Commission on Dental Accreditation

Accreditation Standards
For Dental Education Programs
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Mission Statement of the Commission on Dental Accreditation

The Commission on Dental Accreditation serves the public by establishing, maintaining and applying standards that ensure the quality and continuous improvement of dental and dental-related education and reflect the evolving practice of dentistry. The scope of the Commission on Dental Accreditation encompasses dental, advanced dental and allied dental education programs.

Commission on Dental Accreditation
Revised: January 30, 2001
Accreditation Status Definitions

Programs Which Are Fully Operational

APPROVAL (without reporting requirements): An accreditation classification granted to an education program indicating that the program achieves or exceeds the basic requirements for accreditation.

APPROVAL (with reporting requirements): An accreditation classification granted to an educational program indicating that specific deficiencies or weaknesses exist in one or more areas of the program. Evidence of compliance with the cited standards must be demonstrated within 18 months if the program is between one and two years in length or two years if the program is at least two years in length. If the deficiencies are not corrected within the specified time period, accreditation will be withdrawn, unless the Commission extends the period for achieving compliance for good cause.

Programs Which Are Not Fully Operational

The accreditation classification granted by the Commission on Dental Accreditation to programs which are not fully operational is “Initial Accreditation.”

Initial Accreditation: Initial Accreditation is the accreditation classification granted to any dental, advance dental or allied dental education program which is in the planning and early stages of development or an intermediate stage of program implementation and not yet fully operational. This accreditation classification provides evidence to educational institutions, licensing bodies, government or other granting agencies that, at the time of initial evaluation(s), the developing education program has the potential for meeting the standards set forth in the requirements for an accredited educational program for the program for the specific occupational area. The classification “initial accreditation” is granted based upon one or more site evaluation visit(s) and until the program is fully operational.
Introduction

Accreditation
Accreditation is a non-governmental, voluntary peer review process by which educational institutions or programs may be granted public recognition for compliance with accepted standards of quality and performance. Specialized accrediting agencies exist to assess and verify educational quality in particular professions or occupations to ensure that individuals will be qualified to enter those disciplines. A specialized accrediting agency recognizes the course of instruction which comprises a unique set of skills and knowledge, develops the accreditation standards by which such educational programs are evaluated, conducts evaluation of programs, and publishes a list of accredited programs that meet the national accreditation standards. Accreditation standards are developed in consultation with those affected by the standards who represent the broad communities of interest.

The Commission on Dental Accreditation
The Commission on Dental accreditation is the specialized accrediting agency recognized by the United States Department of Education to accredit programs that provide basic preparation for licensure or certification in dentistry and the related disciplines.

Standards
Dental education programs leading to the D.D.S. or D.M.D. degree must meet the standards delineated in this document to achieve and maintain accreditation.

Standards 1 through 6 constitute The Accreditation Standards for Dental Education by which the Commission on Dental Accreditation and its consultants evaluate Dental Education Programs for accreditation purposes. This entire document also serves as a program development guide for institutions that wish to establish new programs or improve existing programs. Many of the goals related to the educational environment and the corresponding standards were influenced by the work of the American Dental Education Association Commission on Change and Innovation and by best practices in accreditation from other health professions.

The standards identify those aspects of program structure and operation that the Commission regards as essential to program quality and achievement of program goals. They specify the minimum acceptable requirements for programs and provide guidance regarding alternative and preferred methods of meeting standards.
Although the standards are comprehensive and applicable to all institutions that offer dental education programs, the Commission recognizes that methods of achieving standards may vary according to the mission, size, type and resources of sponsoring institutions. Innovation and experimentation with alternative ways of providing required training are encouraged, assuming standards are met and compliance can be demonstrated. The Commission recognizes the importance of academic freedom, and an institution is allowed considerable flexibility in structuring its educational program so that it can meet the Standards. No curriculum has enduring value, and a program will not be judged by conformity to a given type. The Commission also recognizes that schools organize their faculties in a variety of ways. Instruction necessary to achieve the prescribed levels of knowledge and skill may be provided by the educational unit(s) deemed most appropriate by each institution.

The Commission has an obligation to the public, the profession and prospective students to assure that accredited Dental Education Programs provide an identifiable and characteristic core of required education, training and experience.

**Format of the Standards**

Each standard is numbered (e.g., 1-1, 1-2) and in bold print. Where appropriate, standards are accompanied by statements of intent that explain the rationale, meaning and significance of the standard. This format is intended to clarify the meaning and application of standards for both those responsible for educational programs and those who evaluate these programs for the Commission.
Goals

The assessment of quality in educational programs is the foundation for the Standards. In addition to the emphasis on quality education, the Accreditation Standards for Dental Education Programs are designed to meet the following goals:

1. to protect the public welfare;
2. to promote an educational environment that fosters innovation and continuous improvement;
3. to guide institutions in developing their academic programs;
4. to guide site visit teams in making judgments regarding the quality of the program and;
5. to provide students with reasonable assurance that the program is meeting its stated objectives.

Specific objectives of the current version of the Standards include:

- streamlining the accreditation process by including only standards critical to the evaluation of the quality of the educational program;
- increasing the focus on competency statements in curriculum-related standards; and
- emphasizing an educational environment and goals that foster critical thinking and prepare graduates to be life-long learners.

To sharpen its focus on the quality of dental education, the Commission on Dental Accreditation includes standards related to institutional effectiveness. Standard 1, “Institutional Effectiveness,” guides the self-study and preparation for the site visit away from a periodic approach by encouraging establishment of internal planning and assessment that is ongoing and continuous. Dental education programs are expected to demonstrate that planning and assessment are implemented at all levels of the academic and administrative enterprise. The Standards focus, where necessary, on institutional resources and processes, but primarily on the results of those processes and the use of those results for institutional improvement.
The following steps comprise a recommended approach to an assessment process designed to measure the quality and effectiveness of programs and units with educational, patient care, research and services missions. The assessment process should include:

1. establishing a clearly defined purpose/mission appropriate to dental education, patient care, research and service;
2. formulating goals consistent with the purpose/mission;
3. designing and implementing outcomes measures to determine the degree of achievement or progress toward stated goals;
4. acquiring feedback from internal and external groups to interpret the results and develop recommendations for improvement (viz., using a broad-based effort for program/unit assessment);
5. using the recommendations to improve the programs and units; and
6. re-evaluating the program or unit purpose and goals in light of the outcomes of this assessment process.

Implementation of this process will also enhance the credibility and accountability of educational programs.

It is anticipated that the *Accreditation Standards for Dental Education Programs* will strengthen the teaching, patient care, research and service missions of schools. These *Standards* are national in scope and represent the minimum requirements expected for a dental education program. However, the Commission encourages institutions to extend the scope of the curriculum to include content and instruction beyond the scope of the minimum requirements, consistent with the institution’s own goals and objectives.

The foundation of these *Standards* is a competency-based model of education through which students acquire the level of competence needed to begin the unsupervised practice of general dentistry. Competency is a complex set of capacities including knowledge, experience, critical thinking, problem-solving, professionalism, personal integrity and procedural skills that are necessary to begin the independent and unsupervised practice of general dentistry. These components of competency become an integrated whole during the delivery of patient care. Professional competence is the habitual and judicious use of communication, knowledge, critical appraisal, clinical reasoning, emotions, values and reflection in daily practice for the benefit of the individuals and communities served. Accordingly, learning experiences help students blend the various dimensions of competency into an integrated performance for the benefit of the patient, while the assessment process focuses on measuring the student’s overall capacity to function as an entry-level, beginning general dentist rather than measuring individual skills in isolation.
In these *Standards* the competencies for general dentistry are described broadly. The Commission expects each school to develop specific competency definitions and assessment methods in the context of the broad scope of general dental practice. These competencies must be reflective of an evidence-based definition of general dentistry. To assist dental schools in defining and implementing their competencies, the Commission strongly encourages the development of a formal liaison mechanism between the dental school and the practicing dental community.

The objectives of the Commission are based on the premise that an institution providing a dental educational program will strive continually to enhance the standards and quality of both scholarship and teaching. The Commission expects an educational institution offering such a program to conduct that program at a level consistent with the purposes and methods of higher education and to have academic excellence as its primary goal.
Educational Environment

Among the factors that may influence predoctoral curricula are expectations of the parent institution, standing or emerging scientific evidence, new research foci, interfaces with specialty or other dental-related education programs, approaches to clinical education, and pedagogical philosophies and practices. In addition, the demographics of our society are changing, and the educational environment must reflect those changes. People are living longer with more complex health issues, and the dental profession will routinely be expected to provide care for these individuals. Each dental school must also have policies and practices to achieve an appropriate level of diversity among its students, faculty and staff. While diversity of curricula is a strength of dental education, the core principles below promote an environment conducive to change, innovation, and continuous improvement in educational programs. Application of these principles throughout the dental education program is essential to achieving quality.

Comprehensive, Patient-Centered Care
The Standards reconfirm and emphasize the importance of educational processes and goals for comprehensive patient care and encourage patient-centered approaches in teaching and oral health care delivery. Administration, faculty, staff, and students are expected to develop and implement definitions, practices, operations and evaluation methods so that patient-centered comprehensive care is the norm.

Institutional definitions and operations that support patient-centered care can have the following characteristics or practices:

1. ensure that patients’ preferences and their social, economic, emotional, physical and cognitive circumstances are sensitively considered;
2. teamwork and cost-effective use of well-trained allied dental personnel are emphasized;
3. evaluations of practice patterns and the outcomes of care guide actions to improve both the quality and efficiency of care delivery; and
4. general dentists serve as role models for students to help them learn appropriate therapeutic strategies and how to refer patients who need advanced therapies beyond the scope of general dental practice.
Critical Thinking
Critical thinking is foundational to teaching and deep learning in any subject. The components of critical thinking are: the application of logic and accepted intellectual standards to reasoning; the ability to access and evaluate evidence; the application of knowledge in clinical reasoning; and a disposition for inquiry that includes openness, self-assessment, curiosity, skepticism, and dialogue. In professional practice, critical thinking enables the dentist to recognize pertinent information, make appropriate decisions based on a deliberate and open-minded review of the available options, evaluate outcomes of diagnostic and therapeutic decisions, and assess his or her own performance. Accordingly, the dental educational program must develop students who are able to:

- Identify problems and formulate questions clearly and precisely;
- Gather and assess relevant information, weighing it against extant knowledge and ideas, to interpret information accurately and arrive at well-reasoned conclusions;
- Test emerging hypotheses against evidence, criteria, and standards;
- Show intellectual breadth by thinking with an open mind, recognizing and evaluating assumptions, implications, and consequences;
- Communicate effectively with others while reasoning through problems.

Self-Directed Learning
The explosion of scientific knowledge makes it impossible for students to comprehend and retain all the information necessary for a lifetime of practice. Faculty must serve as role models demonstrating that they understand and value scientific discovery and life-long learning in their daily interactions with students, patients and colleagues. Educational programs must depart from teacher-centered and discipline-focused pedagogy to enable and support the students’ evolution as independent learners actively engaged in their curricula using strategies that foster integrated approaches to learning. Curricula must be contemporary, appropriately complex and must encourage students to take responsibility for their learning by helping them learn how to learn.

Humanistic Environment
Dental schools are societies of learners, where graduates are prepared to join a learned and a scholarly society of oral health professionals. A humanistic pedagogy inculcates respect, tolerance, understanding, and concern for others and is fostered by mentoring, advising and small group interaction. A dental school environment characterized by respectful professional relationships between and among faculty and students establishes a context for the development of interpersonal skills necessary for learning, for patient care, and for making meaningful contributions to the profession.
Scientific Discovery and the Integration of Knowledge
The interrelationship between the basic, behavioral, and clinical sciences is a conceptual cornerstone to clinical competence. Learning must occur in the context of real health care problems rather than within singular content-specific disciplines. Learning objectives that cut across traditional disciplines and correlate with the expected competencies of graduates enhance curriculum design. Beyond the acquisition of scientific knowledge at a particular point in time, the capacity to think scientifically and to apply the scientific method is critical if students are to analyze and solve oral health problems, understand research, and practice evidence-based dentistry.

Evidence-based Care
Evidence-based dentistry (EBD) is an approach to oral health care that requires the judicious integration of systematic assessments of clinically relevant scientific evidence, relating to the patient's oral and medical condition and history, with the dentist's clinical expertise and the patient's treatment needs and preferences.\(^1\) EBD uses thorough, unbiased systematic reviews and critical appraisal of the best available scientific evidence in combination with clinical and patient factors to make informed decisions about appropriate health care for specific clinical circumstances. Curricular content and learning experiences must incorporate the principles of evidence-based inquiry, and involve faculty who practice EBD and model critical appraisal for students during the process of patient care. As scholars, faculty contribute to the body of evidence supporting oral health care strategies by conducting research and guiding students in learning and practicing critical appraisal of research evidence.

Assessment
Dental education programs must conduct regular assessments of students’ learning throughout their educational experiences. Such assessment not only focuses on whether the student has achieved the competencies necessary to advance professionally (summative assessment), but also assists learners in developing the knowledge, skills, attitudes, and values considered important at their stage of learning (formative assessment). In an environment that emphasizes critical thinking and humanistic values, it is essential for students to develop the capacity to self-assess. Self-assessment is indicative of the extent to which students take responsibility for their own learning. To improve curricula, assessment involves a dialogue between and among faculty, students, and administrators that is grounded in the scholarship of teaching and learning. Data from program outcomes, assessment of student learning, and feedback from students and faculty can be used in a process that actively engages both students and faculty.

Application of Technology
Technology enables dental education programs to improve patient care, and to revolutionize all aspects of the curriculum, from didactic courses to clinical instruction. Contemporary dental education programs regularly assess their use of technology and explore new applications of technological advances to enhance student learning and to assist faculty as facilitators of learning and designers of learning environments. Use of technology must include systems and processes to safeguard the quality of patient care and ensure the integrity of student performance. Technology has the potential to reduce expenses for teaching and learning and help to alleviate increasing demands on faculty and student time. Use of technology in dental education programs can support learning in different ways, including self-directed, distance and asynchronous learning.

Faculty Development
Faculty development is a necessary condition for change and innovation in dental education. The environment of higher education is changing dramatically, and with it health professions education. Dental education programs can re-examine the relationship between what faculty do and how students learn to change from the sage authority who imparts information to a facilitator of learning and designer of learning experiences that place students in positions to learn by doing. Ongoing faculty development is a requirement to improve teaching and learning, to foster curricular change, to enhance retention and job satisfaction of faculty, and to maintain the vitality of academic dentistry as the wellspring of a learned profession.

Collaboration with other Health Care Professionals
Access to health care and changing demographics are driving a new vision of the health care workforce. Dental curricula can change to develop a new type of dentist, providing opportunities early in their educational experiences to engage allied colleagues and other health care professionals. Enhancing the public’s access to oral health care and the connection of oral health to general health form a nexus that links oral health care providers to colleagues in other health professions. Health care professionals educated to deliver patient-centered care as members of an interdisciplinary team present a challenge for educational programs. Patient care by all team members will emphasize evidence-based practice, quality improvement approaches, the application of technology and emerging information, and outcomes assessment. Dental education programs are to seek and take advantage of opportunities to educate dental school graduates who will assume new roles in safeguarding, promoting, and caring for the health care needs of the public.
Diversity
Diversity in education is essential to academic excellence. A significant amount of learning occurs through informal interactions among individuals who are of different races, ethnicities, religions, and backgrounds; come from cities, rural areas and from various geographic regions; and have a wide variety of interests, talents, and perspectives. These interactions allow students to directly and indirectly learn from their differences, and to stimulate one another to reexamine even their most deeply held assumptions about themselves and their world. Cultural competence cannot be effectively acquired in a relatively homogeneous environment. Programs must create an environment that ensures an in-depth exchange of ideas and beliefs across gender, racial, ethnic, cultural and socioeconomic lines.

Summary
These principles create an environmental framework intended to foster educational quality and innovation in ways that are unique to the mission, strengths, and resources of each dental school. The Commission believes that implementation of the guidance incorporated in this document will ensure that dental education programs develop graduates who have the capacity for life-long and self-directed learning and are capable of providing evidence-based care to meet the needs their patients and of society.
Definition of Terms Used in Accreditation Standards for Dental Education Programs

Community-based experience: Refers to opportunities for dental students to provide patient care in community-based clinics or private practices. Community-based experiences are not intended to be synonymous with community service activities where dental students might go to schools to teach preventive techniques or where dental students help build homes for needy families.

Comprehensive patient care: The system of patient care in which individual students or providers, examine and evaluate patients; develop and prescribe a treatment plan; perform the majority of care required, including care in several disciplines of dentistry; refer patients to recognized dental specialists as appropriate; and assume responsibility for ensuring through appropriate controls and monitoring that the patient has received total oral care.

Competencies: Written statements describing the levels of knowledge, skills and values expected of graduates.

Competent: The levels of knowledge, skills and values required by the new graduates to begin independent, unsupervised dental practice.

Cultural competence: Having the ability to provide care to patients with diverse backgrounds, values, beliefs and behaviors, including tailoring delivery to meet patients’ social, cultural, and linguistic needs. Cultural competence training includes the development of a skill set for more effective provider-patient communication and stresses the importance of providers’ understanding the relationship between diversity of culture, values, beliefs, behavior and language and the needs of patients.

Dimensions of Diversity: The dimensions of diversity include: structural, curriculum and institutional climate.

Structural: Structural diversity, also referred to as compositional diversity, focuses on the numerical distribution of students, faculty and staff from diverse backgrounds in a program or institution.
Curriculum: Curriculum diversity, also referred to as classroom diversity, covers both the diversity-related curricular content that promote shared learning and the integration of skills, insights, and experiences of diverse groups in all academic settings, including distance learning.

Institutional Climate: Institutional climate, also referred to as interactional diversity, focuses on the general environment created in programs and institutions that support diversity as a core value and provide opportunities for informal learning among diverse peers.

Evidence-based dentistry (EBD): An approach to oral health care that requires the judicious integration of systematic assessments of clinically relevant scientific evidence, relating to the patient's oral and medical condition and history, with the dentist's clinical expertise and the patient's treatment needs and preferences.

Examples of evidence to demonstrate compliance include: Desirable condition, practice or documentation indicating the freedom or liberty to follow a suggested alternative.

Must: Indicates an imperative need or a duty; an essential or indispensable item; mandatory.

In-depth: A thorough knowledge of concepts and theories for the purpose of critical analysis and the synthesis of more complete understanding (highest level of knowledge).

Instruction: Describes any teaching, lesson, rule or precept; details of procedure; directives.

Intent: Intent statements are presented to provide clarification to dental education programs in the application of and in connection with compliance with the Accreditation Standards for Dental Education Programs. The statements of intent set forth some of the reasons and purposes for the particular Standards. As such, these statements are not exclusive or exhaustive. Other purposes may apply.

Patients with special needs: Those patients whose medical, physical, psychological, cognitive or social situations make it necessary to consider a wide range of assessment and care options in order to provide dental treatment. These individuals include, but are not limited to, people with developmental disabilities, cognitive impairment, complex medical problems, significant physical limitations, and the vulnerable elderly.

Predoctoral: Denotes training leading to the DDS or DMD degree.
**Quality assurance:** A cycle of PLAN, DO, CHECK, ACT that involves setting goals, determining outcomes, and collecting data in an ongoing and systematic manner to measure attainment of goals and outcomes. The final step in quality assurance involves identification and implementation of corrective measures designed to strengthen the program.

**Service learning:** A structured experience with specific learning objectives that combines community service with academic preparation. Students engaged in service learning learn about their roles as dental professionals through provision of patient care and related services in response to community-based problems.

**Should:** Indicates an expectation.

**Standard:** Offers a rule or basis of comparison established in measuring or judging capacity, quantity, quality, content and value; criterion used as a model or pattern.
Accreditation Standards for Dental Education Programs

STANDARD 1-INSTITUTIONAL EFFECTIVENESS

1-1 The dental school must develop a clearly stated purpose/mission statement appropriate to dental education, addressing teaching, patient care, research and service.

Intent:
A clearly defined purpose and a mission statement that is concise and communicated to faculty, staff, students, patients and other communities of interest is helpful in clarifying the purpose of the institution.

1-2 Ongoing planning for, assessment of and improvement of educational quality and program effectiveness at the dental school must be broad-based, systematic, continuous, and designed to promote achievement of institutional goals related to institutional effectiveness, student achievement, patient care, research, and service.

Intent:
Assessment, planning, implementation and evaluation of the educational quality of a dental education program that is broad-based, systematic, continuous and designed to promote achievement of program goals will maximize the academic success of the enrolled students. The Commission on Dental Accreditation expects each program to define its own goals and objectives for preparing individuals for the practice of general dentistry.
The dental education program must have a stated commitment to a humanistic culture and learning environment that is regularly evaluated.

**Intent:**
The dental education program should ensure collaboration, mutual respect, cooperation, and harmonious relationships between and among administrators, faculty, students, staff, and alumni. The program should also support and cultivate the development of professionalism and ethical behavior by fostering diversity of faculty, students, and staff, open communication, leadership, and scholarship.

**Examples of evidence to demonstrate compliance may include:**
- Established policies regarding ethical behavior by faculty, staff and students that are regularly reviewed and readily available
- Student, faculty, and patient groups involved in promoting diversity, professionalism and/or leadership support for their activities
- Focus groups and/or surveys directed towards gathering information on student, faculty, patient, and alumni perceptions of the cultural environment

The dental school must have policies and practices to:

a. achieve appropriate levels of diversity among its students, faculty and staff;
b. engage in ongoing systematic and focused efforts to attract and retain students, faculty and staff from diverse backgrounds; and
c. systematically evaluate comprehensive strategies to improve the institutional climate for diversity.

**Intent:**
The dental school should develop strategies to address the dimensions of diversity including, structure, curriculum and institutional climate. The dental school should articulate its expectations regarding diversity across its academic community in the context of local and national responsibilities, and regularly assess how well such expectations are being achieved. Schools could incorporate elements of diversity in their planning that include, but are not limited to, gender, racial, ethnic, cultural and socioeconomic. Schools should establish focused, significant, and sustained programs to recruit and retain suitably diverse students, faculty, and staff.
The financial resources must be sufficient to support the dental school’s stated purpose/mission, goals and objectives.

**Intent:**
The institution should have the financial resources required to develop and sustain the program on a continuing basis. The program should have the ability to employ an adequate number of full-time faculty, purchase and maintain equipment; procure supplies, reference material and teaching aids as reflected in annual operating budget. Financial resources should ensure that the program will be in a position to recruit and retain qualified faculty. Annual appropriations should provide for innovations and changes necessary to reflect current concepts of education in the discipline. The Commission will assess the adequacy of financial support on the basis of current appropriations and the stability of sources of funding for the program.

The sponsoring institution must ensure that support from entities outside of the institution does not compromise the teaching, clinical and research components of the program.

**Examples of evidence to demonstrate compliance may include:**
- Written agreement(s)
- Contracts between the institution/program and sponsor(s) (For example: contract(s)/agreement(s) related to facilities, funding, faculty allocations, etc.)

The authority and final responsibility for curriculum development and approval, student selection, faculty selection and administrative matters must rest within the sponsoring institution.

The dental school must be a component of a higher education institution that is accredited by a regional accrediting agency.

The dental school must show evidence of interaction with other components of the higher education, health care education and/or health care delivery systems.
STANDARD 2-EDUCATIONAL PROGRAM

Instruction

2-1 In advance of each course or other unit of instruction, students must be provided written information about the goals and requirements of each course, the nature of the course content, the method(s) of evaluation to be used, and how grades and competency are determined.

2-2 If students do not meet the didactic, behavioral and/or clinical criteria as published and distributed, individual evaluations must be performed that lead to an appropriate decision in accordance with institutional due process policies.

Curriculum Management

2-3 The curriculum must include at least four academic years of instruction or its equivalent.

2-4 The stated goals of the dental education program must be focused on educational outcomes and define the competencies needed for graduation, including the preparation of graduates who possess the knowledge, skills and values to begin the practice of general dentistry.
2-5 The dental education program must employ student evaluation methods that measure its defined competencies.

**Intent:**
Assessment of student performance should measure not only retention of factual knowledge, but also the development of skills, behaviors, and attitudes needed for subsequent education and practice. The education program should assess problem solving, clinical reasoning, professionalism, ethical decision-making and communication skills. The evaluation of competence is an ongoing process that requires a variety of assessments that can measure not only the acquisition of knowledge and skills but also assess the process and procedures which will be necessary for entry level practice.

**Examples of evidence to demonstrate compliance may include:**
- Narrative descriptions of student performance and professionalism in courses where teacher-student interactions permit this type of assessment
- Objective structured clinical examination (OSCE)
- Clinical skills testing

2-6 Biomedical, behavioral and clinical science instruction must be integrated and of sufficient depth, scope, timeliness, quality and emphasis to ensure achievement of the curriculum’s defined competencies.

2-7 The dental school must have a curriculum management plan that ensures:
   a. an ongoing curriculum review and evaluation process which includes input from faculty, students, administration and other appropriate sources;
   b. evaluation of all courses with respect to the defined competencies of the school to include student evaluation of instruction;
   c. elimination of unwarranted repetition, outdated material, and unnecessary material;
   d. incorporation of emerging information and achievement of appropriate sequencing.

2-8 The dental school must ensure the availability of adequate patient experiences that afford all students the opportunity to achieve its stated competencies within a reasonable time.
Critical Thinking

2-9 Graduates must be competent in the use of critical thinking and problem-solving, including their use in the comprehensive care of patients, scientific inquiry and research methodology.

Intent:
Throughout the curriculum, the educational program should use teaching and learning methods that support the development of critical thinking and problem solving skills.

Examples of evidence to demonstrate compliance may include:
- Explicit discussion of the meaning, importance, and application of critical thinking
- Use of questions by instructors that require students to analyze problem etiology, compare and evaluate alternative approaches, provide rationale for plans of action, and predict outcomes
- Prospective simulations in which students perform decision-making
- Retrospective critiques of cases in which decisions are reviewed to identify errors, reasons for errors, and exemplary performance
- Writing assignments that require students to analyze problems and discuss alternative theories about etiology and solutions, as well as to defend decisions made
- Asking students to analyze and discuss work products to compare how outcomes correspond to best evidence or other professional standards
- Demonstration of the use of active learning methods, such as case analysis and discussion, critical appraisal of scientific evidence in combination with clinical application and patient factors, and structured sessions in which faculty and students reason aloud about patient care
Self-Assessment

2-10 Graduates must demonstrate the ability to self-assess, including the development of professional competencies and the demonstration of professional values and capacities associated with self-directed, lifelong learning.

Intent:
Educational program should prepare students to assume responsibility for their own learning. The education program should teach students how to learn and apply evolving and new knowledge over a complete career as a health care professional. Lifelong learning skills include student assessment of learning needs.

Examples of evidence to demonstrate compliance may include:
- Students routinely assess their own progress toward overall competency and individual competencies as they progress through the curriculum
- Students identify learning needs and create personal learning plans
- Students participate in the education of others, including fellow students, patients, and other health care professionals, that involves critique and feedback

Biomedical Sciences

2-11 Biomedical science instruction in dental education must ensure an in-depth understanding of basic biological principals, consisting of a core of information on the fundamental structures, functions and interrelationships of the body systems.

2-12 The biomedical knowledge base must emphasize the oro-facial complex as an important anatomical area existing in a complex biological interrelationship with the entire body.

2-13 In-depth information on abnormal biological conditions must be provided to support a high level of understanding of the etiology, epidemiology, differential diagnosis, pathogenesis, prevention, treatment and prognosis of oral and oral-related disorders.
2-14 Graduates **must** be competent in the application of biomedical science knowledge in the delivery of patient care.

**Intent:**
*Biological science knowledge should be of sufficient depth and scope for graduates to apply advances in modern biology to clinical practice and to integrate new medical knowledge and therapies relevant to oral health care.*

**Behavioral Sciences**

2-15 Graduates **must** be competent in the application of the fundamental principles of behavioral sciences as they pertain to patient-centered approaches for promoting, improving and maintaining oral health.

2-16 Graduates **must** be competent in managing a diverse patient population and have the interpersonal and communications skills to function successfully in a multicultural work environment.

**Intent:**
*Students should learn about factors and practices associated with disparities in health status among subpopulations, including but not limited to, racial, ethnic, geographic, or socioeconomic groups. In this manner, students will be best prepared for dental practice in a diverse society when they learn in an environment characterized by, and supportive of, diversity and inclusion. Such an environment should facilitate dental education in:*
  * basic principles of culturally competent health care;*
  * recognition of health care disparities and the development of solutions;*
  * the importance of meeting the health care needs of dentally underserved populations, and;*
  * the development of core professional attributes, such as altruism, empathy, and social accountability, needed to provide effective care in a multidimensionally diverse society.*
Practice Management and Health Care Systems

2-17 Graduates must be competent in applying legal and regulatory concepts related to the provision and/or support of oral health care services.

2-18 Graduates must be competent in applying the basic principles and philosophies of practice management, models of oral health care delivery, and how to function successfully as the leader of the oral health care team.

2-19 Graduates must be competent in communicating and collaborating with other members of the health care team to facilitate the provision of health care.

Intent:
Students should understand the roles of members of the health care team and have educational experiences, particularly clinical experiences, that involve working with other healthcare professional students and practitioners. Students should have educational experiences in which they coordinate patient care within the health care system relevant to dentistry.

Ethics and Professionalism

2-20 Graduates must be competent in the application of the principles of ethical decision making and professional responsibility.

Intent:
Graduates should know how to draw on a range of resources, among which are professional codes, regulatory law, and ethical theories. These resources should pertain to the academic environment, patient care, practice management and research. They should guide judgment and action for issues that are complex, novel, ethically arguable, divisive, or of public concern.
Clinical Sciences

2-21 Graduates **must** be competent to access, critically appraise, apply, and communicate scientific and lay literature as it relates to providing evidence-based patient care.

**Intent:**
*The education program should introduce students to the basic principles of clinical and translational research, including how such research is conducted, evaluated, applied, and explained to patients.*

2-22 Graduates **must** be competent in providing oral health care within the scope of general dentistry to patients in all stages of life.
At a minimum, graduates must be competent in providing oral health care within the scope of general dentistry, as defined by the school, including:

a. patient assessment, diagnosis, comprehensive treatment planning, prognosis, and informed consent;
b. screening and risk assessment for head and neck cancer;
c. recognizing the complexity of patient treatment and identifying when referral is indicated;
d. health promotion and disease prevention;
e. anesthesia, and pain and anxiety control;
f. restoration of teeth;
g. communicating and managing dental laboratory procedures in support of patient care;
h. replacement of teeth including fixed, removable and dental implant prosthodontic therapies;
i. periodontal therapy;
j. pulpal therapy;
k. oral mucosal and osseous disorders;
l. hard and soft tissue surgery;
m. dental emergencies;
n. malocclusion and space management; and
o. evaluation of the outcomes of treatment, recall strategies, and prognosis.

Intent:
Graduates should be able to evaluate, assess, and apply current and emerging science and technology. Graduates should possess the basic knowledge, skills, and values to practice dentistry, independently, at the time of graduation. The school identifies the competencies that will be included in the curriculum based on the school’s goals, resources, accepted general practitioner responsibilities and other influencing factors. The comprehensive care experiences provided for patients by students should be adequate to ensure competency in all components of general dentistry practice. Programs should assess overall competency, not simply individual competencies in order to measure the graduate’s readiness to enter the practice of general dentistry.
2-24 Graduates must be competent in assessing the treatment needs of patients with special needs.

**Intent:**
An appropriate patient pool should be available to provide experiences that may include patients whose medical, physical, psychological, or social situations make it necessary to consider a wide range of assessment and care options. The assessment should emphasize the importance of non-dental considerations. These individuals include, but are not limited to, people with developmental disabilities, cognitive impairment, complex medical problems, significant physical limitations, and the vulnerable elderly. Clinical instruction and experience with the patients with special needs should include instruction in proper communication techniques and assessing the treatment needs compatible with the special need.

2-25 Dental education programs must make available opportunities and encourage students to engage in service learning experiences and/or community-based learning experiences.

**Intent:**
Service learning experiences and/or community-based learning experiences are essential to the development of a culturally competent oral health care workforce. The interaction and treatment of diverse populations in a community-based clinical environment adds a special dimension to clinical learning experience and engenders a life-long appreciation for the value of community service.
STANDARD 3- FACULTY AND STAFF

3-1 The number and distribution of faculty and staff must be sufficient to meet the dental school’s stated purpose/mission, goals and objectives.

3-2 The dental school must show evidence of an ongoing faculty development process.

Intent:
Ongoing faculty development is a requirement to improve teaching and learning, to foster curricular change, to enhance retention and job satisfaction of faculty, and to maintain the vitality of academic dentistry as the wellspring of a learned profession. Effective teaching requires not only content knowledge, but an understanding of pedagogy, including knowledge of curriculum design and development, curriculum evaluation, and teaching methodologies.

Examples of evidence to demonstrate compliance may include:
- Participation in development activities related to teaching and learning
- Attendance at regional and national meetings that address education
- Mentored experiences for new faculty
- Scholarly productivity
- Maintenance of existing and development of new and/or emerging clinical skills

3-3 Faculty must be ensured a form of governance that allows participation in the school’s decision-making processes.

3-4 A defined evaluation process must exist that ensures objective measurement of the performance of each faculty member in teaching, patient care, scholarship and service.

3-5 The dental school must have a stated process for promotion and tenure (where tenure exists) that is clearly communicated to the faculty.
STANDARD 4-EDUCATIONAL SUPPORT SERVICES

Admissions

4-1 Specific written criteria, policies and procedures must be followed when admitting predoctoral students.

4-2 Admission of students with advanced standing must be based on the same standards of achievement required by students regularly enrolled in the program.

4-3 Transfer students with advanced standing must receive an individualized assessment and an appropriate curriculum plan that results in the same standards of competence for graduation required by students regularly enrolled in the program.

Examples of evidence to demonstrate compliance may include:

- Policies and procedures on advanced standing
- Results of appropriate qualifying examinations
- Course equivalency or other measures to demonstrate equal scope and level of knowledge

4-4 Admission policies and procedures must be designed to include recruitment and admission of a diverse student population.

Intent 4-1 to 4-4:
The dental education curriculum is a scientifically oriented program which is rigorous and intensive. Admissions criteria and procedures should ensure the selection of a diverse student body with the potential for successfully completing the program. The administration and faculty, in cooperation with appropriate institutional personnel, should establish admissions procedures that are non-discriminatory and ensure the quality of the program.

Facilities and Resources

4-5 The dental school must provide adequate and appropriately maintained facilities and learning resources to support the purpose/mission of the dental school and which are in conformance with applicable regulations.
Student Services

4-6 Student services **must** include the following:

a. personal, academic and career counseling of students;
b. assuring student participation on appropriate committees;
c. providing appropriate information about the availability of financial aid and health services;
d. developing and reviewing specific written procedures to ensure due process and the protection of the rights of students;
e. student advocacy; and
f. maintenance of the integrity of student performance and evaluation records.

**Intent:**

*All policies and procedures should protect the students and provide avenues for appeal and due process. Policies should ensure that student records accurately reflect the work accomplished and are maintained in a secure manner. Students should have available the necessary support to provide career information and guidance as to practice, post-graduate and research opportunities.*

Student Financial Aid

4-7 At the time of acceptance, students **must** be advised of the total expected cost of their dental education.

**Intent:**

*Financial information should include estimates of living expenses and educational fees, an analysis of financial need, and the availability of financial aid.*

4-8 The institution **must** be in compliance with all federal and state regulations relating to student financial aid and student privacy.

Health Services

4-9 The dental school **must** advise prospective students of mandatory health standards that will ensure that prospective students are qualified to undertake dental studies.
4-10 There **must** be a mechanism for ready access to health care for students while they are enrolled in dental school.

4-11 Students **must** be encouraged to be immunized against infectious diseases, such as mumps, measles, rubella, and hepatitis B, prior to contact with patients and/or infectious objects or materials, in an effort to minimize the risk of infection to patients, dental personnel, and themselves.
STANDARD 5- PATIENT CARE SERVICES

5-1 The dental school must have a published policy addressing the meaning of and commitment to patient-centered care and distribute the written policy to each student, faculty, staff, and patient.

Intent:
A written statement of patient rights should include:

- considerate, respectful and confidential treatment;
- continuity and completion of treatment;
- access to complete and current information about his/her condition;
- advance knowledge of the cost of treatment;
- informed consent;
- explanation of recommended treatment, treatment alternatives, the option to refuse treatment, the risk of no treatment, and expected outcomes of various treatments;
- treatment that meets the standard of care in the profession.

5-2 Patient care must be evidenced-based, integrating the best research evidence and patient values.

Intent:
The dental school should use evidence to evaluate new technology and products and to guide diagnosis and treatment decisions.
5-3 The dental school must conduct a formal system of continuous quality improvement for the patient care program that demonstrates evidence of:

a. standards of care that are patient-centered, focused on comprehensive care and written in a format that facilitates assessment with measurable criteria;
b. an ongoing review and analysis of compliance with the defined standards of care;
c. an ongoing review of a representative sample of patients and patient records to assess the appropriateness, necessity and quality of the care provided;
d. mechanisms to determine the cause(s) of treatment deficiencies; and
e. implementation of corrective measures as appropriate.

**Intent:**
*Dental education programs should create and maintain databases for monitoring and improving patient care and serving as a resource for research and evidence-based practice.*

5-4 The use of quantitative criteria for student advancement and graduation must not compromise the delivery of comprehensive patient care.

5-5 The dental school must ensure that active patients have access to professional services at all times for the management of dental emergencies.

5-6 All students, faculty and support staff involved in the direct provision of patient care must be continuously certified in basic life support (B.L.S.), including cardiopulmonary resuscitation, and be able to manage common medical emergencies.

5-7 Written policies and procedures must be in place to ensure the safe use of ionizing radiation, which include criteria for patient selection, frequency of exposing radiographs on patients, and retaking radiographs consistent with current, accepted dental practice.

5-8 The dental school must establish and enforce a mechanism to ensure adequate preclinical/clinical/laboratory asepsis, infection and biohazard control, and disposal of hazardous waste.

5-9 The school’s policies and procedures must ensure that the confidentiality of information pertaining to the health status of each individual patient is strictly maintained.

DEP Standards -34-
STANDARD 6- RESEARCH PROGRAM

6-1 Research, the process of scientific inquiry involved in the development and dissemination of new knowledge, must be an integral component of the purpose/mission, goals and objectives of the dental school.

6-2 The dental school faculty, as appropriate to meet the school’s purpose/mission, goals and objectives, must engage in research or other forms of scholarly activity.

6-3 Dental education programs must provide opportunities, encourage, and support student participation in research and other scholarly activities mentored by faculty.

Intent:
The dental education program should provide students with opportunities to experience research including, but not limited to, biomedical, translational, educational, epidemiologic and clinical research. Such activities should align with clearly defined research mission and goals of the institution. The dental education program should introduce students to the principles of research and provide elective opportunities beyond basic introduction, including how such research is conducted and evaluated, and where appropriate, conveyed to patients and other practitioners, and applied in clinical settings.
Curriculum Committee Review of New Courses

How are you teaching to the developmental goals as defined by the Vision Implementation Team (See reference below)?

How are you going to test students? (Please provide as much detail as possible.)

How do concepts presented in your course integrate with concurrently offered courses in the new summer curriculum?

Please provide a copy of your syllabus (a template is attached for your convenience).

Reference:
Defining Characteristics of the U-M School of Dentistry Graduate (Draft: September 15, 2009)
The U-M DDS graduate is a highly skilled and self-motivated clinician who applies scientific knowledge and critical thinking to achieve optimal oral health
The U-M dentist:
  a. has a deep knowledge and understanding of the science that underpins diagnosis, risk assessment, prevention, management, and treatment in the practice of dentistry;
  b. practices with the understanding that the orofacial complex is the gateway to the body with principal roles in regulating life-essential functions;
  c. interacts within other health professions to represent and promote oral health as a key component of total health;
  d. is prepared to influence policy for the profession through the ability to evaluate competing claims and positions, and through active participation in local and national organizations;
  e. models integrity and professional responsibility through ethical behavior in professional practice and daily life.
Syllabus Template

Course title.

Course number.

Term and year.

Location, time, and day.

Course personnel and contact information.

Course description.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

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<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
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<td>___Application</td>
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How progression toward competency or competency is measured.

Objectives.

Session information.

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<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
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Textbooks/ Readings.

Examination/grading policies.

Other information.
Curriculum Committee Review of New Proposed D1 Summer Term Courses

Executive Summary

Review Process:

The Curriculum Committee developed a process for review of the seven courses that comprise the new D1 Summer term, beginning on July 7, 2010. Each course director developed a course proposal consisting of a course outline and/or a course syllabus, and prepared responses to a set of review questions developed by the Committee prior to meeting with the Committee (see Appendices 1 and 2 to review the questions and the syllabus template). At meetings with the Committee, each course director provided a brief introduction to the course. The course review was lead by a Curriculum Committee member who served as primary reviewer for that course. Two secondary reviewers were also assigned to review each course and all members of the Committee contributed to the discussions. At the end of each course review session, course directors were apprised of any tasks remaining to be completed or any course materials needing to be revised or submitted to the Committee in order for the course to be approved. All seven D1 Summer term courses, three of which are modified slightly from previously existing courses and four of which are new courses, had received final approval by the Committee by April 23, 2010.

Findings:

Seven courses were proposed and all have now been approved by the Curriculum Committee for the new D1 summer term (see Appendix 3 for the term schedule and Appendix 4 for syllabi) for a total of 9.5 credit hours. These courses are:

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Grading</th>
<th>Credits</th>
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<tbody>
<tr>
<td>501A</td>
<td>Introduction to the Dental Profession</td>
<td>Graded</td>
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<tr>
<td>504</td>
<td>Introduction to Pathways in the Dental Curriculum</td>
<td>Graded</td>
<td>1.0</td>
</tr>
<tr>
<td>505</td>
<td>Grand Rounds</td>
<td>P/F</td>
<td>1.0</td>
</tr>
<tr>
<td>509</td>
<td>Introduction to the Function of the Oralfacial Complex</td>
<td>P/F</td>
<td>1.5</td>
</tr>
<tr>
<td>517</td>
<td>Introduction to Clinical Skills</td>
<td>P/F</td>
<td>0.5</td>
</tr>
<tr>
<td>521</td>
<td>Dental Anatomy and Occlusion I</td>
<td>Graded</td>
<td>1.75</td>
</tr>
<tr>
<td>545</td>
<td>Dental Head and Neck Anatomy</td>
<td>Graded</td>
<td>2.5</td>
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</table>
All course directors addressed at least to some extent, the goals of the Vision Implementation Team (VIT) in evolving our curriculum:

**Defining Characteristics of the U-M School of Dentistry Graduate (Draft: Sept. 15, 2009)**

The U-M DDS graduate is a highly skilled and self-motivated clinician who applies scientific knowledge and critical thinking to achieve optimal oral health.

The U-M dentist:

a. has a deep knowledge and understanding of the science that underpins diagnosis, risk assessment, prevention, management, and treatment in the practice of dentistry;

b. practices with the understanding that the orofacial complex is the gateway to the body with principal roles in regulating life-essential functions;

c. interacts within other health professions to represent and promote oral health as a key component of total health;

d. is prepared to influence policy for the profession through the ability to evaluate competing claims and positions, and through active participation in local and national organizations;

e. models integrity and professional responsibility through ethical behavior in professional practice and daily life.

**VIT goals** - The Committee discussed these defining characteristics with each of the course directors, particularly with respect to how their coursework planned to foster development of these characteristics by our students. We particularly focused discussion related to development of student’s critical thinking and problem-solving skills (global characteristic). Course directors were readily able to describe how their courses contributed to students’ acquisition of deep knowledge of science and understanding of the principle roles of the orofacial complex in regulating life essential functions (a and b) as appropriate for first year students.

**Testing/Assessment** - The Committee had discussions with each of the course directors regarding how course testing and other assessment strategies could be employed to help students develop their critical thinking and problem-solving skills and to assess their progress toward developing and attaining the other defining characteristics described by the VIT.

**Integration of concepts with other concurrently running courses** - Some of the course directors had well developed plans for integrating the content of their courses with other ongoing D1 Summer term courses. The Committee was able to offer suggestions to all of the course directors regarding additional “touch points” for potential integration of course work based on its review of all of the concurrently running courses.
May 5, 2010

Thematic issues that emerged in the review and Committee recommendations to address them:

Communication/coordination of effort between course directors. It became clear during the review process that we should try to achieve better communication between directors of concurrently running courses and between “core leaders” and other VIT team leaders. This communication is necessary to manage overlap, redundancy, and identification of missing information as well as to support integration of the curriculum and the Committee recommends developing formal processes to support this communication.

Grading: Letter grade (A-F) vs. Pass/Fail P/F. Some of the courses for the new D1 summer term proposed using a “letter” grading system whereas others proposed using a “Pass/Fail” system. The rationale for these proposals were discussed with each of the course directors. Courses that award letter grades contribute to students credit hour totals and award quality points that contribute to students GPA. Courses that award “P/F” grades contribute to student credit hour totals, but do not award quality points or contribute to students GPA. Course directors should be mindful of this issue. Course directors in increasing numbers are proposing to use “P/F” grading systems. That means that students GPAs may be determined by only a few courses each term. It also means that if students face academic discipline that requires them to raise their GPAs, they may have few opportunities to do so. In addition, some students may make decisions about how to allocate their time on the basis of the grading system. Specifically, they may spend less time on P/F courses than on graded courses. The student members of the Curriculum Committee were especially helpful in recounting to course directors the impact of this issue on the students. We encourage the faculty as a whole to have a broader discussion of these issues.

Assessment and Pedagogy – Course directors were encouraged to expand the use of learning methods in their courses beyond the lecture format and assessment methods beyond the use of multiple choice tests to support students’ development of critical thinking and problem-solving skills. Some course directors discussed the possibility of developing some integrated examinations across courses and/or some collaborative end-term assessments of student performance. The Committee recommends providing opportunities for faculty development in this area. (The Committee found the following reference helpful and encourages the faculty to review it: Albino, JEN et al. 2008. Assessing Dental Students’ Competence: Best Practice Recommendations in the Performance Assessment Literature and Investigation of Current Practices in Predoctoral Dental Education, JDE 72:1405.)

The Committee noted that it will be important to continue the CoursEval assessments by students during the “phase-in” of the curriculum revisions and recommends that these assessments continue. It also discussed some new questions that could be added to these assessments. Finally, the Committee recommends that in the next iteration a full seven weeks be allotted to the D1 Summer Term to avoid some of the compression that has occurred in this first, shortened iteration (5.5 weeks).

Overall Recommendation: The Committee recommends that the faculty vote approval of the new proposed D1 Summer term courses.
## Proposed 2010 D1 Summer Schedule

**Date** | **Time** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday**
--- | --- | --- | --- | --- | --- | ---
**July 5** | 8 | Head | Tracks/ Pathways and Neck | Head | Intro to CS | Head | Orientation
9 | and | Intro to CS | and Neck | and | Orientation | Anatomy
10 | Neck | Tracks/ | Neck | Intro to Neck | Tracks/ | Neck | Pathways
11 | Anatomy | Pathways | Anatomy | Dent Prof | Course | Orientation
12 | Intro to the | Flex Time | Intro to the | Flex Time | Orientation
1 | Function OFC | Dental | Function OFC | Dental | Student
2 | Intro to Anatomy | Intro to CS | Anatomy | Welfare
3 | Dent Prof | Course | Course
4 | Date | **Time** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday**
**August 2** | 8 | Head | Tracks/ Head | and Pathways and Neck | Intro to Clin Session | Intro to Clin Session
9 | and | and Pathways and Neck | and | and | and | and
10 | Neck | Tracks/ Neck | and | Intro to Neck | and | Intro to Neck
11 | Anatomy | Pathways | Anatomy | Dent Prof | Course | Orientation
12 | Intro to the | Flex Time | Intro to the | Flex Time | Orientation
1 | Function OFC | Dental | Function OFC | Dental | Intro to
2 | Function OFC | Dental | Function OFC | Dental | Intro to
3 | Grand | Anatomy | Intro to Anatomy | Dent Prof | Pathways | Anatomy | Clinic Session
4 | Rounds | Course | Clinics | Skills | Course | SPI Session
5 | Date | **Time** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday**
**August 9** | 8 | Head | Tracks/ Head | and Pathways and Neck | Intro to Clin Session | Intro to Clin Session
9 | and | and Pathways and Neck | and | and | and | and
10 | Neck | Tracks/ Neck | Clinics | Neck | Tracks/ Neck | Neck | and | and
11 | Anatomy | Pathways | Anatomy | Dent Prof | Course | Orientation
12 | Intro to the | Flex Time | Intro to the | Flex Time | Orientation
1 | Function OFC | Dental | Function OFC | Dental | Intro to
2 | Function OFC | Dental | Function OFC | Dental | Intro to
3 | Grand | Anatomy | Intro to Anatomy | Dent Prof | Pathways | Anatomy | Clinics | Skills
4 | Rounds | Course | Clinics | Skills | Course | SPI Session
5 | Date | **Time** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday**
**August 16** | 8 | Head | Tracks/ Head | and Pathways and Neck | Exams | Exams
9 | and | and Pathways and Neck | and | and | and | and
10 | Neck | Tracks/ Neck | Exams | Neck | and | and
11 | Anatomy | Pathways | Anatomy | Dent Prof | Course | Orientation
12 | Intro to the | Flex Time | Intro to the | Flex Time | Orientation
1 | Function OFC | Dental | Function OFC | Dental | Intro to
2 | Function OFC | Dental | Function OFC | Dental | Intro to
3 | Grand | Anatomy | Intro to Anatomy | Dent Prof | Pathways | Anatomy | Clinics | Skills
4 | Rounds | Course | Clinics | Skills | Course | SPI Session
5 | Date | **Time** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday**
**August 23** | 8 | Head | Tracks/ Head | and Pathways and Neck | Final Exam | Final Exam
9 | and | and Pathways and Neck | and | and | and | and
10 | Neck | Tracks/ Neck | Exams | Neck | and | and
11 | Anatomy | Pathways | Anatomy | Dent Prof | Course | Orientation
12 | Intro to the | Flex Time | Intro to the | Flex Time | Orientation
1 | Function OFC | Dental | Function OFC | Dental | Intro to
2 | Function OFC | Dental | Function OFC | Dental | Intro to
3 | Grand | Anatomy | Intro to Anatomy | Dent Prof | Pathways | Anatomy | Clinics | Skills
4 | Rounds | Course | Clinics | Skills | Course | SPI Session
5 | Date | **Time** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday**
**August 30** | 8 | Head | Tracks/ Head | and Pathways and Neck | Final Exam | Final Exam
9 | and | and Pathways and Neck | and | and | and | and
10 | Neck | Tracks/ Neck | Exams | Neck | and | and
11 | Anatomy | Pathways | Anatomy | Dent Prof | Course | Orientation
12 | Intro to the | Flex Time | Intro to the | Flex Time | Orientation
1 | Function OFC | Dental | Function OFC | Dental | Intro to
2 | Function OFC | Dental | Function OFC | Dental | Intro to
3 | Grand | Anatomy | Intro to Anatomy | Dent Prof | Pathways | Anatomy | Clinics | Skills
4 | Rounds | Course | Clinics | Skills | Course | SPI Session
5

CPR will be held on Saturdays July 10 and July 17; 8 AM - 12 PM and 1 - 5 PM Sessions

Mentor meetings - two noon hours.
Course title: Introduction to Clinical Skills

Course number: DENT XXX

Term and year: D1 Summer, 2010

Location, time, and day. Lectures, Room XXX
Clinic, Room XXX (2 Blue Clinic)

Course personnel and contact information.
• Dr. Stefanac – stefanac@umich.edu
• Dr. Kanjirath – pkanjira@umich.edu
• Dr. Johnson – lynjohns@umich.edu
• Mr. Sweier – gsweier@umich.edu
• Ms. McDougall – hideaway@umich.edu

Course description.
This course provides fundamental skills that a D1 student needs to begin treating patients at the School of Dentistry. These include following patient privacy and security practices, practicing infection control and assisting a colleague, interviewing patients, identifying normal oral structures and performing a head and neck examination on a fellow classmate.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

1. Makes decisions affecting the practice of dentistry based on ethical and as prescribed by law.

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<th>Behaviors</th>
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5. Communicating effectively with patients and colleagues.

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Draft
8. Determines differential, provisional and definitive diagnoses by correlating and interpreting examination and assessment findings.

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16. Applies the principal of infection control and environmental safety in clinical practice.

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</tbody>
</table>

How progression toward competency or competency is measured.

Progress toward competency is measured with written assignments submitted via C-Tools and clinical performance evaluation.

Objectives.
At the end of this course the student will have the knowledge to practice privacy and security, basic dental assisting, be able to set up a dental cubicle and know the rational for infection control, identify normal oral and head and neck structures.

Session information.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 8, 2010</td>
<td>9-10</td>
<td>Lecture – Privacy and Security Practice</td>
<td>Johnson and Stefanac</td>
</tr>
<tr>
<td>July 14, 2010</td>
<td>3-4 PM</td>
<td>Lecture – Infection Control</td>
<td>Sweier, McDougal</td>
</tr>
<tr>
<td>July 21, 2010</td>
<td>3-4</td>
<td>Lecture – Basic Dental Assisting Skills</td>
<td>Sweier, McDougal</td>
</tr>
<tr>
<td>Date</td>
<td>Time</td>
<td>Activity</td>
<td>Instructor</td>
</tr>
<tr>
<td>------------</td>
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</tr>
<tr>
<td>July 21, 2010</td>
<td>4-5</td>
<td>Lecture – Interviewing skills</td>
<td>Stefanac</td>
</tr>
<tr>
<td>August 5</td>
<td>8-11</td>
<td>Clinic – Interviewing, Infection Control and Dental Assisting</td>
<td>Groups A, B, C</td>
</tr>
<tr>
<td>August 6</td>
<td>8-11</td>
<td>Clinic – Interviewing, Infection Control and Dental Assisting</td>
<td>Groups D, E, F</td>
</tr>
<tr>
<td>August 11</td>
<td>3-5</td>
<td>Lecture – Oral Structures and Examination Technique</td>
<td>Kanjirath</td>
</tr>
<tr>
<td>August 12</td>
<td>9-12</td>
<td>Clinic – Oral Structures and Examination Technique</td>
<td>Groups A, B, C</td>
</tr>
<tr>
<td>August 17</td>
<td>9-12</td>
<td>Clinic – Oral Structures and Examination Technique</td>
<td>Groups D, E, F</td>
</tr>
</tbody>
</table>

**Textbooks/ Readings.**


**Examination/grading policies.**

This is a PASS/FAIL course. Students must successfully complete all written assignments, attend clinic sessions and pass clinic competency exercises.
Course title. Dental Anatomy and Occlusion I

Course number. Occlusion I 521

Term and year. Summer, 2010. D1

Location, time, and day. Simulation Lab. G360. Tuesdays and Thursdays 2-5 pm

Course personnel and contact information.

Course description.
The content of this course addresses the morphology and structure of the teeth and their parts as they relate with their function. Also, it gives the opportunity to acquire hand skills necessary for further laboratory and clinical experience. This course teaches foundation knowledge in dental anatomy and occlusion that will give the students the opportunity to interact with the rest of the dental profession. Specific topics include defining and identifying and nomenclature relating to dental anatomy, drawing and identifying primary and permanent teeth, waxing teeth singly and in relation to adjacent teeth and function, concepts and principles of occlusion and recognizing the relationship between Dental Anatomy and different areas in Dentistry. During the learning experience the students have the opportunity to put this knowledge into hands-on practice by means of functional tooth waxing. The students will acquire basic hand skills to be used in future courses.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>_X_Foundation</td>
<td>_X_Basic</td>
<td><em>X</em></td>
<td><em>X</em></td>
</tr>
<tr>
<td>_X_Application</td>
<td>_Intermediate</td>
<td><em>X</em></td>
<td><em>X</em></td>
</tr>
<tr>
<td></td>
<td>_X_Advanced</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How progression toward competency or competency is measured.
Written and practical examinations

Objectives.
After completing this course, the student should have a good basic understanding of the anatomy of the primary and permanent dentition, its identification and relation with Endodontics, Periodontics, Restorative Dentistry and Oral Surgery. The student should also have basic hand skills developed during the waxing exercise where the acquired knowledge of the anatomy of the teeth and their occlusion is applied into practice. A basic knowledge of occlusion principles at the end of this course is expected.
<table>
<thead>
<tr>
<th>Session#</th>
<th>Date</th>
<th>Time</th>
<th>Topic:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>07-09-2010</td>
<td>3-5</td>
<td>Tooth Development (Chiego)</td>
</tr>
<tr>
<td>2</td>
<td>07-13-2010</td>
<td>2-3</td>
<td>Introduction (Vivas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dental Terminology and Nomenclature (Vivas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mounting Models on Articulator (Lab)</td>
</tr>
<tr>
<td>3</td>
<td>07-15-2010</td>
<td>2-3</td>
<td>Maxillary Incisors (Vivas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weekly Quiz 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Occlusal Adjustment (Lab)</td>
</tr>
<tr>
<td>4</td>
<td>07-20-2010</td>
<td>2-3</td>
<td>Mandibular Incisors (Vivas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weekly Quiz 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Introduction to Waxing Instruments and Techniques (Lab)</td>
</tr>
<tr>
<td>5</td>
<td>07-22-2009</td>
<td>2-5</td>
<td>Maxillary and Mandibular Canines (Vivas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Review Anterior Teeth (Vivas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tooth ID 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Waxing Criteria and Exercise (#8) (Lab)</td>
</tr>
<tr>
<td>6</td>
<td>07-27-2010</td>
<td>2-3</td>
<td>Maxillary Premolars (Vivas)</td>
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<td></td>
<td></td>
<td></td>
<td>Weekly Quiz 3</td>
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<tr>
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<td></td>
<td>Occlusion Terminology and Articulators (Vivas)</td>
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<td></td>
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<td></td>
<td>Waxing Exercise (#8) (Lab)</td>
</tr>
<tr>
<td>7</td>
<td>07-29-2010</td>
<td>2-3</td>
<td>Mandibular Premolars (Vivas)</td>
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<td>Weekly Quiz 4</td>
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<td></td>
<td>Waxing Exercise (#8) (Lab)</td>
</tr>
<tr>
<td>8</td>
<td>08-03-2010</td>
<td>2-5</td>
<td>WRITTEN MIDTERM EXAM (Vivas)</td>
</tr>
<tr>
<td>9</td>
<td>08-05-2010</td>
<td>2-5</td>
<td>Maxillary Molars (Vivas)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Weekly Quiz 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Waxing Exercise (#8) (Lab)</td>
</tr>
<tr>
<td>10</td>
<td>08-10-2010</td>
<td>2-3</td>
<td>Mandibular Molars (Vivas)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Weekly Quiz 6</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Waxing Exercise (#8) (Lab)</td>
</tr>
<tr>
<td>11</td>
<td>08-12-2010</td>
<td>2-3</td>
<td>Primary Teeth (Vivas)</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Weekly Quiz 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Occlusion: Putting all together (Vivas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Waxing Maxillary Canine (Lab)</td>
</tr>
<tr>
<td>12</td>
<td>08-17-2010</td>
<td>2-5</td>
<td>FINAL TOOTH ID (Vivas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FINAL WRITTEN EXAM (Vivas)</td>
</tr>
<tr>
<td>13</td>
<td>08-19-2010</td>
<td>TBA</td>
<td>PRACTICAL EXAM (Waxing # 8) (Vivas)</td>
</tr>
</tbody>
</table>

Textbooks/ Readings.

Textbooks: The following textbook is suggested as a reference but is not mandatory.

- Individual videotape vignette's (~40, see the Master List), which are associated with dental anatomy and morphology, are available for all the sessions in the course and can
be accessed from the individual session pages. Versions are available for viewing on both PC and MAC platforms.

- **Glossary**: For different sections of the course, a glossary of terms is provided that includes all key words.
- **Online Self-Test**: To reinforce your learning and prepare for the in-lab quizzes, please take the online self-study quizzes.

**Examination/grading policies.**

**Examinations**: Student achievement will be determined by a series of exercises and evaluations.

- There are a total of 7 **weekly quizzes**. The grade will be taken out of the best 5 results. These quizzes are 10 multiple choice question tests. These Quizzes account for a 7% of the grade.
- The **drawings** of teeth singly and in relation to adjacent teeth to be completed for each unit. These drawings along with the home assignments account for 3% of the grade.
- The **2 tooth ID quizzes** are meant to identify teeth and landmarks of given tooth specimens. These quizzes are 15 multiple choice question tests. These Quizzes account for 10% of the grade.
- The **mid-term and final written exam** are condensed multiple choice question tests. The Mid-Term Exam accounts for 20% of the grade. The Written Exam accounts for 25% of the grade.
- The **50-station tooth ID/landmarks exam** is a multiple choice question test. Students must score 85% or above on this test for successful completion of the course. This exam accounts for 15% of the grade.
- A **final or remediation test** on a date to be announced is reserved for only the students that fail to get 85% on the **100-station tooth ID/landmarks exam**. The student must get 85% or above on this test otherwise another date will be set to retake it. The grade on this Final Test does not count as a grade and it is not added or taking in consideration for the final grade.
- A **practical exam** in waxing are hands-on exams where the students are given ninety minutes to complete the requested exercise. This exam account for 15% of the grade.
- The **waxing projects** are hands-on exercises that the students must turn in on a daily basis once they complete their lab exercise. These projects account for 5% of the grade.
Grade Calculation:

Quizzes 5 quizzes at 2% each 7%
Drawings 8 drawings / home assignments 3%
Tooth IDs 2 at 5% each 10%
Midterm Written Exam Multiple choice test 20%
Final Written Exam Multiple choice test 25%
Tooth ID/Landmarks 100 teeth and landmarks exam 15%
Waxing Projects 2.5 % per project (s) for #8 and #11 5%
Waxing Practical 10% practical # 8 15%

Grading Scale: The final grades will be assigned according to the following final percentages. All the grades are cumulative. Students must achieve a grade of C- or better to complete the course.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>98% - 100%</td>
</tr>
<tr>
<td>A</td>
<td>94% - 97%</td>
</tr>
<tr>
<td>A-</td>
<td>90% - 93%</td>
</tr>
<tr>
<td>B+</td>
<td>87% - 89%</td>
</tr>
<tr>
<td>B</td>
<td>84% - 86%</td>
</tr>
<tr>
<td>B-</td>
<td>80% - 83%</td>
</tr>
<tr>
<td>C+</td>
<td>77% - 79%</td>
</tr>
<tr>
<td>C</td>
<td>74% - 76%</td>
</tr>
<tr>
<td>C-</td>
<td>70% - 73%</td>
</tr>
<tr>
<td>D</td>
<td>60% - 69%</td>
</tr>
<tr>
<td>E</td>
<td>59% or less</td>
</tr>
</tbody>
</table>

Other information.
# DENT 5XX— DENTAL HEAD AND NECK ANATOMY

**July – August, 2010**

Medical Science Bldg. II — 3rd floor  
Course Directors: David W. Brzezinski, Jerry Cortright  
Instructors: Kelli Sullivan, Walter Castelli, Lowell Fisher, Sabine Hildebrandt, John Stribley, Ameed Raoof, John Zeller

**Lecture:** MWF 8-9:00 a.m.  
South Lecture Hall

**Lab:** MWF 9-12:00 noon  
Gross Anatomy Labs 2,3, & 4

CTools Website: https://ctools.umich.edu

## COURSE CONTENT

<table>
<thead>
<tr>
<th>DATE</th>
<th>SESSION</th>
<th>SUBJECT</th>
<th>KEY TEXT PGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Embryologic Morphology and Anatomic Orientation</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Cranial cavity; osteology, dural venous sinuses, scalp, blood supply to brain</td>
<td>157-163; 247-257</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Neck I - Superficial neck, anterior triangle</td>
<td>109-125</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Neck II - Posterior cervical triangle, root of neck</td>
<td>125-143</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Facial muscles &amp; vessels; cutaneous nn. of face</td>
<td>45-156</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Lateral face, parotid gland, carotid triangle</td>
<td>179-186</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Paralingual space &amp; tongue; submandibular triangle</td>
<td>219-227</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Muscles of mastication &amp; TMJ</td>
<td>219-227 (Ch. 15)</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Infratemporal fossa</td>
<td>32-37</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Lateral pharyngeal wall &amp; larynx</td>
<td>43-45; 234-245</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>Orbit &amp; cavernous sinus</td>
<td>68-69; 165-174</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Nasal &amp; oral regions; sinuses; palate &amp; fauces</td>
<td>27-43; 211-216; 229-234</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>Maxillary nerve &amp; pterygopalatine fossa</td>
<td>209-211</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>Middle ear; fascial spaces</td>
<td>174-177; 319-326</td>
</tr>
</tbody>
</table>
### Knowledge ILOs

<table>
<thead>
<tr>
<th>Intended Learning Outcomes</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The student will be able to <strong>use</strong> essential anatomic terminology to describe human anatomic structure and function.</td>
<td>1. MCQ</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The student will be able to <strong>use</strong> essential anatomic terminology to describe three-dimensional points of reference and movements through various anatomic planes.</td>
<td>2. Restricted Response Essay</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>3. The student will be able to <strong>describe</strong> the morphology, arrangement, and organization of the fundamental structures within the head and neck. [see specific outcomes outlined in each laboratory session]</td>
<td>3. MCQ</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>4. The student will be able to <strong>describe</strong> how the underlying morphology, arrangement and organization of the various body systems work together in an integrated fashion with the head and neck.</td>
<td>4. Restricted Response Essay</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>5. The student will be able to <strong>explain</strong> common clinical problems of the various body systems and the head and neck as they directly relate to the underlying gross anatomy.</td>
<td>5. MCQ and/or Restricted Response Essay</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>6. The student will be able to <strong>explain</strong> the principles and applications of modern imaging techniques and modalities as they relate to identification and understanding of the underlying gross anatomical structures.</td>
<td>6. MCQ and/or Restricted Response Essay</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>Intended Learning Outcomes</td>
<td>Assessment</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>• Demonstrate proficiency at recognizing anatomic structures of the various body systems.</td>
<td>1. Practical Laboratory Examination</td>
</tr>
<tr>
<td>• Develop hand-eye coordination concomitant with the development of dissection skills.</td>
<td>2. Restricted Task In Laboratory</td>
</tr>
<tr>
<td>• Demonstrate proficiency at recognizing anatomical structures using common imaging modalities.</td>
<td>3. Practical Radiographic Examination</td>
</tr>
<tr>
<td>• Become proficient at presenting anatomical and clinical information in a concise and precise manner that demonstrates teaching and peer communication skills.</td>
<td>4. Oral Presentation Of Patient Work-Up</td>
</tr>
<tr>
<td>• Develop problem solving skills (in the context of small groups).</td>
<td>5. Restricted Task In Laboratory</td>
</tr>
<tr>
<td>• Demonstrate skill in the analysis of the patient’s medical history.</td>
<td>6. Restricted Essay</td>
</tr>
<tr>
<td>• Demonstrate the application and use of various imaging modalities as they are important in the diagnosis and treatment of common pathologic entities which have an anatomic etiology.</td>
<td>7. Restricted Essay</td>
</tr>
<tr>
<td>Intended Learning Outcomes</td>
<td>Assessment</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>■ Demonstrate and apply respect for the donor as the first patient.</td>
<td>1. Restricted Response Essay</td>
</tr>
<tr>
<td>■ Demonstrate accountability to the profession, peers, society, and patients.</td>
<td>2. Restricted Response Essay</td>
</tr>
<tr>
<td>■ Demonstrate an attitude of empathy and compassion toward donors, patients, and their families at the “Memorial Service” each Fall. (For D1s and D2s)</td>
<td>3. Restricted Response Essay</td>
</tr>
</tbody>
</table>
ASSESSMENT

• WEEKLY QUIZZES
  o 4 total
    ▪ 50% total score

• FINAL EXAMS
  o WRITTEN: (Lect Hall TBA)
    ▪ 25% total score
  o LAB PRACTICAL: (Dissection labs)
    ▪ 25% total score

ASSIGNED READING AND MODULES

• Anatomy Learning Modules
  o http://anatomy.med.umich.edu/courseinfo/module_index.html
    ▪ Anatomical Orientation
    ▪ Introduction to the Nervous System
    ▪ Spinal Cord and Spinal Nerves
    ▪ Introduction to the Autonomics
    ▪ Autonomic Nervous System
    ▪ Cranial Nerves
    ▪ Autonomics of the Head and Neck


NOTE: The list of suggested pages above is only a brief guide & is NOT COMPREHENSIVE. Read in your text and atlas as necessary for your own comprehension. Several chapters should be read and referred to throughout the course:

Ch. 1-3 Basic anatomy (review)                                                 Ch. 20 Lymphatics
Ch. 5 Embryology (review)                                                      Ch. 21 Blood vessels
Ch. 6 Osteology (IMPORTANT)                                                    Ch. 22 Fascia
Ch. 18 Cranial nn. (IMPORTANT)                                                  Ch. 22 Fascia

• Head and Neck Anatomy for Dental Medicine, Thieme
Course Title: INTRODUCTION TO THE FUNCTION OF THE ORALFACIAL COMPLEX  
Course Number: XXX  
Term and Year: D1 Summer  
Location, Time and Day: Room XXX, Monday 1-3 and Wednesday 1-3.  
Faculty: Robert Bradley, Course director.  

Course description: Dentists will spend their entire professional lives working in the oral cavity, face and cranium, that is, the orofacial complex. Indeed the basis of dental treatment is to maintain and restore orofacial functions. This course, then, is designed to familiarize the student dentist with the functions of the orofacial complex, a region that is of special provenance to the dental practitioner. This introductory course will pave the way for other courses that will analyze and present details of how these life important functions are controlled and integrated. The basic orofacial functions covered in this course are essential for a healthy life. When pathology occurs these functions will be compromised requiring the professional attention of a practicing dentist and other health professionals. The overall goal of the course is to understand the association between the structures of the orofacial region and the life essential functions of the craniofacial complex and to see the integration between orofacial functions and general health and well being.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level?

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Foundation</td>
<td>___Basic ___</td>
<td>X</td>
<td>___</td>
</tr>
<tr>
<td>___Application ___</td>
<td>___Intermediate ___</td>
<td></td>
<td>___Advanced ___</td>
</tr>
</tbody>
</table>

2. The graduating student participates in professional self-regulation.
   The graduating student…
   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
   2b. Understands the need for and establishes a plan for personal/professional growth and development.

4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.
   The graduating student…
   4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
   The graduating student…
   8a. Differentiates between health and disease.
   8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic

How progression toward competency or competency is measured.
A course paper.
Objectives.
To introduce students to the structure and function of oralfacial organs and tissues.
To inform entering students of the role of oralfacial structures in feeding and communication.
To present a series of clinical cases illustrating how various conditions will influence normal oralfacial function.
To present comparative data on how the oralfacial structures have adapted to the unique feeding behaviors of various mammalian species.
To provide students with an introduction to the clinical diagnosis of patients with disorders of oralfacial functions.

Session information.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 12</td>
<td>What are the functions of the oralfacial complex?</td>
<td>Bradley</td>
</tr>
<tr>
<td>July 12</td>
<td>All oralfacial functions are controlled by the CNS</td>
<td>Bradley</td>
</tr>
<tr>
<td>July 14</td>
<td>Adaptation of the oral facial complex to diet</td>
<td>Dasilva/Bradley</td>
</tr>
<tr>
<td>July 14</td>
<td>Case studies – salt appetite - fructose intolerance.</td>
<td>Dasilva/Bradley</td>
</tr>
<tr>
<td>July 19</td>
<td>Food intake and systemic disease – the sweet tooth and obesity</td>
<td>Bradley</td>
</tr>
<tr>
<td>July 19</td>
<td>Introduction to salivary secretion</td>
<td>Simmer</td>
</tr>
<tr>
<td>July 21</td>
<td>Role of oral mucosa in feeding</td>
<td>Mistretta</td>
</tr>
<tr>
<td>July 21</td>
<td>Mastication and swallowing</td>
<td>Gerstner</td>
</tr>
<tr>
<td>July 23</td>
<td>Speech – language - writing - reading</td>
<td>Bradley</td>
</tr>
<tr>
<td>July 23</td>
<td>Facial expression</td>
<td>Crane</td>
</tr>
<tr>
<td>July 28</td>
<td>Disorders of speech production</td>
<td>Gerstner</td>
</tr>
<tr>
<td>July 28</td>
<td>Effects of aging on oral communication</td>
<td>Pending</td>
</tr>
<tr>
<td>Aug 2</td>
<td>Visit to sleep disorder clinic</td>
<td>Gerstner</td>
</tr>
<tr>
<td>Aug 2</td>
<td>Negative emotions - fear</td>
<td>Bradley</td>
</tr>
<tr>
<td>Aug 4</td>
<td>Case study – insensitivity to pain</td>
<td>Bradley</td>
</tr>
<tr>
<td>Aug 4</td>
<td>Case study – trigeminal neuralgia</td>
<td>Dasilva</td>
</tr>
<tr>
<td>Aug 9</td>
<td>Visit to headache clinic</td>
<td>Cooper</td>
</tr>
<tr>
<td>Aug 9</td>
<td>Case study on salivary dysfunction</td>
<td>Murdoch-Kinch</td>
</tr>
<tr>
<td>Aug 11</td>
<td>Visit to Oral Pain clinic</td>
<td>Ashman</td>
</tr>
<tr>
<td>Aug 11</td>
<td>Amelogenesis imperfecta - case study</td>
<td>Simmer</td>
</tr>
<tr>
<td>Aug 16</td>
<td>Burning mouth syndrome - case study</td>
<td>Murdoch-Kinch</td>
</tr>
<tr>
<td>Aug 16</td>
<td>Eating disorders and oral health</td>
<td>Bradley</td>
</tr>
</tbody>
</table>

Textbooks/ Readings. Assigned readings

Examination/grading policies. Pass/fail based on an assigned paper.

Other information. Various aspects of this course will require use of various communication techniques which remain to be resolved. The sequence of topics may have to be modified to accommodate summer commitments of the faculty.
Syllabus

Course title
Grand Rounds – D1 program

Course number

Term and year
Summer D1 year

Location, time, and day
July 15-29 sessions, Thursday mornings, 8-10am
August 2-16 sessions, Monday afternoons, 3-5pm

Course personnel and contact information
Dr. Dennis J. Fasbinder, djfas@umich.edu

Course description
The objective of the course is to provide an introduction to the skills D1 students will be expected to apply when participating in Grand Round session. Students will be introduced to dental literature search techniques, reviewing literature articles, evidence-based decision making, and assessment of compiled information. Students will participate in two structured Grand Round sessions with faculty mentoring.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Foundation</td>
<td>X Basic</td>
<td>___</td>
<td>X</td>
</tr>
<tr>
<td>X Application</td>
<td>Intermediate</td>
<td>___</td>
<td>Advanced</td>
</tr>
</tbody>
</table>

How progression toward competency or competency is measured.
Students will be assessed on searching the dental literature by submitting two literature searches one for each of the two Grand Round sessions. Assessment will be based on the ability to find three articles on the assigned topic of the session.
Students will electronically submit two questions prior to each of the Grand Round sessions for discussion during the topic presentation.
Students will assess the relevance of their literature search relative to the topic presented in each of the two Grand Round sessions following the session.
Objectives

Develop an understanding and appreciation for importance of evidence based patient care
Promote skill building in searching for and accessing dental literature
Promote skill building in developing questions for discussion based on discovered dental literature
Develop enthusiasm for active participation in Grand Round sessions.

Session information.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic/Assignment</th>
<th>Presenter</th>
</tr>
</thead>
</table>
| July 15 | 8:00-10:00 | Searching the Dental Literature  
Assignment: submit 3 references on the topic to be presented at Grand Rounds | Mark MacEachern                |
| July 22 | 8:00-10:00 | Grand Rounds Session #1  
Topic: Extraction of Third Molars  
Assignment: Complete topic assessment | Guest Lecturers  
Moderator: D. Fasbinder |
| July 29 | 8:00-10:00 | GR Session #1 Review and Assessment | Moderator: Dr. Fasbinder       |
| August 2 | 3:00-5:00 | Introduction to Evidenced-based Decision Making  
Assignment: submit 3 references on the topic to be presented at Grand Rounds | TBD                           |
| August 9 | 3:00-5:00 | Grand Rounds Session #2  
Topic: Cleft Palate & Cleft Lip  
Assignment: Complete topic assessment | Guest Lecturers  
Moderator: R. Bradley |
| August 16 | 3:00-5:00 | GR Session #1 Review and Assessment | Moderator: R. Bradley         |

Textbooks/ Readings

There are no assigned textbooks for the course.

Examination/grading policies

Pass/Fail based on submission of all assignments and mandatory attendance in class.
Course title.  Introduction to the Dental Profession

Course number. 501

Term and year. D1 Summer

Location, time, and day. (see schedule)

Course personnel and contact information.

Co-Course Directors  Dr. M. Lantz  763-5651  mslantz@umich.edu
                     Dr. M. Fitzgerald  647-3904  markfitz@umich.edu

Course Coordinator  Nancy Kelly  763-5651  nankel@umich.edu

Course description.

This course introduces first year students to concepts of professionalism and professional ethics. The course consists of lectures, facilitated large and small group discussions, and an encounter with a standardized patient instructor.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

Competencies Addressed
1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
   1a. The graduating student practices as obliged by principles of ethics and the ADA Code of Ethics.

2. The graduating student participates in professional self-regulation.
   2a. The graduating student practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
   2b. The graduating student understands the need for and establishes a plan for personal/professional growth and development.

3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>_x_Foundation</td>
<td>_xBasic</td>
<td>_x</td>
<td>_x</td>
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</tbody>
</table>
How progression toward competency or competency is measured.

Student progression toward competency is measured using a written examination that tests student understanding reading assignments and of basic concepts of professional ethics and professional responsibility.

Objectives:

1. To prepare students for the White Coat Ceremony
2. To introduce students to the Honor System of the School of Dentistry, and issues related to academic and non-academic misconduct in dental school
3. To introduce students to the American Dental Association Principles of Ethics and Code of Professional Conduct, the American Student Dental Association Code of Ethics, and the American Dental Education Association Statement on Professionalism
4. To help students in the class get to know one another through interacting in small group discussion sessions
5. To provide an initial “patient experience” through interaction with a Standardized Patient Instructor
6. To introduce students to a faculty mentor
7. To prepare written work to support learning in this course and for use in the next course in the sequence.

Attendance Policy/Requirement:
Because much of your learning will occur through participation in group and in-class interactions, attendance at every class session is mandatory. Attendance will be taken at each class, and any unexcused absence may result in remediation assignments and/or failure of the course.

Absences must be reported to the Registrar’s office prior to the beginning of each class. The attendance hotline is 734-764-1512.

Textbooks/ Readings. All reading assignments are posted to the course CTools site.

Examination/grading policies:

Your performance in the course will be assessed as described below. The assessments are weighted as follows to determine your final grade:
10% for submitting all written assignments on time
25% for grading of In-class essay
65% for the final examination

The grading scale is as follows. A student receiving a grade of 69% or below will be required to repeat the course.

97-100 A+
94-96  A
90-93 A-
87-89 B+
84-86  B
80-83  B-
77-79 C+
74-76  C
70-73  C-
67-69 D+
64-66  D
60-63 D-
00-59  F

The final examination in this course is an “open book” test. Resources and tools for use during the exam will be posted in advance of the exam. Failure to bring the proper resources and/or tools with you to the exam may result in the loss credit for those sections on the examination that require use of the missing resources. You may be asked to bring a USB drive to the final exam for uploading your work. You may use the flashdrive given to you by Student Affairs at the beginning of the term or you may use your own. Submitted flashdrives can be returned to you only if your NAME is clearly marked on the outside of the flash drive.

Other Information

Developing a “professional identity” and making the transition from layperson to professional is one of the most important outcomes of professional education. This course is intended to help you begin to understand what it means to be a professional and to start the process of professional identity development. We think this is an exciting and meaningful process, and we want to be of assistance to you as you begin the journey. We expect that your professional growth and development will continue throughout your professional lifetime. Please feel free to contact course faculty members at any time this semester if you desire to explore any of the ideas / concepts presented in the course in more detail through discussion. We welcome the opportunity to get to know you better and assist you in your efforts to learn.

501 - Introduction to the Dental Profession – Course Schedule

Dent 501, Summer 2010
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Facilitators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fri. 07/09/10</strong>&lt;br&gt;S. Week 1</td>
<td>1–2 PM</td>
<td>Course Overview&lt;br&gt;Professional Role Orientation Inventory (PROI)&lt;br&gt;Technology Overview</td>
<td>Drs. Lantz &amp; Fitzgerald&lt;br&gt;Ms Springfield&lt;br&gt;Drs. Lantz &amp; Fitzgerald</td>
</tr>
<tr>
<td></td>
<td>2–3 PM</td>
<td>In-Class Essay</td>
<td></td>
</tr>
<tr>
<td><strong>Mon. 07/12/10</strong>&lt;br&gt;S. Week 2</td>
<td>3-5 PM</td>
<td>School of Dentistry Honor System and University Policies (Academic &amp; Non-academic Misconduct) Discussion / Q&amp;A/ College/dental school differences</td>
<td>Drs. Lantz, Fitzgerald, Polverini, Woolfolk, E.C. Rep, Honor Council Rep</td>
</tr>
<tr>
<td><strong>Thu. 07/15/12</strong>&lt;br&gt;S. Week 2</td>
<td>10 AM–Noon</td>
<td>Small Group Discussion 1:&lt;br&gt;Can Ethics be Taught?&lt;br&gt;• Piper et al: Can Ethics be Taught excerpts pp. 13-29&lt;br&gt;• Rule &amp; Bebeau text: Appendix E Kegan’s Stages of Identity Formation pp. 173-176.</td>
<td>D4 Facilitators&lt;br&gt;Varied rooms – see CTools for list</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource Readings:&lt;br&gt;• A Guide to Quality Tutorials&lt;br&gt;• Aids for Giving and Receiving Feedback&lt;br&gt;• Guide to Professional Behaviors in Tutorial Meetings</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prior to class, complete above readings on-CTools site. Students should have copies of the materials with them or should download the documents to your desktop and then bring your laptop to class.</td>
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<tr>
<td></td>
<td></td>
<td><em>Please bring your laptop.</em></td>
<td></td>
</tr>
<tr>
<td><strong>Mon. 07/19/10</strong>&lt;br&gt;S. Week 3</td>
<td>3 – 5 PM</td>
<td>Small Group Discussion 2:&lt;br&gt;Are Professionalism Lapses in Dental School Important?&lt;br&gt;• Papadakis: Disciplinary Action by</td>
<td>D4 Facilitators&lt;br&gt;Varied rooms – see CTools for list</td>
</tr>
</tbody>
</table>
Medical Boards and Prior Behavior in Med. School
- Weise: Bad med students, bad docs
- Ann Arbor News: Study: Unprofessional behavior in medical school a red flag
- Howard: UNLV students accused of forgery to receive degrees
- Sherman & Margolin: Cheating scam rocks UMDNJ dental school

Prior to class, complete above readings on CTools site. Students should have copies of the materials with them or should download the documents to your desktop and then bring your laptop to class.

Please bring your laptop.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue. 07/20/10</td>
<td>Noon–1 PM</td>
<td>(Tent) Mentor/Mentee Social 1</td>
<td>Sindecuse Atrium</td>
</tr>
<tr>
<td>Thu. 07/22/09</td>
<td>10 AM– Noon</td>
<td>Small Group Discussion 3: Professional Codes, Professional Obligations, and the Central Values of Dentistry</td>
<td>D4 Facilitators</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ADA/MDA Code of Ethics</td>
<td>Varied rooms – see</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ASDA White paper on Ethics and Professionalism in Dental Education</td>
<td>CTools for list</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ADEA Statement on Professionalism in Dental Education</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Ozar &amp; Sokol excerpt: pp. 36-40, 67-73 Central Values of Dental Practice</td>
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<tr>
<td></td>
<td></td>
<td>- Rule &amp; Bebeau excerpt, pp.171-172 Expectations for and Obligations of the Dental Professional; Virtues Exhibited</td>
<td></td>
</tr>
</tbody>
</table>

Prior to class, complete above readings on CTools site. Students should have copies of the materials with them or should download the documents to your desktop and then bring your laptop to class.

Please bring your laptop.

Wed. 07/28/10 | 4–5 PM  | - Preparation for White Coat                                                                             | Dr. Lantz, Ms. Kelly, |
| **S. Week 4** | **Ceremony**  
• Oath of Aspiring Dental Professionals  
• Class Oath | **D4 White Coat Committee** |
|---|---|---|
| Thu., 07/29/10  
**S. Week 4** | 10 AM – Noon  
Critique of In-class Essay Grading Instructions  
History of Dentistry as a Profession | **Assignment** – Critique of In-Class Essay due to CTools by noon Thur. 08/05/10  
Dr. Bagramian |
| Fri. 07/30/10  
**S. Week 4** | 2–4 PM  
**White Coat** Ceremony & Reception  
*Students must report to Rackham Auditorium by 1:40PM* | Dean Polverini, and speakers |
| Fri. 08/06/10  
**S. Week 5** | 2–5 PM  
SPI Experience #1  
Group 1 (S-Z) 2-3:30 PM  
Group 2 (M-R) 3:30-5 PM  
Groups 3 (G-L) & 4 (A-F) study time  
*Prior to class, read instructions on CTools* | Ms. Guenther, SPI Instructors  
In Orange Clinic  
Dent 3340 |
| Thu. 08/12/10 | Noon–1 PM  
(Tent) Mentor/Mentee Social 2 | Sindecuse Atrium |
| Fri. 08/13/09  
**S. Week 6** | 2–5 PM  
SPI Experience #1  
Group 3 (G-L) 2-3:30 PM  
Group 4 (A-F) 3:30-5:00 PM  
Groups 1 (S-Z) & 2 (M-R) study time  
*Prior to class, read instructions on CTools* | Ms. Guenther, SPI Instructors  
In Orange Clinic  
Dent 3340 |
| **TBD**  
**S. Week 7** | TBD  
• Final Exam  
*Laptop Needed for exam.* | Drs. Lantz & Fitzgerald  
Kellogg Auditorium  
Rm. G005 |
Course title. Introduction to Pathways in the DDS Curriculum
Course number. tbd
Term and year. D1 Summer, 2010
Location, time, and day. (see schedule)

Course personnel and contact information.
Director William Giannobile 998-1468 wgiannob@umich.edu
Co-Director Darnell Kaigler 615-4023 dkaigler@umich.edu

Course Website: Available on CTools

Course description.
This seminar introductory course will provide an overview on the DDS pathways that are available to pre-doctoral dental students. These pathways include the 4-year DDS curriculum combined with Research, Health Care Delivery or Leadership tracks. The 5-year DDS Master’s Pathways include Clinical Research, Health Care Policy or Public Health tracks. The 7+ year DDS/PhD Pathway includes the DDS combined with a PhD in Oral Health Sciences. The summer program will include seminar presentations with information from faculty and current student trainees on opportunities for students to participate in various pathways.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

Competencies Addressed

2. The graduating student participates in professional self-regulation.
   The graduating student...
   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
   2b. Understands the need for and establishes a plan for personal/professional growth and development.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><em>X</em> Foundation</td>
<td><em>X</em> Basic</td>
<td><em>X</em></td>
<td>___</td>
</tr>
<tr>
<td>__Application</td>
<td>__Intermediate</td>
<td>___Advanced</td>
<td>___</td>
</tr>
</tbody>
</table>

Contact Hours.
Classroom seminars and activities (total of 5 sessions) will be held on Tuesdays from 8 AM – 12 PM during the summer.
Objectives.
1. To gain information on the 4-year DDS program combined with a research, leadership or health care delivery track, the 5-year DDS Master’s Pathways combined with Clinical Research, Health Care Policy or Public Health tracks, or the 7+ year DDS/PhD Pathway with a PhD in Oral Health Sciences

2. To understand the plan on how students are to utilize their flexible time for the specific pathways

3. Provide information to students regarding the identification and selection of mentors to individualize their experience as they begin to make their choices by the end of the D1 year to enter into a pathway

Format for each of the 5 summer sessions:

8:00-8:50 AM - Faculty overview of each of the 5 areas: DDS-Research, DDS-Leadership, DDS-Health Care Delivery, DDS-MS/MPH/MPP, DDS-PhD. Each session will be focused to provide an orientation of the elements required in the entry into a pathway decision-making required to identify a track by the end of the D1 year.

9:00-9:50 AM – Student presentations on the pathways. DDS students who are currently or have previously participated in pathways present their specific experiences relevant to the program.

10:00 – 12:00 – Student Kick-off/immersion experience on each pathway. An experience with exposure of students to specific elements of each of the pathways will be made available in an event whereby students can gain firsthand knowledge on aspects of each program. These events may be held on or off campus. Examples of the planned immersion experiences are research open house events whereby former students of the SRP present posters and faculty and postdoctoral fellows provide direct information regarding specific faculty mentors who may be able to be identified to work with individual students.

Textbooks/Readings. none

Examination/grading policies.
To successfully complete all segments of this course, the student must:
1. Attend a minimum of 80% of the scheduled sessions during the Summer Term.
2. Submit a concise, coherent written summary of "The three most important things that I learned during the Pathways Orientation that will be directly applicable to my professional development."
3. Successfully complete the Pathways Orientation Self-Summer Assessment at the end of the Summer Term.

Summer Term Information.
The Summer Term is fully graded (A, B, C, etc.) for the D1 students. Half (50%) of the Summer course grade is based on faculty receipt of satisfactory “Minute Papers” for attended Seminars according to the following guidelines:
- 80% or more of the Seminars to receive a C for this portion of the grade
- 90% or more of the Seminars to receive a B for this portion of the grade
- 100% of the Seminars to receive an A for this portion of the grade

A “Minute Paper” will minimally consist of a short (at least one sentence) response to the following pre-established question regarding the attended Seminar:

- What were the most valuable and interesting aspects of today’s discussion?

The other half (50%) of the Summer course grade will be based on a concise, coherent and engaging written summary of “The three most important things that I learned during the Summer Term seminars that will be directly applicable to my professional development.” This assignment must be:

1. completed independently by each student and identified only by honor code number.
2. typewritten and fit on only one sheet of paper (may be printed double-sided).
3. turned in during class time on August 10, 2010.

Drs. Giannobile and/or Kaigler will read and grade each summary based on accuracy and clarity of thought and expression.
# Summer Session Schedule

## DDS-Research

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, July 13</td>
<td>8:00-8:15</td>
<td>Pathways Course overview</td>
<td>William Giannobile, Darnell Kaigler</td>
</tr>
<tr>
<td></td>
<td>8:15-8:50</td>
<td>Faculty overview: DDS-Research</td>
<td>Darnell Kaigler</td>
</tr>
<tr>
<td></td>
<td>9:00-9:50 AM</td>
<td>Student presentations</td>
<td>Katie Kempenien</td>
</tr>
<tr>
<td></td>
<td>10:00 – 12:00</td>
<td>Student Kick-off/ immersion</td>
<td></td>
</tr>
</tbody>
</table>

## DDS-Leadership

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, July 20</td>
<td>8:00-8:50</td>
<td>Faculty overview: DDS-Leadership</td>
<td>Russell Taichman</td>
</tr>
<tr>
<td></td>
<td>9:00-9:50 AM</td>
<td>Student presentations</td>
<td>Meghan Dubois</td>
</tr>
<tr>
<td></td>
<td>10:00 – 12:00</td>
<td>Student Kick-off/ immersion</td>
<td></td>
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</tbody>
</table>

## DDS, MS, MPH, MPP

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, August 3</td>
<td>8:00-8:50</td>
<td>Faculty overview: DDS, MS, MPH, MPP</td>
<td>William Giannobile</td>
</tr>
<tr>
<td></td>
<td>9:00-9:50 AM</td>
<td>Student presentations</td>
<td>Lindsay Rayburn, Evelyn Lucas-Perry</td>
</tr>
<tr>
<td></td>
<td>10:00 – 12:00</td>
<td>Student Kick-off/ immersion</td>
<td></td>
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</tbody>
</table>

## DDS, PhD

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, August 10</td>
<td>8:00-8:50</td>
<td>Faculty overview: DDS, PhD</td>
<td>Charlotte Mistretta</td>
</tr>
<tr>
<td></td>
<td>9:00-9:50 AM</td>
<td>Student presentations</td>
<td>Chad Novince, Kathryn Ritchie</td>
</tr>
<tr>
<td></td>
<td>10:00 – 12:00</td>
<td>Student Kick-off/ immersion</td>
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</tbody>
</table>

## DDS-Health Care Delivery

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, July 27</td>
<td>8:00-8:50</td>
<td>Faculty overview: DDS-Health Care Delivery</td>
<td>Bill Piskorowski</td>
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<td>9:00-9:50 AM</td>
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<td>10:00 – 12:00</td>
<td>Wrap-up / Exam</td>
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Curriculum Committee Review of New Proposed D1 Fall Term Courses

Executive Summary

Review Process:

The Curriculum Committee continued their process for review of the courses that comprise the new D1 fall term. Each course director developed a course proposal consisting of a course outline and/or a course syllabus, and prepared responses to a set of review questions developed by the Committee prior to meeting with the Committee. At meetings with the Committee, each course director provided a brief introduction to the course. The course review was lead by a Curriculum Committee member who served as primary reviewer for that course. All members of the Committee were invited to contribute to the discussions. At the end of each course review session, course directors were apprised of any tasks remaining to be completed or any course materials needing to be revised or submitted to the Committee in order for the course to be approved.

Findings:

Thirteen courses were proposed for the new D1 fall term and all have now been approved by the Curriculum Committee (see Appendix 1 for the term schedule and Appendix 2 for syllabi). These courses are:

Title

Applied Biomaterials
Basic Biomaterials
Behavioral Science I
Cariology
Cell and Molecular Biology
Clinical Foundations I
D1 Comprehensive Care Seminar
Grand Rounds
Infection and Immunity
Introduction to the Dental Profession
The Oral Facial Complex in Health II
Pathways Program
Scientific Foundation for Evidence-based Dentistry
All course directors addressed at least to some extent, the goals of the Vision Implementation Team (VIT) in evolving our curriculum:

**Defining Characteristics of the U-M School of Dentistry Graduate (Draft: Sept. 15, 2009)**

The U-M DDS graduate is a highly skilled and self-motivated clinician who applies scientific knowledge and critical thinking to achieve optimal oral health.

The U-M dentist:

a. has a deep knowledge and understanding of the science that underpins diagnosis, risk assessment, prevention, management, and treatment in the practice of dentistry;

b. practices with the understanding that the orofacial complex is the gateway to the body with principal roles in regulating life-essential functions;

c. interacts within other health professions to represent and promote oral health as a key component of total health;

d. is prepared to influence policy for the profession through the ability to evaluate competing claims and positions, and through active participation in local and national organizations;

e. models integrity and professional responsibility through ethical behavior in professional practice and daily life.

**VIT goals** - The Committee discussed these defining characteristics with each of the course directors, particularly with respect to how their coursework planned to foster development of these characteristics by our students. We particularly focused discussion related to development of student’s critical thinking and problem-solving skills (global characteristic). Course directors were readily able to describe how their courses contributed to students’ acquisition of deep knowledge of science and understanding of the principle roles of the orofacial complex in regulating life essential functions (a and b) as appropriate for first year students.

**Testing/Assessment** - The Committee had discussions with each of the course directors regarding how course testing and other assessment strategies could be employed to help students develop their critical thinking and problem-solving skills and to assess their progress toward developing and attaining the other defining characteristics described by the VIT.

**Integration of concepts with other concurrently running courses** - Some of the course directors had well developed plans for integrating the content of their courses with other ongoing D1 Summer term courses. The Committee was able to offer suggestions to all of the course directors regarding additional “touch points” for potential integration of course work based on its review of all of the concurrently running courses.
Thematic issues that emerged in the review and Committee recommendations to address them:

**Communication/coordination of effort between course directors.** As with the summer term review, it was clear during the fall term review that we should try to achieve better communication between directors of concurrently running courses and between “core leaders” and other VIT team leaders. This communication is necessary to manage overlap, redundancy, and identification of missing information as well as to support integration of the curriculum and the Committee recommends developing formal processes to support this communication.

**Assessment and Pedagogy** – Also as with the summer term review, course directors were encouraged to expand the use of learning methods in their courses beyond the lecture format and assessment methods beyond the use of multiple choice tests to support students’ development of critical thinking and problem-solving skills. The Committee recommends providing opportunities for faculty development in this area. (The Committee found the following reference helpful and encourages the faculty to review it: Albino, JEN et al. 2008. Assessing Dental Students’ Competence: Best Practice Recommendations in the Performance Assessment Literature and Investigation of Current Practices in Predoctoral Dental Education, JDE 72:1405.)

**Overall Recommendation:** The Committee recommends that the faculty vote approval of the new proposed D1 fall term courses.
## Proposed D1 Fall 2010

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Note: There will be some time sharing among the following courses: Intro to Prof, Cariology, Clin Fnd I, and Comp Care Seminar. Details will be shown in the individual course schedules given to students.
Syllabus Template

Course title. Applied Biomaterials I – Direct Restorative Materials

Course number. Formally 508A

Term and year. Fall – II/D1

Location, time, and day. Formally G378, M, W 1-2 PM

Course personnel and contact information. Course Director: David H. Kohn, Ph.D. (764-2206; dhkohn@umich.edu)

Course description. In this lecture-based course in which lectures parallel concepts discussed in the pre-clinical laboratory, students will learn principles of replacing/restoring oral structures with direct restorative materials. These objectives are accomplished by conveying fundamental physical, chemical and biological principles important for understanding, choosing, manipulating and evaluating specific types of dental materials that students are using in the preclinic and clinic. Specific materials discussed include: liners, varnishes, adhesion, sealants, composites, amalgams.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

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<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
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<tr>
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<td>_Basic</td>
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<tr>
<td>___Application</td>
<td>___Intermediate</td>
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4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice. (Knowledge: Foundation)

The graduating student...

6a. Identifies patient values, expectations and goals for oral health care. (Knowledge: Foundation)

9g. Develops treatment plans that address the patient’s esthetic concerns. (Knowledge: Foundation)

14. The graduating student provides oral health care to treat/manage craniofacial and dental diseases/disorders and their effects, including:

14a. Preservation and restoration of teeth. (Knowledge: Foundation)

14b. Replacement of teeth. (Knowledge: Foundation)

14c. Periodontal therapy. (Knowledge: Foundation)

14d. Pulpal therapy. (Knowledge: Foundation)

14e. Treatments for/management of soft tissue diseases/disorders. (Knowledge: Foundation)
14f. Hard and soft tissue surgery. (Knowledge: Foundation)
14g. Management of space and treatment/management of malocclusion. (Knowledge: Foundation)

16. The graduating student applies the principles of infection control and environmental safety to clinical practice. (Knowledge: Foundation)

Attitudes Associated with Course

Esthetic dentistry - esthetic properties of material integrated into discussions of physical properties (e.g. composites - need balance between esthetics and mechanical properties; amalgam - societal acceptance/rejection of Hg-containing materials)

How progression toward competency or competency is measured. Written examination

Objectives.

Students will demonstrate understanding of the processing-composition-structure-property synergy in biomaterials and how these interrelations impact clinical function of materials. Students will be able to select among biorestorative materials, choosing best one for clinical application at hand.

Students will be able to convey fundamental physical, chemical and biological principles important for understanding, choosing, manipulating and evaluating specific types of dental materials that they are using in the preclinic and clinic.

Students will demonstrate understanding of the various liners, varnishes, adhesives, sealants, composites, amalgams.

Students will demonstrate the competency to progress from small to large restorations.

Students will demonstrate the competency to progress from more conservative to less conservative dental materials.

Students will be able to articulate the bases for success/failure of restorative dental materials rooted in fundamental principles.

Students will be able to articulate general scientific concepts rather than specific products.

Session information.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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<tr>
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<td></td>
<td>Introduction</td>
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<tr>
<td>10/25</td>
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<td>Varnishes, Ca(OH2), Liners</td>
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<tr>
<td>10/27</td>
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<td>Principles of Adhesion</td>
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<td>11/1</td>
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<td>Dentin Adhesives</td>
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<td>Sealants</td>
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<td>Composites - I (Classification)</td>
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<td>Composites - II (Composition)</td>
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<td>11/15</td>
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<td>Composites - III (Chemical Reactions)</td>
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<td>11/17</td>
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<td>Composites - IV (Properties)</td>
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<tr>
<td>11/22</td>
<td>Amalgam: Composition, Reactions</td>
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<td>Amalgam: Manipulation and Properties</td>
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<td>Amalgam: Hg Toxicity, Environmental Issues</td>
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<td>12/6</td>
<td>Review</td>
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Examination/grading policies. 1 cumulative exam at end of semester; class participation (asking and answering questions) is considered

Other information.
Biomaterials 507 - Basic Biomaterials

Fall 2010, D-1

Lecture Hours: Monday and Wednesday 1:00-2:00 PM

Room G378, Dental School

Instructor: Peter X. Ma, PhD, Professor
Email: mapx@umich.edu  Phone: 764-2209
Office: 2211 Dental School
Office Hour: 4:00-5:00 PM Thursdays

<table>
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<tr>
<th>Date</th>
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<tbody>
<tr>
<td>8/25  (W)</td>
<td>Introduction: biomaterials, dental materials, selection and applications</td>
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<tr>
<td>8/30  (M)</td>
<td>Mechanical properties: Elastic</td>
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<tr>
<td>9/01  (W)</td>
<td>Mechanical properties: Viscoelastic</td>
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<td>9/06  (M)</td>
<td>Labor Day - No class</td>
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<tr>
<td>9/08  (W)</td>
<td>Clinical importance of biomaterials in dentistry (Dr. Dennison)</td>
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<tr>
<td>9/13  (M)</td>
<td>Mechanical properties: Hardness and fatigue</td>
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<tr>
<td>9/15  (W)</td>
<td>Surface properties</td>
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<tr>
<td>9/20  (M)</td>
<td>Surface properties and adhesion</td>
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<td>9/22  (W)</td>
<td>Midterm</td>
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<tr>
<td>9/27  (M)</td>
<td>Bio-restoration &amp; tissue engineering, brief review of Midterm</td>
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<tr>
<td>9/39  (W)</td>
<td>Optical properties</td>
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<td>10/04 (M)</td>
<td>Structure of metals, alloys, and ceramics</td>
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<td>10/06 (W)</td>
<td>Materials and phase diagrams</td>
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<tr>
<td>10/11 (M)</td>
<td>Polymers, and review for final</td>
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<tr>
<td>10/13 (W)</td>
<td>Final Exam</td>
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</table>


Grade: Midterm - 35%  Final - 65%
Course title: Behavioral Science I
Course number: Dent 518
Term and year: Fall Term 2010
Location, time, and day: Lecture Hall G378, Wednesdays,
First half of term: 1 hour 9:00 - 10:00 am
Second half of term: 2 hours 8:00 – 10:00 am
Course Director: Dr. Marita R. Inglehart
Contact information: Office: Dent B393, Tel. 763-8073; E-mail: mri@umich.edu

Course description

This course is the first of three courses in Behavioral Science for pre-doctoral dental students. The overall objective is to make the students aware of the importance of constructive communication between a dental care provider and a patient and to provide them with the basic concepts needed to understand and create constructive patient-provider interactions. The students will be introduced to a patient-centered, culturally-sensitive approach to providing dental care in an interdisciplinary team. The foundation knowledge needed to understand human behavior and communication in the dental office will be provided. In addition, the students will engage in skills training concerning taking a medical and dental history and interviewing a new patient. Lectures and case presentations focus on demonstrating how the knowledge base of the behavioral sciences can be applied to oral health and oral health care. This course is supplemented by reading assignments.

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them is measured at the following levels:

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<th>Knowledge</th>
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<th>Behaviors</th>
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<td>X Application</td>
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Dental Graduate Competencies addressed: This course aims to develop in the student the behaviors and attitudes required for developing the following competencies defined in the document “Competencies for the New Dental Graduate”. Competencies 1a, 2a, 2b, 3, 4a and b, 5 a, b and c, 6 a and b, e, 7a, e, g, 8a, d, 9a, b, c, f, g, h, 10a, 15, 17b.

How progression toward competency or competency is measured.

Measurement of the acquisition of knowledge, skills, attitudes, and behaviors required to meet the competencies:

- At the beginning of each lecture, a one minute paper will be given that challenges the student to report on some aspects of the required readings for this class and reflect on the relevance of the upcoming material. This one minute paper focuses on making the students aware of how the upcoming lecture might relate to their own background and to oral health-related issues in general. (15% of grades)
- At the end of the lectures, short quizzes or one minute response papers will be given to assess the students’ understanding of the material presented in class and their ability to apply this
material to concrete problems in the dental setting. These quizzes/one minute responses are open book exams. (30%).

- During the second part of the term, the students will engage in a standardized patient exercise concerning taking a medical and dental history. The students will be videotaped while they engage in an interview with a new “patient”. They will self evaluate their performance immediately after the experience as well as when they watch the videotaped interaction and will provide feedback to peers about the peers’ performance. (20%)

- At the end of the term, a cumulative final exam will be given that consists of multiple choice questions. (35%). This exam is not an open book exam.

- Up to 8 extra points can be acquired by attending the monthly lunch time CE courses on treating patients with special needs.

**Examination / grading policies:**

The final grade will be based on the grades in the one minute papers at the beginning of the class and the quizzes and one minute responses at the end of the class, the self and peer evaluations of the standardized patient experience, and the performance in the final exam. The final exam will cover the material presented in the classes and in the required readings. Grades are given according to the following scale:

A+ = +100 - 97; A= 96-94; A-=93-91; B+=90-88; B=87-85; B-=84-82; C+=81-79.
Objectives

1. **Behavioral science and dentistry - an introduction**
   - Identify how the knowledge base of behavioral science might make some contributions to understanding oral health and disease and oral health care issues.
   - Define the terms “health”, “disease”, “behavioral science”, and “behavioral dentistry” and identify how these concepts relate to your professional life.

2. **The patient**
   2.1. **Oral health-related quality of life (ohrqol)**
       - Define the term oral health-related quality of life and its four aspects.
       - Identify how ohrqol can be measured and assessed in the dental office.
       - Describe how oral health and ohrqol are related.
       - Describe how oral health care affects ohrqol.
       - Describe how dental appearance related to facial attractiveness and ohrqol.
       - Describe how facial attractiveness affects a person’s life over the life course.
       - Discuss the role of facial attractiveness in dentistry.

2.2. **Dental fear / anxiety**
   - Define the terms dental anxiety, fear, and phobia and relate them to dental care.
   - Identify the major causes of dental fear.
   - Identify ways in which dental fear can be diagnosed/identified and assessed in a dental office.
   - Identify the consequences and problems when patients have dental fear.
   - Discuss the ways in which pediatric and adult dental patients should be treated in order to prevent the development of dental fear.
   - Identify strategies to reduce dental fear.

2.3. **Dental pain**
   - Describe the ways communication between a dental health care provider and a patient should be structured if pain perception should be minimized.
   - Describe definitions of pain and their origins.
   - Describe methods to measure pain.
   - Describe methods of non pharmacological approaches to managing acute pain and chronic pain.
   - Describe the prevalence of chronic pain in the US population.

2.4. **Personality differences and social support and oral health and oral health care**
   - Describe different views on personality and how they relate to your patients.
   - Define personality characteristics that will moderate how your patient relates to his/her oral health and to your interaction in the dental office.
   - Define the term “social network” and identify its major components.
   - Describe the ways in which your patients’ social support system affects (a) your patient’s oral health, and (b) oral health behavior.
   - Describe the ways in which social support is crucial in socializing children to acquire positive attitudes and behaviors concerning oral health care.
3. **The dental healthcare provider**

3.1. **Information processing and decision making**
- Identify the unique characteristics of human information processing and decision making.
- Identify biases that can affect decision making when providing dental care.
- Identify problems in decision making that might affect treatment planning.

3.2. **Provider stress and impairment**
- Define the terms “stress”, “coping”, and “appraisal” and relate them to your current and future professional situation.
- Describe strategies to cope with stress based on your understanding of the stress concept.
- Describe the degree of dental healthcare provider impairment (rate of alcoholism, drug addiction and suicide).
- Identify the factors that might increase the likelihood of a provider impairment.

4. **The treatment alliance**

4.1. **Meeting the patient: Establishing rapport & The power of nonverbal communication**
- Define the term “rapport” and how it can be established and recognized.
- Identify the major elements of nonverbal communication.
- Describe the ways in which touch can be positive and negative for the communication between dental healthcare providers and patients.
- Describe the special significance of facial expressions for the communication of emotions.
- Identify ways in which nonverbal communication is universal and in which it is culturally specific.
- Describe the special significance of personal space considerations when providing dental care.
- Being able to demonstrate constructive behavior that creates rapport with a patient in a standardized patient interaction.
- Being able to self and peer evaluate patient-provider interactions concerning their success in establishing rapport.

4.2. **Collecting the necessary information: Taking a medical / dental history & Verbal communication**
- Identify the factors in the communication model (who, what, how, to whom) and discuss their relevance when providing dental care to a diverse patient population.
- Describe the problems caused by the dental healthcare provider in verbal communication and what can be done about it.
- Describe the problems caused by a patient in verbal communication and what can be done about it.
- Identify Dos and Don’ts in verbal communication if dental fear and pain perception should be minimized.
- Identify the reasons why taking a history is relevant for a dental healthcare provider.
- Describe the stages in an interview and the major parts of a medical history.
- Describe possible opening questions when taking a medical history.
- Describe the ways in which open and closed ended questions are asked and when to use them in the course of an interview.
- Identify problems concerning honesty and openness in interviewing.
- Describe interviewer biases and how they can affect proper history taking.
- Being able to demonstrate constructive interviewing behavior that allows the provider to collect
the information needed to provide optimal care for a patient.
- Being able to self and peer evaluate patient-provider interactions concerning their success in
collecting all information needed to successfully treat a patient.

4.3. Interacting with the patient: Treatment cooperation
- Describe the rates of noncompliance with medical recommendations in general and with dental
recommendations specifically.
- Describe the consequences of noncooperation between patients and dental healthcare providers.
- Identify the major factors affecting the degree of cooperation between patients and healthcare
providers.
- Describe the health belief model, its pros and cons, and how it applies to the dental field.
- Describe the theory of reasoned action, its pros and cons and how it applies to the dental field.
- Describe cognitive approaches to prevention and their pros and cons.
- Discuss the terms “motivation”, “knowledge” and “skills” as they apply to the prevention of
dental diseases.

4.4. Communication with challenging patients: Patients with anxiety / anger / depression / apathy / impatience
- Identify characteristics that are commonly ascribed to “good” and “bad” patient behavior and
discuss the way in which these characteristics relate to reactance theory and the theory of learned
helplessness.
- Describe the consequences of showing “good” and “bad” patient behavior (a) for the patient’s
health, and (b) for receiving care.
- Identify causes of anger in dental patients, how a dental healthcare provider can identify it, and
how it should be responded to by a dental healthcare provider in order to allow providing optimal
care.
- Identify how a dental healthcare provider can identify depression, and how it should be
responded to by a dental healthcare provider in order to allow to provide optimal care.
- Identify causes of apathy in dental patients, how a dental healthcare provider can identify it,
and how it should be responded to by a dental healthcare provider in order to allow providing
optimal care.
- Identify causes of impatience in dental patients, how a dental healthcare provider can identify
it, and how it should be responded to by a dental healthcare provider in order to allow providing
optimal care.

4.5. One on One - Health education

4.5.1. Content
- Describe how and when you can identify issues that you need to address in health education.
- Describe how you identify the stage in which a patient is when you identify a behavior you
want to change.

4.5.2. Process
- Describe the positive aspects of motivational interviewing.
- Identify the main features of motivational interviewing.
- Describe how you would proceed in a motivational interview.

4.5.3. Application
- Identify and describe verbal and non verbal responses being helpful to show empathy, develop discrepancy, role with resistance and create self efficacy.
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>9/1/2010</td>
<td>Class 2</td>
<td>2. The patient</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.1. Oral health and oral health-related quality of life</td>
</tr>
<tr>
<td>9/8/2010</td>
<td>Class 3</td>
<td>2.2. Facial attractiveness</td>
</tr>
<tr>
<td>9/15/2010</td>
<td>Class 4</td>
<td>2.3. Dental fear</td>
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<tr>
<td>9/22/2010</td>
<td>Class 5</td>
<td>2.4. Dental pain</td>
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<tr>
<td>9/29/2010</td>
<td>Class 6</td>
<td>2.5. Personality and oral health</td>
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<tr>
<td>10/6/2010</td>
<td>Class 7</td>
<td>2.6. Social factors and oral health</td>
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<td>10/13/2010</td>
<td>Class 8</td>
<td>3. The provider</td>
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<td></td>
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<td>3.1. Dental decision making</td>
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<tr>
<td>10/20/2010</td>
<td>Class 9</td>
<td>3.2. Stress and provider impairment</td>
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<tr>
<td>10/20/2010</td>
<td>Class 10</td>
<td>4. The treatment alliance</td>
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<tr>
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<td>4.1. Meeting the patient: Establishing rapport</td>
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<tr>
<td>10/27/2010</td>
<td>Class 11</td>
<td>4.2. Collecting the necessary information:</td>
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<tr>
<td></td>
<td></td>
<td>Taking a medical / dental history – introduction</td>
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<tr>
<td>10/27/2010</td>
<td>Class 12</td>
<td>Discuss a model tape of a provider who takes a medical/dental</td>
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<td></td>
<td></td>
<td>history and the criteria used to evaluate the interaction</td>
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<tr>
<td>11/3/2010</td>
<td>Class 13</td>
<td>Taping of standardized patient interaction</td>
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<tr>
<td>11/3/2010</td>
<td>Class 14</td>
<td>4.3. Communication with challenging patients I</td>
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<td></td>
<td>4.3.1. Patients with anxiety and anger</td>
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<tr>
<td>11/10/2010</td>
<td>Class 15</td>
<td>4.3.2. Communication with challenging patients II</td>
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<tr>
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<td></td>
<td>- Patients with depression, apathy, impatience</td>
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<tr>
<td>11/10/2010</td>
<td>Class 16</td>
<td>Discussion of videotaped standardized patient interactions</td>
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<tr>
<td>11/17/2010</td>
<td>Class 17</td>
<td>Discussion of videotaped standardized patient interactions</td>
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<tr>
<td>11/17/2010</td>
<td>Class 18</td>
<td>4.4. Interacting with the patient: Treatment cooperation</td>
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<tr>
<td>12/1/2010</td>
<td>Class 19</td>
<td>4.5. One on One - Health education</td>
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<td></td>
<td>4.5.1. Content</td>
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<tr>
<td>12/1/2010</td>
<td>Class 20</td>
<td>4.5.2. Process: Motivational Interviewing</td>
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<tr>
<td>12/8/2010</td>
<td>Class 21</td>
<td>4.5.3. Application: Tobacco cessation</td>
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<tr>
<td>12/8/2010</td>
<td>Class 22</td>
<td>Tobacco cessation</td>
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Textbooks: Please note that Drs. Inglehart and Richards are working on a textbook that is due at the Quintessence Publishing Company at the end of August and will be published in January 2010. We will use chapters of this book that we provide to the students on c-tools. However, here are alternative readings if the chapters should not be available in time.

**Required Readings**

8/25/2010
1. General information about the course
   Introduction: Behavioral science and dentistry
   **Required reading:**

9/1/2010
2. The patient
   2.1. Oral health and oral health-related quality of life
   **Required reading:**

9/8/2010
2.2. Facial attractiveness
   **Required reading:**

9/15/2010
2.3. Dental fear
   **Required reading:**

9/22/2010
2.4. Dental pain
   **Required reading:**

9/29/2010
2.5. Personality and oral health
   **Required reading:**

10/6/2010
2.6. Social factors and oral health
   **Required reading:**

10/13/2010
3. The provider
   3.1. Dental decision making
   **Required reading:**

10/20/2010
3.2. Stress and provider impairment
Required reading:  

10/20/2010  
4. The treatment alliance  
4.1. Meeting the patient: Establishing rapport  
Required reading:  

10/27/2010  
4.2. Collecting necessary information: Taking a medical / dental history & Verbal communication  
Required reading:  

10/27/2010 – Class 2  
no reading

11/3/2010 – Class 1  
no reading

11/3/2010  
4.3. Communicating with challenging patients  
4.3.1. Communication with anxious and angry patients  
Required reading:  
- Chambers & Abrams, 109-121

11/10/2010  
4.3.2. Communication with patients with depression, apathy, impatience  
Required reading:  
- Chambers & Abrams, 109-121

11/10/2010 – Class 2  
Discussion of videotaped standardized patient interactions

11/17/2010 – Class 1  
Discussion of videotaped standardized patient interactions

11/17/2010  
4.4. Interacting with patients: Treatment cooperation  
Required reading:  
- Chambers & Abrams, 179-187

12/1/2010  
4.5. Health education – 4.5.1. Content  
Required reading:  

12/1/2010  
4.5.2. Health education – Process  
Required reading:  

12/8/2010  
4.5.3. Health education – Applied: Tobacco cessation  
Required reading:  
**Examination / grading policies:**

The final grade will be based on the grades in

- the one minute papers at the beginning of the class and
- the quizzes and one minute responses at the end of the class,
- the self and peer evaluations of the standardized patient experience, and
- the performance in the final exam.

The final exam will cover the material presented in the classes and in the required readings.

Grades are given according to the following scale:

\[\begin{array}{ccc}
A+ & = & 97 - 100; \\
A & = & 94 - 96; \\
A- & = & 93 - 94; \\
B+ & = & 88 - 90; \\
B & = & 85 - 87; \\
B- & = & 82 - 84; \\
C+ & = & 79 - 81.
\end{array}\]
Syllabus

Course title.  Cariology I
Course number.  XXX
Term and year.  Fall term, 2010

Location, time, and day.  Friday’s 8-10am (Room XXX); Wednesday 2-5pm (time and room shared with Dr. McLean’s course); Tuesday and Thursday 2-5pm (lab/clinic/seminar; time and space shared with Dr. McLean’s and Dr. Fitzgerald’s courses)

Course personnel and contact information.
Margherita Fontana (mfontan@umich.edu)
Carlos Gonzalez (carlosgc@umich.edu)
Mathilde Peters (mcpete@umich.edu)
Mark Fitzgerald (markfitz@umich.edu)
Christopher Fenno (fenno@umich.edu)
Erika Benavides (benavid@umich.edu)

Course description.
This is the first course in a series of courses throughout the 4 years of the DDS curriculum that will be establishing didactic foundational knowledge (both through traditional lecture formats and online content delivery), caries detection skills development (through hand-on laboratory exercises), seminar patient case discussions, and clinical experiences to enhance and facilitate active student learning, critical-thinking, problem-solving, and use of evidence-based information for dental caries detection, diagnosis, risk assessment, prevention and management.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
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<tbody>
<tr>
<td><em>X</em> Foundation</td>
<td>_X_Basic</td>
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<td>_X_Application</td>
<td>Intermediate</td>
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<td>___Advanced</td>
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The following competencies are addressed in this course:

#4-The graduating student incorporates the methods of science and scientific inquiry into clinical practice. The graduating student…
4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.  (Knowledge application)
4b. Routinely evaluates outcomes of clinical practice.  (Knowledge foundation)

#5. The graduating student communicates effectively with patients and colleagues. The graduating student…
5a. Demonstrates effective interpersonal skills to establish rapport, obtain complete and accurate information from patients, and answer patient’s questions and address patient’s concerns.
(Knowledge foundation and application as it refers to caries assessment)
5b. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventive measures, and obtain informed consent. (Knowledge application as it refers to caries assessment)

#6. The graduating student obtains, records, updates and organizes accurate and complete medical/dental histories including pertinent psychological and sociocultural information. The graduating student...
6a. Identifies patient values, expectations and goals for oral health care. (Knowledge foundation)  
6b. Obtains and records the chief complaint of the patient and the history of the present illness. (Basic skills, knowledge foundation and application as it refers to caries assessment and management)  
6c. Establishes and maintains the patient record as a document of patient encounters. (Knowledge foundation)  
6d. Identifies and records the patient's medications, their potential effects on oral and systemic health, and their impact on treatment. (Knowledge foundation and application as it refers to caries assessment and management)  
6e. Recognizes the oral manifestations of systemic disease and how the disease and its management may affect the delivery of dental care. (Knowledge foundation and application as it refers to caries assessment and management)  
6f. Initiates necessary consultations or referrals to clarify questions related to the patient's health. (Knowledge foundation)

#7. The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care. The graduating student…
7a. Performs/records the findings of an appropriate behavioral assessment and physical examination not limited to the head and neck. (Knowledge application as it refers to caries assessment and management)  
7b. Performs and records the findings of intraoral examinations. (Basic skills; knowledge application as it refers to caries assessment and management)  
7c. Performs/orders and records findings of other diagnostic procedures and tests as necessary. (Foundation knowledge on radiographs)  
7d. Identifies and assesses conditions that place patients at increased risk for disease. (Basic skills; knowledge foundation and application as it refers to caries assessment and management)  
7e. Identifies patient behaviors that impact oral and systemic health. (Basic skills; knowledge foundation and application as it refers to caries assessment and management)

#8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings. The graduating student…
8a. Differentiates between health and disease. (Basic skills; knowledge foundation and application as it refers to caries assessment and management)  
8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases. (Basic skills; knowledge foundation and application as it refers to caries assessment and management)

#9. The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses. The graduating student…
9a. Identifies treatment options and estimates prognosis with and without treatment. (Basic skills; knowledge foundation and application as it refers to caries assessment and management)
9b. Plans treatments that reflect and manage the impact of behavioral, social and cultural beliefs and habits on oro-facial conditions. (Basic skills; knowledge foundation and application as it refers to caries assessment and management)

9c. Plans oral health instruction and treatments that include health promotion and maintenance care. (Basic skills; knowledge foundation and application as it refers to caries assessment and management)

9d. Develops treatment plans that reflect the impact of systemic disease and its management on the provision of oral health care. (Basic skills; knowledge foundation and application as it refers to caries assessment and management)

9e. Develops treatment plans that reflect the impact of growth and development. (Foundation knowledge)

9f. Develops treatment plans that reflect the impact of disabilities on the provision and maintenance of oral health care. (Basic skills; knowledge foundation and application as it refers to caries assessment and management)

9h. Collaborates with the patient to establish a mutually acceptable treatment plan. (Foundation knowledge)

#15. The graduating student promotes health maintenance and disease prevention by:

15a. Collaborating with the patient to create an individualized self-care program. (Knowledge application as it refers to caries assessment and management)

**How progression toward competency or competency is measured.**

Progression towards competency in caries management will be measured by obtaining a passing grade on the course and completing a caries risk and management assessment plan in clinic.

**Objectives.**

After completing the course the student should be able to:

- Understand and apply the appropriate nomenclature in cariology to clinical scenarios.
- Recognize dental caries as a biofilm-mediated disease, identify main etiological agents and characterize major pathogenicity mechanisms and ecological influences.
- Discuss the physicochemical mechanisms and histopathology behind caries lesion formation in coronal and root surfaces.
- Discuss how different tooth substrates affect the caries process.
- Discuss the importance of saliva in dental caries risk and management.
- Discuss and assess dietary factors driving the caries disease process.
- Discuss and apply visual and radiographic methods to detect the consequences of the dental caries disease process in the mouth.
- Discuss and apply different methods to diagnose the present activity of dental caries disease (active, arrested).
- Explain and assess the factors that increase the risk of future dental caries.
- Compare and contrast the uses, advantages, disadvantages, indications and contraindications of different strategies (topical fluorides, mechanical plaque removal, use of dental sealants, and dietary control) used to prevent and manage dental caries.

**Session information.**

<table>
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<tr>
<th>Date</th>
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<th>Topic</th>
<th>Presenter</th>
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</table>

See attached excel file (highlighted in yellow and grey are related and/or shared with other courses relative to this course).
**Textbooks/ Readings.**
Lamont, R.J. et al., Oral Microbiology and Immunology. ASM Press. 2006. ($89.95)
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm

**Examination/grading policies.**
One final grade will be reported for the course. The grade will be composed of the following assessments:
1) Midterm examination (30%)
2) Caries detection assessment practical exam (15%)
3) Caries risk assessment and management case assignment (20%)
4) Final examination (30%)
5) Completion of one caries risk assessment and management plan in clinic and reflection (5%)

The letter grade outcomes will be as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent</th>
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<tbody>
<tr>
<td>A+</td>
<td>97-100</td>
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<tr>
<td>A</td>
<td>93-96.9</td>
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<tr>
<td>A-</td>
<td>90-92.9</td>
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<td>B+</td>
<td>87-89.9</td>
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<td>B</td>
<td>83-86.9</td>
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<td>B-</td>
<td>80-82.9</td>
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<td>C+</td>
<td>77-79.9</td>
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<td>C</td>
<td>73-76.9</td>
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<tr>
<td>C-</td>
<td>70-72.9</td>
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<tr>
<td>F (Remediation)</td>
<td>65-69.9</td>
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<tr>
<td>F (No Remediation)</td>
<td>64.9 and below</td>
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</table>

Note: Scores will be carried out one decimal place and are not rounded up. An 89.9 is an 89.9.
Syllabus Template

Course title. Cell and Molecular Biology

Course number. DENT522?

Term and year. Fall, 2010

Location, time, and day. 4 h/week, 56 h total including 4 in class hour exams and a final examination.

Course personnel and contact information.
Course Director: Dr. Renny T. Franceschi, Tel: 763-7381, email: rennyf@umich.edu
With:
Dr. Michael Hortsch, Tel: 647-2720, email: hortsch@umich.edu
Dr. James P. Simmer, Tel: 975-9318, email: jsimmer@umich.edu
Dr. Helena Ritchie; Tel: 763-3746, email: helenar@umich.edu
Dr. Randal J. Kaufman, Tel: 763-9037, email: kaufmanr@umich.edu
Dr. James McReynolds, Tel: 763-2559, email: jsm@umich.edu

Course description. Goals of this course are to provide basic foundation knowledge concerning the biochemistry, cell and molecular biology of the human body relevant to the practice of dentistry and initial experience in the application and extension of this knowledge to address dentally and medically-relevant clinical problems. Specific topics include the cellular structure of the major tissues, protein structure and function, mineralization of bones and teeth, molecular biology of DNA replication and the cell cycle, gene expression, protein synthesis and processing, the structure and function of biological membranes, cellular signaling, the metabolism of carbohydrates, proteins and fats, and regulation of metabolism in health and disease. Emphasis will be placed on the continually evolving nature of biomedical knowledge and the need for lifelong learning if the clinician is to understand and be able to critically evaluate new treatments and technologies. For this reason, student evaluations will emphasize critical thinking as well as mastery of subject areas.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

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<th>Knowledge</th>
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<td>X Application</td>
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<td>__ Advanced</td>
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</table>

Competencies addressed.
This course teaches foundation knowledge in modern human biochemistry, cell and molecular biology and provides opportunities for students to develop problem solving skills while applying and extending this knowledge to address specific clinical problems. Knowledge acquired will
give students the ability to understand the etiology of metabolic and genetic diseases that affect the oral-facial complex and understand the mechanism of action of hormones, drugs and anesthetics. The knowledge base, skills, attitudes and behaviors acquired are integral to the development of the following competencies as define in the document, Competencies for the New Dental Graduate: 2(a) and (b), 4(a), 6(e) and (f) and 8(a-c).

2. The graduating student participates in professional self-regulation.
The graduating student...
2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
2b. Understands the need for and establishes a plan for personal/professional growth and development.

4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.
The graduating student…
4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.

6. The graduating student obtains, records, updates and organizes accurate and complete medical/dental histories including pertinent psychological and sociocultural information.
The graduating student...
6e. Recognizes the oral manifestations of systemic disease and how the disease and its management may affect the delivery of dental care.
6f. Initiates necessary consultations or referrals to clarify questions related to the patient's health.

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
The graduating student…
8a. Differentiates between health and disease.
8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases.
8c. Determines differential and/or provisional diagnoses for developmental disorders of the oro-facial complex.

How progression toward competency or competency is measured.
Development toward meeting competencies 2(a) and (b) and 8 (a-c) is measured in written reports of out of class assignment. Foundation knowledge necessary for meeting competencies 6(d), 8(a-c), is measured in exams and quizzes.

Objectives. On completing this course, the student should have a good overall understanding of the biochemistry, cell and molecular biology of the human body relevant to the practice of dentistry and appreciate how this knowledge is used to understand clinical questions. The student should also have a well-developed appreciation for the continually evolving nature of biomedical knowledge and recognize the importance of life-long learning if the clinician is to understand and be able to critically evaluate new treatments and technologies.
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<tr>
<td></td>
<td></td>
<td><strong>Introduction</strong></td>
<td>Franceschi</td>
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<td><strong>Unit 1: Cell and Tissue Structure (Michael Hortsch and CMB Staff)-10h</strong></td>
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<td>Introduction to Histology, Cellular and organelle structure</td>
<td>Hortsch &amp; CDB Staff</td>
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<td>Epithelia</td>
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<td>Epithelia Lab</td>
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<td>Connective tissue</td>
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<td>Connective tissue Lab</td>
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<td>Gland structure Lab</td>
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<td>Blood and bone marrow</td>
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<td>Blood and bone marrow Lab</td>
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<td>Basic muscle types</td>
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<td>Muscle Lab</td>
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<td><strong>On line evaluation-must reach competency for course credit</strong></td>
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<td><strong>Unit 2: Protein Biochemistry (Dr. James P. Simmer)</strong></td>
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<td>Cell and Molecular Biology dentists need to know</td>
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<td>(sample Board questions and discussion)</td>
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<td>Chemical principles in biochemistry</td>
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<td>Aqueous solutions / acid base balance</td>
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<td>Amino acids, peptide bonds, protein structure</td>
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<td>Thermodynamics &amp; exploring proteins</td>
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<td><strong>Quiz</strong> Vitamins / cofactors</td>
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<td>Enzyme mechanisms and control</td>
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<td>Collagen and connective tissue proteins</td>
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<td>Bone and tooth structure/cell biology</td>
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<td><strong>Hour Exam</strong></td>
<td>Simmer</td>
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<td><strong>Unit 3: Cell replication, gene regulation and protein synthesis (Dr. Helena Ritchie)</strong></td>
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<tr>
<td>Topic</td>
<td>Instructor</td>
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<td>DNA/RNA structure, Flow of genetic information</td>
<td>Ritchie</td>
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<td>Methods of mol bio, recombinant DNA technology</td>
<td>Ritchie</td>
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<td>DNA replication, recombination and repair</td>
<td>Ritchie</td>
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<td>The Cell Cycle</td>
<td>Ritchie</td>
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<td>Chromatin structure and genomic organization</td>
<td>Ritchie</td>
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<tr>
<td><strong>Quiz</strong> Gene regulation and steroid hormones I</td>
<td>Ritchie</td>
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<tr>
<td>Gene regulation and steroid hormones II</td>
<td>Ritchie</td>
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<tr>
<td>RNA processing/ Regulatory RNAs</td>
<td>Ritchie</td>
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<td>Protein synthesis</td>
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<td>Protein targeting</td>
<td>Ritchie</td>
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<td><strong>Hour Exam</strong></td>
<td>Ritchie</td>
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</table>

**Unit 4: Cell Signaling and Membrane-mediated Processes (Drs. Randal Kaufman and James McReynolds)**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>Structure of biological membranes</td>
<td>Kaufman</td>
</tr>
<tr>
<td>Membrane Signaling: Hormones, growth factor &amp; cytokine mechanism of action I</td>
<td>Kaufman</td>
</tr>
<tr>
<td>Hormones, growth factor &amp; cytokine mech of action II</td>
<td>Kaufman</td>
</tr>
<tr>
<td>Signal transduction-membrane to nucleus I</td>
<td>Kaufman</td>
</tr>
<tr>
<td>Signal transduction-membrane to nucleus II</td>
<td>Kaufman</td>
</tr>
<tr>
<td><strong>Quiz</strong> Homeostasis and cellular transport processes</td>
<td>McReynolds</td>
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<tr>
<td>Membrane transport I</td>
<td>McReynolds</td>
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<tr>
<td>Membrane transport II</td>
<td>McReynolds</td>
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<tr>
<td>Osmosis / transport across epithelia</td>
<td>McReynolds</td>
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<tr>
<td>Membrane potential</td>
<td>McReynolds</td>
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<tr>
<td><strong>Hour Exam</strong></td>
<td>Kaufman/McReynold</td>
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</tbody>
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**Unit 5: Cellular Metabolism and Regulation (Dr. Renny T. Franceschi)**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>Overview of energy metabolism and relationship to major organ systems controlling metabolism</td>
<td>Franceschi</td>
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<tr>
<td>Carbohydrate structure, Glycolysis / glycogen metabolism</td>
<td>Franceschi</td>
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<tr>
<td>Citric acid cycle / amino acid metabolism</td>
<td>Franceschi</td>
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<tr>
<td>Gluconeogenesis / pentose phosphate pathway</td>
<td>Franceschi</td>
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<tr>
<td>Oxidative phosphorylation</td>
<td>Franceschi</td>
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</tbody>
</table>
Textbooks/ Readings.
1. Lecture Notes: Detailed lecture notes will be distributed before the beginning of each unit.

2. Website: General course information, lecture slides and out of class readings will be posted on a course website accessible through CTools.

3. Required Readings
The textbook for the course will be:

Berg, JM, Tymoczko, JL, and Stryer, L.
Biochemistry

Each lecturer will assign readings from Stryer that are directly related to the course material. Required readings from the primary scientific literature will also be assigned. These will either be distributed directly to students or be available online at the CTools site. Students should complete the assigned readings and look over the lecture notes before class.

Examination/grading policies.
Evaluation methods will consist of out of class assignments (10% of final grade-Still not finalized), four section quizzes (5% of final grade), four section examinations (70% of final grade) and a final examination (15% of final grade). Quizzes will consist of MCQ. Exams will consist of MCQ, short answer and essay questions. To pass this course, students must have an overall average of 70% (rounded off to nearest whole number). The first section of the course, Cell and Tissue Structure, will be graded pass/fail using online MCQ evaluations. Students must pass this section to receive credit for the course, but their score will not be used to calculate the final grade.

Other information.
Quizzes will be returned and reviewed during class time. Reproducing (memorizing & transcribing, copying, photographing, etc) exam questions in anyway is an Honor Code
violation. Additionally, if you are aware that questions are being reproduced, it is your responsibility to notify the course director; refraining from doing so is an Honor Code violation.
CLINICAL FOUNDATIONS I

COURSE

#519/520

2009- 2010
COURSE DESCRIPTION:
This course is a lecture, laboratory, and clinical course which teaches foundation knowledge and develops basic skills in the fundamentals of oral examination, diagnosis and treatment planning, infection control, dental instrumentation, patient management, dental caries (etiology, prevention, and management), principles of operative dentistry, and manual skills related to restorative dentistry. Concepts and techniques for placement of direct resin-based adhesive restorations and silver amalgam restorations are introduced. Dental materials are reviewed with an emphasis on clinical considerations. Emphasis is placed on the development of motor skills, self-evaluation, and clinical judgment.

GOALS:
• Learn fundamental knowledge and skills required for the successful clinical practice of dentistry in the student clinics and in future practice
• Learn fundamental knowledge and skills for the successful placement of direct restorations and associated procedures
• Prepare students for success on the National Board Part 2 examination
• Prepare students for success on the Restorative portion of regional or state dental licensing examinations

Information and skills presented in this course are essential to the practice of general dentistry and are NOT elective. This is professional school and you are training to be doctors where you will be using what you learn in this course to treat real live patients. Individuals who practice general dentistry after graduation will use this knowledge and these skills throughout their entire career. ALL students must master the material and skills in order to provide treatment in the student clinics and pass a licensing board.

Course policies have been developed with this in mind. Policies are strictly adhered to because failure to acquire basic knowledge and skills could put future patients at risk. Policies are also implemented to maintain order in a large class, maximize resources, and maintain a pleasant and fair environment for students, faculty and staff who are involved in the course. It is the student's responsibility to read and know the course policies. “I didn't know” is not an acceptable excuse.

COURSE OBJECTIVES:
Attendance for all aspects of this course is mandatory.
On completion of this course the student should develop an understanding of:
• ethics and standards of behavior expected of dental professionals
• infection control and safety standards and procedures
• organization, function, and protocol of undergraduate clinics
• principles and methods of effective patient management
• the purpose, importance, role, and phases of treatment planning in patient care
• the etiology and progression of dental caries
• proper terminology and nomenclature related to dental instrumentation, cavity preparations, and dental restorations
• the importance of proper field isolation for restorative dentistry
• principles of cavity preparation and the effects of cavity preparation on pulpal health
• the indications, contraindications, and procedures for indirect and direct pulp capping
• principles of enamel and dentin adhesion
• the clinically relevant material properties of composite resin, glass ionomer, and compomer materials, sealants, silver amalgam, and cavity liners
On completion of this course the student should develop the knowledge of and the ability to:

• perform basic chairside dental assisting skills
• master manual dexterity and motor skills required for the practice of dentistry
• identify intraoral anatomic structures and landmarks, and distinguish normal appearance from abnormal
• accurately fabricate diagnostic casts from alginate impression material
• diagnose pathological processes resulting in loss of tooth structure or discomfort (caries, erosion, abrasion, abfraction, fracture) and failing restorations
• choose an appropriate treatment protocol or restorative material for a given clinical situation
• correctly identify and remove dental caries
• provide preventive and nonsurgical management/control of dental caries, abrasion, and wear
• properly use dental rotary equipment, examination instruments, and operative dentistry hand instruments
• choose an appropriate method of isolation for various restorative scenarios and correctly apply a rubber dam for routine restorative situations
• correctly use liners, varnishes, and sealers
• correctly accomplish tooth preparations for direct composite resin, compomers, glass ionomer, and silver amalgam restorations
• correctly place and finish pit and fissure sealants, preventive resin restorations, direct composite resin, glass ionomer, compomer, and silver amalgam restorations
• safely and correctly perform vital tooth bleaching procedures
• accurately self-evaluate the quality of his or her clinical work
COURSE DIRECTOR:
Dr. Mary Ellen McLean
Clinical Associate Professor, Dept of Cariology, Restorative Sciences & Endodontics
Office: Rm G363B    ph 615-8353    E-mail: memclean@umich.edu

ADJUNCT COURSE FACULTY:
Dr. Gisele Neiva
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Dr. Bill Piskorowski
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Dr. Jacques Nor
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E-mail: jenor@umich.edu

Dr. Preetha Kanjirath
Clinical Assistant Professor, Department of Oral Medicine/Pathology/Oncology
E-mail: pkanjira@umich.edu

ROW INSTRUCTOR FACULTY:
Dr. Tom Johnson
Dr. Alexandra Jaquery
Dr. Luciana Castro
Dr. Marcy Goldin
Dr. Ahmad Deebajah
Dr. Woosung Sohn
Dr. Helena Pocaterra
Dr. Sahar Taha
Dr. Aikaterini Oikonomopoulou
Dr. Gail Krishnan
Dr. James Thompson

CLINICAL FOUNDATIONS ADMINISTRATIVE ASSISTANT/PRECLINIC COORDINATOR:
Kari Gregerson, CDA    Rm G363A    ph 763-3340    E-mail: kgreg@umich.edu

ACADEMIC AFFAIRS/TUTORS:
Ms. Helen Fotinos    Rm 1208    ph 763-3313    E-mail: hfortinos@umich.edu

DENTAL STORES:    Carlie Seigel and Teresa Patterson (basement)
EQUIPMENT MAINTENANCE:    Rob Berg & Larry Weber
COURSE POLICIES

Attendance
Attendance for lecture, lab, clinic, and seminar is MANDATORY. This course teaches clinical procedures. The observation and visualization of pictures, videos, demonstrations, and discussions of these procedures is critical for learning and cannot be substituted by scribe notes. In most cases, lectures are the background information for and the introduction to the laboratory exercises. Failure to be attentive during lecture will result in the student not being prepared for lab. This places a burden on the row instructors and fellow students when unprepared students require additional help. Students MUST attend scheduled laboratory sessions for practicing these procedures, since these are the only times when faculty are available to provide feedback and assistance in the lab.

Lecture Attendance:
Unless otherwise noted, all lectures will be given in the assigned D1 lecture hall. All students attend lectures as an entire class. Attendance is monitored by row instructors and the course director. Attendance may be taken at any time.

To receive satisfactory attendance credit a student must:
• Be present for the entire lecture. Lectures begin on time. Late arrivals miss important announcements and subject matter
• Be alert and attentive. Students observed sleeping, talking, web surfing, game playing etc may lose attendance credit for that day

Quizzes
• Unannounced quizzes may be administered during any lecture to assess attendance and comprehension of material
• Quizzes cover basic information. There is no need to memorize information for quizzes
• Failure to be present when a quiz is distributed will result in a zero for the quiz grade and an absence for attendance that day

“Minute Papers”
• Minute paper forms may be distributed at any time during a lecture. Only those students present receive a form
• The minute paper may require the student to:
  o Briefly describe the major point of the lecture
  o Answer a question covered in assigned reading or during the lecture
  o Make an appropriate comment or observation regarding the lecture
• Minute papers are collected by the faculty and reviewed for attendance and content
  o Minute papers that are not serious, make flippant remarks, or jokes will not receive credit

On most Tuesdays and Thursdays, after lecture the class is divided into two groups. One group will do lab exercises while the other group participates in clinical activities. The same lab exercise and clinic activity is repeated on the other day for the other group.

Laboratory Attendance:
Attendance is monitored by the course director, row instructors, and the preclinic coordinator. To receive satisfactory attendance credit a student must:
• Work productively for the majority of the laboratory session. Students who arrive late, disappear for extended periods, or leave early without a valid reason may not receive attendance credit for that day
• Be alert and attentive during videos or demos. Students observed sleeping, talking, studying other subjects etc may not receive attendance credit for that day
• Work only on lab projects for course 519/520. Students are not to work on projects for other courses during class time
Clinic Seminars, Clinic Attendance, and Clinic Forms:

In early fall, clinic seminars will last for the entire clinic session until sufficient introductory training has been completed which will enable you to successfully and comfortably assist in the Vertically Integrated (VIC) Clinics. Once you start assisting in clinic in October, seminars will last for only the first 30-45 minutes of the clinic session. Following the seminar, proceed to your assigned clinic to observe and assist D3/ D4 dental students performing a variety of procedures. Once a given procedure is taught in the lab, you may be allowed to perform that procedure with permission and supervision of the attending clinic faculty. This experience is designed with the following goals in mind:

- Provide early clinical experience to enable students to feel confident with their career choice and improve efficiency when treating patients independently in following years
- Reinforce and augment subject matter taught in lecture and lab
- Present clinically oriented topics and cases in a discussion forum
- Expose students early on to realistic patient scenarios
- Acquire and improve communication and patient management skills
- Appreciate the role of a dental assistant and provide training in four – handed dentistry
- Familiarize students early-on with clinic paperwork, procedures and protocol

Clinic Seminars and Clinic Session Participation:

Attendance and participation at ALL assigned seminar and clinic sessions is mandatory and is monitored via the following system:

- Clinic/seminar attendance forms are distributed by faculty at the start of each seminar or at the end of lecture if no seminar is scheduled. If you are not present at seminar, you will not receive an attendance form
- Print your name and date of the clinic session at the top of the form. Forms submitted with no name receive no credit if we cannot identify which student turned it in
- Bring the attendance form with you to clinic
- Print the name of the faculty instructor who works with the D3 or D4 student you assist in the appropriate space on the form
- At the END of the appointment, have that faculty instructor sign the form to verify that you participated in that day’s clinic session. Faculty are instructed NOT to sign forms until the end of the appointment (when the charge ticket is signed)
- D1 students should stay until the end of the appointment and assist the D3 or D4 student with final paperwork and cubicle clean-up
- A forged faculty signature is considered an ethics violation and dealt with accordingly
- Answer all questions on the attendance form about your seminar and clinic experience that day. An obvious lack of effort in answering the questions, as determined by the course director, may forfeit attendance credit

Clinic Form Submission, Review, and Feedback:

- Turn in completed forms to the mailbox labeled “D1 Seminar/Clinic Attendance Forms” in the lab
- Forms may be turned in any time during the week but the **deadline for submission of forms for that week is Friday at 5:00pm.** Forms not turned in by that time will be marked “late”
- **Failure to turn-in an attendance form or obtain a faculty signature will result in a deduction of 1 point from the final point total for the term and will be considered as an absence**
- **Late submissions will result in deduction of a ½ point (better late than never)**
- In situations where the course director is notified in advance of the student’s absence, missed clinic sessions can be made up during another other clinic session where the student is unscheduled. This does NOT have to be on a Tuesday or Thursday afternoon. See Kari to obtain a clinic sign off sheet, go to clinic and participate, have the faculty sign the sheet to verify the student’s attendance, answer any questions on the clinic sign-off sheet, and return the form to Kari, making sure that it is noted what date was missed that the student is making up
- Students cannot just skip Tuesday or Thursday clinic sessions and make them up when they want
- Once forms are logged in by the preclinic coordinator, they are reviewed by the faculty
**Absences**

- A maximum of 3 absences (excused or unexcused) from lecture, lab, and/or clinic are allowed each term
- Missing quizzes, minute papers, seminar/clinic sheets, exams, or practicals are counted as an absence
- Attendance is monitored by the course director, row instructors and the preclinic coordinator
- Late arrival, leaving early, or failure to satisfactorily participate in a lecture or laboratory session may also be counted as an absence at the course director’s discretion
- *Exceeding three absences will result in the loss of one point from the final grade for each additional absence*
- Students who exceed 5 absences may receive an *Incomplete* grade for the term. Missing work must be made up before the grade will be converted. Additional work in the form of written papers, projects, lab work, or attendance at additional clinic sessions may be required before the Incomplete grade is converted
- Students who will miss class due to a religious holiday must inform the faculty in advance
- Students will be allowed to make up missed exams, quizzes, or practicals, but the absence will count toward the 3 total allowed absences
- Extended illnesses, injuries, or absences due to professional obligations (i.e. ASDA rep) will be handled on an individual basis
- Make-ups for missed quizzes, exams, and practicals are allowed only when the student has contacted the course director or registrar’s office prior to the start of the exam and presents a valid documented justifiable excuse. The course director has the discretion whether to allow the student to make-up an exam
- Makeups for exams, quizzes, or practicals are the responsibility of the student to schedule. All missed work must be made up within 2 weeks of the original date or by the date of the final exam, whichever is sooner

**Laboratory Project Sheets**

- Project sheets are distributed at the start of each new laboratory exercise
- Project sheets assign and monitor progress and completion of required laboratory exercises. They describe the procedures to be accomplished and at which stages faculty evaluation is required. Faculty assistance and feedback may be requested at any time, but is mandatory at the stages noted
- If a student performs a procedure with a less than satisfactory outcome, the student will be required to correct or repeat the procedure before the project sheet is signed
- Failure to obtain a necessary evaluation and signature before proceeding with the next step will require repeating the first step
- Projects not finished during scheduled class hours will require work outside of regular class time and evaluation at the next laboratory session. *Most* projects require work outside of regular class sessions. Students must plan and organize their work accordingly. *Do not* approach instructors outside of class time to sign off project sheets
- Each project sheet has a deadline for completion noted on the sheet. Turn in completed project sheets to the designated collection box at Kari’s office window any time before the deadline
- Incomplete project sheets will not be accepted until they are completed
- *Turning in project sheets late will result in the loss of a ½ point from the final point total at the end of the term*
- *Missing project sheets will result in an Incomplete grade AND an additional assignment. The Incomplete grade will not be resolved until both the original work and the additional work are completed satisfactorily*
Starting and Finishing on Time

- Students are expected to be in their seats at the start of lecture, lab, and seminar sessions. Lectures and labs will start on time. Students who arrive late may miss important information.
- Students not present when minute papers, tests, quizzes, or seminar attendance sheets are distributed will be counted as absent.
- Students may stay past the end of the lab session to continue working, if desired, and if lab space is available. However, due to faculty and staff having other teaching, practice, administrative and family obligations, faculty and staff are not expected to stay past the end of the laboratory session.
- Equipment and supplies that must be locked up overnight will be collected at 4:50 pm.

Working in the Lab Outside of Normal Class Times

- Students must complete lab work not finished in class outside of normal class time, and are highly encouraged to practice outside of normal class times to improve their skills.
- The labs are shared by other classes. Please be respectful of other students and faculty.
  - Regularly scheduled classes have first priority for using the labs. Depending on what other courses are doing, you may or may not be able to use the lab while other classes are in session. Always check with Kari or the faculty teaching that day before setting up.
  - Outside of class, D1 and D2 students who share a bench must work out on their own a schedule for using that specific bench. Students with upcoming practical exams should have priority. Notify the faculty or Kari if your bench partner is uncooperative. You are allowed to work at another student’s bench as long as they are not present, but you may have to move if they arrive later on.
  - The labs will generally be open for after-hours practice. Building hours are 7 am – 11 pm daily. Hours for holidays will be announced. Continuing Education (CE) courses may use the lab occasionally on some weekends. Kari will keep you notified of any times when the lab will not be open.
- If the suction shuts off after hours, flipping the switch on the wall by the entry door will turn on the suction to the preclinical lab for additional time.
- Equipment and materials for practice outside of class will be available as long as they are not abused. If problems arise with intentional damage of equipment, theft, or hoarding of instruments and supplies, this privilege may be revoked.
- Students needing materials not normally kept available at the supply table should see Kari or Dental Stores personnel during regular hours.
- Music may be played in the lab ONLY if it does not disturb others.

Row Instructor Faculty

- In the lab, there is at least one row instructor assigned to each row of students.
- Row instructors work individually with students to evaluate student work and assist students during laboratory sessions. Row instructors report to the course director regarding student progress.
- Due to organizational and administrative obligations, the course director may not be available for individual assistance during some class sessions.
- When starting new procedures or projects, obtain feedback from row instructors early on! Have row instructors evaluate your work in class before practicing on your own outside of class. This will save you wasted time and effort making the same errors repeatedly.
- Unless your row instructor is absent that day, work only with your assigned instructor:
  - Working with another instructor imposes on the students assigned to that instructor.
  - Jumping from instructor to instructor robs you of continuity of instruction.
  - When faculty see your work on a continuous basis they can better assess your progress and identify areas where you are doing well and where you need additional help.
- Row instructor assignments will change Winter term.
**Working on Typodonts**

- Unless otherwise instructed, the following procedures should **always** be followed:
  - Teeth and adjacent teeth must remain in place in the typodont. Typodont teeth are **not** to be removed and worked on individually.
  - Typodonts should be mounted in the simulator head.
  - Ripped face shrouds (rubber cheeks) must be replaced. You may not work with a torn face shroud.
  - Rubber dam should be applied for restorations.

**When in doubt, follow the handout!**

- You may be exposed to variations or different ways to accomplish a procedure through readings, clinic instructors, or other students. You may observe or have observed different techniques performed in private offices. In the event of discrepancies, *the procedures, protocols, and criteria described or demonstrated by the course director and in your handouts are the ones to be followed on exams, quizzes, and practicals*. Once you move on from this course, you may experiment with alternate procedures.

**Use of Electronic Equipment**

- **ALL** electronic devices such as cellular phones, pagers, etc must be turned off during ALL lectures, videos, and laboratory demonstrations. (If a situation arises where you must be able to be contacted by phone immediately, such as a family emergency, notify the course director in advance).
- PDA’s, laptop computers, etc may ONLY be used for appropriate purposes that pertain to the class in session (i.e., to enter schedule change announcements or for note taking on the lecture being given). Students using laptops must sit in the back rows so that faculty in the back of the room can see their screens. Students observed web surfing, texting, playing video games etc will be instructed to shut off the device and may lose attendance credit.
- **NO** electronic equipment (including cell phones and PDA’s) is allowed out during any written examination, quiz, or practical exam.
- Headphones may be worn to listen to music during lab time, but at the student’s own risk, and not during demonstrations. Do not have the volume so loud that you cannot hear faculty announcements or disturb others nearby.

**Schedule Changes & Important Announcements**

- All students must check their umich e-mail every day. All important announcements and schedule changes will be communicated via e-mail to the entire class. Failure to read e-mail messages is not a valid excuse for not being aware of announcements.

**Offices**

- The preclinical office area, including Kari’s office, are secure areas. Do not enter without permission.

**Lab Security and Cleanliness/ Simulator Equipment**

- Instructions for proper use and care of the simulator equipment MUST be followed at all times to prevent malfunction.
  - Do **NOT** prep dry (without water spray) inside the simulator mouth or dust will clog it.
  - Do **NOT** prep wet (with water spray) or use the water syringe outside of the simulator mouth. The benchtop suction will **NOT** handle water.
  - Do **NOT** suction up inappropriate materials or large items. Do **NOT** let large chunks fall back into the low speed suction in the throat of the sim head. These suctions clog easily.
  - Be careful **NOT** to tear or damage the rubber face shroud. If you rip the face shroud on your simulator head, you MUST replace it (if the tear is ½” or greater, you will not be allowed to work with a ripped shroud). The cost for replacing a face shroud is $50.
  - Be careful **NOT** to set fire or melt equipment when using flames. If you melt an overhead light or computer equipment, you will be charged a damage fee.
The course director may deduct points if a student obviously misuses or abuses equipment or shows obvious neglect in maintaining their equipment.

- Each student is responsible for the security and cleanliness of their lab bench area.
- Students MUST lockup their equipment when not in use. You are responsible for replacing any lost or stolen equipment.
- If a student forgets or loses their lab bench key, Kari will NOT unlock/lock their drawers for them. Students must go to Dental Stores and pay a deposit for the new key which will be refunded when the replacement key is returned.
- Equipment and supplies which are to be shared and available for all students are NOT to be kept in drawers or lockers.
- Students may keep a reasonable amount of consumable supplies (burs, gauze, matrix bands, etc) in their lab drawers for work outside of class but do NOT hoard or waste supplies.
- All equipment and consumable supplies are University property. Removal of any equipment or consumable supplies for personal use or sale is an Honor Code violation, is considered as theft, and will be reported to the University police.
  - The course director or staff may check student drawers and may remove unauthorized items at any time.
- Students must protect their lab bench counter with paper when in use.
- Students MUST return supplies and equipment to the supply table, throw away trash in proper containers, and clean up lab bench areas (or sinks and model pouring areas) before leaving, both during and outside of class times. (Custodial staff does NOT throw out trash from bench tops).
  - Points may be deducted for a student who fails to clean up, particularly if faculty or staff have to perform clean-up tasks.

**Infection Control and Safety Policies in the Laboratory**

- The following personal protective equipment (PPE) MUST be worn when working in the laboratory:
  - a clean white lab coat with name tag
  - mask and safety glasses or magnifying loupes (with side shields) whenever rotary instrumentation is used or grinding procedures are performed
  - gloves whenever extracted teeth are used and during all phases of restorative material manipulation (bonding agents, amalgam etc)
- Long hair which may become tangled in rotary instrumentation MUST be tied back or pinned up.
- Jewelry which may become tangled in machinery or rotary instrumentation must be removed. Head coverings, scarves, or loose clothing must be secured so as not to be a safety hazard around open flames or rotary machinery.
- Students MUST dispose of “sharps” (burs, blades etc), amalgam waste, and amalgam capsules ONLY in the designated containers.
- When extracted teeth are used, all equipment used and exposed bench surfaces must be disinfected after use.

**Ethics and Professionalism**

- Students are expected to maintain professional and ethical standards of behavior at all times. The following behaviors will not be tolerated in this course:
  - Lying, cheating, forgery, intentionally deceptive alteration of documents or lab work, stealing, plagiarism, or passing off another student’s work as his or her own
  - Supplying work for other students to pass off as their own
  - Producing or distributing prohibited examination materials
  - Sabotaging another student’s work
  - Abusive or profane language
  - Rude or abusive behavior. Discourteous treatment of faculty, staff, or fellow students
  - Possessing or being under the influence of illicit drugs or alcohol
  - Possession of a weapon
  - Sexual, racial, or religious harassment or intolerance
  - Infliction or threat of harm to others
• Lack of respect for or destruction of school property or equipment or other’s personal
  property
• Theft of personal or school property or equipment
• Excessive hoarding or wasting of supplies
• Unwillingness to accept constructive criticism or arguing over grades
• Purposeful failure to carry out faculty instructions
• Blatant disregard for basic school policies regarding dress code, safety, or infection control

*Students in gross violation of ethical or professional standards may be removed from class or
  clinic at the faculty’s discretion. Grade reduction for these violations is at the discretion of the
  course director depending on the severity of the infraction. Severe infractions will be referred to the
  Honor Council or higher authorities in accordance with University policies

Dress Code
• This is a professional school and you are expected to dress appropriately. Like it or not, people will
  judge you by your appearance. Even when just attending class, you may be observed by patients,
  alumni, and University officials who walk the halls of the school. Sloppy or inappropriate attire
  reflects negatively on you and the dental school as a whole.
• A copy of the School of Dentistry’s dress code is included in the next section. Students in violation
  of this policy may be asked to leave class or clinic until the violation is corrected
• Absolutely NO jeans, shorts, sweats, mini-skirts, or open toed shoes (sandals, flip-flops) are
  allowed in clinic. Socks or hose are required to be worn when in clinic. You WILL be removed from
  clinic by the faculty or staff if these rules are violated
• All long hair MUST be tied back when in clinic
• The following dress code violations are specifically prohibited in lecture, preclinic lab and clinic:
  o Underwear showing (to include panties above low rider pants or bra straps intentionally
    showing) or obvious lack of appropriate undergarments
  o Camisole/spaghetti strap tops worn with no outer covering
  o Scrub pants may not be rolled down below the waist
  o Belly buttons and butt cracks will not be visible
  o Flip flops, sandals, and open toed shoes are not allowed for safety issues
  o Shorts are not allowed (must extend at least past the knee)
  o T-shirts with offensive or unprofessional messages or pictures
  o Hats are not to be worn inside the dental school
• Clean scrubs and tennis shoes are a low-cost, low maintenance, comfortable option which when
  worn properly, presents a professional appearance
Insert DRESS CODE
GRADING

Fall Term

Written Exams: Points
#1- 10
#2- (Oral Exams - Dr. Kanjirath) 10
#3- 10
#4- 10
Final Exam 15
Quizzes 5

Lab Practicals:
1 – Rubber Dam 5
2 – Form 1 Prep 10
3 – Caries Removal Independent Project 5
4 – Class 3 Resin Composite Prep 10
5 – Class 3 Resin Composite Restoration 10
TOTAL 100

Winter Term – grading system will be published when the Winter term schedule is published

Written Examinations
• The number of written exams will vary by semester, reflective of the material covered
• Examinations will cover information from reading assignments, handouts, lectures, videos, demos, lab sessions, and clinic seminars
• All exams will be identified by honor code only
• No questions are allowed of the faculty during the exam. Questions may be asked immediately after the exam. Answer sheets are reviewed by the faculty after scoring to ensure grading accuracy and to evaluate which questions were missed. Bad questions are either thrown out or credit is given for other answers
• Due to test security issues in the past, exams will NOT be returned nor keys posted
• Due to logistic issues, students cannot individually review written exams. Faculty will provide review sessions for written exams after they are graded
• Reproduction of tests or test questions by any method such as copying, photography, or scribing is strictly prohibited. Violations of this policy will be considered an Honor Code infraction
• Electronic equipment, including cell phones, are not allowed out during any examination
• The wear of hats is not allowed

Lab Practicals
• Practical exams test a student’s ability to perform a clinical procedure independently within a given time frame
• The number of practicals varies by semester, reflective of the material covered
• Practicals are timed. It is the student’s responsibility to be set up and prepared to start when the practical begins. No additional time is allowed due to late starts. Failure to turn in materials by the time stated results in a zero
• Students must work independently with no assistance from faculty or other students. Giving help or receiving help from another student during a practical is an Honor Code violation
• Questions are allowed of the faculty during a practical only to resolve problems related to the test teeth, equipment, or materials which are out of the student’s control. Faculty will NOT answer inappropriate questions nor assist students with procedures that are part of what is being tested
• Students must notify the faculty of any problems related to equipment, materials, or the test teeth at the time that a problem is discovered and no later than the time at which the practical is turned in
• All practicals are graded by the course director. The final decision on all grades lies with the course director
• All practicals are identified by honor code only. Faculty do NOT know the identity of the student at the time of grading
• Specific instructions and criteria for successful completion of each practical will be provided as that procedure is covered in class
• Practicals will not be returned to students but students will be allowed to review their grade sheet and test tooth so that they may see and learn from any errors

Grading Scale for Exams, Quizzes, and Practicals
• Point value of written exams and practicals are weighted according to the amount and importance of the subject matter tested, and time devoted to the subjects
• A total of 100 points is possible for the semester. A student must earn at least 70 points over the course of the semester to pass the class. All points are earned or lost. There is no extra credit or free points given
• Each exam/practical has a maximum score possible based on the number of questions or criteria evaluated (i.e., a 50 question exam has a maximum possible score of 50)
• Points are earned based on the percentage of the maximum score (example: a score of 45 on an exam with a maximum score of 50 would earn 45/50 or 90% of the points assigned to that exam. If the exam were worth 10 points of the final grade, the number of points earned would be 9.0)
• 60% is the minimum passing grade for exams, quizzes, and practicals in this course. Students only earn points if the % score earned is 60% or higher. Students earn zero points for exams, quizzes, and practicals which score below 60%.

Final Grade Grading Scale
The final grade is based on the total of the points earned and deducted over the course of the semester:
A+ 98 – 100
A  94 – 97.9
A- 90 – 93.9
B+ 87 – 89.9
B  84 – 86.9
B- 80 – 83.9
C+ 77 – 79.9
C  74 – 76.9
C- 70 – 73.9
E  less than 70 points

Other Course Requirements Which Influence the Final Grade:
Attendance/Course Policies
• Points may be deducted for unsatisfactory attendance (as listed previously) or for failure to comply with course policies (as previously described)

Project Sheets
• ½ point deducted for turning in project sheets after the deadline
• Incomplete project sheets will not be accepted until they are completed
• Failure to turn in project sheets by the end of the term will result in a 1-point deduction and will result in an Incomplete grade until both the original project sheet and additional work are completed
Seminar/Clinic Attendance Journal Forms
• ½ point deducted for turning in clinic forms after the deadline
• Incomplete forms will result in deduction of at least ½ point
• Failure to turn in a clinic form will result in a 1 point deduction and is counted as an absence

Honor Code or Name Identification
• It is the student’s responsibility to ensure their honor code is correctly annotated on all exams, practicals, and quizzes and their name is annotated on daily project sheets and clinic forms
• Failure to annotate the honor code on any required items for any quiz, written exam (answer sheet or text booklet) or practical exam (evaluation sheets, typodont etc) will result in a minimum deduction of 5% and may result in a zero. The course director has the discretion to fail any student who fails to annotate their honor code on any required portion of any examination if the faculty is unable to identify the student who performed or submitted the work
• Clinic forms and laboratory project sheets submitted with no name will not receive credit unless it is obvious to whom it belonged

Tutors
• Students identified by the course director or row instructors as needing additional one-on-one assistance will be recommended to be assigned a student tutor
• Students who fail a written exam or practical will automatically be referred to be assigned a student tutor
• It is the D1’s responsibility to follow-up with their assigned tutor for help sessions

Unsatisfactory Performance
• Failure to achieve 70% of the total points for the course, due to academic performance as well as point deductions, is considered unsatisfactory and will result in the grade of “E”. This may result in course remediation, course repetition or academic dismissal
  • The Academic Review Board reviews all cases of unsatisfactory academic performance on an individual basis and makes the final decision as to how a student resolves an unsatisfactory grade
• Remediation and retakes of practicals will be required of any student who fails the same part of both the Class II amalgam practical and the MOD amalgam practical Winter term, regardless of their final grade in the class
• Remediation and retakes of other individual exams or practicals may be required on an individual basis at the course director’s discretion
• Retakes of examinations or practicals will be used only to reassess student competency and will not improve the student’s original grade
COMPETENCIES: CLINICAL FOUNDATIONS I – 519/520

COMPETENCIES ARE ADDRESSED AND ACQUISITION OF KNOWLEDGE, SKILLS, ATTITUDES, AND BEHAVIORS REQUIRED TO MEET THEM IS MEASURED AT THE FOLLOWING LEVELS:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
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<tbody>
<tr>
<td>X Foundation</td>
<td>X Basic</td>
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<tr>
<td>___ Application</td>
<td>___ Intermediate</td>
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COMPETENCIES ADDRESSED:
This course aids in developing competency in the following areas as defined in the Competencies for the New Dental Graduate through the following methods:

1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
   The graduating student…
   1a. Practices as obliged by principles of ethics and the ADA Code of Ethics.
      Instructional tools used: presentations in clinic seminars and observations in clinic.

2. The graduating student participates in professional self-regulation.
   The graduating student…
   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
      Instructional tools used: emphasis on self-evaluation in laboratory.

3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.
   Instructional tools used: interaction in lecture, laboratory and clinical settings.

5. The graduating student communicates effectively with patients and colleagues.
   The graduating student…
   5a. Demonstrates effective interpersonal skills to establish rapport, obtain complete and accurate information from patients, and answer patient’s questions and address patient’s concerns.
   5b. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventive measures, and obtain informed consent.
   5c. Demonstrates effective interpersonal skills in consultations and referrals.
      Instructional tools used: assisting in the student clinics.

7. The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.
   The graduating student…
   7b. Performs and records the findings of intraoral examinations.
   7c. Performs/orders and records findings of other diagnostic procedures and tests as necessary.
   7d. Identifies and assesses conditions that place patients at increased risk for disease.
   7e. Identifies patient behaviors that impact oral and systemic health.
      Instructional tools used: 7b. lectures and oral examination clinical exercises
                                7c, d & e. lectures and clinic seminars (caries)

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
   The graduating student…
   8a. Differentiates between health and disease.
      Instructional tools used: lectures, laboratory exercises and clinic seminars related to caries, occlusal factors, and restorative dentistry
9. The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses.

   The graduating student...


   Instructional tools used: lectures, clinic seminars and observations in clinic.

14. The graduating student provides oral health care to treat/manage craniofacial and dental diseases/disorders and their effects, including:

   14a. Preservation and restoration of teeth.

   14d. Pulpal therapy.

   14f. Hard and soft tissue surgery.

   Instructional tools used: Fundamentals in lecture and laboratory. Practical application exposure during clinic assisting.

16. The graduating student applies the principles of infection control and environmental safety to clinical practice.

   The graduating student...

   16a. Establishes and maintains an environment that protects against transmission of disease.

   16b. Implements protocols that establish and maintain an environment that protects against environmental hazards.

   Instructional tools used: Fundamentals in lectures and clinic seminars. Practical application during clinic assisting and laboratory work.

HOW ACQUISITION OF KNOWLEDGE, SKILLS, ATTITUDES, AND BEHAVIORS REQUIRED TO MEET THE COMPETENCIES IS MEASURED:

7. The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.

   The graduating student...

   7b. Performs and records the findings of intraoral examinations.

   7c. Performs/orders and records findings of other diagnostic procedures and tests as necessary.

   7d. Identifies and assesses conditions that place patients at increased risk for disease.

   7e. Identifies patient behaviors that impact oral and systemic health.

   Measurement instrument: written examinations.

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.

   The graduating student...

   8a. Differentiates between health and disease.

   Measurement instrument: written examinations.

9. The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses.

   The graduating student...


   Measurement instrument: written examinations.

14. The graduating student provides oral health care to treat/manage craniofacial and dental diseases/disorders and their effects, including:

   14a. Preservation and restoration of teeth.

   14d. Pulpal therapy.

   14f. Hard and soft tissue surgery.

   Measurement instrument: 14a, 14d and 14f written examinations

14a and f practical examinations
# CLASS SCHEDULE

## CLINICAL FOUNDATIONS I  519 – FALL 2009

**LECTURE:**
- Tuesday 1-2pm  Rm G378  Entire class
- Thursday 1-2pm  Rm G378  Entire class

**LAB:**
- Tuesday 2-5pm  Rm G360  Group A
- Thursday 2-5pm  Rm G360  Group B

**SEMINAR & CLINIC:**
- Tuesday 2-5pm  VIC Clinics  Group B
- Thursday 2-5pm  VIC Clinics  Group A

**LECT/SEMINAR:**  **Oct 21 – Dec 9 (Half-term)**
- Wednesday 2-5pm  Rm G378  Entire class

(dental hygiene class is in the lab 1-2pm on Thursdays)

## CLINICAL FOUNDATIONS I  520 – WINTER 2010

**LECTURE:**
- Tuesday 1-2pm  Rm G322  Entire class
- Thursday 1-2pm  Rm G322  Entire class

**LAB:**
- Tuesday 2-5pm  Rm G360  Group B
- Thursday 2-5pm  Rm G360  Group A

**CLINIC:**
- Tuesday 2-5pm  VIC Clinics  Group A
- Thursday 2-5pm  VIC Clinics  Group B

**LECT/LAB:**  Friday 2-5pm  G322/G360  Entire class

* This is a general schedule only. There are exceptions to this schedule. See syllabus for specific activities on specific dates.
CLINICAL FOUNDATION I  519 – FALL 2009
DAILY SCHEDULE

** Schedule is subject to change at any time pending changes to academic calendar, room or faculty availability, equipment availability, student progress, and instructor determination
** Changes will be announced in class or via e-mail to entire class
** Announced changes will supercede previous versions of the syllabus
** It is the student’s responsibility to keep track of syllabus and schedule changes

WEEK 1

Thurs Aug 27
Lab (1-5 pm): Entire Class: Introduction & Instrument Inventory
1:00 – 2:00 pm:
• Introduction/ obtain student info
• Review syllabus, schedule, course policies & expectations
2:00 – 2:15pm: Break
2:15 – 4:00pm: (w/ Kari, Carlie, Teresa)
• Equipment/instrument inventory & contracts

No clinic or seminar this week.

WEEK 2

Tue Sep 1
Lect (1-2pm): Examination Instruments (McLean)
Rotary Instrumentation for Operative Dentistry (McLean)

Thurs Sep 3
Lect (1-2pm): Treatment Planning and Restorative Dentistry (McLean)
Dental Anatomy Nomenclature (McLean)

Tue & Thurs Lab (2:15- 5pm): Sim lab orientation/Handpiece set-up
Benchtop Form 1 preps on blocks
2:15 – 2:30 pm: Introduce row instructors/ row instructor assignments
2:30 – 3:00 pm: Sim lab orientation
3:00 – 3:15 pm: Handpiece set up
3:15 – 4:00 pm  Introduce Form 1 criteria sheet and project sheet
Demo of instrument grasp/ use of fulcrum
4:00 – 5:00 pm: Start Form 1 preps on blocks on the benchtop (**short faculty meeting once students start prepping)

Clinic Seminar: 2-5pm in lecture hall
WEEK 3

Tue Sep 8
Lect (1-2pm): Black’s Classifications/ Nomenclature of Cavity Preparations (McLean)

Thurs Sep 10
Lect (1-2:15pm): Alginate Impressions and Diagnostic Casts (McLean)

Tue & Thurs Lab (2:15-5pm): Chair positioning/ Typodont & sim head set-up/ Mirror exercises/ Form 1 block preps (indirect vision)
2:15 – 2:30 pm: Video - “Positioning the Patient and the Operating Team”
2:30 – 3:00 pm: Demo: Set up of sim head, typodonts, water, and suction. Label typodonts
3:00 – 3:15 pm: Mirror exercises (attach blocks to typodont with rubber bands before screwing into head)
3:15 – 5:00 pm: Exercise: Using mirror/indirect vision, cut Form 1 preps on blocks.

Clinic Seminar: 2:15-5pm in lecture hall

WEEK 4

Tue Sep 15 - **Faculty meeting in office during lecture
Lect (1-2pm): Oral Examinations – Structures and Landmarks Part I (Dr. Kanjirath)

Thurs Sep 17 - **Faculty free until 2:00pm
Lect (1-2pm): Oral Examinations – Structures and Landmarks Part II (Dr. Kanjirath)

Tue & Thurs Lab (2-5pm): Alginate impressions and diagnostic casts
**Bring clear dental anatomy models to lab!
2:00-3:00 pm: Video/demo
  • Tray selection and modification
  • Alginate mixing and impression making
  • Model pouring, separation, and trimming
3:00-5:00 pm: Exercise
  • Max & man alginate impressions of clear dental anatomy models
  • Pour impressions in stone
  • Separate and trim models

Clinic Seminar: 2-5pm in lecture hall
WEEK 5 (*White Coat Ceremony - Friday Sep 25*)

Tues Sep 22
(1-2pm) **WRITTEN EXAM #1** – Treatment Planning, Exam Instruments and Rotary Instrumentation, Nomenclature of Dental Anatomy and Cavity Preparations, Black’s Classifications, Alginate Impressions and Diagnostic Casts (and lab and seminar material)
(*exam will be in the OLD lab - go straight to clinic, seminar, or new lab when finished with exam)*

Thurs Sep 24
Lect (1-2pm): Etiology, Detection and Diagnosis of Dental Caries (Neiva)

**Tues & Thurs Lab (2-5pm):** Form 1 preps on flat typodont teeth (indirect vision)

**Exercise:** Form 1 preps on flat teeth using mirror/indirect vision

Clinic Seminar (in lecture hall) **OR** Oral Examination exercise in clinic with Dr. Kanjirath (2-5pm):
(see Dr. Kanjirath’s schedule - TBA)

**Note when you are scheduled to be in clinic with Dr. Kanjirath.**

**You MUST WEAR APPROPRIATE CLINIC ATTIRE that day and bring safety glasses with you.**

**The week that you are NOT in clinic, you must attend the seminar. It will be repeated both weeks.**

WEEK 6

**Tues Sep 29**
Lect (1-2:15pm): Restorative Isolation/Rubber Dams (McLean)

**Thurs Oct 1**
Lect (1-2:15pm): Principles of Cavity Preparation and Caries Removal Procedures (McLean)

**Tues & Thurs Lab (2:15-5pm):** Rubber Dams
(*pass out caries removal teeth*)

**Demo:**
- Preparation of the rubber dam
- Anterior & posterior rubber dam application

**Demo:** Mounting extracted teeth in stone mounts

**Exercise:** Apply anterior & posterior rubber dams on typodont
  - Mount caries removal teeth in stone

Clinic Seminar (in lecture hall) **OR** Oral Examination exercise in clinic with Dr. Kanjirath (2:15-5pm):
(see Dr. Kanjirath’s schedule - TBA)

**Note when you are scheduled to be in clinic with Dr. Kanjirath.**

**You MUST WEAR APPROPRIATE CLINIC ATTIRE that day and bring safety glasses with you.**

**The week that you are NOT in clinic, you must attend the seminar. It will be repeated both weeks.**
WEEK 7

Tue Oct 6
Lect (1-2pm): Biological and Pulpal Considerations of Cavity Preparations (McLean)

Thurs Oct 8
Lect (1-2pm): Liners, Varnish, and Temporary Restorative Materials (McLean)

Tue & Thurs Lab (2:15-5pm): Caries Removal
Video: "Removal of Carious Lesion"
Exercise: Caries removal on extracted teeth (on benchtop)

Seminar/Clinic (2-5pm): Go to seminar first, then clinic to assist
**Be sure to be in proper clinic attire and bring safety glasses!

WEEK 8

Tue Oct 13
Lect (1-2pm): Review for Form 1 and Rubber Dam Practicals (McLean)
Review of Exam #1 (McLean)

Thurs Oct 15 (*exam will be in the lecture hall)
(1-1:30pm): WRITTEN EXAM #2 – Oral Structures and Landmarks (Dr. Kanjirath)
** Faculty meeting during exam (in preclinic office area)

Tue & Thurs Lab (2-5pm): Liners and Temporary Restorations (McLean)
Demo with student exercise after each one: Use caries removal teeth from last week
  • Mix and place calcium hydroxide
  • Mix and place glass ionomer liner
  • Place copal varnish
  • Mix and place IRM (as temporary restoration) in a different tooth
*Use remaining time to practice caries removal or Form 1 preps

Seminar/Clinic (2-5pm): Go to seminar first, then clinic

WEEK 9 (*start Wednesday class sessions!)

Tue Oct 20 - Midterm Break 😊

Wed Oct 21
Lect (2-3:15pm): Management and Prevention of Dental Caries (McLean)
Break (3:15 – 3:30pm)
Lect (3:30-4:30pm): Review for Caries Removal Independent Project (McLean)

Thurs Oct 22
1:00 – 1:30pm: Student set-up for practical
1:30 – 1:45pm: Faculty set-up for practical
1:45 – 2:00pm: Practical Instructions
2:00 – 3:30pm: PRACTICALS #1 & 2– Rubber Dam & Form 1 Preparation
3:30 – 5:00pm: Optional lab session for caries removal practice

**No clinic or seminar this week
WEEK 10

Tue Oct 27
Lect (1-2pm): Resin Composite Materials (Neiva)

Wed Oct 28
(2-3pm): WRITTEN EXAM #3 – Restorative Isolation, Rubber Dams, Caries, Cavity Preparations and Caries Removal, Caries Management and Prevention, Biological and Pulpal Considerations, Liners and Temporary Restorations (*exam in lecture hall)
(3:00 – 3:15pm): Review of Written Exam #3

Thurs Oct 29
Lect (1-2pm): Class III Resin Composite Preparations (Neiva)

Tuesday Lab: CARIES REMOVAL INDEPENDENT PROJECT (CRIP)
***** ALL students take practical this day. ½ of class tested at a time.
2:00-2:15pm Faculty meeting in office to organize
All students set-up
2:15-2:30pm Faculty set up in lab for Group A (Tues lab group)
2:30-3:30pm Group A in Lab: Row instructors grade CR on extracted test tooth (to be distributed that day)
Group B is free
3:30-3:45pm Faculty set up in lab for Group B (Thurs lab group)
3:45-4:45pm Group B in Lab: Row instructors grade CR on extracted test tooth (to be distributed that day)
Group A is free

Thursday Lab (2-5pm): MiDent Training
*****All students attend MiDent computer training in the sim lab (Dr. Fitzgerald/S. Grayden)

WEEK 11

Tue Nov 3 – No lecture. Lab starts at 1:00. Clinic group free until 2:00.

Wed Nov 4 – No class

Thurs Nov 5 (hygiene class is in lab 1-2pm)
Lect (1-2pm): Curing Lights (McLean)

Tue & Thurs Lab (2-5pm): Class III Resin Composite Preparations
(*pass out sealant teeth)
Exercise:
• Class III resin composite preparations
• Mount extracted teeth in stone for sealant exercise next week

Seminar/Clinic (2-5pm): Go to seminar first, then clinic
WEEK 12

**Tue Nov 10**
Lect (1-2pm): Etching, Enamel Bonding, and Sealants (Nor)

**Wed Nov 11**
Lect (2-3pm): Dentin Bonding - Part I (Nor)

**Thurs Nov 12**
Lect (1-2pm): Dentin Bonding (continued) and Preventive Resin Restorations (PRR’s) (Nor)

**Tue & Thurs Lab (2-5pm):** Sealants/continue Class III preps
Demo & Exercise: Etching, bonding, sealant placement on extracted teeth
Exercise: Continue Class III preps

**Clinic only (2-5pm):** No seminar this week. Go straight to clinic after lecture

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WEEK 13

**Tue Nov 17**
Lect (1-2pm): Class III Resin Composite Restorations (Neiva)

**Wed Nov 18** – No class

**Thurs Nov 19**
Lect (1-2pm): Class IV Resin Composite Preps and Restorations (Neiva)

**Tue & Thurs Lab (2-5pm):** Class III resin composite restorations
Demo: Matrix use, placement, and finishing of resin composite in Class III prep
Exercise: Class III restorations

**Seminar/Clinic (2-5pm):** Go to seminar first, then clinic

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WEEK 14 (Dr. McLean out – Reserve duty Nov 23-25)

**Tue Nov 24**
Lect (1-2pm): Esthetic Considerations for Anterior Resin Composite Restorations (Neiva)

Lab (2-5pm): ***Entire class in lab.
Exercise: Continue Class III resin composite preps and restorations

No seminar or clinic this week.

**Wed Nov 25 & Thurs Nov 26** – Happy Thanksgiving!!
WEEK 15

Tue Dec 1
Lect (1-2pm): Glass Ionomer Materials and Compomers (Neiva)

Wed Dec 2 (*exam will be in the lecture hall)
2-3pm: WRITTEN EXAM #4: Resin Composite Materials, Glass Ionomers, Compomers, Light Curing, Bonding, Sealants, PRR’s, Class III & IV Preps, Class III & IV Restorations, Esthetics

Thurs Dec 3
Lect (1-2pm): Review for Class III practicals (McLean)
Review of Written Exam #4

Clinic only (2-5pm): No seminar this week - go straight to clinic

WEEK 16

Tue Dec 8
1:00 – 1:30pm Students set-up for practical
1:30 – 1:45pm Faculty set-up for practical
1:45 – 2:00pm Practical Instructions/Check contacts
2:00 – 3:00pm PRACTICAL #3- Class III Resin Composite Preparation
3:00 – 5:00pm Optional lab session to practice for restoration practical

Wed Dec 9 (*exam will be in the lecture hall)
2-3:15pm FINAL WRITTEN EXAM

Thurs Dec 10
1:00 – 1:30pm Students set-up for practical
1:30 – 1:45pm Faculty set-up for practical
1:45 – 2:00pm Practical Instructions/Check contacts
2:00 – 3:00pm PRACTICAL #4- Class III Resin Composite Restoration (on precut prep)
3:00 – 5:00pm Students free after practical

**No clinic or seminar this week!

FINALS WEEK: DEC 14-18 (no class)

Happy Holidays! Have A Great Break!! ☺

COURSE SCHEDULES AND GRADING CRITERIA FOR COURSE 520 WINTER TERM 2009 AND SPRING TERM 2009 WILL BE DISTRIBUTED/POSTED AT A LATER DATE
CLINIC & CLINIC SEMINAR SCHEDULE  
**Fall Term 2009**

- Seminars will meet in Room G378 following lecture  
  Tues Seminars - Dr. Bill Piskorowski  
  Thurs Seminars - Dr. Mark Fitzgerald  
- Clinic sessions begin in October, the week after the White Coat ceremony  
- Attend clinic in the VIC clinic to which you are assigned  
- Go to clinic right after seminar (or lecture, if no seminar scheduled that day)  
- Be sure to get attendance sheets signed and turned in!

<table>
<thead>
<tr>
<th>Wk</th>
<th>Dates</th>
<th>Event</th>
<th>Time</th>
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<tbody>
<tr>
<td>1</td>
<td>Aug 27</td>
<td>No clinic or seminar</td>
<td></td>
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<tr>
<td>2</td>
<td>Sep 1 &amp; 3</td>
<td>Seminar only</td>
<td>2-5 pm</td>
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<td>3</td>
<td>Sep 8 &amp; 10</td>
<td>Seminar only</td>
<td>2:15-5 pm</td>
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<td>4</td>
<td>Sep 15 &amp; 17</td>
<td>Seminar only</td>
<td>2-5 pm</td>
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<td>5</td>
<td>Sep 22 &amp; 24</td>
<td>Oral examination exercise with Dr. Kanjirath or Seminar</td>
<td>2-5 pm</td>
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<td>(see individual schedule - TBA)</td>
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<td>*<em>Friday <em>Sep 25</em></em></td>
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<td><strong>White coat ceremony</strong></td>
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<td>6</td>
<td>Sep 29 &amp; Oct 1</td>
<td>Oral examination exercise with Dr. Kanjirath or Seminar</td>
<td>2:15-5 pm</td>
</tr>
<tr>
<td></td>
<td>(see individual schedule - TBA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Oct 6 &amp; 8</td>
<td>Seminar, then clinic</td>
<td>2-5 pm</td>
</tr>
<tr>
<td>8</td>
<td>Oct 13 &amp; 15</td>
<td>Seminar, then clinic</td>
<td>2-5 pm</td>
</tr>
<tr>
<td>9</td>
<td>Oct 20 &amp; 22</td>
<td>No clinic or seminar (midterm break &amp; practical)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Oct 27 – Tues Oct 29 - Thurs</td>
<td>No clinic or seminar (Caries Removal Independent Project) MIDent computer training (in lab – all students)</td>
<td>2-5 pm</td>
</tr>
<tr>
<td>11</td>
<td>Nov 3 &amp; 5</td>
<td>Seminar, then clinic</td>
<td>2-5 pm</td>
</tr>
<tr>
<td>12</td>
<td>Nov 10 &amp; 12</td>
<td>Clinic only</td>
<td>2-5 pm</td>
</tr>
<tr>
<td>13</td>
<td>Nov 17 &amp; 19</td>
<td>Seminar, then clinic</td>
<td>2-5 pm</td>
</tr>
<tr>
<td>14</td>
<td>Nov 24 &amp; 26</td>
<td>No clinic or seminar (Thanksgiving)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Dec 1 &amp; 3</td>
<td>Clinic only</td>
<td>2-5 pm</td>
</tr>
<tr>
<td>16</td>
<td>Dec 8 &amp; 10</td>
<td>No clinic or seminar (due to practicals)</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Dec 15 &amp; 17</td>
<td>No clinic or seminar (final exams)</td>
<td></td>
</tr>
</tbody>
</table>
Course title.  
Comprehensive Care Clinic

Course number.  
5XX

Term and year.  
Fall D1 Year

Location, time, and day:  
Comp Care Clinics: Tue. and Thurs. 2-5 pm  
Seminars: G-378 Tue. and Thurs. 2-5 pm

Course personnel and contact information.  
Course Director-Mark Fitzgerald  
Email: markfitz@umich.edu,  
Room 2351, 2nd floor, Tele: (734) 647-3904

Course description/Nature of Course Content.  
An introductory clinical experience and translation of bench work into clinical practice in Oral Medicine, Risk Assessment, Treatment Planning, Oral Radiology and Periodontics. This course is composed of experiences in clinical, laboratory, lecture, and seminar settings.

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them is measured at the following levels:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Foundation</td>
<td>X Basic</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X Application</td>
<td>___Intermediate</td>
<td>___</td>
<td>___ Advanced</td>
</tr>
</tbody>
</table>

Competencies addressed:

1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
   The graduating student…
   1a. Practices as obliged by principles of ethics and the ADA Code of Ethics.
   1b. Practices within the context of the appropriate state Dental Practice Act.

2. The graduating student participates in professional self-regulation.
   The graduating student…
   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
   2b. Understands the need for and establishes a plan for personal/professional growth and development.
3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.

4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.
   The graduating student...
   4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.
   4b. Routinely evaluates outcomes of clinical practice.

5. The graduating student communicates effectively with patients and colleagues.
   The graduating student...
   5a. Demonstrates effective interpersonal skills to establish rapport, obtain complete and accurate information from patients, and answer patient’s questions and address patient’s concerns.
   5b. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventive measures, and obtain informed consent.
   5c. Demonstrates effective interpersonal skills in consultations and referrals.

6. The graduating student obtains, records, updates and organizes accurate and complete medical/dental histories including pertinent psychological and sociocultural information.
   The graduating student...
   6a. Identifies patient values, expectations and goals for oral health care.
   6b. Obtains and records the chief complaint of the patient and the history of the present illness.
   6c. Establishes and maintains the patient record as a document of patient encounters.
   6d. Identifies and records the patient’s medications, their potential effects on oral and systemic health, and their impact on treatment.
   6e. Recognizes the oral manifestations of systemic disease and how the disease and its management may affect the delivery of dental care.
   6f. Initiates necessary consultations or referrals to clarify questions related to the patient’s health.

7. The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.
   The graduating student...
   7a. Performs/records the findings of an appropriate behavioral assessment and physical examination not limited to the head and neck.
   7b. Performs and records the findings of intraoral examinations.
   7c. Performs/orders and records findings of other diagnostic procedures and tests as necessary.
   7d. Identifies and assesses conditions that place patients at increased risk for disease.
   7e. Identifies patient behaviors that impact oral and systemic health.
7f. Identifies the signs and symptoms of medical emergencies.
7g. Identifies the signs and symptoms of abuse.

8. **The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.**
The graduating student...
8a. Differentiates between health and disease.
8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases.
8c. Determines differential and/or provisional diagnoses for developmental disorders of the oro-facial complex.
8d. Determines provisional diagnoses of abuse.
8e. Recognizes medical emergencies.

9. **The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses.**
The graduating student...
9b. Plans treatments that reflect and manage the impact of behavioral, social and cultural beliefs and habits on oro-facial conditions.
9c. Plans oral health instruction and treatments that include health promotion and maintenance care.
9d. Develops treatment plans that reflect the impact of systemic disease and its management on the provision of oral health care.
9e. Develops treatment plans that reflect the impact of growth and development.
9f. Develops treatment plans that reflect the impact of disabilities on the provision and maintenance of oral health care.
9g. Develops treatment plans that address the patient’s esthetic concerns.
9h. Collaborates with the patient to establish a mutually acceptable treatment plan.

14. **The graduating student provides oral health care to treat/manage craniofacial and dental diseases/disorders and their effects, including:**
14a. Preservation and restoration of teeth.
14b. Replacement of teeth.
14c. Periodontal therapy.
14d. Pulpal therapy.
14e. Treatments for/management of soft tissue diseases/disorders.
14f. Hard and soft tissue surgery.
14g. Management of space and treatment/management of malocclusion.

15. **The graduating student promotes health maintenance and disease prevention by:**
15a. Collaborating with the patient to create an individualized self-care program.
15b. Recognizing and appreciating the need to contribute to the improvement of oral health beyond those served in traditional practice settings.
16. The graduating student applies the principles of infection control and environmental safety to clinical practice.
   The graduating student…
   16a. Establishes and maintains an environment that protects against transmission of disease.  
   16b. Implements protocols that establish and maintain an environment that protects against environmental hazards.

How acquisition of knowledge, skills, attitudes, and behaviors required to meet the competencies is measured:
This is a full year course of basic skill and knowledge application. There are clinical simulation exercises, clinical experiences, written examinations and independent treatment planning competency exams on simulated patients through-out the course.

This course objectives are for students to:
1. Actively participate in patient care
2. Develop an understanding the basic patient treatment protocols in the VICs
3. Master proper infection control practices
4. Integrate preclinical, behavioral science, and basic science skills into clinical experiences
5. Acquire the basic clinical skills necessary to perform a complete oral examination and treatment plan for a patient.
6. Develop proper clinical time management skills
7. Use self-evaluation of procedures to improve quality
8. Identify behavioral risk factors for oral disease
9. Develop interpersonal skills for relating to patients

Goals and Requirements:
On completion of this course the student should be able to function in a clinical setting observing all infection control guidelines, visually detect caries and independently develop an organized and finalized treatment plan on a simulated patient. The student is also expected to be able to enter into MiDent all patient treatment related data collected during routine dental treatment and assist in that treatment in the CompCare clinics.
**Course schedule:**

Seminars, lectures, and clinical sessions are scheduled on Tuesday and Thursday afternoons from 2 to 5 pm. Seminars and lectures are in G-378. Training sessions for MiDent are on designated Friday afternoons 3-5 pm in the SimLab.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time &amp; Location</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 31 &amp; Sept. 2</td>
<td>2-5 pm: Seminar G-378</td>
<td>CompCare Orientation, Professionalism, Roles and Responsibilities in the Clinics, Assign Observation of Professional Behavior Project</td>
</tr>
<tr>
<td>Sept. 3</td>
<td>3-5 pm: MiDent SimLab</td>
<td>MiDent Training - Activating Student Accounts and Accessing Information in MiDent</td>
</tr>
<tr>
<td>Sept. 8 &amp; Sept. 10</td>
<td>2-5 pm: Assigned VIC Clinics</td>
<td>Observation of Professional Behavior in clinic</td>
</tr>
<tr>
<td>Sept. 14 &amp; Sept. 16</td>
<td>2-5 pm: Seminar G-378</td>
<td>Tx. planning process overview, Taking a Health Hx. on Pt. William Jones</td>
</tr>
<tr>
<td>Sept. 17</td>
<td>3-5 pm: MiDent SimLab</td>
<td>Entering Health Hx for Pt. William Jones into MiDent</td>
</tr>
<tr>
<td>Sept. 21 &amp; Sept. 23</td>
<td>2-5 pm: Seminar G-378</td>
<td>Clinical Assessment and Treatment Plan formulation on patient William Jones</td>
</tr>
<tr>
<td>Sept. 24</td>
<td>3-5 pm: MiDent SimLab</td>
<td>Entering Clinical Assessment Data for William Jones into MiDent</td>
</tr>
<tr>
<td>Sept. 28 &amp; Sept. 30</td>
<td>2-5 pm: Seminar G-378</td>
<td>Completed Tx Plan Review for Patient William Jones</td>
</tr>
<tr>
<td>Oct. 1</td>
<td>3-5 pm: MiDent SimLab</td>
<td>Enter Final Tx Plan for William Jones into MiDent</td>
</tr>
<tr>
<td>Oct. 12</td>
<td>Midterm Break</td>
<td>No Seminar or Clinic</td>
</tr>
<tr>
<td>Oct. 14</td>
<td>Reflective assignment on clinic experience due</td>
<td></td>
</tr>
<tr>
<td>Oct. 26</td>
<td>No Seminar – 519 Practical Exam</td>
<td></td>
</tr>
<tr>
<td>Oct. 28</td>
<td>2-5 pm: Seminar G-378</td>
<td>Intro to clinical risk &amp; management forms. (All students)</td>
</tr>
<tr>
<td>Nov. 2 &amp; Nov. 4</td>
<td>2-5 pm: Seminar / Clinic then Old Lab</td>
<td>Group B and D: Tx Plan Seminar then Clinic Group A and C: Caries Detection Lab Part 1</td>
</tr>
<tr>
<td>Nov. 9 &amp; Nov. 11</td>
<td>2-5 pm: Seminar / Clinic then Old Lab</td>
<td>Group A and C: Tx Plan Seminar then Clinic Group B and D: Caries Detection Lab Part 1</td>
</tr>
<tr>
<td>Date</td>
<td>Time</td>
<td>Event Description</td>
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</tr>
<tr>
<td>Nov. 9 &amp; 11</td>
<td>2-5 pm</td>
<td>Orange Clinic Risk Assessment on patients</td>
</tr>
<tr>
<td>Nov. 23</td>
<td></td>
<td>No Seminar – 519 Practical Exam</td>
</tr>
<tr>
<td>Nov. 25</td>
<td></td>
<td>THANKSGIVING</td>
</tr>
<tr>
<td>Nov. 30 &amp; 2</td>
<td>2-5 pm</td>
<td>Old Lab Practical for Caries Detection</td>
</tr>
<tr>
<td>Dec. 7 &amp; 9</td>
<td></td>
<td>No Seminar – 519 Practical Exam</td>
</tr>
<tr>
<td>Dec. 10</td>
<td></td>
<td>Tx. Plan for Charlotte Smith due</td>
</tr>
</tbody>
</table>

**Clinical Seminars**
These seminars are for presenting new material, general discussion and trouble-shooting, Room G378

**Method of Evaluation:**
Grades will be Letter grade and based on the following:

1. Satisfactory attendance and participation in scheduled clinic, seminar and special MiDent Training sessions. (20%)
   Students must participate in a minimum of 90% of scheduled sessions.

2. Satisfactory completion and submission of Simulated Patient Treatment Plan Worksheets and Finalized Treatment Plan, each by its due date: (40%)

3. Reflective Assignment (20%)

4. Quiz (from questions on final exam for Caries Management) (20%)

Failure to meet the requirements in any one of the above criteria will result in an “E” or an “I” (Incomplete requiring additional work) at the faculty’s discretion. Failure to meet 2 or more of the above criteria will result in an “E” grade.
Syllabus

Course title
Grand Rounds

Course number

Term and year
Fall D1 year

Location, time, and day
Thursday mornings, 8-10 am

Course personnel and contact information
Dr. Dennis J. Fasbinder, djfas@umich.edu

Course description
The objective of the course is to provide D1 students an opportunity to apply basic skills in dental literature search techniques, reviewing literature articles, evidence-based decision making, and assessment of compiled information that were introduced in the Summer Grand Rounds course. Students will work in groups mentored by Faculty for the Fall sessions. Students will participate in four structured Grand Round sessions.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Foundation</td>
<td>X Basic</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>X Application</td>
<td>___Intermediate</td>
<td>___</td>
<td>___</td>
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<tr>
<td></td>
<td>___Advanced</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How progression toward competency or competency is measured.
Student groups will be assessed on searching the dental literature by submitting four literature searches, one for each of the four Grand Round sessions. Assessment will be based on the ability to find six references (2 per speaker) on the assigned topic of the session. Student groups will electronically submit at least one question per speaker prior to each of the Grand Round sessions for discussion during the topic presentation. Student groups will assess the relevance of their literature search relative to the topic presented in each of the two Grand Round sessions following the session.
Objectives

Develop an understanding and appreciation for importance of evidence based patient care
Promote skill building in searching for and accessing dental literature
Promote skill building in developing questions for discussion based on discovered dental literature
Develop enthusiasm for active participation in Grand Round sessions.

Session information.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic/Assignment</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Sep</td>
<td>8:00-10:00</td>
<td>Course Introduction</td>
<td>Dr. Fasbinder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GR Preparation – Student Groups meet</td>
<td></td>
</tr>
<tr>
<td>9 Sep</td>
<td>8:00-10:00</td>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
</tr>
<tr>
<td>16 Sep</td>
<td>8:00-10:00</td>
<td>Grand Rounds Session #1 Topic: Oral Health Course focus</td>
<td>Oral Health course faculty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignment: Complete topic assessment</td>
<td></td>
</tr>
<tr>
<td>23 Sep</td>
<td>3:00-5:00</td>
<td>GR Session #1 Review and Assessment</td>
<td>Oral Health course faculty</td>
</tr>
<tr>
<td>30 Sep</td>
<td>3:00-5:00</td>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
</tr>
<tr>
<td>7 Oct</td>
<td>3:00-5:00</td>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
</tr>
<tr>
<td>14 Oct</td>
<td>8:00-10:00</td>
<td>Grand Rounds Session #2 Topic: Cleft Lip/Palate</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Assignment: Complete topic assessment</td>
<td></td>
</tr>
<tr>
<td>21 Oct</td>
<td>8:00-10:00</td>
<td>GR Session #2 Review and Assessment</td>
<td>Moderator: R. Bradley</td>
</tr>
<tr>
<td>28 Oct</td>
<td>8:00-10:00</td>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
</tr>
<tr>
<td>4 Nov</td>
<td>3:00-5:00</td>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
</tr>
<tr>
<td>11 Nov</td>
<td>3:00-5:00</td>
<td>Grand Rounds Session #3 Topic: Infection Control</td>
<td>TBD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignment: Complete topic assessment</td>
<td></td>
</tr>
<tr>
<td>18 Nov</td>
<td>3:00-5:00</td>
<td>GR Session #3 Review and Assessment</td>
<td>TBD</td>
</tr>
<tr>
<td>2 Dec</td>
<td>3:00-5:00</td>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
</tr>
<tr>
<td>9 Dec</td>
<td>3:00-5:00</td>
<td>Grand Rounds Session #4 Topic: Cariology focus</td>
<td>Cariology course faculty (Dr. M. Fontana)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignment: Complete topic assessment</td>
<td></td>
</tr>
<tr>
<td>16 Dec</td>
<td>3:00-5:00</td>
<td>GR Session #4 Review and Assessment</td>
<td>Cariology course faculty</td>
</tr>
</tbody>
</table>
**Textbooks/ Readings**

There are no assigned textbooks for the course.

**Examination/grading policies**

Attendance at all Grand Round Presentation and Review sessions is mandatory.

Students will be graded based on the four Grand Round sessions. 50% of the grade will be based on the Group submissions for each session. 50% will be based on an individual grade submitted by the Faculty Mentor for the group.
Syllabus Template

Course title. Infection and Immunity

Course number. TBD

Term and year. Fall D1

Location, time, and day. Mon, Weds, Fri morning 9, 10, or 11:00 (same time each day) either large G-level lecture halls is fine. Exams will be in Kellogg Auditorium

Course personnel and contact information.
Course Directors: Eric Krukonis (ekrukoni@umich.edu) and Nikki Sweier (domsw@umich.edu)
Lecturers: Oveta Fuller (fullerao@umich.edu), Michael Hortsch (hortsch@umich.edu), James Varani (varani@med.umich.edu), Nick Lukacs (nlukacs@umich.edu), Peter Polverini (neovas@umich.edu), Nazy Kermani (nazy@umich.edu)

Course description.

This course covers basic microbiology of bacteria, viruses and fungi and includes an introduction to immunology. A more detailed discussion of sterilization and disinfection techniques, antibiotics, inflammation in response to infection, host factors that contribute to disease, pathogenic mechanisms of microbes and vaccine development will be covered. Case studies will be presented throughout the course.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Foundation</td>
<td>_Basic</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X Application</td>
<td>_Intermediate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>_Advanced</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How progression toward competency or competency is measured.

Two exams and some group projects.
Objectives.

Students should become familiar the basic biology of microbes, gain an appreciation for infection control, understand the basics of antibiotic function and antibiotic resistance, development of the immune system, the role of cytokines in inflammation, and the development and use of vaccines. Students should also become familiar with host conditions that predispose a patient to disease. Students should obtain the underpinnings for why infection control is so critical and the ways in which different disinfecting agents work.

Session information.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/25/10</td>
<td>9:00 AM</td>
<td>Introduction/Anatomy and structure of bacteria</td>
<td>Krukonis/Sweier</td>
</tr>
<tr>
<td>8/27/10</td>
<td>9:00 AM</td>
<td>Microbial growth and controlling microbial spread</td>
<td>Krukonis</td>
</tr>
<tr>
<td>8/30/10</td>
<td>9:00 AM</td>
<td>Antibiotics</td>
<td>Krukonis</td>
</tr>
<tr>
<td>9/1/10</td>
<td>9:00 AM</td>
<td>Bacterial genetics</td>
<td>Krukonis</td>
</tr>
<tr>
<td>9/3/10</td>
<td>9:00 AM</td>
<td>Case Study I: Antibiotics selection of drugs and antibiotic-associated colitis</td>
<td>Krukonis and Sweier</td>
</tr>
<tr>
<td>9/8/10</td>
<td>9:00 AM</td>
<td>Viruses: introduction, structure, and classification</td>
<td>Fuller</td>
</tr>
<tr>
<td>9/10/10</td>
<td>9:00 AM</td>
<td>Viral modes of replication</td>
<td>Fuller</td>
</tr>
<tr>
<td>9/13/10</td>
<td>9:00 AM</td>
<td>Transmission and patterns of virus infections (principles of pathogenesis)</td>
<td>Fuller</td>
</tr>
<tr>
<td>9/15/10</td>
<td>9:00 AM</td>
<td>Lymphatic System Development and Histology</td>
<td>Hortsch</td>
</tr>
<tr>
<td>9/17/10</td>
<td>9:00 AM</td>
<td>Immunoglobulins and Antibody-Antigen Reactions</td>
<td>Sweier</td>
</tr>
<tr>
<td>Date</td>
<td>Time</td>
<td>Topic</td>
<td>Instructor(s)</td>
</tr>
<tr>
<td>------------</td>
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</tr>
<tr>
<td>9/20/10</td>
<td>9:00 AM</td>
<td>Case Study I: Review</td>
<td>Krukonis/Sweier</td>
</tr>
<tr>
<td>9/22/10</td>
<td>9:00 AM</td>
<td>Innate Immunity</td>
<td>Sweier</td>
</tr>
<tr>
<td>9/24/10</td>
<td>9:00 AM</td>
<td>Activation of Adaptive Immunity,</td>
<td>Sweier</td>
</tr>
<tr>
<td>9/27/10</td>
<td>9:00 AM</td>
<td>Anaphylactic reactions</td>
<td>Sweier</td>
</tr>
<tr>
<td>9/29/10</td>
<td>9:00 AM</td>
<td>Hypersensitivity Reactions II-V</td>
<td>Sweier</td>
</tr>
<tr>
<td>10/1/10</td>
<td>9:00 AM</td>
<td>Mucosal Immunity</td>
<td>Sweier</td>
</tr>
<tr>
<td>10/4/10</td>
<td>9:00 AM</td>
<td>EXAM I</td>
<td>Krukonis and Sweier</td>
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<td>10/6/10</td>
<td>9:00 AM</td>
<td>Cell injury and death</td>
<td>Varani</td>
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<tr>
<td>10/8/10</td>
<td>9:00 AM</td>
<td>Inflammation: neutrophil function</td>
<td>Varani</td>
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<td>10/11/10</td>
<td>9:00 AM</td>
<td>Inflammation: chemical mediators</td>
<td>Varani</td>
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<td>10/13/10</td>
<td>9:00 AM</td>
<td>Cytokines and chemokines in inflammation</td>
<td>Lukacs</td>
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<td>10/15/10</td>
<td>9:00 AM</td>
<td>Chronic inflammation: cells and mediators</td>
<td>Polverini</td>
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<td>10/20/10</td>
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<td>Wound healing and repair</td>
<td>Polverini</td>
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<td>Acute and Chronic inflammation and repair</td>
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<td>10/25/10</td>
<td>9:00 AM</td>
<td>Case Study II: topic</td>
<td>Sweier, Krukonis and Varani</td>
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<tr>
<td>10/27/10</td>
<td>9:00 AM</td>
<td>Introduction to host-microbe interactions</td>
<td>Krukonis</td>
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<td>10/29/10</td>
<td>9:00 AM</td>
<td>Bacterial wound infections</td>
<td>Krukonis</td>
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<td>11/1/10</td>
<td>9:00 AM</td>
<td>Disorders of the immune system: autoimmunity</td>
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<td>11/3/10</td>
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<td>Disorders of the immune system: immunodeficiency</td>
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<td><strong>Case Study II Due</strong></td>
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<td>11/5/10</td>
<td>9:00 AM</td>
<td>Vaccines and anti-viral controls</td>
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<td>Emerging viruses (West Nile, Ebola, Avian Flu, etc)</td>
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<td>11/10/10</td>
<td>9:00 AM</td>
<td>Retroviruses and HIV (unique, major)</td>
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<td>Principles of microbial path of fungi</td>
<td>Krukonis</td>
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<td>Case Study II: Review</td>
<td>Krukonis/Sweier/Varani</td>
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<td>11/17/10</td>
<td>9:00 AM</td>
<td>Case Study III: The role of host conditions in disease susceptibility</td>
<td>Krukonis/Fulle r/Sweier</td>
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<td>Exam II</td>
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<td>11/29/10</td>
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<td>Culturing of Oral Microbes and interpreting reports</td>
<td>Krukonis/Sweir/Eber/Fontana</td>
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<td>12/1/10</td>
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<td>Case Study III due</td>
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<td>9:00 AM</td>
<td>Case Study III: Review</td>
<td>Krukonis/Fuller/Sweier/Kermani</td>
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Textbooks/ Readings.

Microbiology a Human Perspective: Nester et al, 5th edition  
The Immune System: Peter Parham, 3rd edition  
Robbins Basic Pathology: Kumar, Abbas, Fausto and Mitchell, 8th Edition

Examination/grading policies.

We will administer 2 exams throughout the semester. They will include some multiple-choice questions and some short answer questions. We will also assign (2-3) group projects to evaluate case studies relevant to the material covered.  
Estimated grade balance 55% exams, 30% case studies, 15% quizzes.

Other information.
### D1 Clinical Sciences and Pre-Clinic Courses Fall 2010

<table>
<thead>
<tr>
<th>Mon</th>
<th>Date</th>
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<th>Patient With Caries Course</th>
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<td>Aug</td>
<td>25</td>
<td>Wed</td>
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<td>Fall Semester-1st day of classes</td>
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<td>1-2 pm Course Introduction (McLean)</td>
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<td>1-2 pm: Examination instruments Rotary instruemntation for operative dentistry (McLean)</td>
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<td>2-5 pm: Seminar: CompCare Orientation, Professionalism, Roles and Responsibilities in the Clinics, Assign Observation of Professional Behavior Project (50 students)</td>
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<td>1-2 pm: Treatment Planning and Restorative Dentistry, Dental Anatomy Nomenclature (McLean)</td>
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<td>2-5 pm: Seminar: CompCare Orientation, Professionalism, Roles and Responsibilities in the Clinics, Assign Observation of Professional Behavior Project (50 students)</td>
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<td>1-2 pm: Black's Classifications/Nomenclature of Cavity Preparations (McLean)</td>
<td>2-5 pm: Chair Positioning / Typodont and Sim head set-up / Mirror exercises / Form 1 block preps (indirect vision)</td>
<td>2-5 pm: Clinic: Observation of Professional Behavior in clinic (50 students)</td>
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<td>1-2 pm: Alginate Impressions and Diagnostic Casts (McLean)</td>
<td>2-5 pm: Chair Positioning / Typodont and Sim head set-up / Mirror exercises / Form 1 block preps (indirect vision)</td>
<td>2-5 pm: Clinic: Observation of Professional Behavior in clinic (50 students)</td>
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<td>1-2 pm: MF-Visual Caries Detection and Diagnosis-part 1</td>
<td>2-5 pm: Alginate Impressions and Diagnostic Casts</td>
<td>2-5 pm: Seminar with Dr. Fitzgerald-(50 students) - Tx. planning process overview, Taking a Health Hx. on Pt. William Jones</td>
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<td>1-2 pm: MF-Visual Caries Detection and Diagnosis-part 2</td>
<td>2-5 pm: Alginate Impressions and Diagnostic Casts</td>
<td>2-5 pm: Seminar with Dr. Fitzgerald-(50 students) - Tx. planning process overview, Taking a Health Hx. on Pt. William Jones</td>
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<td>8-10am MF-Introduction to radiographic interpretation of caries lesions</td>
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<td>1-2 pm: WRITTEN EXAM #1 - Tx Planning, Exam and Rotary Insts, Nomenclature of Dental Anat and Cavity Prep, Black's Classifications, Alginate Imps and Dx. Casts</td>
<td>2-5 pm: Form 1 preps on flat Typodont Teeth (indirect vision)</td>
<td>2-5 pm: Seminar with Dr. Fitzgerald-Treatment Plan (50 students) - Clinical Assessment and Treatment Plan formulation on patient William Jones</td>
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<td>1-2 pm: CF Microbiology of caries-part 1 (from Dr. McLean's course time) Formerly Etiology, detection and dx of dental caries (Neiva)</td>
<td>2-5 pm: Form 1 preps on flat Typodont Teeth (indirect vision)</td>
<td>2-5 pm: Seminar with Dr. Fitzgerald-(50 students) - Clinical Assessment and Treatment Plan formulation on patient William Jones</td>
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<td>8-10am CF Microbiology of caries (part 2)</td>
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<td>1-2 pm: Restorative Isolation/ Rubber Dams (McLean)</td>
<td>2-5 pm: Rubber Dams</td>
<td>2-3 pm: Seminar with Dr. Fitzgerald- (50 students) - Completed Tx Plan Review for Patient William Jones</td>
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<td>3-5 pm: Clinic</td>
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<td>1-2 pm: Principles of Cavity Prepartaion and Caries Removal Procedures (McLean)</td>
<td>2-5 pm: Rubber Dams</td>
<td>2-3 pm: Seminar with Dr. Fitzgerald- (50 students) - Completed Tx Plan Review for Patient William Jones</td>
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<td>1-2 pm: Biological and Pulpal Considerations of Cavity Preparations</td>
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<td>1-2 pm: Liners, Varnish, and Temporary Restorative Materials</td>
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<td>8-10 WRITTEN EXAM CARIOLOGY MIDTERM</td>
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<td>1-2 pm: Review for Form 1 and Rubber Dam Practicals, Review of Exam #1 (McLean)</td>
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<td>8-10am CG-Role of Diet in the Etiology and Management of Dental Caries</td>
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<td>1-2 pm: Composite resin materials (Neiva)</td>
<td>2-5 pm: PRACTICAL EXAM: Caries removal independent project</td>
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<td>1-2 pm: Class III Resin Composite Preparations (Neiva)</td>
<td>No Lab:</td>
<td>2-5pm MF-Intro to clinical risk &amp; management forms (All students)</td>
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<td>1-2 pm: No Lecture</td>
<td>1-5 pm: Class 3 Resin Composite Preparations</td>
<td>2-5 pm: Seminar with Dr. Fitzgerald then Clinic Grp B</td>
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<td>1-2 pm: Curring Lights (McLean)</td>
<td>1-5 pm: Class 3 Resin Composite Preparations</td>
<td>2-5 pm: Seminar with Dr. Fitzgerald then Clinic Grp D</td>
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<td>1-2 pm: Etching, Enamel Bonding, and Sealants (Nor)</td>
<td>2-5 LAB (Sealant application) Dr. McLean (50 students)</td>
<td>2-5 pm: Seminar with Dr. Fitz then Clinic Grp A</td>
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<td>2-5 pm-MF-CG-WS-Old lab (25 students-Grp B) lab-Detection lab part 1</td>
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<td>2-3 pm: Dentin Bonding - Part I (Nor)</td>
<td>2-5 LAB (Sealant application) Dr. McLean (50 students)</td>
<td>2-5 pm: Seminar with Dr. Fitz then Clinic Grp C</td>
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<td>1-2 pm: Class III Resin Composite Rests. (Neiva)</td>
<td>2-5 pm: Class III resin composite restorations</td>
<td>2-5 pm: Orange Clinic for Risk Assessment (Grp A&amp;B)</td>
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<td>1-2 pm: Class IV Resin Composite Preps and Restorations (Neiva)</td>
<td>2-5 pm: Class III resin composite restorations</td>
<td>2-5 pm: Orange Clinic for Risk Assessment (Grp C&amp;D)</td>
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<td>1-2 pm: Esthetic Considerations for Anterior Resin Composite Restorations (Neiva)</td>
<td>2-5 pm: Class III resin composite restorations (Entire Class)</td>
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<td>1-2 pm: Glass Ionomer Materials and Compomers (Neiva)</td>
<td>2-5 pm: Class IV resin composite preparations</td>
<td>2-5 pm: Practical for Caries Detection (Grp A&amp;B)</td>
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<td>1-2 pm: Review for Class III Practicals (McLean)</td>
<td>2-5 pm: Class IV resin composite preparations</td>
<td>2-5 pm: Practical for Caries Detection (Grp C&amp;D)</td>
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<td>8-10am MF- Case discussions part 2-Day 1 Grp decisions (Assessment exercise-Assigned)</td>
<td>2-3 pm: WRITTEN EXAM #4: Resin Composite Materials, Glass Ionomers, Compomers, Light Curing, Bonding, Sealants, PPR's, Class III &amp; IV Preps</td>
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<td>1-2 pm: Student Set-up for Practical #3</td>
<td>2-5 pm: Practical # 3 - Class 3 Resin Composite Preparation</td>
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<td>1-2 pm: Student Set-up for Practical #4</td>
<td>2-5 pm: Practical # 4 - Class 3 Resin Composite Restoration on pre-prepared tooth</td>
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<td>8-10am MF- Case discussions part 2-Day 2 Grp decisions (Assessment exercise-Due)</td>
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<td>1-2 pm</td>
<td>Principles of Treatment Planning: Pt 1</td>
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<td>2-5 pm</td>
<td>MiDent Training - Activating Student Accounts and Accessing Information in MiDent</td>
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<td>History and Information Gathering</td>
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<td>Clinical Assessment and the Treatment Plan</td>
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<td>Mident Training - Entering Health Hx for Pt. William Jones into Mident</td>
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<td>Common Med &amp; Dent Problems: Referrals, Consultations &amp; Drug Refs</td>
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<td>2-5 pm: MiDent Training - Enter Final Tx Plan for William Jones into MiDent</td>
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<td>Other Factors Influencing the Treatment Plan</td>
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2-4pm CG-Introduction to the use of fluorides in caries management-Part 2(from Dr. McLean's course time)

1-3pm CG- Oral hygiene and mechanical plaque removal in caries control (from Dr. McLean's course time)
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<td>1-2 pm</td>
<td>Dentin Bonding (cont.) and Preventive Resin Restorations (PRR's) (Nor)</td>
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<td>1-3 pm</td>
<td>Discussion and questions</td>
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Course Title: Introduction to the Dental Profession - Peer & Self-Assessment & Professional Problem Solving

Course Number: DENT 501B
Term and Year: Fall 2010
Location, Time & Day: Location varies – G378 for most class sessions lecture, other rooms for small group work, and clinic activities. Days and times – Wednesdays 1-3 PM; Thursdays 11AM – Noon. Additional meeting times as indicated in schedule.

Course Personnel and Contact Information
Co-Course Directors
Dr. M. Fitzgerald 647-3904 markfitz@umich.edu
Dr. M. Lantz 763-5651 mslantz@umich.edu
Course Coordinator
Nancy Kelly 763-5651 nankel@umich.edu

Course description/Nature of Course Content
This course builds on material presented in DENT 501A and supports first year students in continuing their professional development. The course provides students with the opportunity to observe and assess professional behaviors in the clinical setting, self-assess and develop and individual learning plan with feedback from a faculty mentor, write a reflective essay, interact with Fellows of the American College of Dentistry, and develop skills in critical thinking and professional problem-solving. The course consists of lecture facilitated large and small group discussions, and an encounter with a standardized patient instructor.

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them is measured at the following levels:

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<th>Attitudes</th>
<th>Behaviors</th>
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Competencies Addressed

1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
   1a. The graduating student practices as obliged by principles of ethics and the ADA Code of Ethics.

2. The graduating student participates in professional self-regulation.
   2a. The graduating student practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
   2b. The graduating student understands the need for and establishes a plan for personal/professional growth and development.

3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.

How acquisition of knowledge, skills, attitudes, and behaviors required to meet the competencies is measured.
Student development toward competency is measured using written examinations and other performance-
based assessments.

Goals and Requirements
This course has multiple goals and multiple components. First, we want you to get to know some dentists and faculty members. You will meet individually and in small groups with dentists who are faculty members and non-dentist faculty members, and in small groups with dentists who practice in the community. Second, you will work in small groups with your classmates and get to know them better. Third, we want you to become acquainted with patients, so you will have another opportunity to interact with a Standardized Patient Instructor.

Attendance Policy:
Because much of your learning will occur through participation in group and in-class interactions, **attendance at every class session is mandatory**. Attendance will be taken at each class, and any unexcused absence may result in remediation assignments and/or failure of the course.

All INTRO 501B absences must be reported to the Registrar’s office at 764-1512 to Course Coordinator Nancy Kelly **prior** to the beginning of each class. Requests for time off for religious holidays or personal reasons must be submitted in writing to Nancy Kelly at nankel@umich.edu 7 days in advance.

— Please put this number in your cell-phone now: (734)764-1512. (Messages may be left.) —

Assessments and Assessment Methods

1. Reflective Essay on Small Group Discussions from 501A
2. Observation of Professional Behaviors in the Clinical Setting observation write-ups
3. Reflective Self Assessment (RSA) and Individualized Learning Plan (ILP)
4. Final examination

Assessment methods include, written assignments, written examinations on course material which include MCQs, T/FQs, various types of short answer questions essay questions, and exercises that require you to provide written feedback to a peer, written self-assessments, and preparation of a learning plan.

Session Information
Please see the attached Course Schedule on CTools

Textbooks / Readings
Required reading materials will be posted on the CTools site. **Please be sure to refer to the CTools site for the course schedule (Schedule), where required course readings and assignments (Assignments) are located, Instructions and updates (Announcements) may be posted prior to class sessions or small group discussions (an email will be sent to you about each Announcement.)**

The School of Dentistry is expected to be wireless as of August 15, 2010. Some of your assignments will be worked on in class and must be posted to CTools **before** you leave the classroom. **This allows you to complete work during class and removes the need for homework.** Some assignments will be completed outside of class and due dates are clearly marked in the Schedule. **All completed assignments will be posted to CTools.**
Note: Make sure your laptop is fully charged for each class session. The School does not have adequate electrical outlets in every room to service all electronic devices and allowances will not be made for those who come unprepared.

*Important: Once you load an assignment to CTools, it cannot be retrieved or changed. Make sure you upload the proper document each time. If you have any questions about CTools, contact Emily Springfield at espring@umich.edu.

Method of Evaluation

See Assessments and Assessment Methods above.

Examination / Grading Policies

Your performance in the course will be assessed using written exercises, performance-based assignments, and examinations as described above. The assessments are weighted as follows to determine your final grade:

- 5% All assignments submitted on time
- 15% Written Assignment 1: Reflective Essay on Small Group Discussions
- 15% Observation of Professional Behaviors in the Clinical Setting exercise
- 15% Reflective Self Assessment and Individualized Learning Plan exercise
- 50% Final examination

The grading scale is as follows. A student receiving a grade of 69% or below will be required to repeat the course.

- 97-100 A+
- 94-96 A
- 90-93 A-
- 87-89 B+
- 84-86 B
- 80-83 B-
- 77-79 C+
- 74-76 C
- 70-73 C-
- 67-69 D+
- 64-66 D
- 60-63 D-
- 00-59 F

Other Information

Developing a “professional identity” and making the transition from layperson to professional is one of the most important outcomes of professional education. This course is intended to help you begin to understand what it means to be a professional and to start the process of professional identity development. We think this is an exciting and meaningful process, and we want to be of assistance to you as you begin the journey. We expect that your professional growth and development will continue throughout your professional lifetime. Please feel free to contact course faculty members at any time.
semester if you desire to explore any of the ideas / concepts presented in the course in more detail through discussion. We welcome the opportunity to get to know you better and assist you in your efforts to learn.

The schedule listed below is accurate at the day of posting. Occasionally, changes have to be made. We expect you to keep up with the schedule and notifications of changes on the CTools website and to check your email regularly for updates (Announcements.)

The School of Dentistry and the directors of this class do not support any other calendar. Please make sure you keep up with the schedule by checking the CTools site and your email for Announcements.
# Intro to the Profession – Peer & Self-Assessment & Professional Problem Solving

**Dent 501B  Fall 2010**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed. 8/25</td>
<td>F. Week 1</td>
<td>1 hour 1-2 PM • Course Overview</td>
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<tr>
<td></td>
<td></td>
<td>1 hour 2-3 PM • PROI Results and Discussion</td>
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<tr>
<td></td>
<td></td>
<td>Professional Problem Solving – Dilemma Resolution</td>
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<tr>
<td></td>
<td></td>
<td>• Bebeau: Developing a Well-Reasoned Response</td>
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<tr>
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<td>• Case Study Analysis Form</td>
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<td>• Tips for Case Study Analysis</td>
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<td>• Developing a Well-Integrated Essay (Step 2)</td>
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<td>• Distinguishing Rights, Duties and Consequences</td>
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<td>• Dilemma Essay - Suggested approach for writing</td>
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<td>• Responding to a Moral Problem</td>
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<td>• Dilemma Resolution: Examples of Essays: Well-done; Fairly Well-done;</td>
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<tr>
<td></td>
<td></td>
<td>Not Well-done</td>
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<td><em>Prior to class, complete above readings on CTools.</em></td>
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<tr>
<td>Thu. 8/26</td>
<td></td>
<td>1 hour 11AM-Noon Examples of how to do Dilemma Resolution exercises</td>
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<tr>
<td>Wed. 9/1</td>
<td>F. Week 2</td>
<td>2 hours 1-3 PM Dilemma 1 (eProfessionalism)</td>
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<td>ACD Fellows</td>
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<td></td>
<td>Dental Pain at Southwest State</td>
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<td>• Dental Pain at Southwest State</td>
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<td>• Dental Pain at Marquette blog</td>
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<td><em>Prior to class, complete above readings on CTools.</em></td>
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<td>*Students should have copies of the materials with them or should</td>
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<td>download the documents to their desktop and then bring their laptop to</td>
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<td>class.</td>
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<td><em>Please bring your laptop.</em></td>
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<tr>
<td>Thu. 9/2</td>
<td>F. Week 2</td>
<td>1 hour 11AM-Noon Observation of Professional Behaviors in the Clinical</td>
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<td>Setting (OPBCS directions &amp; prep)</td>
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<tr>
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<td></td>
<td>Reflective Writing Instructions</td>
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<td><em>Please bring your laptop.</em></td>
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<tr>
<td>Tue. 9/7</td>
<td></td>
<td>3 hours 2-5 PM OPBCS Exercise (Group 1 &amp; 2, Last names M-R)</td>
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<td><em>Prior to the exercise, read OPBCS</em></td>
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<td></td>
<td>In your home Blue or Green Clinic</td>
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</tbody>
</table>
**materials on CTools**

*After the exercise, complete the OPBCS writing exercise to CTools by Fri. TBD.*
Also, in advance, please arrange a meeting with your mentor to review and discuss your OPBCS exercise between Mon. TBD.

Note: Group 1 (S-Z) may use this as Study Time

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Location</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed. 9/8</td>
<td>1 Hour</td>
<td>1-2 PM</td>
<td>Dr. Susan Goold</td>
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<tr>
<td></td>
<td>2-2:45 PM</td>
<td>Ms. Guenther, Dr. Fitzgerald</td>
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<td></td>
<td>2:45-3 PM</td>
<td>Dr. Fitzgerald</td>
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<tr>
<td>G378</td>
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<td></td>
<td>***Ethics of Financing Health Care (ethical issues in medical education)</td>
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<td></td>
<td>Difficult Conversations with Peers</td>
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<td></td>
<td>• Approaching Difficult Conversations</td>
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<td>• Difficult Conversations Listening Skills</td>
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<td><em>Prior to class, complete above readings on CTools. Students should have copies of the materials with them or should download the documents to your desktop and then bring your laptop to class.</em></td>
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<td>Preparation for Reflective Self Assessment (RSA) and Individualized Learning Plan (ILP) exercise.</td>
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<td></td>
<td>• RSA/ILP Example</td>
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<td><em>Prior to class, review the RSA/ILP Example on CTools.</em></td>
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<td><em>Also, in advance, please arrange a meeting with your mentor to review/discuss the RSA/ILP between Wed. tbd.</em></td>
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<td><em>Please bring your laptop.</em></td>
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<p>| Thu. 9/9  | 1 Hour   | Introduction to Peer Review |
| F. Week3  | Dr. Josef Kolling | Schulte: Dentistry and the Law – Michigan Supreme Court Clarifies Peer Review Immunity |
| G378      | confirmed | In your home Blue or Green Clinic |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Hours</td>
<td>OPBCS Exercise (Group 3 &amp; 4 - Last names A-L)</td>
<td>Prior to the exercise, read OPBCS materials on CTools</td>
</tr>
<tr>
<td>2-5 PM</td>
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<td>After the exercise, complete the OPBCS writing exercise to CTools by tbd at noon.</td>
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<td>Also, in advance, please arrange a meeting with your mentor to review and discuss your OPBCS exercise between TBD.</td>
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<td>Note: Group 3 (Last names G-L) may use this as Study Time</td>
</tr>
<tr>
<td>TBD</td>
<td>Mentor Meetings (Students schedule individually; one hour for OPBCS, one hour for RSA)</td>
<td>Students should meet with their Mentors between 9/2-9/22 to work on OPBCS &amp; RSA/ILP</td>
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<tr>
<td>Wed. 9/15</td>
<td>2 hours ACD Fellows Dilemma 2 (Mid-level providers – Alaska DHATs)</td>
<td>Varied rooms</td>
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<td>F. Week 4</td>
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<td>ACD Fellows</td>
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<td></td>
<td>Access to Care</td>
<td>Assignment: individual and group due to CTools before leaving session</td>
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<tr>
<td></td>
<td>• Surgeon General: <em>Oral Health in America</em></td>
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<td></td>
<td>• Dental Health Aide Therapists (DHATs)</td>
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<td>Prior to class, complete above readings on CTools. Students should have copies of the materials with them or should download the documents to their desktop and then bring their laptop to class.</td>
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<td>Please bring your laptop.</td>
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<td>Thu. 9/16</td>
<td>1 hour ***SPI Experience #2 Group: ____________</td>
<td>In orange clinic Dent 3340</td>
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<tr>
<td>F. Week 4</td>
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<td>Assignment OPBCS summary (2 parts) Due to CTools Fri. 9/16/10 5:00 PM</td>
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<tr>
<td>Wed. 9/22</td>
<td>2 hours SPI Experience #2 Group 1 A-F 9:00-10:30 Group 2 G-L 10:30-12:00</td>
<td>In orange clinic Dent 3340</td>
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<td>F. Week 5</td>
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<td>Assignment Reflective Writing</td>
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<tr>
<td>Date</td>
<td>Time</td>
<td>Activity</td>
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<tr>
<td>Thu. 9/23</td>
<td>11AM-Noon</td>
<td>***SPI Experience #2 Group: ___________________</td>
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<td>F. Week 5</td>
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<tr>
<td>Wed. 9/29</td>
<td>1-3 PM</td>
<td>Dilemma 3 (Dental Spa) Consumerism/Commercialism</td>
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<tr>
<td>F. Week 6</td>
<td></td>
<td>• Jos Welie papers</td>
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<td></td>
<td></td>
<td>• ACD Handbook (pp. 7 &amp; 8)</td>
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<td></td>
<td></td>
<td>• The Dental Spa</td>
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<td>Prior to class, complete above readings on-CTools site. Students should</td>
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<td>have copies of the materials with them or should download the documents</td>
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<td>to their desktop and then bring their laptop to class.</td>
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<tr>
<td>Wed. 10/6</td>
<td>1-3 PM</td>
<td>SPI Experience #2 Group 3 M-R 9:00-10:30</td>
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<td>F. Week 7</td>
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<td>Group 4 S-Z 10:30-12:00</td>
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<td>In orange clinic</td>
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<td>Dent 3340</td>
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<tr>
<td>Thu. 10/7</td>
<td>11AM-Noon</td>
<td>Course Wrap-up</td>
</tr>
<tr>
<td>F. Week 7</td>
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<tr>
<td>Wed. 10/13</td>
<td>1-3 PM</td>
<td>Dilemma Final Exam</td>
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<tr>
<td>F. Week 8</td>
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<tr>
<td>Thu. 10/14</td>
<td>11AM-Noon</td>
<td>Final exam written</td>
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<td>F. Week</td>
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</tbody>
</table>
Syllabus (Mistretta & Simmer)

Course title. The Oralfacial Complex in Health II–The Oral Environment

Course number. To be determined

Term and year. D1, Fall Term

Location, time, and day. School of Dentistry; 3 hours per week

Course personnel and contact information.

<table>
<thead>
<tr>
<th>James P. Simmer DDS, PhD</th>
<th>Charlotte M. Mistretta, Ph.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Biologic and Materials Sciences, University of Michigan Dental Research Lab</td>
<td>Professor</td>
</tr>
<tr>
<td>1210 Eisenhower Place</td>
<td>Department of Biologic and Materials Sciences</td>
</tr>
<tr>
<td>Ann Arbor, MI 48108</td>
<td>School of Dentistry, University of Michigan</td>
</tr>
<tr>
<td>Tel: 734-975-9318</td>
<td>Ann Arbor, MI 48109-1078</td>
</tr>
<tr>
<td>FAX: 734-975-9329</td>
<td>Tel: 734 647-3911</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:jsimmer@umich.edu">jsimmer@umich.edu</a></td>
<td>FAX: 734 647-2110</td>
</tr>
<tr>
<td></td>
<td>E-mail: <a href="mailto:chmist@umich.edu">chmist@umich.edu</a></td>
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</table>

Course description. This course presents foundational concepts about the oral environment including understanding of several tissue systems that include skin, oral mucosa and salivary glands, and an introduction to oral microbial ecology. The course focuses on the role of these key components of the oralfacial complex in oral health and systemic health, and incorporates material to introduce and make a transition to dysfunctions and pathologies when the oral environment is not healthy. Students investigate the tissue, cell and molecular biology of the oral mucosa including regional structural specializations for oral functions. Students explore the barrier and permeability functions of the oral mucosa and learn about the cytoskeleton, basal lamina, cell-cell and cell-matrix interactions, as well as epithelial cell proliferation and turnover, wound healing, inflammation and oral cancer. Students discover the major roles played by salivary glands in oral and systemic health. They will learn about the serious oral consequences of loss of salivary gland functions to better appreciate their role in oral health. Students learn the gross anatomy and histology of the major and minor salivary glands, the protein and fluid components of saliva, the salivary mechanisms for neutralizing acid and protecting the dentition against dental caries. Students will understand how caries protection and the inhibition of calculus formation are competing values. Students learn the fundamentals of the neural control of salivary output so that they can appreciate that salivary glands are a “smart system” that adjusts salivary flow and composition to meet challenges, and how drugs can be employed to stimulate or suppress salivary secretions. Finally, students will be introduced to the complex microbial communities that inhabit the surfaces of both the teeth and the oral mucosa. In this area, emphasis will be on the development and composition of the oral microbiota and its role in maintenance of oral health. Special emphasis is placed upon the clinical relevance of skin, oral mucosa, and salivary glands in the everyday practice of dentistry. Within the course the instructors will routinely cross reference material to demonstrate unifying concepts and interactions among systems and tissues for healthy oral function.
Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
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<tbody>
<tr>
<td><em>X</em> Foundation</td>
<td><em>X</em> Basic</td>
<td><em>X</em></td>
<td><em>X</em></td>
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<tr>
<td><em>X</em> Application</td>
<td>_Intermediate</td>
<td><em>X</em></td>
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The following competencies are addressed in a major way in this course:

4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.
   The graduating student…
   4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.
   4b. Routinely evaluates outcomes of clinical practice.

7. The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.
   The graduating student…
   7a. Performs/ records the findings of an appropriate behavioral assessment and physical examination not limited to the head and neck.
   7b. Performs and records the findings of intraoral examinations.
   7c. Performs/orders and records findings of other diagnostic procedures and tests as necessary.
   7d. Identifies and assesses conditions that place patients at increased risk for disease.
   7e. Identifies patient behaviors that impact oral and systemic health.
   7g. Identifies the signs and symptoms of abuse.

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
   The graduating student…
   8a. Differentiates between health and disease.
   8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases.
   8c. Determines differential and/or provisional diagnoses for developmental disorders of the oro-facial complex.
   8d. Determines provisional diagnoses of abuse.

14. The graduating student provides oral health care to treat/manage craniofacial and dental diseases/disorders and their effects, including:
   14a. Preservation and restoration of teeth.
   14e. Treatments for/management of soft tissue diseases/disorders.

How progression toward competency or competency is measured.
There will be two hourly examinations, a midterm and a cumulative final examination.
OBJECTIVES

To know, understand and appreciate:

- the oral environment as a complex, interacting set of systems based on tissues, cells and molecules that are adapted to particular oral functions
- distinctions between skin and oral mucosa
- the basic structure, and cell and molecular biology of stratified squamous epithelium and associated connective tissues, applied to the oral mucosa
- concepts and data related to regional specializations in the structure, and cell and molecular biology of oral mucosa
- the specialized tissues and cell biology of the periodontium
- basic concepts of barrier function and permeability in regional specializations of oral tissues
- basic concepts of cell proliferation and turnover in oral tissues
- basic processes of wound healing and inflammation, applied to oral mucosa
- the dynamic nature of oral tissue maintenance, in health and disease
- the anatomy and histology of major and minor salivary glands
- the anatomic bases for saliva production
- distinctions among mucous, serous and mixed glands
- the functions of saliva
- the various cell types in a salivon, their forms and functions
- the oral sequelae of salivary dysfunction
- how saliva neutralizes acid, Stephan’s Curves, mineralization and demineralization balance
- the names, anatomical locations, and acinar types of the minor salivary glands.
- the pathogenesis of sialolithiasis, ranulas, and mucoceles.
- how ions and water are sent to the lumen and how saliva is modified in the ducts.
- the major ion transporters (Na⁺/K⁺ ATPase, Na⁺/K⁺/Cl⁻ Cotransporter, Ca²⁺ activated K⁺ channel, Ca²⁺ activated Cl⁻ channel, ATP-dependent sodium-potassium pump), ion exchangers (Na⁺/H⁺ exchanger) and how they work together (along with water channels; aquaporins) to generated the initial saliva.
- how the cystic fibrosis transmembrane conductance regulator (CFTR) contributes to saliva production and salivary deficiency observed in patients with cystic fibrosis.
- nerves innervating the major salivary glands and understand how neural control regulates salivary gland secretions
- how the composition and secretion of saliva is regulated by the nervous system
- the sympathetic and parasympathetic neurotransmitters and receptors and second messengers in the major salivary glands and the drugs that stimulate or inhibit salivary flow
### Session information.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>1</td>
<td>Importance of a healthy oral environment for oral function</td>
<td>Drs. Mistretta and Simmer</td>
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#### Skin

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<th>Soil</th>
<th>Topics</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>2</td>
<td>Structure and function of skin and mucosal tissues</td>
<td>Dr. Charlotte Mistretta</td>
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<tr>
<td>3</td>
<td>Thermal regulation – sweating</td>
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<td>4</td>
<td>Bacterial skin infections</td>
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#### The Oral Mucosa

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<tr>
<th>Soil</th>
<th>Topics</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>5</td>
<td>The oral mucosa and functional adaptations</td>
<td>Dr. Charlotte Mistretta</td>
</tr>
<tr>
<td>6</td>
<td>Oral epithelium: stratified squamous epithelium</td>
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<tr>
<td>7</td>
<td>Cytokeratins and proteins in oral epithelia</td>
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</tr>
<tr>
<td>8</td>
<td>Functional groups and molecular adaptations of junctions</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Basal lamina biology and roles</td>
<td></td>
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<tr>
<td>10</td>
<td>Lamina propria and submucosa</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Vignette: crossing the basal lamina in cancer cell metastasis</td>
<td>Hourly Examination I</td>
</tr>
<tr>
<td>12</td>
<td>Functional types of oral mucosa and specializations</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Barrier functions and permeability of oral mucosa</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Turnover of oral epithelia</td>
<td></td>
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<tr>
<td>15</td>
<td>Wound healing in oral mucosa</td>
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<tr>
<td>16</td>
<td>Inflammation of the oral mucosa</td>
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<tr>
<td>17</td>
<td>Vignette – diet and the oral mucosa - scurvy</td>
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<tr>
<td>18-19</td>
<td>Cumulative Midterm Examination</td>
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</table>

#### Salivary Gland Biology

<table>
<thead>
<tr>
<th>Soil</th>
<th>Topics</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>General Salivary Gland Histology</td>
<td>Dr. James P. Simmer</td>
</tr>
<tr>
<td>21</td>
<td>Major Salivary Glands</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Minor Salivary Glands</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Saliva and Tooth Protection</td>
<td></td>
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<tr>
<td>24</td>
<td>Salivary Proteins: Structures &amp; Functions</td>
<td></td>
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<tr>
<td>25</td>
<td>Salivary Ion and Fluid Secretion</td>
<td></td>
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<tr>
<td>26</td>
<td>Salivary Secretion of Proteins</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Hourly Examination II</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Salivary Flow Rate &amp; Composition</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Diseases of Salivary Glands</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Saliva as a Diagnostic Fluid</td>
<td>Dr. C. A. Murdoch-Kinch</td>
</tr>
</tbody>
</table>

#### Oral Microbial Ecology

<table>
<thead>
<tr>
<th>Soil</th>
<th>Topics</th>
<th>Instructor</th>
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</thead>
<tbody>
<tr>
<td>31</td>
<td>The mouth as a microbial environment</td>
<td>Dr. Christopher Fenno</td>
</tr>
<tr>
<td>32</td>
<td>The human oral microbiome</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Biofilm metabolism: microbial life in dental plaque</td>
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<tr>
<td>34</td>
<td>Review</td>
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<tr>
<td>35-36</td>
<td>Cumulative Final Examination</td>
<td></td>
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</tbody>
</table>
Textbooks/ Readings. All of these reading are available on Ctools.

Readings not yet selected for Skin and Oral Mucosa Objectives and Content

Salivary Glands:
5. Handout "Oral Environment"

Examination/grading policies.
Attendance is mandatory. There will be 2 hourly examinations, a midterm and a final. Tests will be short answer, multiple choice and true/false questions. The examination questions come directly from the lectures and reading material. All old exams and quizzes will be made available on Ctools. The grades are curved and plus-minus grades are assigned. Typically a third of the class achieves a grade in the A range, half in the B range, and a fifth in the C range. Sometimes 1 or 2 people perform well below everyone else in the class and receive an E, with no remediation (they must repeat the course).

Other information.
Course title. Pathways Program Critiques in Oral Health Evidence Base
Course number. tbd
Term and year D1 Fall, 2010
Location, time, and day. Monday afternoons

Course personnel and contact information.
Co-Director William Giannobile 998-1468 wgiannob@umich.edu
Co-Director Darnell Kaigler 615-4023 dkaigler@umich.edu
Co-Director Russell Taichman 764-9952 rtaich@umich.edu
Co-Director Woosung Sohn 615-6622 woosung@umich.edu
Co-Director William Piskorowski 764-7389 wapdds@umich.edu

Course Website: available on CTools

Course description.
This journal discussion course will provide D1 students the opportunity to read, critique, present and discuss current papers in the field with direct relevance to DDS pathways in Research, Leadership and Health Care Delivery. By bringing forward new papers in timely, exciting areas for discussion, D1 students stimulate thinking within the D1 group of students for each of the respective pathway tracks. Furthermore, the journal clubs also provide practice in critical reading, oral presentation, and ability to field questions and ‘think on one’s feet’.

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<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
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<tr>
<td>_X_Foundation</td>
<td>_X_Basic</td>
<td>___</td>
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<tr>
<td>_X_Application</td>
<td>__Intermediate</td>
<td></td>
<td>__Advanced</td>
</tr>
</tbody>
</table>

Which competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors)

1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
   The graduating student...
   1a. Practices as obliged by principles of ethics and the ADA Code of Ethics.
   1b. Practices within the context of the appropriate state Dental Practice Act.

3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.

4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.
   The graduating student...
   4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.
   4b. Routinely evaluates outcomes of clinical practice.
17. The graduating student applies business and practice management skills to clinical practice.
   The graduating student...
   17a. Applies the concepts of quality assessment and assurance, and the principles of risk management in patient care.
   17b. Applies principles of business and financial management and legal and regulatory concepts to dental practice.
   17c. Evaluates and assesses emerging trends in health care.
   17d. Develops a catastrophe preparedness plan for the dental practice.

Contact Hours.
Classroom discussion seminars and activities (total of 5 sessions) will be held on Mondays from 1:00 PM – 3:00 PM. Group time for students to prepare and assemble into small groups discussions of will occur from 3:00-5:00 PM. This time will also be utilized for students to have dedicated time to work, plan and execute their Pathways Selectives Projects associated with the specific chosen pathways (see below).

Objectives.
1. To gain information on current thought and emerging topical areas in oral health research, dental leadership and oral health care delivery.

2. Students will learn approaches to read, critique, present and discuss current papers in the field with direct relevance to DDS pathways in Research, Leadership and Health Care Delivery.

Session Schedule.

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td></td>
<td>Monday, August 30</td>
<td>1:00 – 3:00 PM</td>
<td>Pathways Course overview</td>
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<td>2:30-5:00 PM</td>
<td>Pathways Flexible time and Selectives Exploration</td>
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| Monday, September 6 | Week 2 - NO CLASS - HOLIDAY |

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<tr>
<th>Week 3</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td></td>
<td>Monday, September 13</td>
<td>1:00 – 3:00 PM (all groups- entire class)</td>
<td>Research Journal Club - Why is it important for an appreciation for research, if not actively engaged? (Discuss how knowledge is generated and transferred); culture of science and research; Types of Research: Basic, Translational Clinical; how to efficiently read a manuscript.</td>
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<tr>
<td></td>
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<td>3:00- 5:00 PM</td>
<td>Time for selection of basic, preclinical and clinical articles for reading; identification of groups (3 or 4- see below)</td>
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<tr>
<th>Week 4</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td></td>
<td>Monday, September 20</td>
<td>1:00 – 3:00 PM</td>
<td>Research Journal Club – How to view different types of research; Statistical vs. Clinical Significance; Intro. to scientific manuscript format/process for publications-concept of peer review; quality of manuscripts (i.e. impact factors/audience); How to present a research report in a journal club format</td>
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<tr>
<td>Date</td>
<td>Time</td>
<td>Topic</td>
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<tr>
<td>Monday, September 27</td>
<td>1:00 – 5:00 PM</td>
<td>Pathways Flexible time and Selectives Exploration-Reading of Basic, pre-clinical/translational, and clinical research articles and group prep for next week.</td>
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<tr>
<td><strong>Week 5</strong></td>
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<tr>
<td><strong>Date</strong></td>
<td><strong>Time</strong></td>
<td><strong>Topic</strong></td>
<td></td>
</tr>
<tr>
<td>Monday, October 4</td>
<td>1:00 – 2:30 PM</td>
<td>Research Journal Club Wrap-up / Exam</td>
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<tr>
<td><strong>Week 6</strong></td>
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<tr>
<td><strong>Date</strong></td>
<td><strong>Time</strong></td>
<td><strong>Topic</strong></td>
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<tr>
<td>Monday, October 11</td>
<td>1:00 – 3:00 PM</td>
<td>Leadership Journal Club - The mission of the Pathways Program in Leadership is to empower dental students to imagine and promote cultural changes in the realm of dentistry. The purpose of the Leadership Pathway Journal Club is to provide a comprehensive overview of how leadership issues play out in our daily lives as dentists.</td>
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<td></td>
<td>3:00-5:00 PM</td>
<td>Pathways Flexible time and Selectives Exploration</td>
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<tr>
<td><strong>Week 9</strong></td>
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<tr>
<td><strong>Date</strong></td>
<td><strong>Time</strong></td>
<td><strong>Topic</strong></td>
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<tr>
<td>Monday, October 25</td>
<td>1:00 – 3:00 PM</td>
<td>Leadership Journal Club</td>
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<td></td>
<td>3:00-5:00 PM</td>
<td>Session I. The groups will be asked to discuss each of these two resources in the context of one another and to present a 1-2 page “White Paper” (or other suitable venue e.g. debate, presentation) on the synergy of these two concepts/perspectives to the school.</td>
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<td><strong>Week 10</strong></td>
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<td><strong>Date</strong></td>
<td><strong>Time</strong></td>
<td><strong>Topic</strong></td>
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<tr>
<td>Monday, November 1</td>
<td>1:00 – 3:00 PM</td>
<td>Leadership Journal Club</td>
<td></td>
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<tr>
<td></td>
<td>3:00-5:00 PM</td>
<td>Session II. The groups will be asked to discuss each of these two resources in the context of one another and to present a 1-2 page “White Paper” (or other suitable venue e.g. debate, presentation) on the synergy of these two concepts/perspectives to the school.</td>
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<tr>
<td>Week 11</td>
<td>Date</td>
<td>Time</td>
<td>Topic</td>
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<tr>
<td></td>
<td>Monday, November 8</td>
<td>1:00 – 2:30 PM</td>
<td><strong>Leadership Journal Club Wrap-up / Exam</strong></td>
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<thead>
<tr>
<th>Week 12</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td></td>
<td>Monday, November 15</td>
<td>1:00 – 3:00 PM</td>
<td><strong>Health Care Delivery Journal Club</strong></td>
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<td></td>
<td>3:00-5:00 PM</td>
<td>Pathways Flexible time and Selectives Exploration</td>
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<tr>
<th>Week 13</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td></td>
<td>Monday, November 22</td>
<td>1:00 – 3:00 PM</td>
<td><strong>Health Care Delivery Journal Club</strong></td>
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<td></td>
<td></td>
<td>3:00-5:00 PM</td>
<td>Session I. The groups will be asked to discuss each of these two resources in the context of one another and to present a 1-2 page “White Paper” (or other suitable venue e.g. debate, presentation) on the synergy of these two concepts/perspectives to the school.</td>
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<th>Date</th>
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<th>Topic</th>
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<tbody>
<tr>
<td></td>
<td>Monday, November 29</td>
<td>1:00 – 3:00 PM</td>
<td><strong>Health Care Delivery Journal Club</strong></td>
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<tr>
<td></td>
<td></td>
<td>3:00-5:00 PM</td>
<td>Session II. The groups will be asked to discuss each of these two resources in the context of one another and to present a 1-2 page “White Paper” (or other suitable venue e.g. debate, presentation) on the synergy of these two concepts/perspectives to the school.</td>
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<tr>
<th>Week 15</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Monday, December 6</td>
<td>1:00 – 2:30 PM</td>
<td><strong>Health Care Delivery Journal Club Wrap-up / Exam</strong></td>
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</table>

**Format for each of the sessions:**

**Journal Club Structure**
Every Journal Club will have a Facilitator and an assigned Discussion Leader (4 groups of approximately 25-30 students per session). The *facilitator* will be responsible for presenting the context and content of the paper. The *discussion leader* will start and coordinate the discussion (but not serve as a formal "respondent"), if questions do not come forward spontaneously throughout the presentation. The Facilitator and Discussion Leader will meet and work together as a team for the journal club presentation.

**Facilitator**
The Facilitator will work with faculty advisors (initial academic advisor, lab rotation director, dissertation advisor) and course director to select an article that is timely and interesting. Additional meetings with course director to prepare for the Journal Club are encouraged.
Two or three papers could be presented if the facilitator feels that this would improve the
discussion (for example, if two papers are published at about the same time on the same topic; or
if two papers address a common hypothesis with very different approaches; or if there is
controversy about the topic within the scientific, public policy or health care delivery community).

The Facilitator should choose a presentation format or style that promotes discussion.

The Facilitator is strongly encouraged to present the article without the use of back-up PowerPoint
slides, but using a whiteboard only.

When using slides, the Facilitator’s PowerPoint slides should have minimal text or no text; only
figures or diagrams. This will help the Facilitator to remember to speak to and engage the
audience. The number of slides should be minimized. The slides are there to help the discussion
and it should not be a lecture or strict presentation format.

The Facilitator should not feel a need to present every figure or table in the article (or every panel
of the figures). Just choose key elements of the figures to convey main ideas and point out key
findings/results.

**Discussion leader**
The Discussion Leader(s) will ensure participation of the students and audience.

The Discussion Leader(s) will start discussion with a lead question or with a “critique” of
experiments, controls, or methods, and will ask the audience for alternative experiments or
interpretation of the results; or will ask questions to the audience (the Leader might call on
someone specifically if no one is prompt to respond).

The Leader will monitor timing to allow time for discussion of several topics.

**D1 Students**
All D1 students should read the paper and be prepared to ask and answer questions about the
article.

Each D1 student should have one question prepared ahead of time for the journal club discussion.
The Discussion Leader may call on any student to start the discussion or move it forward.
Faculty Members
Faculty members will participate in and help to stimulate discussion.

Faculty members will stay after the end of the presentation to provide some informal feedback about the presentation --- to the Facilitator and Discussion Leader.

Timing
The Journal Club should flow informally with the intent of promoting discussion about a scientific article.

Textbooks/Readings. Research, leadership or policy journal articles identified mutually among facilitators and faculty.

Examination/grading policies.
To successfully complete all segments of this course, the student must:
  1. Attend a minimum of 80% of the scheduled sessions during the Fall Term.
  2. There will be three examinations based on the journal clubs of each section (1. Research, 2. Leadership and 3. Health Care Delivery). These exams will be held in sessions immediately after the last of each topical area (see schedule).

Fall Term Information.
The Fall Term is fully graded (A, B, C, etc.) for the D1 students. 1/4 (25%) of the Fall course grade is based on confirmed attendance sign-ins for each of the sessions:
  ▪ 80% or more of the Seminars to receive a C for this portion of the grade
  ▪ 90% or more of the Seminars to receive a B for this portion of the grade
  ▪ 100% of the Seminars to receive an A for this portion of the grade

The other 75% of the Fall course grade will be based on examinations given at the end of each session (25% for each of the 3 total sessions).
Syllabus Template

Course title.  Scientific Foundation for Evidence-based Dentistry

Course number.  TBD

Term and year.  D1, Fall 2010

Location, time, and day.  TBD (Wednesdays 1-3pm, second half term)

Course personnel and contact information.
  Course director:  Woosung Sohn (Woosung@umich.edu; 615-6622)
  Course faculty:  George W. Taylor (gwt@umich.edu; 764-1737)
                  Robert A. Bagramian (robtbagr@umich.edu; 647-4239)
                  Mark MacEchern (markmac@umich.edu; 763-7406)

Course description.
Healthcare providers nowadays are inundated with unmanageable amounts of information. Furthermore, rapid development of new knowledge and technology in clinical healthcare make most of what clinicians learned at professional schools obsolete very quickly. Dentists, who are not immune to this trend, are required to be able to locate new information effectively and efficiently, to appraise its value, and to use that information in clinical decision making. This course aims to provide students with the necessary scientific foundation of knowledge and skills that are required to this “Evidence-based dentistry”, including asking critical questions, locating information, judging its quality, and applying the evidence to clinical decision making for individual patient care and oral health promotion and advocacy in the community.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

2.  The graduating student participates in professional self-regulation.
  The graduating student…
  2a.  Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.

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<tr>
<th>Knowledge</th>
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<th>Attitudes</th>
<th>Behaviors</th>
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<tbody>
<tr>
<td>_x_Foundation</td>
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<tr>
<td>_x_Application</td>
<td>__Intermediate</td>
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<td>__Advanced</td>
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</table>
4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.

The graduating student…

4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.

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<th>Behaviors</th>
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<td>___Advanced</td>
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How progression toward competency or competency is measured.

1. Multiple choice exam questions.
2. Web-based in-class and homework case study exercises of focused portions published studies to assess ability to correctly identify the different types of study designs.
3. Web-based in-class and homework case study exercises to demonstrate interpretation and application of results from major study designs.

Objectives.

Overall objectives:

1. To gain basic knowledge and skills required for evidence-based dentistry including the concepts, processes, and methodology of evidence-based dentistry, from asking the right clinically relevant questions, searching and critical appraisal of existing evidence, to application of evidence in clinical decision making.
2. To develop foundation knowledge in assessing research designs and causality that is needed to critically appraise and process clinically relevant scientific information (evidence) from published papers, reports, and other sources.

Session information.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>Session 1</td>
<td></td>
<td><strong>Introduction to Evidence-based Dentistry (EBD)</strong></td>
<td>W. Sohn</td>
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<tr>
<td></td>
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<td>1. Definition of EBD</td>
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<td>a. What is, and what is not EBD</td>
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<td>2. Concept and rationale of EBD</td>
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<td>3. Practice of EBD</td>
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<td><strong>Scientific Inquiry</strong></td>
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<td>1. Rationale for well-formulated questions</td>
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<td>2. Key components of a question</td>
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<td></td>
<td></td>
<td>a. What type of people (patients)?</td>
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</table>
b. What type of interventions (exposures)?
c. What type of comparisons?
d. What type of outcomes?

<table>
<thead>
<tr>
<th>Session 2</th>
<th>Search of Information/Evidence</th>
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<tbody>
<tr>
<td></td>
<td>1. Source of information</td>
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<tr>
<td></td>
<td>a. Scientific literature</td>
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<td>b. Internet as an information source</td>
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<td></td>
<td>c. Peer-review process</td>
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<td>d. Quality of a journal</td>
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<td>e. Systematic reviews and Cochrane Library</td>
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<td>f. Clinical guidelines</td>
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<td>2. Search terms/key words</td>
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<td>3. Unpublished studies &amp; publication bias</td>
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<td>4. Conducting a search and checking for validity</td>
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<tr>
<th>Session 3</th>
<th>Causation and Association</th>
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<td>1. Definition of causality</td>
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<td>2. Types of causal relationships</td>
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<td>3. Criteria for determining existence of a causal relationship</td>
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<td>4. Hierarchies of evidence</td>
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<td>5. Strategy to diagnose causality</td>
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<td>a. Description of the evidence</td>
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<td>b. Internal validity: non-causal explanations</td>
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<td>c. Internal validity: positive features of causation</td>
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<td>d. External validity: generalization of the results</td>
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<td>e. Comparison of the results of the with other evidence</td>
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<tr>
<th>Sessions 4 and 5</th>
<th>Study Design</th>
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<tbody>
<tr>
<td></td>
<td>1. Major study design descriptions: cross-sectional studies, case-control studies, cohort studies, intervention trials, systematic reviews and meta-analyses, and ecologic studies</td>
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<td>2. Quantification of results obtained from observational and interventional studies</td>
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<td>3. Application of results obtained from observational and interventional studies</td>
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<th>Session 6</th>
<th>Measurement</th>
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<td>1. Measurement in clinical practice, clinical research and epidemiological research</td>
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<td>a. Measurement of disease and other factors</td>
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<td>b. Measurement criteria clinical practice, clinical research and epidemiological research</td>
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<p>| M. Mac Eachern | G. Taylor | W. Sohn |</p>
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<tr>
<th>Session 7</th>
<th>Critical Evaluation of Evidence</th>
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<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
<td>Application of findings</td>
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<td>Consideration of sources of variation</td>
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<td>3.</td>
<td>Other relevant information</td>
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<td>Implications</td>
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<td>5.</td>
<td>Common errors in reaching conclusions</td>
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Textbooks/ Readings.

4. Web-based power point presentation on study designs with slides and accompanying text for each slide

Examination/grading policies.
To successfully complete this course, the student must:

1. Demonstrate possession practical knowledge sound application of the knowledge by passing 80% score of quiz that will test the knowledge level of previous session’s topic area. A quiz will be given at the beginning of each session testing for knowledge and application of previous session’s topic area
2. At the end of the term, there will be a final exam and/or a mini-group project consisting of searching for evidence, critical appraisal, and interpretation/application of the findings. The results will be presented orally to the class and a written report will be submitted for grading.
Review Process:

The Curriculum Committee continued their process for review of the courses that comprise the new D1 winter term. Each course director developed a course proposal consisting of a course outline and/or a course syllabus, and was asked to prepare responses to a set of review questions developed by the Committee. At meetings with the Committee, each course director provided a brief introduction to the course. The course review was lead by the chair and all members of the Committee were invited to contribute to the discussions. At the end of each course review session, course directors were apprised of any tasks remaining to be completed or any course materials needing to be revised or submitted to the Committee in order for the course to be approved.

Findings:

Fifteen courses are proposed for the new D1 winter term and all have been approved by the Curriculum Committee (see Appendix 1 for the term schedule and Appendix 2 for syllabi). These courses are:

Course Name

- Basic Radiology
- Behavioral Science II
- Cariology II
- Clinical Foundations I
- Comprehensive Care Clinic
- Development, Regeneration, and Genetics
- Diagnostic Sciences I
- Fundamentals of Periodontics
- Grand Rounds
- Introduction to Prosthodontics Treatment Options
- Musculoskeletal System
- Nervous System
- Oral Health Promotion, Healthcare System and Policy
- Pathways Program
- Principles of Pharmacology
All course directors addressed at least to some extent, the goals of the Vision Implementation Team (VIT) in evolving our curriculum:

**Defining Characteristics of the U-M School of Dentistry Graduate (Draft: Sept. 15, 2009)**

The U-M DDS graduate is a highly skilled and self-motivated clinician who applies scientific knowledge and critical thinking to achieve optimal oral health.

The U-M dentist:

a. has a deep knowledge and understanding of the science that underpins diagnosis, risk assessment, prevention, management, and treatment in the practice of dentistry;
b. practices with the understanding that the orofacial complex is the gateway to the body with principal roles in regulating life-essential functions;
c. interacts within other health professions to represent and promote oral health as a key component of total health;
d. is prepared to influence policy for the profession through the ability to evaluate competing claims and positions, and through active participation in local and national organizations;
e. models integrity and professional responsibility through ethical behavior in professional practice and daily life.

**VIT goals** - The Committee discussed these defining characteristics with each of the course directors, particularly with respect to how their coursework planned to foster development of these characteristics by our students. We particularly focused discussion related to development of student’s critical thinking and problem-solving skills (global characteristic). Course directors were able to describe how their courses contributed to students’ acquisition of deep knowledge of science and understanding of the principle roles of the orofacial complex in regulating life essential functions (a and b) as appropriate for first year students.

**Testing/Assessment** - The Committee had discussions with each of the course directors regarding how course testing and other assessment strategies could be employed to help students develop their critical thinking and problem-solving skills and to assess their progress toward developing and attaining the other defining characteristics described by the VIT.

**Integration of concepts with other concurrently running courses** - Some of the course directors had well developed plans for integrating the content of their courses with other ongoing D1 Winter term courses. The Committee was able to offer suggestions to all of the course directors regarding additional “touch points” for potential integration of course work based on its review of all of the concurrently running courses.
Thematic issues that emerged in the review and Committee recommendations to address them:

**Communication/coordination of effort between course directors.** As with the reviews of previous semesters, it was clear during the winter term review that we should try to achieve better communication among directors of concurrently running courses and among “core leaders” and other VIT team leaders. This communication is necessary to manage overlap, redundancy, and identification of missing information as well as to support integration of the curriculum and the Committee recommends developing formal processes to support this communication.

**Assessment and Pedagogy** – Also as with the reviews of previous semesters, course directors were encouraged to expand the use of learning methods in their courses beyond the lecture format and assessment methods beyond the use of multiple choice tests to support students’ development of critical thinking and problem-solving skills. The Committee recommends providing opportunities for faculty development in this area. (The Committee found the following reference helpful and encourages the faculty to review it: Albino, JEN et al. 2008. Assessing Dental Students’ Competence: Best Practice Recommendations in the Performance Assessment Literature and Investigation of Current Practices in Predoctoral Dental Education, JDE 72:1405.)

**Overall Recommendation:** The Committee recommends that the faculty vote approval of the new proposed D1 winter term courses.
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<td><strong>Flex Time</strong></td>
<td><strong>Devel, Regen, &amp; Genetics</strong></td>
<td><strong>Grand Rounds</strong></td>
<td><strong>Cariology</strong></td>
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<td>*Nervous System</td>
<td>Basic Radiology 506</td>
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<td>Devel, Regen, &amp; Genetics</td>
<td>Clinal Foundations I 520</td>
<td>Pathways</td>
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<td>2:00</td>
<td>Behav Sci II 534</td>
<td>Comprehensive Care Clinic 522</td>
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<td>Oral Health Promotion, Healthcare System &amp; Policy</td>
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* **Weeks (approx.) Course Title**

- Weeks 1 - 10  Nervous System
- Weeks 10 - 14 Musculoskeletal System
Radiology Demonstration Videos

1. Infection control protocol
2. Paralleling vs. Bisecting Angle techniques
3. Assembling the XCP
4. BW with bite tabs
5. BW with XCP
6. Max Ant PA with bite block
7. Max Ant PA with XCP
8. Max Premolar PA with bite block
9. Max Premolar PA with XCP
10. Max Molar PA with bite block
11. Max Molar PA with XCP
12. Mand Ant PA with bite block
13. Mand Ant PA with XCP
14. Mand Premolar PA with bite block
15. Mand Premolar PA with XCP
16. Mand Molar PA with bite block
17. Mand Molar PA with XCP
18. Occlusal radiography
19. Panoramic radiography
20. Film processing
21. Film mounting

Active learning exercises

1. Intraoral radiography
2. Image shift principle

Online radiology quizzes

1. Intraoral radiographic anatomy (2)
2. Panoramic radiographic anatomy (2)
3. Film mounting (2)
4. Intraoral radiographic quality evaluation (2)
5. Panoramic radiographic quality evaluation (2)
6. Basic radiographic interpretation skills (2)

Online radiographic interpretation exercises

1. Bitewing interpretation (5)
2. FMX interpretation (3)
3. Image shift principle (2)
D1 - Basic Radiology 506
In-class demonstrations

1. Source-to-Film distance (Inverse square law, intensity)
2. Source-to-Object distance (Penumbra)
3. Object-to-Film distance (Magnification and Unsharpness)
4. Paralleling vs. Bisecting Angle techniques (image shifting vs. geometric distortion)
5. Horizontal angulation and overlapping
6. Film mounting exercise (3 FMXs; scan films separately + FMX)
7. Image shift principle
<table>
<thead>
<tr>
<th>Dates</th>
<th>Main topics</th>
<th>Sub-topics</th>
<th>Format</th>
<th>Reading assignment</th>
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<td>1 hour</td>
<td>Introduction</td>
<td>Course overview (review of syllabus and schedule)</td>
<td>Lecture</td>
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<td>History</td>
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<td>Radiography vs. photography</td>
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<td>Types of radiographs</td>
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<td>1 hour</td>
<td>Radiation physics</td>
<td>Properties of x-rays</td>
<td>Lecture</td>
<td>Chapter 1, p 2-16</td>
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<td>Types of radiation</td>
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<td>Parts of the x-ray machine</td>
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<td>Controlling the x-ray beam</td>
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<td>1 hour</td>
<td>Image characteristics</td>
<td>Visual characteristics</td>
<td>Lecture + In-</td>
<td>Chapter 4, p 46-52</td>
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<td>Geometric characteristics</td>
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<td>Distortion</td>
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<td>1 hour</td>
<td>Image receptors</td>
<td>Conventional film</td>
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<td>Chapters 5, p 53-64,</td>
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<td>Intensifying screens</td>
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<tr>
<td>1 hour</td>
<td>Digital Imaging</td>
<td>Direct: CCD, CMOS</td>
<td>Lecture</td>
<td>Chapter 7, p 78-99</td>
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<td>Semi-direct: SPP</td>
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<td>1 hour</td>
<td>Film processing and quality</td>
<td>Processing solutions</td>
<td>Lecture + online</td>
<td>Chapters 6, 8, p. 65-77, 100-108</td>
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<td>assurance</td>
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<td>Duplicating radiographs</td>
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<td>Intraoral radiography</td>
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<td>Film holders</td>
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<td>Chapter 9, p 109-151</td>
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<td>Beam guiding devices</td>
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<td>Paralleling technique</td>
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<td>Bisecting angle</td>
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<td>Special Considerations</td>
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<td>Description</td>
<td>Lecture + Online Resources</td>
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<td>Bitewing radiography</td>
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<td>On intraoral radiographs</td>
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<td>Occlusal radiography</td>
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<td>Diagnostic criteria</td>
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<td>Radiographic quality evaluation</td>
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<td>Digital imaging errors</td>
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<td>Image shift principle</td>
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<td>Basic principles</td>
<td>2 hours</td>
<td>Patient positioning</td>
<td>Lecture + Online Video + Online quiz</td>
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<td>Common technical errors</td>
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<td>Radiographic anatomy on panoramic radiographs</td>
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<td>Radiographic interpretation</td>
<td>Systematic evaluation of radiographs</td>
<td>2 hours</td>
<td>Teeth (caries, restorations, calculus)</td>
<td>Lecture + Online Quizzes + Online exercise</td>
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<td>Periodontium (bone loss, periapical pathology)</td>
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<td>Chapter 14, p 225-243</td>
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<td>Direct vs. indirect biologic effects</td>
<td>Chapter 2, p 18-30</td>
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<td>Genetic vs. somatic mutations</td>
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<td>Cell/ tissue/ organ sensitivity</td>
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<td>Effect of dose, rate, fractionation, and volume exposed</td>
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<td>Acute radiation syndrome</td>
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<td>Somatic and fetal effects of low doses</td>
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<td>Chapter 15, p 244-254</td>
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<td>- Film holders, beam guiding devices</td>
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<td>Occupational and nonoccupational dose</td>
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<td>Selection criteria for dental radiographs</td>
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<td>Risks vs. benefits</td>
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<th>2 hours</th>
<th>Final Exam</th>
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Lecture hours = 19
Radiology clinic time = 6 hours per student (2 rotations)
Exam hours = 3
Course title. Basic Radiology
Course number. 506
Term and year. Winter 2011
Location, time, and day. See schedule in this syllabus
Course personnel and contact information.

Erika Benavides, DDS, PhD, Course Director
Office: 2029 A Dent
Telephone: 734-936-0051
E-mail: benavid@umich.edu

Carol Anne Murdoch-Kinch, Course Instructor
Office: 2029 C
Telephone: 734-615-6948
E-mail: camurdoc@umich.edu

Terri Stilwell, RDH, Radiology Clinic Instructor
Office: Radiology Clinic
Telephone: 734-936-2595
E-mail: tstil@umich.edu

Course description/Nature of Course Content.
This course provides the foundation knowledge and skills needed for the appropriate use of diagnostic imaging in dental practice. Learning will take place through a variety of mechanisms: lectures; in-class demonstration of some aspects of image formation and group active learning and problem-solving exercises; online demonstration videos, quizzes, and exercises, and hands-on experience in the Radiology Clinic. In order to develop the background knowledge required to understand the material presented in class and participate actively in the active learning exercises and discussions, you will need to complete assigned readings in the textbook, guided by a series of study questions. The course materials and handouts will be available on the course CTools site.

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them is measured at the following levels:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
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<tr>
<td>___x___Foundation</td>
<td>___x___Basic</td>
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<td>____Application</td>
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Competencies addressed.
1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law. (Knowledge: foundation; attitudes; behaviors)
The graduating student…
1a. Practices as obliged by principles of ethics and the ADA Code of Ethics.
1b. Practices within the context of the appropriate state Dental Practice Act.
2. **The graduating student participates in professional self-regulation.** (Attitudes, behaviors)
   The graduating student...
   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.

3. **The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.** (Attitudes, behaviors)

4. **The graduating student incorporates the methods of science and scientific inquiry into clinical practice.** (Knowledge: foundation; skills: basic; attitudes; behaviors)
   The graduating student...
   4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.
   4b. Routinely evaluates outcomes of clinical practice.

5. **The graduating student communicates effectively with patients and colleagues.** (Skills: basic; attitudes; behaviors)
   The graduating student...
   5a. Demonstrates effective interpersonal skills to establish rapport, obtain complete and accurate information from patients, and answer patient’s questions and address patient’s concerns.
   5b. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventative measures, and obtain informed consent.
   5c. Demonstrates effective interpersonal skills in consultations and referrals.

7. **The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.** (Knowledge: foundation; skills: basic)
   The graduating student...
   7a. Performs/orders and records findings of other diagnostic procedures and tests as necessary. 

8. **The graduating student applies the principles of infection control and environmental safety to clinical practice.** (Knowledge: foundation; skills: basic)
   The graduating student...
   16a. Establishes and maintains an environment that protects against transmission of disease.
   16b. Implements protocols that establish and maintain an environment that protects against environmental hazards.

9. **The graduating student applies business and practice management skills to clinical practice.** (Knowledge: foundation; skills: basic)
   The graduating student...
   9a. Applies the concepts of quality assessment and assurance, and the principles of risk management in patient care.
   9b. Applies principles of business and financial management and legal and regulatory concepts to dental practice.

**How acquisition of knowledge, skills, attitudes, and behaviors required to meet the competencies is measured.** *(ie. The method of evaluation)*

The students will be evaluated by short-answer, multiple choice, and case-based written in-class and online examinations as well as the successful completion of the Radiology Clinic assignments and the online radiographic interpretation exercises.

**Goals and Requirements:** By the end of the course the student should be able to:
1. Identify all of the factors that affect the density, contrast, and resolution of radiographs, including exposure time, tube current, tube potential, filtration, collimation, source-skin distance, type of film and/or intensifying screen, film processing, film viewing conditions, type of digital imaging sensor, and digital imaging enhancement.
   A. Define and discuss the effect of each of these factors alone and in combination on the finished radiograph.
   B. Apply the factors to a given case scenario to produce and/or modify the image, predicting in advance what the image would look like.
   C. View a radiograph and determine whether the density and contrast are adequate and, if not, identify the cause(s) of the problem and suggest a remedy.

2. Identify all of the factors that affect the geometric accuracy of radiographs, including source-object and object-film distance, size of focal spot, film placement, vertical angulation, horizontal angulation, beam centering (or framing).
   A. Describe the effect of each of these factors alone and in combination on the finished radiograph.
   B. Apply the factors to a given case scenario to produce and/or modify the image, predicting in advance what the image would look like.
   C. View a radiograph and determine whether it shows geometric distortion and, if so, identify the cause(s) of the problem and suggest a remedy.

3. Describe the various types of intraoral and extraoral radiographic examinations commonly used in dental practice, including periapical, bitewing, occlusal, panoramic, lateral cephalometric and cone-beam computed tomography (CBCT).
   A. Compare and contrast the basic features of these examinations: indications, limitations, steps used to produce them (e.g., film placement, beam orientation), modifications to the usual technique for special cases (e.g., children, edentulous patients, patients in wheelchairs, etc.)
   B. Identify the type of radiograph when shown an example.
   C. Place intraoral radiographs in correct anatomic order in a film mount.
   D. Identify all anatomic landmarks visible on intraoral and panoramic radiographs.
   E. Discuss briefly other imaging techniques available when the basic intraoral and/or extraoral exams do not provide enough information, including CBCT, CT, MRI, tomography, sialography, arthrography: what information might be needed, what the various examinations can provide, what they look like, how to obtain them.

4. Localize hidden objects on radiographs by applying the Image Shift Principle (also known as Buccal Object Rule (BOR) or Same Lingual-Opposite Buccal (SLOB) Rule)
   A. Discuss the theory behind these principles and rules, list the steps necessary to apply them, identify the landmarks used to determine changes in beam direction or x-ray machine position.
   B. Apply these principle and rules to the localization of impacted teeth, root canals, mandibular canal position with respect to third molar roots, and other cases.

5. Develop a plan for providing radiographic services in an environment that is safe for both staff and patients and be able to allay any fears about radiation effects that might arise.
   A. Discuss how the ALARA (As Low As Reasonably Achievable) principle can be implemented in the dental office. This includes methods to minimize radiation dose from all sources to patients and staff. Legal requirements should be considered as well as ethical issues. Demonstrate your understanding by applying the principles whenever you are working around radiation-generating equipment.
   B. Explain the effects of high and low doses of radiation on living tissue and factors that modify the amount of biological damage that occurs, including total dose, dose rate and...
fractionation, volume of tissue exposed, type of cell, presence of oxygen and other chemicals.

C. Compare the radiation doses used in dental radiography to those used in other radiographic examinations and to that from background radiation, in terms understandable to the general public.

D. Develop a statement that can be used in your office that explains the benefits and risks of dental radiographs to your patients. Include information that will answer any questions they have about potential adverse effects such as cancer or harm to the fetus.

E. Apply selection criteria for radiographic examinations to a wide variety of case scenarios.

6. Learn the basic principles of interpretation of intraoral and panoramic radiographs.

A. Develop a systematic way of evaluating radiographs.

B. Be able to differentiate normal anatomy from evidence of pathology.

C. Be able to evaluate the teeth and the periodontium to diagnose different depths of proximal, occlusal, smooth surface, and cervical carious lesions, presence of periapical pathology, vertical and horizontal bone loss, calculus deposits, and evaluate the status of existing restorations.

**STUDENTS ARE EXPECTED TO BE AT ALL ASSIGNED SESSIONS**

**Session information.**
See following pages in syllabus for schedule.

**Demonstration sessions:** There will be a series of in-class and online demonstrations of basic principles of imaging.

**Active learning exercises:** A series of active learning exercises are planned for some topics. These exercises are intended to stimulate critical thinking and improve your problem-solving skills particularly as it relates to the technical aspects of intraoral radiography and the image shift principle.

**Film mounting/anatomy exercise:** After the lecture and demonstration, the students will have the opportunity to mount several sets of intraoral radiographs. The films will be displayed individually and the students will work in pairs to “mount” the radiographs by placing the film’s code (letter or number) on the appropriate box on a simulated mount and to identify anatomic structures. Sharing expertise is encouraged. Students will also have the opportunity to mount their own bitewings and FMX in the Radiology Clinic. **Prior to this session, students should familiarize themselves with radiographic anatomy.**

**Online videos:** Demonstration videos on infection control in the Radiology Clinic, assembling an XCP beam guiding device, intraoral radiographic technique, processing your radiographs, film mounting, and positioning a patient for a panoramic radiograph will be available on the course ctools site.

**Online quizzes:** You will be required to take a series of online quizzes available on the course ctools site. The quizzes include topics such as radiographic anatomy on intraoral (2) and panoramic radiographs (2), film mounting (2), evaluating intraoral and panoramic radiographic quality (4), and basic radiographic interpretation skills (2). The quizzes are graded pass-fail. They will remain open throughout the duration of the course. You will decide when you feel ready to take them. You will have two opportunities to pass each quiz. The quizzes are worth 10 points of the final grade.
Online radiographic interpretation exercises: A series of bitewing radiographs and full mouth surveys (FMXs) will be available online on the course ctools site for you to practice your interpretation skills mainly on the detection of caries and calculus and receive immediate feedback. You are required to complete 5 bitewing and 3 FMX interpretation exercises. In addition to this, you will require to complete 2 exercises on the application of the image shift principle. The exercises will be available throughout the duration of the course. These exercises are worth 10 points of the final grade.

Radiology Clinic rotation: Each student will be assigned one session in the radiology clinic to practice taking intraoral radiographs on a manikin. You are encourage to watch the demonstration videos that are available on the course ctools sites ahead of time and come to your session prepared to start taking your radiographs as soon as possible. Our Radiology Clinic instructor, Ms. Stillwell, will be in the clinic in case you have questions. You will need to complete 3 perfects sets of bitewings (one set of horizontal bitewings with the bite tab; one set of horizontal bitewings with the XCP, and one set of vertical bitewings with the XCP) and one perfect FMX with the XCP. You will turn them in to Ms. Stilwell. If you need more time to practice, you are welcome to sign up for additional Radiology Clinic time with Ms. Stilwell. The successful completion of these assignments is worth 10 points of the final grade.

Textbooks/ Readings: The primary textbook is White & Pharoah, Oral Radiology: Principles and Interpretation, 6th ed. Earlier editions are not satisfactory for many sections, particularly radiation safety and advanced imaging. The same text will be used for Radiographic Interpretation 604 and 706. It is also an excellent reference book for your professional library and is highly recommended. Lectures handouts will not be printed but will be available on the course CTools site instead.

Reading Assignments: see schedule for information about reading assignments.

Method of Evaluation:
The total grade in the course will be a composite of the final exam (40 pts), the midterm exam (30 pts), the online quizzes (10 points), the online radiographic interpretation exercises, and the successful completion of the Radiology Clinic assignments (10 points).

The midterm and final exams are cumulative. Both exams will include a variety of formats, including multiple choice, short answer, cases, and slides as appropriate.

Examination/grading policies.
Examinations will be given in Kellogg Auditorium with the students sitting in alternate seats. Other seating arrangements during the slide portion of the examinations may be used on occasion, but the exact method will be announced at the time of the examination.

Minimum passing score in the course is 70%. The following grading scale will be used for this course:

<table>
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<th>Total # of Points</th>
<th>Grade</th>
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<tr>
<td>97-100</td>
<td>A+</td>
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<tr>
<td>93-96</td>
<td>A</td>
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<tr>
<td>90-92</td>
<td>A-</td>
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<tr>
<td>87-89</td>
<td>B+</td>
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<tr>
<td>83-86</td>
<td>B</td>
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<td>80-82</td>
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<td>77-79</td>
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<td>60-69</td>
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<td>Below 60</td>
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Work hard, learn lots – and have fun at the same time!
**Course title:** Behavioral Science II  
**Course number:** DENT 534  
**Term and year:** Winter Term, First year (D1), 2011  
**Location, time, and day:** Lecture Hall G378  
Preferably on Tu or We or Th in the morning  

**Course personnel and contact information:**  
Course Director – Marita Rohr Inglehart, Dr. phil. habil.  
Office: Dent B393, Tel. 763-8073  
E-mail: mri@umich.edu

**Course description:**

This course is the second of three courses in Behavioral Science for dental undergraduate students. It aims at raising awareness about treating patients from different backgrounds, and provides the basic knowledge necessary to understand human interaction and communication with these patients. This is a lecture course supplemented by reading assignments. It introduces you to the material by presenting cases of patients, thus giving you an introduction to case based work in future classes.

In “Dent 518: Behavioral Science I”, you learned about health psychology, your patient (e.g., dental fear, and the significance of social support systems for oral health promotion), your own situation as a dental health care provider (decision making and information processing, burnout and impairment), and your interaction with your patient (verbal / non verbal communication, compliance / cooperation, prevention). “Dent 534: Behavioral Science II” focuses more specifically on your interactions with patients from specific groups such as pediatric patients, patients with a disability, or patients with mental health issues such as patients with depression.

In the first part, we will explore which special considerations you might want to take into account when you treat patients from different backgrounds. Specifically, we will talk about how your and your patients’ cultural, ethnic / racial backgrounds, gender, age, abilities / disabilities, sexual orientation, or general health status will affect oral health, access to care, oral health care utilization patterns, and quality of care. In the second part, we will discuss concerns / issues that might arise when you treat patients with mental health issues. We will discuss the general classification of mental disorders, explore different treatment approaches to mental health issues, and learn more about special oral health related concerns when treating patients with depression, anxiety disorders, addictive disorders, and chronic pain.
Dental Graduate Competencies addressed:

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them is measured at the following levels:

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<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
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<td>X Basic</td>
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<tr>
<td>X Application</td>
<td>X Intermediate</td>
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This course teaches foundation knowledge in the behavioral sciences and its application concerning human behavior and communication. It aims to develop in the student the behaviors and attitudes required for developing the following competencies defined in the document *Competencies for the New Dental Graduate*. Competencies: 1a, 2a, 2b, 3, 4a and b, 5 a, b and c, 6 a and b, e, 7a, e, g, 8a, d, 9b, c, f, g, h, 10a, 15, 17b.

How acquisition of knowledge, skills, attitudes, and behaviors required to meet the competencies is measured:
- At the beginning of each lecture the students respond to an open ended question that aims at raising awareness about the relevance of the subject matter of the upcoming lecture and how it applies to the student’s personal and professional situation.
- At the end of each lecture a response paper asks for the student’s response to the material presented, and also includes 2 to 4 multiple choice items that assess the students’ understanding of the material presented.
- A final exam (multiple choice format) at the end of the term will assess the level of knowledge and understanding the students acquired, and the ability to apply this knowledge to dentally relevant situations.

Examination / grading policies:
The final grade will be based on
- 11 one minute papers at the beginning of each class (1 point for each of the 11 classes),
- 44 questions (44%) in the end of the class one minute papers/quizzes,
- the Final Exam (45%).
The questions in the end of the class papers and in the Final Exam will cover the material presented in class and in the required readings. The final exam will be a multiple choice exam. Grades are given according to the following point scale:
A+ = +100 - 98; A= 97-95; A-=94-92; B+=91-89; B=88-86; B-=85-83; C=82-80.

Extra points: 2 extra points for each month January through June in which you participated in the Special Needs Patients CE courses.
Objectives:

Part 1. You and your patient from a different social group
1.1. General introduction
• Describe the main findings of the Surgeon General Report on Oral Health.

1.2. Treating members of specific groups
1.2.1. Patients from different cultural, ethnic / racial backgrounds
• Define the term “culture” and provide examples how this term is relevant when providing dental care.
• Describe the cultural influences on pain perceptions and reactions to pain.
• Describe cultural differences in nonverbal behavior and how these differences can affect providing optimal dental care.
• Describe ways in which language concerned with health and diseases is culturally determined.
• Describe the significance of understanding how cultural factors affect health beliefs, health related values and health behavior.

1.2.2. Treating children
• Describe the stages of cognitive and psycho social development children go through and their significance for providing optimal dental care.
• Identify ways in which treating children is significant for preventing dental fear.
• Describe reactions of children under the age of three to receiving dental care and how dental health care providers might respond optimally.
• Identify ways in which parents need to be informed about the significance of socializing their children into proper dental care.
• Describe typical reactions of children between the ages of 3 and 6 years, 6 and 10 years, and teenagers to being in the dental office and the special considerations dental health care providers should have concerning patients in these age groups.
• Describe the special needs of children with LD, ADHD, and autism, and how you address these needs in a dental office.

1.2.3. Geriatric patients
• Describe the significance of treating patients over 65 years of age in the 21st century.
• Identify differences in the rate of acute and of chronic diseases in persons under 65 years of age and over 65 years of age.
• Identify factors affecting subjective well being and depression in older adults and how dental care might be affected by these.
• Identify sensory and cognitive changes in old age that might affect your interaction with patients over 65 years of age.
• Describe the special significance of understanding the role of psychosocial factors (prior experiences, health beliefs and values, and control beliefs) in older adults for providing optimal care.
• Identify ways in which changes in motor functioning might affect dental care in older adults and how alternative ways of dental care might be introduced to older adults.
1.2.4. The role of gender in oral health care
• Identify the reasons why gender might be an issue worthwhile studying in healthcare and in dental healthcare settings.
• Describe gender specific issues in oral health.
• Identify ways in which gender may affect oral health care utilization.
• Describe ways in which communication in the dental office might be a function of gender.

1.2.5. Patients with different sexual orientations
• Describe theories about sexual orientations.
• Describe the ways in which personal values might interact with perspectives on sexuality.
• Describe

1.2.6. Patients with disabilities / life threatening diseases
• Describe the statistics about persons with disabilities in the US and discuss the relevance of these issues in the dental office.
• Define the term “disability”.
• Describe the different degrees of mental retardation and their implications for providing dental care.
• Describe the special concerns / issues when treating vision impaired patients, hearing impaired patients and motion impaired patients.

Part 2. You and your patient with a mental disorders
2.1. General introduction
2.1.1. Classification of mental disorders
• Identify the 3 major mental disorders and discuss their prevalence in the US population.
• Describe the DSM-IV classification system of mental disorders, and discuss its benefits and problems.
• Identify symptoms of schizophrenia, theories about its causes and treatment approaches.
• Identify major subcategories of anxiety disorders, the symptoms and theories about its causes, and the treatment approaches to these disorders.
• Describe the connection between the anxiety disorders in general and the understanding and the treatment of dental fear.
• Identify the major causes of dental fear, its prevalence and ways dental healthcare providers can prevent and treat dental fear.
• Identify psychosomatic disorders and discuss the role of stress and psychosocial mediating factors on psychosomatic disorders.

2.1.2. Different treatment approaches / types of therapy
• Describe the various mental healthcare providers available for the treatment of mental diseases, and their educational backgrounds and outlooks on the treatment of mental disorders.
• Identify the major components of a psychodynamic approach to the treatment of mental disorders.
• Identify the major aspects of a client centered, non directive approach to the treatment of mental disorders.
• Identify the major aspects of a cognitive approach to the treatment of mental disorders.
• Describe the basic principles of learning according to classical conditioning and operant conditioning.
• Describe how a behavior modification approach explains the causes of mental disorders and its treatment.

2.2. Treating patients with specific problems
2.2.1. Treating patients with affective disorders
• Describe the prevalence of affective disorders in the US population.
• Identify causes presented in the literature for affective disorders.
• Describe factors explaining the gender difference in the prevalence of affective disorders.
• Describe how dental care might be affected when a patient has an affective disorder.
• Describe the ways in which a dental healthcare provider (a) can identify a serious affective disorder, (b) and his / her responsibilities / options in such a situation.

2.2.2. Treating patients with anxiety disorders.
• Describe the prevalence of anxiety disorders in the US population.
• Identify causes presented in the literature for anxiety disorders.
• Describe how dental care might be affected when a patient has an anxiety disorder.
• Describe the ways in which a dental healthcare provider can identify an anxiety disorder, and what can be done about it.

2.2.3. Treating patients with addictions
• Describe the prevalence rates of alcoholism and drug addiction in the US population.
• Define alcoholism and drug addiction.
• Identify symptoms of alcoholism and drug addiction.
• Describe the major theories explaining the causes of alcoholism and drug addiction.
• Describe the organizational structure, the philosophy underlying and the problems / benefits of so called “Twelve Step” programs.
• Describe approaches to alcoholism and drug rehabilitation.
• Describe approaches to the prevention of alcoholism and drug addiction.

2.3. Final discussion
• Identify your professional responsibilities when encountering a dental patient with symptoms of a mental disorder, specifically affective disorder or with signs of physical abuse.
DENT 534: Behavioral Science II
INSTRUCTOR: Marita Rohr Inglehart, Dr. phil. habil.

Winter 2011

Schedule

Lecture 1: Introduction to class
Part 1. You and your patient from different social groups
1.2.1. Patients from different socio economic backgrounds

Lecture 2: 1.2.2. Patients from different ethnic / racial backgrounds

Lecture 3: 1.2.3. Treating children

Lecture 4: 1.2.4. Treating patients over 65 years of age

Lecture 5: 1.2.5. Gender and oral health

Lecture 6: 1.2.6. Patients with different sexual orientations

Lecture 7: 1.2.6. Patients with disabilities

Lecture 8: Part 2. You and your patients with mental health disorders -
2.1. Classification of mental health disorders

Lecture 9: 2.2. Therapy approaches

Lecture 10: 2.3. Treating patients with specific mental health problems
2.3.1. Treating patients with affective disorders

Lecture 11: 2.3.2. Treating patients with anxiety disorders

Lecture 12: 2.3.3. Treating patients with addictions

Lecture 13: 2.3.4. Treating patients with chronic facial pain

Lecture 14: 3. Final discussion

Final exam - TBA
DENT 534: Behavioral Science II Winter 2011
INSTRUCTOR: Marita Rohr Inglehart, Dr. phil. habil.

REQUIRED READING:

Lecture 1: Introduction to class
Part 1. You and your patient from different social groups
1.2.2. Patients from different socio economic backgrounds
- Dye BA, Tan S, Smith V, Lewis BG, Barker LK, Thornton-Evans

Lecture 2: 1.2.2. Patients from different ethnic / racial backgrounds
- Dye BA, Tan S, Smith V, Lewis BG, Barker LK, Thornton-Evans

Lecture 3: 1.2.3. Treating children
Required Reading: Chambers, p. 129 – 138

Lecture 4: 1.2.4. Treating patients over 65 years of age
Required Reading: Riley, 213 – 227

Lecture 5: 1.2.5. Gender and oral health
Required Reading: Redford et al., p.1-4

Lecture 6: 1.2.6. Patients with different sexual orientations

Lecture 7: 1.2.6. Patients with disabilities

Lecture 8: Part 2. You and your patients with mental health disorders -
2.1. Classification of mental health disorders

Lecture 9: 2.2. Therapy approaches
Lecture 10: 2.3. Treating patients with specific mental health problems
2.3.1. Treating patients with affective disorders

**Required Reading:**
- b. McFarland

Lecture 11: 2.3.2. Treating patients with anxiety disorders

**Required Reading:**

Lecture 12: 2.3.3. Treating patients with addictions

**Required Reading:**

Lecture 13: 2.3.4. Treating patients with chronic facial pain

**Required Reading:**

Lecture 14: 3. Final discussion
Curriculum Committee Review of New Courses

How are you teaching to the developmental goals as defined by the Vision Implementation Team (See reference below)?

The D1 Cariology courses courses (Fall and Winter semester D1 year) are addressing primarily the following goal:

a. has a deep knowledge and understanding of the science that underpins diagnosis, risk assessment, prevention, management, and treatment in the practice of dentistry;

How are you going to test students?
Please refer to examination grading policies in the attached syllabi.

How do concepts presented in your course integrate with concurrently offered courses in the new summer curriculum?
Related information regarding microbiology, salivary gland physiology, behavioral sciences, radiology, public health dentistry, is being provided in concurrent courses being developed.

Please provide a copy of your syllabus (a template is attached for your convenience). See attached.
Syllabus

Course title.  Cariology II
Course number.  XXX
Term and year.  Winter term, 2011

Location, time, and day.  Friday’s 8-10am (Room XXX); Tuesday and Thursday 2-5pm (lab/clinic/seminar; time and space shared with Dr. McLean’s and Dr. Fitzgerald’s courses)

Course personnel and contact information.
Margherita Fontana (mfontan@umich.edu)
Carlos Gonzalez (carlosgc@umich.edu)
Mathilde Peters (mcpete@umich.edu)
Mark Fitzgerald (markfitz@umich.edu)
Christopher Fenno (fenno@umich.edu)

Course description.
This is the second course in a series of courses throughout the 4 years of the DDS curriculum that will be establishing didactic foundational knowledge (both through traditional lecture formats and online content delivery), caries detection skills development (through hand-on laboratory exercises), seminar patient case discussions, and clinical experiences to enhance and facilitate active student learning, critical-thinking, problem-solving, and use of evidence-based information for dental caries detection, diagnosis, risk assessment, prevention and management.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

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<th>Knowledge</th>
<th>Skills</th>
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<tbody>
<tr>
<td>X_Foundation</td>
<td>X_Basic</td>
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<tr>
<td>X_Application</td>
<td>Intermediate</td>
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The following competencies are addressed in this course:
#4-The graduating student incorporates the methods of science and scientific inquiry into clinical practice. The graduating student…
4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care. (Knowledge application)
4b. Routinely evaluates outcomes of clinical practice. (Knowledge application)

#5. The graduating student communicates effectively with patients and colleagues. The graduating student…
5a. Demonstrates effective interpersonal skills to establish rapport, obtain complete and accurate information from patients, and answer patient’s questions and address patient’s concerns. (Knowledge application as it refers to caries assessment)
5b. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventive measures, and obtain informed consent. *(Knowledge application as it refers to caries assessment)*

#6. The graduating student obtains, records, updates and organizes accurate and complete medical/dental histories including pertinent psychological and sociocultural information. The graduating student...
6a. Identifies patient values, expectations and goals for oral health care. *(Knowledge application)*
6b. Obtains and records the chief complaint of the patient and the history of the present illness. *(Basic skills, knowledge foundation and application as it refers to caries assessment and management)*
6c. Establishes and maintains the patient record as a document of patient encounters. *(Knowledge application)*
6d. Identifies and records the patient's medications, their potential effects on oral and systemic health, and their impact on treatment. *(Knowledge foundation and application as it refers to caries assessment and management)*
6e. Recognizes the oral manifestations of systemic disease and how the disease and its management may affect the delivery of dental care. *(Knowledge foundation and application as it refers to caries assessment and management)*
6f. Initiates necessary consultations or referrals to clarify questions related to the patient's health. *(Knowledge foundation)*

#7. The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care. The graduating student…
7a. Performs/records the findings of an appropriate behavioral assessment and physical examination not limited to the head and neck. *(Knowledge application as it refers to caries assessment and management)*
7b. Performs and records the findings of intraoral examinations. *(Basic skills; knowledge application as it refers to caries assessment and management)*
7c. Performs/orders and records findings of other diagnostic procedures and tests as necessary. *(Foundation knowledge on radiographs)*
7d. Identifies and assesses conditions that place patients at increased risk for disease. *(Basic skills; knowledge foundation and application as it refers to caries assessment and management)*
7e. Identifies patient behaviors that impact oral and systemic health. *(Basic skills; knowledge foundation and application as it refers to caries assessment and management)*

#8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings. The graduating student…
8a. Differentiates between health and disease. *(Basic skills; knowledge foundation and application as it refers to caries assessment and management)*
8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases. *(Basic skills; knowledge foundation and application as it refers to caries assessment and management)*

#9. The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses. The graduating student…
9a. Identifies treatment options and estimates prognosis with and without treatment. *(Basic skills; knowledge foundation and application as it refers to caries assessment and management)*
9b. Plans treatments that reflect and manage the impact of behavioral, social and cultural beliefs and habits on oro-facial conditions. *(Basic skills; knowledge foundation and application as it refers to caries assessment and management)*

9c. Plans oral health instruction and treatments that include health promotion and maintenance care. *(Basic skills; knowledge foundation and application as it refers to caries assessment and management)*

9d. Develops treatment plans that reflect the impact of systemic disease and its management on the provision of oral health care. *(Basic skills; knowledge foundation and application as it refers to caries assessment and management)*

9e. Develops treatment plans that reflect the impact of growth and development. *(Foundation knowledge)*

9f. Develops treatment plans that reflect the impact of disabilities on the provision and maintenance of oral health care. *(Basic skills; knowledge foundation and application as it refers to caries assessment and management)*

9h. Collaborates with the patient to establish a mutually acceptable treatment plan. *(Foundation knowledge)*

#15. The graduating student promotes health maintenance and disease prevention by:

15a. Collaborating with the patient to create an individualized self-care program. *(Knowledge application as it refers to caries assessment and management)*

**How progression toward competency or competency is measured.**

Progression towards competency in caries management will be measured by obtaining a passing grade on the course and completing 2 caries risk and management assessment plans in clinic.

**Objectives.**

After completing the course the student should be able to:

1) Discuss and explain Fluoride’s:  
   mechanism of action  
   kinetics and toxicity  
   usage at the community level  
   products available for in office and over the counter use

2) Assess salivary factors related to caries risk and management (flow rate, bacterial levels)

3) Explain the role of bacterial transmission in caries management and be able to apply to patient scenarios strategies to delay acquisition of a cariogenic flora.

4) Explain the role of the immune system in caries etiology and management (Dental Vaccines)

5) Compare and contrast the use of different antimicrobials in caries management (chlorhexidine, xylitol, etc.)

6) Compare and contrast the uses, advantages, disadvantages, indications and contraindications of calcium-based strategies for caries management

7) Compare and contrast Dental Erosion with Dental Caries

8) Compare and contrast Recurrent Caries with Primary Caries

9) Compare and contrast Root Caries with Enamel Caries
10) Explain and discuss the epidemiology of dental caries
11) Discuss the advantages, disadvantages, sensitivity and specificity of technology-based methods to detect dental caries lesions (Diagnodent, QLF, Midwest Caries ID).

Session information.

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<th>Date</th>
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<th>Presenter</th>
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See attached excel file

Textbooks/ Readings.
[http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm)

Examination/grading policies.
One final grade will be reported for the course. The grade will be composed of the following assessments:
   1) Midterm examination (30%)
   2) Caries risk assessment and management case assignment (20%)
   3) Final examination (30%)
   4) Completion of two caries risk assessment and management plan in clinic (20%)

The letter grade outcomes will be as follows:

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<th>Letter grades assignment:</th>
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<tr>
<td>Grade</td>
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<td>F (Remediation)</td>
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<td>F (No Remediation)</td>
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Note: Scores will be carried out one decimal place and are not rounded up. An 89.9 is an 89.9.
CLINICAL FOUNDATIONS I

COURSE #519/520

2010- 2011
COURSE DESCRIPTION:
This course is a lecture and laboratory course which teaches foundation knowledge and develops basic skills in the fundamentals of dental instrumentation, principles of operative dentistry, and manual skills related to restorative dentistry. Concepts and techniques for placement of direct resin-based adhesive restorations and silver amalgam restorations are introduced. Dental materials are reviewed with an emphasis on clinical considerations. Emphasis is placed on the development of motor skills, self-evaluation, and clinical judgment.

GOALS:
• Learn fundamental knowledge and skills required for the successful clinical practice of dentistry in the student clinics and in future practice
• Learn fundamental knowledge and skills for the successful placement of direct restorations and associated procedures
• Prepare students for success on the National Board Part 2 examination
• Prepare students for success on the Restorative portion of regional or state dental licensing examinations

Information and skills presented in this course are essential to the practice of general dentistry and are NOT elective. This is professional school and you are training to be doctors where you will be using what you learn in this course to treat real live patients. Individuals who practice general dentistry after graduation will use this knowledge and these skills throughout their entire career. ALL students must master the material and skills in order to provide treatment in the student clinics and pass a licensing board.

Course policies have been developed with this in mind. Policies are strictly adhered to because failure to acquire basic knowledge and skills could put future patients at risk. Policies are also implemented to maintain order in a large class, maximize resources, and maintain a pleasant and fair environment for students, faculty and staff who are involved in the course. It is the student’s responsibility to read and know the course policies. “I didn’t know” is not an acceptable excuse.

COURSE OBJECTIVES:
Attendance for all aspects of this course is mandatory.
On completion of this course the student should develop an understanding of:
• proper terminology and nomenclature related to dental instrumentation, cavity preparations, and dental restorations
• the importance of proper field isolation for restorative dentistry
• principles of cavity preparation and the effects of cavity preparation on pulpal health
• the indications, contraindications, and procedures for indirect and direct pulp capping
• principles of enamel and dentin adhesion
• the clinically relevant material properties of composite resin, glass ionomer, and compomer materials, sealants, silver amalgam, and cavity liners

On completion of this course the student should develop the knowledge of and the ability to:
• master manual dexterity and motor skills required for the practice of dentistry
• accurately fabricate diagnostic casts from alginate impression material
• diagnose pathological processes resulting in loss of tooth structure or discomfort (caries, erosion, abrasion, abfraction, fracture) and failing restorations
• choose an appropriate treatment protocol or restorative material for a given clinical situation
• correctly identify and remove dental caries
• provide preventive and nonsurgical management/control of dental caries, abrasion, and wear
• properly use dental rotary equipment, examination instruments, and operative dentistry hand instruments
• choose an appropriate method of isolation for various restorative scenarios and correctly apply a rubber dam for routine restorative situations
• correctly use liners, varnishes, and sealers
• correctly accomplish tooth preparations for direct composite resin, glass ionomer, and silver amalgam restorations
• correctly place and finish pit and fissure sealants, direct composite resin, glass ionomer, and silver amalgam restorations
• safely and correctly perform vital tooth bleaching procedures
• accurately self-evaluate the quality of his or her clinical work
COURSE #519        FALL 2010
FACULTY AND STAFF

COURSE DIRECTORS:
Dr. Mary Ellen McLean
Clinical Associate Professor, Dept of Cariology, Restorative Sciences & Endodontics
Office: Rm G363B     ph 615-8353     E-mail: memclean@umich.edu

Dr. Gail Krishnan
Clinical Assistant Professor, Dept of Cariology, Restorative Sciences & Endodontics
Office: Rm G363B     ph 615-8353     E-mail: kgail@umich.edu

ROW INSTRUCTOR FACULTY:
Dr. Tom Johnson
Dr. Alexandra Jaquery
Dr. Luciana Castro
Dr. Marcy Goldin
Dr. Ahmad Deebajah
Dr. Woosung Sohn
Dr. Helena Pocaterra
Dr. Sahar Taha
Dr. Aikaterini Oikonomopoulou
Dr. James Thompson

CLINICAL FOUNDATIONS ADMINISTRATIVE ASSISTANT/PRECLINIC COORDINATOR:
Kari Gregerson, CDA     Rm G363A     ph 763-3340     E-mail: kgreg@umich.edu

ACADEMIC AFFAIRS/TUTORS:
Ms. Helen Fotinos     Rm 1208     ph 763-3313     E-mail: hfotinos@umich.edu

DENTAL STORES:     Carlie Seigel and Teresa Patterson (basement)
EQUIPMENT MAINTENANCE:     Rob Berg & Larry Weber
COURSE POLICIES

Attendance
Attendance for lecture and lab is MANDATORY. This course teaches clinical procedures. The observation and visualization of pictures, videos, demonstrations, and discussions of these procedures is critical for learning and cannot be substituted by scribe notes. In most cases, lectures are the background information for and the introduction to the laboratory exercises. Failure to be attentive during lecture will result in the student not being prepared for lab. This places a burden on the row instructors and fellow students when unprepared students require additional help.
Students MUST attend scheduled laboratory sessions for practicing these procedures, since these are the only times when faculty are available to provide feedback and assistance in the lab.

Lecture Attendance:
Unless otherwise noted, all lectures will be given in the assigned D1 lecture hall. All students attend lectures as an entire class. Attendance is monitored by row instructors and the course director. Attendance may be taken at any time.

To receive satisfactory attendance credit a student must:
• Be present for the entire lecture. Lectures begin on time. Late arrivals miss important announcements and subject matter
• Be alert and attentive. Students observed sleeping, talking, web surfing, game playing etc may lose attendance credit for that day

Quizzes
• Unannounced quizzes may be administered during any lecture to assess attendance and comprehension of material
• Quizzes cover basic information. There is no need to memorize information for quizzes
• Failure to be present when a quiz is distributed will result in a zero for the quiz grade and an absence for attendance that day

“Minute Papers”
• Minute paper forms may be distributed at any time during a lecture. Only those students present receive a form
• The minute paper may require the student to:
  o Briefly describe the major point of the lecture
  o Answer a question covered in assigned reading or during the lecture
  o Make an appropriate comment or observation regarding the lecture
• Minute papers are collected by the faculty and reviewed for attendance and content
  o Minute papers that are not serious, make flippant remarks, or jokes will not receive credit

On most Tuesdays and Thursdays, after lecture the class is divided into two groups. One group will do lab exercises while the other group participates in clinical activities (Course 522) or cariology lab activities (Course 532). The same lab exercise and clinic/cariology activity is repeated on the other day for the other group.

Laboratory Attendance:
Attendance is monitored by the course director, row instructors, and the preclinic coordinator. To receive satisfactory attendance credit a student must:
• Work productively for the majority of the laboratory session. Students who arrive late, disappear for extended periods, or leave early without a valid reason may not receive attendance credit for that day
• Be alert and attentive during videos or demos. Students observed sleeping, talking, studying other subjects etc may not receive attendance credit for that day
• Work only on lab projects for course 519/520. Students are not to work on projects for other courses during class time
**Absences**

- A maximum of 3 absences from lecture or lab are allowed each term. Missing a lecture will count as one absence. Missing all or a significant part of a lab session will count as one absence. Missing an entire afternoon will only count as one absence. There is no distinction between excused and unexcused absences.
- Missing quizzes, minute papers, exams, or practicals are counted as an absence
- Attendance is monitored by the course director, row instructors and the preclinic coordinator
- Late arrival, leaving early, or failure to satisfactorily participate in a lecture or laboratory session may also be counted as an absence at the course director’s discretion
- **Exceeding three absences will result in the loss of one point from the final grade for each additional absence**
- Students who exceed 5 absences may receive an *Incomplete* grade for the term. Missing work must be made up before the grade will be converted. Additional work in the form of written papers, projects, or lab work may be required before the Incomplete grade is converted
- Students who will miss class due to a religious holiday must inform the faculty in advance. Students will be allowed to make up missed exams, quizzes, or practicals, but the absence will count toward the 3 total allowed absences
- Extended illnesses, injuries, or absences due to professional obligations (i.e. ASDA rep) will be handled on an individual basis
- Make-ups for missed quizzes, exams, and practicals are allowed only when the student has contacted the course director or registrar’s office prior to the start of the exam and presents a valid documented justifiable excuse. The course director has the discretion whether to allow the student to make-up an exam
- Makeup for exams, quizzes, or practicals are the responsibility of the student to schedule. All missed work must be made up within 2 weeks of the original date or by the date of the final exam, whichever is sooner

**Laboratory Project Sheets**

- Project sheets are distributed at the start of each new laboratory exercise
- Project sheets assign and monitor progress and completion of required laboratory exercises. They describe the procedures to be accomplished and at which stages faculty evaluation is required. Faculty assistance and feedback may be requested at any time, but is mandatory at the stages noted
- If a student performs a procedure with a *less than satisfactory* outcome, the student will be required to correct or repeat the procedure before the project sheet is signed
- Failure to obtain a necessary evaluation and signature before proceeding with the next step will require repeating the first step
- Projects not finished during scheduled class hours will require work outside of regular class time and evaluation at the next laboratory session. Most projects require work outside of regular class sessions. Students must plan and organize their work accordingly. Do not approach instructors outside of class time to sign off project sheets
- Each project sheet has a deadline for completion noted on the sheet. Turn in completed project sheets to the designated collection box at Kari’s office window any time before the deadline
- Incomplete project sheets will not be accepted until they are completed
- Turning in project sheets late will result in the loss of a ½ point from the final point total at the end of the term
- **Missing project sheets will result in an Incomplete grade AND an additional assignment.** The Incomplete grade will not be resolved until both the original work and the additional work are completed satisfactorily
**Starting and Finishing on Time**

- Students are expected to be in their seats at the start of lecture and lab sessions. Lectures and labs will start on time. Students who arrive late may miss important information.
- Students not present when minute papers, tests, or quizzes are distributed will be counted as absent.
- Students may stay past the end of the lab session to continue working, if desired, and if lab space is available. However, due to faculty and staff having other teaching, practice, administrative and family obligations, faculty and staff are not expected to stay past the end of the laboratory session.
- Equipment and supplies that must be locked up overnight will be collected at 4:50pm.

**Working in the Lab Outside of Normal Class Times**

- Students must complete lab work not finished in class outside of normal class time, and are highly encouraged to practice outside of normal class times to improve their skills.
- The labs are shared by other classes. Please be respectful of other students and faculty.
  - Regularly scheduled classes have first priority for using the labs. Depending on what other courses are doing, you may or may not be able to use the lab while other classes are in session. Always check with Kari or the faculty teaching that day before setting up.
  - Outside of class, D1 and D2 students who share a bench must work out on their own a schedule for using that specific bench. Students with upcoming practical exams should have priority. Notify the faculty or Kari if your bench partner is uncooperative. You are allowed to work at another student's bench as long as they are not present, but you may have to move if they arrive later on.
  - The labs will generally be open for after-hours practice. Building hours are 7am – 11pm daily. Hours for holidays will be announced. Continuing Education (CE) courses may use the lab occasionally on some weekends. Kari will keep you notified of any times when the lab will not be open.
- If the suction shuts off after hours, flipping the switch on the wall by the entry door will turn on the suction to the preclinic lab for additional time.
- Equipment and materials for practice outside of class will be available as long as they are not abused. If problems arise with intentional damage of equipment, theft, or hoarding of instruments and supplies, this privilege may be revoked.
- Students needing materials not normally kept available at the supply table should see Kari or Dental Stores personnel during regular hours.
- Music may be played in the lab ONLY if it does not disturb others.

**Row Instructor Faculty**

- In the lab, there is at least one row instructor assigned to each row of students.
- Row instructors work individually with students to evaluate student work and assist students during laboratory sessions. Row instructors report to the course director regarding student progress.
- Due to organizational and administrative obligations, the course directors may not be available for individual assistance during some class sessions.
- When starting new procedures or projects, obtain feedback from row instructors early on! Have row instructors evaluate your work in class before practicing on your own outside of class. This will save you wasted time and effort making the same errors repeatedly.
- Unless your row instructor is absent that day, work only with your assigned instructor:
  - Working with another instructor imposes on the students assigned to that instructor.
  - Jumping from instructor to instructor robs you of continuity of instruction.
  - When faculty see your work on a continuous basis they can better assess your progress and identify areas where you are doing well and where you need additional help.
- Row instructor assignments will change Winter term.
**Working on Typodonts**

- Unless otherwise instructed, the following procedures should always be followed:
  - Teeth and adjacent teeth must remain in place in the typodont. Typodont teeth are not to be removed and worked on individually.
  - Typodonts should be mounted in the simulator head.
  - Ripped face shrouds (rubber cheeks) must be replaced. You may not work with a torn face shroud.
  - Rubber dam should be applied for restorations.

**When in doubt, follow the handout!**

- You may be exposed to variations or different ways to accomplish a procedure through readings, clinic instructors, or other students. You may observe or have observed different techniques performed in private offices. In the event of discrepancies, the procedures, protocols, and criteria described or demonstrated by the course director(s) and in your handouts are the ones to be followed on exams, quizzes, and practicals. Once you move on from this course, you may experiment with alternate procedures.

**Use of Electronic Equipment**

- ALL electronic devices such as cellular phones, Blackberries, pagers, etc must be turned off during ALL lectures, videos, and laboratory demonstrations. (If a situation arises where you must be able to be contacted by phone immediately, such as a family emergency, notify the course director in advance).
- PDA’s, laptop computers, etc may ONLY be used for appropriate purposes that pertain to the class in session (i.e., to enter schedule change announcements or for note taking on the lecture being given). Students using laptops must sit in the back rows so that faculty in the back of the room can see their screens. Students observed web surfing, texting, playing video games etc will be instructed to shut off the device and may lose attendance credit.
- NO electronic equipment (including cell phones and PDA’s) is allowed out during any written examination, quiz, or practical exam.
- Headphones may be worn to listen to music during lab time, but at the student’s own risk, and not during demonstrations. Do not have the volume so loud that you cannot hear faculty announcements or disturb others nearby.

**Schedule Changes & Important Announcements**

- All students must check their “umich” e-mail every day. All important announcements and schedule changes will be communicated via e-mail to the entire class. Failure to read e-mail messages is not a valid excuse for not being aware of announcements.

**Offices**

- The preclinical office area, including Kari’s office, are secure areas. Do not enter without permission.

**Lab Security and Cleanliness/ Simulator Equipment**

- Instructions for proper use and care of the simulator equipment MUST be followed at all times to prevent malfunction.
  - Do NOT prep dry (without water spray) inside the simulator mouth or dust will clog it.
  - Do NOT prep wet (with water spray) or use the water syringe outside of the simulator mouth. The benchtop suction will NOT handle water.
  - Do NOT suction up inappropriate materials or large items. Do NOT let large chunks fall back into the low speed suction in the throat of the sim head. These suctions clog easily.
  - Be careful NOT to tear or damage the rubber face shroud. If you rip the face shroud on your simulator head, you MUST replace it (if the tear is 1/2” or greater, you will not be allowed to work with a ripped shroud). The cost for replacing a face shroud is $50.
  - Be careful NOT to set fire or melt equipment when using flames. If you melt an overhead light or computer equipment, you will be charged a damage fee.
The course director may deduct points if a student obviously misuses or abuses equipment or shows obvious neglect in maintaining their equipment

- Each student is responsible for the security and cleanliness of their lab bench area
- Students MUST lockup their equipment when not in use. You are responsible for replacing any lost or stolen equipment
- If a student forgets or loses their lab bench key, Kari will NOT unlock/lock their drawers for them. Students must go to Dental Stores and pay a deposit for the new key which will be refunded when the replacement key is returned
- Equipment and supplies which are to be shared and available for all students are NOT to be kept in drawers or lockers
- Students may keep a reasonable amount of consumable supplies (burs, gauze, matrix bands, etc) in their lab drawers for work outside of class but do NOT hoard or waste supplies
- All equipment and consumable supplies are University property. Removal of any equipment or consumable supplies for personal use or sale is an Honor Code violation, is considered as theft, and will be reported to the University police
  - Course directors or staff may check student drawers and may remove unauthorized items at any time
- Students must protect their lab bench counter with paper when in use
- Students MUST return supplies and equipment to the supply table, throw away trash in proper containers, and clean up lab bench areas (or sinks and model pouring areas) before leaving, both during and outside of class times. (Custodial staff does NOT throw out trash from bench tops
  - Points may be deducted for a student who fails to clean up, particularly if faculty or staff have to perform clean-up tasks

**Infection Control and Safety Policies in the Laboratory**

- The following personal protective equipment (PPE) MUST be worn when working in the laboratory:
  - a clean white lab coat with name tag
  - mask and safety glasses or magnifying loupes (with side shields) whenever rotary instrumentation is used or grinding procedures are performed
  - gloves whenever extracted teeth are used and during all phases of restorative material manipulation (bonding agents, amalgam etc)
- Long hair which may become tangled in rotary instrumentation MUST be tied back or pinned up. Jewelry which may become tangled in machinery or rotary instrumentation must be removed. Head coverings, scarves, or loose clothing must be secured so as not to be a safety hazard around open flames or rotary machinery
- Students MUST dispose of “sharps” (burs, blades etc), amalgam waste, and amalgam capsules ONLY in the designated containers
- When extracted teeth are used, all equipment used and exposed bench surfaces must be disinfected after use

**Ethics and Professionalism**

- Students are expected to maintain professional and ethical standards of behavior at all times. The following behaviors will not be tolerated:
  - Lying, cheating, forgery, intentionally deceptive alteration of documents or lab work, stealing, plagiarism, or passing off another student’s work as his or her own
  - Supplying work for other students to pass off as their own
  - Producing or distributing prohibited examination materials
  - Sabotaging another student’s work
  - Abusive or profane language
  - Rude or abusive behavior. Discourteous treatment of faculty, staff, or fellow students
  - Possessing or being under the influence of illicit drugs or alcohol
  - Possession of a weapon
  - Sexual, racial, or religious harassment or intolerance
  - Infliction or threat of harm to others
Lack of respect for or destruction of school property or equipment or other’s personal property

- Theft of personal or school property or equipment
- Excessive hoarding or wasting of supplies
- Unwillingness to accept constructive criticism or arguing over grades
- Purposeful failure to carry out faculty instructions
- Blatant disregard for basic school policies regarding dress code, safety, or infection control

*Students in gross violation of ethical or professional standards may be removed from class or clinic at the faculty’s discretion. Grade reduction for these violations is at the discretion of the course director depending on the severity of the infraction. Severe infractions will be referred to the Honor Council or higher authorities in accordance with University policies

**Dress Code**

- This is a professional school and you are expected to dress appropriately. Like it or not, people will judge you by your appearance. Even when just attending class, you may be observed by patients, alumni, and University officials who walk the halls of the school. Sloppy or inappropriate attire reflects negatively on you and the dental school as a whole.
- A copy of the School of Dentistry’s dress code is included in the next section. Students in violation of this policy may be asked to leave class or clinic until the violation is corrected
- Absolutely NO jeans, shorts, sweats, mini-skirts, or open toed shoes (sandals, flip-flops) are allowed in clinic. Socks or hose are required to be worn when in clinic. You WILL be removed from clinic by the faculty or staff if these rules are violated
- All long hair MUST be tied back when in clinic
- The following dress code violations are specifically prohibited in lecture, preclinic lab and clinic:
  - Underwear showing (to include panties above low rider pants or bra straps intentionally showing) or obvious lack of appropriate undergarments
  - Camisole/spaghetti strap tops worn with no outer covering
  - Scrub pants may not be rolled down below the waist
  - Belly buttons and butt cracks will not be visible
  - Flip flops, sandals, and open toed shoes are not allowed for safety issues
  - Shorts are not allowed (must extend at least past the knee)
  - T-shirts with offensive or unprofessional messages or pictures
  - Hats are not to be worn inside the dental school
- Clean scrubs and tennis shoes are a low-cost, low maintenance, comfortable option which when worn properly, presents a professional appearance
Insert DRESS CODE
**GRADING**

### Fall Term

#### Written Exams:

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<td>#2-</td>
<td>10</td>
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<tr>
<td>#3-</td>
<td>10</td>
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<td>Final Exam</td>
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#### Quizzes

- 5

#### Lab Practicals:

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<thead>
<tr>
<th>Lab Practical</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Rubber Dam</td>
<td>10</td>
</tr>
<tr>
<td>2 – Form 1 Prep</td>
<td>10</td>
</tr>
<tr>
<td>3 – Caries Removal Independent Project</td>
<td>5</td>
</tr>
<tr>
<td>4 – Class 3 Resin Composite Prep</td>
<td>10</td>
</tr>
<tr>
<td>5 – Class 3 Resin Composite Restoration</td>
<td>10</td>
</tr>
</tbody>
</table>

**TOTAL 100**

### Winter Term

Grading system will be published when the Winter term schedule is published.

#### Written Examinations

- The number of written exams will vary by semester, reflective of the material covered.
- Examinations will cover information from reading assignments, handouts, lectures, videos, demos, and lab sessions.
- All exams will be identified by honor code only.
- No questions are allowed of the faculty during the exam. Questions may be asked immediately after the exam. Answer sheets are reviewed by the faculty after scoring to ensure grading accuracy and to evaluate which questions were missed. Bad questions are either thrown out or credit is given for other answers.
- Due to test security issues in the past, exams will NOT be returned nor keys posted.
- Due to logistic issues, students cannot individually review written exams. Faculty will provide review sessions for written exams after they are graded.
- Reproduction of tests or test questions by any method such as copying, photography, or scribing is strictly prohibited. Violations of this policy will be considered an Honor Code infraction.
- Electronic equipment, including cell phones, are not allowed out during any examination.
- The wear of hats is not allowed.

#### Lab Practicals

- Practical exams test a student’s ability to perform a clinical procedure independently within a given time frame.
- The number of practicals varies by semester, reflective of the material covered.
- Practicals are timed. *It is the student’s responsibility to be set up and prepared to start when the practical begins.* No additional time is allowed due to late starts. *Failure to turn in materials by the time stated results in a zero.*
- Students must work independently with no assistance from faculty or other students. Giving help or receiving help from another student during a practical is an Honor Code violation.
- Questions are allowed of the faculty during a practical only to resolve problems related to the test teeth, equipment, or materials which are out of the student’s control. Faculty will NOT answer inappropriate questions nor assist students with procedures that are part of what is being tested.
- Students must notify the faculty of any problems related to equipment, materials, or the test teeth at the time that a problem is discovered and no later than the time at which the practical is turned in.
- All practicals are graded by the course directors. The final decision on all grades lies with the course directors.
• All practicals are identified by honor code only. Faculty do NOT know the identity of the student at the time of grading
• Specific instructions and criteria for successful completion of each practical will be provided as that procedure is covered in class
• Practicals will not be returned to students but students will be allowed to review their grade sheet and test tooth so that they may see and learn from any errors

**Grading Scale for Exams, Quizzes, and Practicals**
- Point value of written exams and practicals are weighted according to the amount and importance of the subject matter tested, and time devoted to the subjects
- A total of 100 points is possible for the semester. A student must earn at least 70 points over the course of the semester to pass the class. All points are earned or lost. There is no extra credit or free points given
- Each exam/practical has a maximum score possible based on the number of questions or criteria evaluated (i.e., a 50 question exam has a maximum possible score of 50)
- Points are earned based on the percentage of the maximum score (example: a score of 45 on an exam with a maximum score of 50 would earn 45/50 or 90% of the points assigned to that exam. If the exam were worth 10 points of the final grade, the number of points earned would be 9.0)
- 60% is the minimum passing grade for exams, quizzes, and practicals in this course. Students only earn points if the % score earned is 60% or higher. Students earn zero points for exams, quizzes, and practicals which score below 60%.

**Final Grade Grading Scale**
The final grade is based on the total of the points earned and deducted over the course of the semester:
- A+ 98 – 100
- A  94 – 97.9
- A-  90 – 93.9
- B+  87 – 89.9
- B   84 – 86.9
- B-  80 – 83.9
- C+  77 – 79.9
- C   74 – 76.9
- C-  70 – 73.9
- E  less than 70 points

**Other Course Requirements Which Influence the Final Grade:**

**Attendance/Course Policies**
- Points may be deducted for unsatisfactory attendance (as listed previously) or for failure to comply with course policies (as previously described)

**Project Sheets**
- ½ point deducted for turning in project sheets after the deadline
- Incomplete project sheets will not be accepted until they are completed
- Failure to turn in project sheets by the end of the term will result in a 1-point deduction and will result in an Incomplete grade until both the original project sheet and additional work are completed
Honor Code or Name Identification

• It is the student's responsibility to ensure their honor code is correctly annotated on all exams, practicals, and quizzes and their name is annotated on daily project sheets and clinic forms

• Failure to annotate the honor code on any required items for any quiz, written exam (answer sheet or text booklet) or practical exam (evaluation sheets, typodont etc) will result in a minimum deduction of 5% and may result in a zero. The course director has the discretion to fail any student who fails to annotate their honor code on any required portion of any examination if the faculty is unable to identify the student who performed or submitted the work

• Laboratory project sheets submitted with no name will not receive credit unless it is obvious to whom it belonged

Tutors

• Students identified by the course director or row instructors as needing additional one-on-one assistance will be recommended to be assigned a student tutor

• Students who fail a written exam or practical will automatically be referred to be assigned a student tutor

• It is the D1’s responsibility to follow-up with their assigned tutor for help sessions

 Unsatisfactory Performance

• Failure to achieve 70% of the total points for the course, due to academic performance as well as point deductions, is considered unsatisfactory and will result in the grade of “E”. This may result in course remediation, course repetition or academic dismissal
  
  • The Academic Review Board reviews all cases of unsatisfactory academic performance on an individual basis and makes the final decision as to how a student resolves an unsatisfactory grade

• Remediation and retakes of practicals will be required of any student who fails the same part of both the Class II amalgam practical and the MOD amalgam practical Winter term, regardless of their final grade in the class

• Remediation and retakes of other individual exams or practicals may be required on an individual basis at the course director’s discretion

• Retakes of examinations or practicals will be used only to reassess student competency and will not improve the student’s original grade
COMPETENCIES: CLINICAL FOUNDATIONS I – 519/520

COMPETENCIES ARE ADDRESSED AND ACQUISITION OF KNOWLEDGE, SKILLS, ATTITUDES, AND BEHAVIORS REQUIRED TO MEET THEM IS MEASURED AT THE FOLLOWING LEVELS:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Foundation</td>
<td>X Basic</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X Application</td>
<td></td>
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</tbody>
</table>

COMPETENCIES ADDRESSED:
This course aids in developing competency in the following areas as defined in the Competencies for the New Dental Graduate through the following methods:

2. The graduating student participates in professional self-regulation.
   The graduating student...
   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
   Instructional tools used: emphasis on self-evaluation in laboratory

3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.
   Instructional tools used: interaction in lecture and laboratory settings.

7. The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.
   The graduating student...
   7d. Identifies and assesses conditions that place patients at increased risk for disease.
   7e. Identifies patient behaviors that impact oral and systemic health.
   Instructional tools used: 7 d & e. lectures

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
   The graduating student...
   8a. Differentiates between health and disease.
   Instructional tools used: lectures and laboratory exercises related to caries, occlusal factors, and restorative dentistry

14. The graduating student provides oral health care to treat/manage craniofacial and dental diseases/disorders and their effects, including:
   14a. Preservation and restoration of teeth.
   14d. Pulpal therapy.
   14f. Hard and soft tissue surgery.
   Instructional tools used: Fundamentals in lecture and laboratory.

16. The graduating student applies the principles of infection control and environmental safety to clinical practice.
   The graduating student...
   16a. Establishes and maintains an environment that protects against transmission of disease.
   16b. Implements protocols that establish and maintain an environment that protects against environmental hazards.
   Instructional tools used: Fundamentals in lectures. Practical application during and laboratory work.
HOW ACQUISITION OF KNOWLEDGE, SKILLS, ATTITUDES, AND BEHAVIORS REQUIRED TO MEET THE COMPETENCIES IS MEASURED:

7. The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.

   The graduating student…

7d. Identifies and assesses conditions that place patients at increased risk for disease.

7e. Identifies patient behaviors that impact oral and systemic health.

   Measurement instrument: written examinations.

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.

   The graduating student…

8a. Differentiates between health and disease.

   Measurement instrument: written examinations.

14. The graduating student provides oral health care to treat/manage craniofacial and dental diseases/disorders and their effects, including:

   14a. Preservation and restoration of teeth.

   14d. Pulpal therapy.

   14f. Hard and soft tissue surgery.

   Measurement instrument: 14a, 14d and 14f written examinations

   14a and f practical examinations
# CLINICAL FOUNDATIONS I (COURSE #519/520) 2010 – 2011 CLASS SCHEDULE

## CLINICAL FOUNDATIONS I  519 – FALL 2010

<table>
<thead>
<tr>
<th>Time</th>
<th>Day</th>
<th>Session</th>
<th>Room</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2pm</td>
<td>Tuesday</td>
<td>Lecture</td>
<td>G378</td>
<td>Entire class</td>
</tr>
<tr>
<td>1-2pm</td>
<td>Thursday</td>
<td>Lecture</td>
<td>G378</td>
<td>Entire class</td>
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</tbody>
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<tbody>
<tr>
<td>2-5pm</td>
<td>Tuesday</td>
<td>Lab</td>
<td>G360</td>
<td>Group A</td>
</tr>
<tr>
<td>2-5pm</td>
<td>Thursday</td>
<td>Lab</td>
<td>G360</td>
<td>Group B</td>
</tr>
</tbody>
</table>

**Shared Time with Courses 522 (Comp Care Clinic) and 532 (Cariology)**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1-5pm</td>
<td>Friday</td>
<td>Lecture</td>
<td>G378/G360</td>
<td>Entire class</td>
</tr>
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</table>

*(COURSE 522: COMP CARE CLINIC – Drs. Fitzgerald and Piskorowski)*

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</tr>
</thead>
<tbody>
<tr>
<td>2-5pm</td>
<td>Tuesday</td>
<td>Seminar &amp; Clinic</td>
<td>G378/VIC Clinics</td>
<td>Group B</td>
</tr>
<tr>
<td>2-5pm</td>
<td>Thursday</td>
<td>Seminar &amp; Clinic</td>
<td>G378/VIC Clinics</td>
<td>Group A</td>
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</tbody>
</table>

*(Note: Dental hygiene class is in the lab 12-2pm on Thursdays)*

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## CLINICAL FOUNDATIONS I  520 – WINTER 2011

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1-2pm</td>
<td>Tuesday</td>
<td>Lecture</td>
<td>G322</td>
<td>Entire class</td>
</tr>
<tr>
<td>1-2pm</td>
<td>Thursday</td>
<td>Lecture</td>
<td>G322</td>
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</tbody>
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<td>Friday</td>
<td>Lecture/Lab</td>
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</tr>
</tbody>
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<td>Seminar &amp; Clinic</td>
<td>G322/VIC Clinics</td>
<td>Group B</td>
</tr>
</tbody>
</table>

* This is a general schedule only. There are exceptions to this schedule. See daily schedule for specific activities on specific dates. See syllabus for Courses 522 and 532 for specific activities.
** Schedule is subject to change at any time pending changes to academic calendar, room or faculty availability, equipment availability, student progress, and instructor determination
** Changes will be announced in class or via e-mail to entire class
** Announced changes will supersede previous versions of the syllabus
** It is the student’s responsibility to keep track of syllabus and schedule changes

WEEK 1

**Thurs Aug 26**
Lab (1-5 pm): Entire Class: Introduction & Sim Lab Equipment Orientation
1:00–2:00pm:
• Introduction/ obtain student info
• Review syllabus, schedule, course policies & expectations
2:00 – 2:15pm: Break
2:15 – 2:45pm:
• Begin sim lab equipment orientation

No clinic or seminar this week.

WEEK 2

**Tue Aug 31**
Lect (1-2pm): Examination Instruments (McLean)
• Rotary Instrumentation for Operative Dentistry (McLean)

**Thurs Sep 2**
Lect (1-2pm): Black’s Classifications/ Nomenclature of Cavity Preparations (McLean)
• Dental Anatomy Nomenclature (McLean)

**Tue & Thurs Lab (2:15- 5pm): Sim lab orientation/Handpiece set-up**
Benchtop Form 1 preps on blocks
2:15 – 2:30 pm: Introduce row instructors/ row instructor assignments
2:30 – 3:00 pm: Sim lab orientation
3:00 – 3:15 pm: Handpiece set up
3:15 – 4:00 pm Introduce Form 1 criteria sheet and project sheet
• Demo of instrument grasp/ use of fulcrum
4:00 – 5:00 pm: Start Form 1 preps on blocks on the benchtop (**short faculty meeting once students start prepping**)

**Course 522 Seminar:** 2-5pm in lecture hall
WEEK 3

Tue Sep 7
Lect (1-2pm): Alginate Impressions (McLean)

Thurs Sep 9
Lect (1-2pm): Diagnostic Casts (McLean)

Tue & Thurs Lab (2:15-5pm): Chair positioning/ Typodont & sim head set-up/ Mirror exercises/ Form 1 block preps (indirect vision)
2:15 – 3:15 pm: Demo: Operator positioning, set up of sim head, typodons, water, and suction.
3:15 – 3:30 pm: Mirror exercises (attach blocks to typodont with rubber bands before screwing into head)
3:30 – 5:00 pm: Exercise: Using mirror/indirect vision, cut Form 1 preps on blocks.

Course 522 (2-5pm): Clinic Observation (must be in clinic attire!)

WEEK 4

Tue Sep 14 – No Course 519 lecture
Course 532 Lect (1-2pm): Visual Caries Detection and Diagnosis – Part 1 (Fontana)

Thurs Sep 16 – No Course 519 lecture
Course 532 Lect (1-2pm): Visual Caries Detection and Diagnosis – Part 2 (Fontana)

Tue & Thurs Lab (2-5pm): Alginate impressions and diagnostic casts
**Bring clear dental anatomy models to lab!**
2:00-3:00 pm: Video/demo
  • Tray selection and modification
  • Alginate mixing and impression making
  • Model pouring, separation, and trimming
3:00-5:00 pm: Exercise
  • Max & man alginate impressions of clear dental anatomy models
  • Pour impressions in stone
  • Separate and trim models

Course 522 Seminar: 2-5pm in lecture hall

WEEK 5

Tues Sep 21
(1-2pm) WRITTEN EXAM #1 – Exam Instruments and Rotary Instrumentation, Nomenclature of Dental Anatomy and Cavity Preparations, Black’s Classifications, Alginate Impressions and Diagnostic Casts (and lab and seminar material)
(*exam will be in the OLD lab - go to seminar or set up for lab when finished with exam)

Thurs Sep 23 – No Course 519 lecture
Course 532 Lect (1-2pm): Microbiology of Caries – Part 1 (Gonzalez)

Tue & Thurs Lab (2-5pm): Form 1 preps on flat typodont teeth (indirect vision)
Exercise: Form 1 preps on flat teeth using mirror/indirect vision

Course 522 Seminar: 2-5pm in lecture hall
WEEK 6

Tue Sep 28
Lect (1-2:15pm): Restorative Isolation/Rubber Dams (McLean)

Thurs Sep 30
Lect (1-2:15pm): Principles of Cavity Preparation and Caries Removal Procedures (McLean)

Tue & Thurs Lab (2:15-5pm): Rubber Dams
("pass out caries removal teeth")
Demo:
  • Preparation of the rubber dam
  • Anterior & posterior rubber dam application
Demo: Mounting extracted teeth in stone mounts
Exercise: Apply anterior & posterior rubber dams on typodont
  Mount caries removal teeth in stone

Course 522 Seminar/Clinic: 2-5pm

WEEK 7

Tue Oct 5
Lect (1-2pm): Biological and Pulpal Considerations of Cavity Preparations (McLean)

Thurs Oct 7
Lect (1-2pm): Liners, Varnish, and Temporary Restorative Materials (McLean)

Tue & Thurs Lab (2:15-5pm): Caries Removal
Demo & Exercise: Caries removal on extracted teeth (on benchtop)

Course 522 Seminar/Clinic: 2-5pm

WEEK 8

Tue Oct 12
Lect (1-2pm): Review for Form 1 and Rubber Dam Practicals (McLean)
  Review of Exam #1 (McLean)

Thurs Oct 14 - No lecture (Dr. McLean at CODE Mtg)

Tue & Thurs Lab (2-5pm): Liners and Temporary Restorations (Tues-McLean/Thurs-Krishnan)
Demo with student exercise: Use caries removal teeth from last week
  • Mix and place calcium hydroxide
  • Mix and place glass ionomer liner
  • Place copal varnish
  • Mix and place IRM (as temporary restoration) in a different tooth
*Use remaining time to practice caries removal or Form 1 preps

Course 522 Seminar/Clinic: 2-5pm
WEEK 9 (**start occasional Friday afternoon sessions)**

**Tue Oct 19**  
- Midterm Break 😊

**Thurs Oct 21**
1:00 – 1:30pm: Student set-up for practical
1:30 – 1:45pm: Faculty set-up for practical
1:45 – 2:00pm: Practical Instructions
2:00 – 3:30pm: PRACTICALS #1 & 2– Rubber Dam & Form 1 Preparation
3:30 – 5:00pm: Optional lab session for caries removal practice

**No Course 522 clinic or seminar this week**

**Fri Oct 22**
Lect (1-2pm): Review for Caries Removal Independent Project (McLean)

WEEK 10

**Tue Oct 26**
Lect (1-2pm): Resin Composite Materials (Neiva)

**Thurs Oct 28**
Lect (1-2pm): WRITTEN EXAM #2 – Restorative Isolation, Rubber Dams, Cavity Preparations and Caries Removal, Biological and Pulpal Considerations, Liners and Temporary Restorations (*exam in the lecture hall)

**Tuesday Lab:** CARIES REMOVAL INDEPENDENT PROJECT (CRIP)

**** ALL students take practical this day. ½ of class tested at a time.
2:00-2:15pm  Faculty meeting in office to organize
               All students set-up
2:15-2:30pm  Faculty set up in lab for Group A (Tues lab group)
2:30-3:30pm  **Group A in Lab:** Row instructors grade CR on extracted test tooth (to be distributed that day)
               Group B is free
3:30-3:45pm  Faculty set up in lab for Group B (Thurs lab group)
3:45-4:45pm  **Group B in Lab:** Row instructors grade CR on extracted test tooth (to be distributed that day)
               Group A is free

**Thursday Lab – No 519 lab**
Course 532 (2-5pm): ****Entire class (computer training in the sim lab)

WEEK 11

**Tue Nov 2**
Lect (1-2pm): Class III Resin Composite Preparations (Krishnan)

**Thurs Nov 4**
Lect (1-2pm): Curing Lights (McLean)
               Review of Written Exam #2 (McLean)

**Tue & Thurs Lab (2-5pm):** Class III Resin Composite Preparations
(‘pass out sealant teeth)

**Exercise:**
- Class III resin composite preparations
- Mount extracted teeth in stone for sealant exercise next week

Course 522 Seminar/Clinic and Course 532 Caries Detection (in old lab): 2-5pm
(see Course 522 and 532 syllabi for details and group assignments)
WEEK 12

Tue Nov 9
Lect (1-2pm): Etching, Enamel Bonding, and Sealant Placement (Peters)

Thurs Nov 11
Lect (1-2pm): Dentin Bonding - Part I (Nor)

**Tue & Thurs Lab (2-5pm): Sealants/continue Class III preps (McLean/Krishnan)**
Demo & Exercise: Etching, bonding, sealant placement on extracted teeth
Exercise: Continue Class III preps

Course 522 Seminar/Clinic and Course 532 Caries Detection (in old lab): 2-5pm
(see Course 522 and 532 syllabi for details and group assignments)

Fri Nov 12
Lect (1-2pm): Dentin Bonding (continued) and Preventive Resin Restorations (PRR’s) (Nor)

WEEK 13

Tue Nov 16
Lect (1-2pm): Class III Resin Composite Restorations (Krishnan)

Thurs Nov 18
Lect (1-2pm): Class IV Resin Composite Preps and Restorations (Krishnan)

**Tue & Thurs Lab (2-5pm): Class III Resin Composite Restorations**
***** LAB DAYS SWITCH THIS WEEK (DUE TO ORANGE CLINIC EXERCISE) ****
Demo: Matrix use, placement, and finishing of resin composite in Class III prep
Exercise: Class III restorations

Course 532 (2-5pm): Risk Assessment Clinic

WEEK 14

Tue Nov 23
Lect (1-2pm): Esthetic Considerations for Anterior Resin Composite Restorations (Neiva)

Tues Lab (2-5pm): ***Entire class in lab.
Exercise: Continue Class III resin composite preps and restorations

No seminar or clinic this week.

Thurs Nov 25 & Fri Nov 26 – Happy Thanksgiving!!
WEEK 15

Tue Nov 30
Lect (1-2pm): Glass Ionomer Materials and Compomers (Neiva)

Thurs Dec 2 (*exam will be in the lecture hall)
1-2pm: WRITTEN EXAM #3: Resin Composite Materials, Glass Ionomers, Compomers, Light Curing, Bonding, Sealants, PRR's, Class III & IV Preps, Class III & IV Restorations, Esthetics

Tue & Thurs Lab: Class IV resin composite preparations
Demo & Exercise: Class IV preparations (must be completed for restoration at first lab session in January)

Course 532 Caries Detection practical (2-5pm): See Course 532 syllabus for details/group assignments

Fri Dec 3
Lect (1-2:15pm): Review for Class III practicals and Review of Written Exam #3 (McLean/Krishnan)

WEEK 16

Tue Dec 7
1:00 – 1:30pm  Students set-up for practical
1:30 – 1:45pm  Faculty set-up for practical
1:45 – 2:15pm  Practical Instructions/Check contacts
2:15 – 3:15pm  PRACTICAL #3- Class III Resin Composite Preparation
3:15 – 5:00pm  Optional lab session to practice for restoration practical

Thurs Dec 9
1:00 – 1:30pm  Students set-up for practical
1:30 – 1:45pm  Faculty set-up for practical
1:45 – 2:15pm  Practical Instructions/Check contacts
2:15 – 3:15pm  PRACTICAL #4- Class III Resin Composite Restoration (on precut prep)
3:15 – 5:00pm  Students free after practical

Fri Dec 10  (*exam will be in the old lab)
1-2:30pm  FINAL WRITTEN EXAM

**No clinic or seminar this week!

Happy Holidays! Have A Great Break!! 😊

COURSE SCHEDULES AND GRADING CRITERIA FOR COURSE 520 WINTER TERM 2011 AND SPRING TERM 2011 WILL BE DISTRIBUTED/POSTED AT A LATER DATE
CLINICAL FOUNDATIONS I  520 – WINTER 2010  
SYLLABUS  
*note that your lab and clinic days switch in Winter term

LECTURE:  
Tuesday 1-2 pm Rm G378 Entire class  
Thursday 1-2 pm Rm G378 Entire class  

LAB:  
Tuesday 2-5 pm Rm G360 Group B  
Thursday 2-5 pm Rm G360 Group A  

CLINIC:  
Tuesday 2-5 pm VIC Clinics Group A  
Thursday 2-5 pm VIC Clinics Group B  

LECT/LAB:  
Friday 2-5pm G378/G360 Entire class  
(*may be able to move class to 1:00 on days of no Biomaterials)  

* This is a general schedule only. There are exceptions to this schedule. See syllabus for specific activities on specific dates.  
* All rules, policies, etc in Fall syllabus pertain to Winter term as well  

WEEK 1  

Tue  Jan 5  
Lect (1-2 pm): Class 5 Lesions: Etiology, Diagnosis, and Treatment Options (McLean)  

Thu  Jan 7  
Lect (1-2pm): Tissue Management and Class 5 Isolation (McLean)  

Tue & Thu Lab (2-5pm): Class 4 composite resin restorations  
Demo & Exercise: Restore Class 4 preps (prepped in Fall term)  

Tue & Thurs Clinic Seminar/Clinic (2-5pm): Seminar first, then clinic  

Fri  Jan 8  
Lect (2-3:15pm): Vital Bleaching (McLean)  
Lab (3:15–5pm): Class 4 composite resin restorations  

WEEK 2  

Tue  Jan 12  
Lect (1-2pm): Class 5 Composite Resin/Glass Ionomer (GI) Preps & Restorations (Neiva)  

Thu  Jan 14  
Lect: (1-2 pm): Amalgam Chemistry - Clinical Considerations (McLean)  

Tue & Thu Lab (2-5 pm): Class 5 composite resin / glass ionomer preps  

Tue & Thurs Clinic Seminar/Clinic (2-5pm): Seminar first, then clinic  

Fri  Jan 15  
Lect (2-3pm): Instrumentation for Amalgam Restorations (McLean)  
Lab (3-5pm): Class 5 composite resin / glass ionomer preps
WEEK 3

Tue Jan 19
Lect (1-2pm): Amalgam Safety and Mercury Hygiene (Dr. Stoffers)

Thu Jan 21
Lect (1-2pm): Cavity Preparations for Amalgam Restorations (McLean)

Tue & Thu Lab (2-5pm): Class 5 composite resin & glass ionomer restorations
Demo & Exercise: Class 5 rubber dam isolation & restorations

Tue & Thurs Clinic Seminar/Clinic (2-5pm): Seminar first, then clinic

Fri Jan 22
Lect (2-3pm): Review for Class 4/Class 5 Composite Resin Restoration practicals (McLean)
Lab (3-5pm): Class 5 composite resin /glass ionomer restorations

WEEK 4

Tue Jan 26
Lect (1-2pm): Class 1 & 5 Amalgam Preparations (McLean)

Thu Jan 28
(1-2pm) WRITTEN EXAM #1 – Class 5 lesions, Class 5 isolation, Class 5 composite resin and glass ionomer preps and restorations, vital bleaching (*exam in old lab)

Tue & Thu Lab (2-5pm): Class 1 & 5 amalgam preps

Tue & Thurs Clinic Seminar/Clinic (2-5 pm): Seminar first, then clinic

Fri Jan 29
Lect (2-3:30pm): Amalgam Placement Techniques - Condensation, Carving, and Burnishing (McLean)
Exam #1 review (McLean)
Lab (3:30-5pm): Class 1 & 5 amalgam preps

WEEK 5

Tue Feb 2
No lecture: Lab starts at 1:00 (clinic group free from 1-2pm)

Thu Feb 4
No lecture: Lab starts at 1:00 (clinic group free from 1-2pm)

Tue & Thurs Lab (1-5 pm): Class 1 & 5 amalgam restorations
Demo & Exercise: Class 1 & 5 amalgam restorations

Tue & Thurs Clinic Seminar/Clinic (2-5 pm): Seminar first, then clinic

Fri Feb 5
***Students set up during lunch
1-2pm: Faculty set up (while students are in class)
2–5pm: PRACTICALS #1 & 2: Class 4 Composite Resin Restoration AND Class 5 Composite Resin Restoration (precut preps on same tooth)
WEEK 6

Tue Feb 9 - Research Day: No afternoon classes

Thu Feb 11
Lect (1-2pm): Review for Class 1 Amalgam Practicals

Thurs Lab (2-5pm): Class 1 & 5 amalgams (entire class in lab)

No seminar or clinic this week (due to Research Day)

Fri Feb 12
Lect (2-3pm): Principles of Class 2 Amalgam Preparation Design (McLean)
Lab (3-5pm): Class 1 & 5 amalgams

WEEK 7

Tue Feb 16
Lect (1-2 pm): Class 2 Amalgam Preparations – Step by Step (McLean)

Thu Feb 18
(1-2pm) WRITTEN EXAMINATION #2: Class 1 & 5 amalgam preps, Amalgam chemistry & safety, Amalgam instrumentation, Amalgam placement techniques (*exam in old lab)

Tue & Thurs Lab (2-5 pm): Start Class 2 amalgam preps

No seminar or clinic this week (due to OSCE exams in clinic) – clinic group is free

Fri Feb 19
***Students set up for both practicals during lunch
1-2pm: Faculty set up for prep practical (while students are in class)
2-3pm: PRACTICAL #3 – Class I Amalgam Preparation (1 hr)
3-3:15pm: Student break/Faculty set up for restoration practical
3:15-4:15pm: PRACTICAL #4 – Class I Amalgam Restoration (on precut prep) (1 hr)
*Students free after practical is turned in
(**only the tooth is turned in for prep so students keep a typodont to continue working on Class 2’s)

WEEK 8

Feb 22 – 26  Spring Break!
WEEK 9 (ADEA/AADR Meeting – many row instructors out)

Tue  Mar 2
Lect (1-2pm): Matrix Systems for Class 2 Amalgam Restorations (McLean)

Thu  Mar 4
Lect (1-2pm): Class 2 Amalgam Restorations - Amalgam Placement & Carving (McLean)
Exam #2 review (McLean)

Tue & Thurs Lab (2-5 pm): Class 2 amalgam preps

Tue & Thurs Clinic (2-5 pm): No more seminars - go straight to clinic (or bitewing clinic if scheduled)
   (Dr. Brooks will put out a schedule for bitewing clinic)

Fri  Mar 5
Lect (2-3:15 pm): Tooth Fractures (McLean)
Lab  (3:15-5pm): Class 2 amalgam preps

WEEK 10

Tue  Mar 9
Lect (1-2pm): Unique Proximal Preparations: Distals of Canines, Mandibular 1st Premolars, and Facial/Lingual Slot Access (McLean)

Thu  Mar 11
Lect (1-2pm): Review for Class 2 Amalgam Preparation practical (McLean)

Tue & Thu Lab (2-5pm): Start Class 2 amalgam restorations
   Demo: Matrix band placement, restoring & carving Class 2 amalgams

Tue & Thurs Clinic (2–5 pm): Go straight to clinic or bite-wing clinic

Fri  Mar 12
Lect (2-3pm): Amalgam Finishing and Polishing (McLean)
Lab  (3-3:30pm): Demo – Amalgam Polishing
   (3:30-5pm): Class 2 amalgam restorations

WEEK 11

Tue  Mar 16
(1-2pm) WRITTEN EXAM #3 – Class 2 Amalgam Preps & Restorations, Matrices, Finishing & Polishing, Unique Proximal Preps, Tooth Fractures (*exam in old lab)

Thu  Mar 18
Lect (1-2pm): Review for Class 2 Amalgam Restoration Practical and Review Exam #3 (McLean)

Tue & Thu Lab (2-5pm): Class 2 amalgam restorations & polishing

Tue & Thurs Clinic (2-5pm): Go straight to clinic or bite-wing clinic

Fri  Mar 19
2:00-2:15pm: Student set up
2:15-2:30pm: Faculty set up
2:30-3:00pm: Instructions/ check contacts
3:00-4:30pm: PRACTICAL #5 – Class 2 Amalgam Preparation (1 ½ hrs)
WEEK 12

**Tue Mar 23** - No lecture. Lab starts at 1:00 pm (Clinic group free until 2:00)

**Thu Mar 25** - No lecture. Lab starts at 1:00 pm (Clinic group free until 2:00)

**Tue & Thu Lab (1-5pm):** Start MOD amalgams

**Tue & Thurs Clinic (2–5pm):** Go straight to clinic or bite-wing clinic

**Fri Mar 26**
2:00-2:30pm: Student set up
2:30-2:45pm: Faculty set up
2:45-3:15pm: Instructions/ check contacts
3:15-4:45pm: **PRACTICAL #6 – Class 2 Amalgam Restoration** (precut prep) (1½ hrs)

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WEEK 13

**Tue Mar 30**
Reading Assignment: Articles to be distributed

Lect (1-2pm): Group discussion of articles: Amalgam Restorations - Failures, Replacement & Repairs (McLean)

**Thu Apr 1**
Lect (1-2pm): Continue Tuesday's discussion (McLean)

**Tue & Thu Lab (2-5pm):** MOD amalgam preps & restorations

**Tue & Thurs Clinic (2–5pm):** Go straight to clinic or bite-wing clinic

**Fri Apr 2**
(2-3:15pm): **FINAL EXAM** (Comprehensive – over Winter term only) (*exam in old lab)

(**There will NOT be a separate exam over Replacement of Restorations/Amalgam Failures but these topics WILL be included on the final along with other information from earlier in the term)
Lab (3:15-5:00pm): MOD Amalgams

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WEEK 14

**Tue Apr 6** - No lecture. Lab starts at 1:00 pm (Clinic group free until 2:00)

**Thu Apr 8** - No lecture. Lab starts at 1:00 pm (Clinic group free until 2:00)

**Tue & Thu Lab (1-5pm):** MOD amalgams

**Tue & Thurs Clinic (2–5pm):** Go straight to clinic or bite-wing clinic

**Fri Apr 9**
2:00-2:15pm: Student set up
2:15-2:30pm: Faculty set up
2:30-3:00pm: Instructions/ check contacts
3:00-5:00pm: **PRACTICAL #7 – MOD Amalgam Preparation** (2 hrs)
WEEK 15  (no clinic this week)

Tue  Apr 13 - No lecture. Lab starts at 1:00 pm.
Entire class in lab (*optional if project sheet is turned in)

Thu  Apr 15 - No lecture. Lab starts at 1:00 pm.
Entire class in lab (*optional if project sheet is turned in)
Finish MOD project sheet (LAST DAY to turn in MOD project sheet!)

Fri  Apr 16
2:00–2:30pm:  Student set up
2:30–2:45pm:  Faculty set up
2:45–3:15pm:  Instructions/check contacts
3:15–4:45pm:  PRACTICAL #8 – MOD Amalgam Restoration (on precut prep) (1½ hrs)
CLINIC & SEMINAR SCHEDULE - Winter Term 2010

Wk 1   Jan 5 & 7  2-5pm  Seminar first, then go to clinic
Wk 2   Jan 12 & 14  2-5pm  Seminar first, then go to clinic
Wk 3   Jan 19 & 21  2-5pm  Seminar first, then go to clinic
Wk 4   Jan 26 & 28  2-5pm  Seminar first, then go to clinic
Wk 5   Feb 2 & 4  2-5pm  Seminar first, then go to clinic
Wk 6   Feb 9 &11  No clinic or seminar (Research Day)
Wk 7   Feb 16 & 18  No clinic or seminar (OSCE exams in clinic)
Wk 8   Feb 23 & 25  Spring Break
Wk 9   Mar 2 & 4  2-5pm  Clinic or bite-wing clinic
Wk 10  Mar 9 & 11  2:30-5pm  Clinic or bite-wing clinic
Wk 11  Mar 16 & 18  2-5pm  Clinic or bite-wing clinic
Wk 12  Mar 23 & 25  2-5pm  Clinic or bite-wing clinic
Wk 13  Mar 30 & Apr 1  2-5pm  Clinic or bite-wing clinic
Wk 14  Apr 6 & 8  2-5pm  Clinic or bite-wing clinic
Wk 15  Apr 13 & 15  2-5pm  No clinic

(****Dr. Brooks will provide exact schedules for when you will attend bite-wing clinic later on. Each student will attend one session)

Winter Term Grading

Written Exams:
- Exam #1-  10
- Exam #2-  10
- Exam #3-  10
- Final exam  12
- Quizzes  3

Lab Practicals:
1- Class 4 Composite restoration  5
2- Class 5 Composite restoration  5
3- Class 1 Amalgam prep  5
4- Class 1 Amalgam restoration  5
5- Class 2 Amalgam prep  7.5
6- Class 2 Amalgam restoration  7.5
7- Class 2 MOD Amalgam prep  10
8- Class 2 MOD Amalgam restoration  10

TOTAL 100
COURSE 520 - SPRING TERM (3 WEEKS)
POSTERIOR COMPOSITE RESTORATIONS
June 1-17, 2010 (Tues & Thurs afternoons)

*If you had Tuesday lab during Winter term, you will be in Tuesday lab for this course (same schedule as last term)

WEEK 1

Tue Jun 1
1-2 pm Lect: Class II Posterior Composites – Advantages and Disadvantages, Case Selection, Preparation Design (McLean)

Thurs Jun 3
1-2 pm Lect: Matrix and Material Options for Restoring Class II Composites (McLean)

Tue & Thurs Jun 1 & 3
2-5 pm: Lab: Preparations for Class II composites

WEEK 2

Tue Jun 8
1-2 pm Lect: Restoring and Finishing Class II Composites (McLean)

Thurs Jun 10
1-2 pm: WRITTEN EXAM

Tue & Thurs Jun 8 & 10
2-5 pm: Video: ComposiTight Sectional Matrix System
Lab: Restore Class II composites prepared last week

WEEK 3

Tue & Thurs Jun 15 & 17 (no lecture)
1-5 pm Lab only: Complete Class II composite restoration project sheet.
Completed project sheet is due no later than 5:00 pm on Jun 17

Grading: Pass/Fail
Criteria:
- Attendance at all scheduled lectures (unless cleared with Dr. McLean)
- Participation at all scheduled lab sessions (unless cleared with Dr. McLean)
- Score 80% or greater on written examination
- Satisfactorily complete project sheet on time
- Failure to complete project sheet on time will result in both an Incomplete grade AND additional course work or lab projects to be assigned at the discretion of the course director. The Incomplete grade will NOT be changed until both original course work AND additional course work is completed satisfactorily

P.S. – I am NOT involved with the Spring Term course Clinical Foundations 530A or 530B. Contact those Course Directors for questions concerning those courses.
Course title. Comprehensive Care Clinic
Course number. 522
Term and year. Winter D1 Year
Location, time, and day: Comp Care Clinics: Tue. and Thurs. 2-5 pm, Friday (9-12 or 2-5pm)
Seminars: G-378 Tue. and Thurs. 2-5 pm

Course personnel and contact information.
Course Director-Mark Fitzgerald
Email: markfitz@umich.edu
Room 2351, 2nd floor, Tele: (734) 647-3904

Course description/Nature of Course Content.
An introductory clinical experience and translation of bench work into clinical practice in Oral Medicine, Risk Assessment, Treatment Planning, Oral Radiology and Periodontics. This course is composed of experiences in clinical, laboratory, lecture, and seminar settings.

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them is measured at the following levels:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Foundation</td>
<td>X Basic</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X Application</td>
<td>___Intermediate</td>
<td>___</td>
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</tbody>
</table>

Competencies addressed:

1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
The graduating student...
1a. Practices as obliged by principles of ethics and the ADA Code of Ethics.
1b. Practices within the context of the appropriate state Dental Practice Act.

2. The graduating student participates in professional self-regulation.
The graduating student...
2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
2b. Understands the need for and establishes a plan for personal/professional growth and development.

3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.
4. **The graduating student incorporates the methods of science and scientific inquiry into clinical practice.**
   The graduating student...
   4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.
   4b. Routinely evaluates outcomes of clinical practice.

5. **The graduating student communicates effectively with patients and colleagues.**
   The graduating student...
   5a. Demonstrates effective interpersonal skills to establish rapport, obtain complete and accurate information from patients, and answer patient’s questions and address patient’s concerns.
   5b. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventive measures, and obtain informed consent.
   5c. Demonstrates effective interpersonal skills in consultations and referrals.

6. **The graduating student obtains, records, updates and organizes accurate and complete medical/dental histories including pertinent psychological and sociocultural information.**
   The graduating student...
   6a. Identifies patient values, expectations and goals for oral health care.
   6b. Obtains and records the chief complaint of the patient and the history of the present illness.
   6c. Establishes and maintains the patient record as a document of patient encounters.
   6d. Identifies and records the patient’s medications, their potential effects on oral and systemic health, and their impact on treatment.
   6e. Recognizes the oral manifestations of systemic disease and how the disease and its management may affect the delivery of dental care.
   6f. Initiates necessary consultations or referrals to clarify questions related to the patient’s health.

7. **The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.**
   The graduating student...
   7a. Performs / records the findings of an appropriate behavioral assessment and physical examination not limited to the head and neck.
   7b. Performs and records the findings of intraoral examinations.
   7c. Performs/orders and records findings of other diagnostic procedures and tests as necessary.
   7d. Identifies and assesses conditions that place patients at increased risk for disease.
   7e. Identifies patient behaviors that impact oral and systemic health.
   7f. Identifies the signs and symptoms of medical emergencies.
   7g. Identifies the signs and symptoms of abuse.
8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings. The graduating student...
8a. Differentiates between health and disease.
8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases.
8c. Determines differential and/or provisional diagnoses for developmental disorders of the oro-facial complex.
8d. Determines provisional diagnoses of abuse.
8e. Recognizes medical emergencies.

9. The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses. The graduating student...
9b. Plans treatments that reflect and manage the impact of behavioral, social and cultural beliefs and habits on oro-facial conditions.
9c. Plans oral health instruction and treatments that include health promotion and maintenance care.
9d. Develops treatment plans that reflect the impact of systemic disease and its management on the provision of oral health care.
9e. Develops treatment plans that reflect the impact of growth and development.
9f. Develops treatment plans that reflect the impact of disabilities on the provision and maintenance of oral health care.
9g. Develops treatment plans that address the patient’s esthetic concerns.
9h. Collaborates with the patient to establish a mutually acceptable treatment plan.

14. The graduating student provides oral health care to treat/manage craniofacial and dental diseases/disorders and their effects, including:
14a. Preservation and restoration of teeth.
14b. Replacement of teeth.
14c. Periodontal therapy.
14d. Pulpal therapy.
14e. Treatments for/management of soft tissue diseases/disorders.
14f. Hard and soft tissue surgery.
14g. Management of space and treatment/management of malocclusion.

15. The graduating student promotes health maintenance and disease prevention by:
15a. Collaborating with the patient to create an individualized self-care program.
15b. Recognizing and appreciating the need to contribute to the improvement of oral health beyond those served in traditional practice settings.

16. The graduating student applies the principles of infection control and environmental safety to clinical practice. The graduating student...
16a. Establishes and maintains an environment that protects against transmission of disease.
16b. Implements protocols that establish and maintain an environment that protects against environmental hazards.

**How acquisition of knowledge, skills, attitudes, and behaviors required to meet the competencies is measured:**
This is a full year course of basic skill and knowledge application. There are clinical simulation exercises, clinical experiences, written examinations and independent treatment planning competency exams on simulated patients through-out the course.

**This course objectives are for students to:**
1. Actively participate in patient care
2. Develop an understanding the basic patient treatment protocols in the VICs
3. Master proper infection control practices
4. Integrate preclinical, behavioral science, and basic science skills into clinical experiences
5. Acquire the basic clinical skills necessary to perform a complete oral examination and treatment plan for a patient.
6. Develop proper clinical time management skills
7. Use self-evaluation of procedures to improve quality
8. Identify behavioral risk factors for oral disease
9. Develop interpersonal skills for relating to patients

**Goals and Requirements:**
On completion of this course the student should be able to function in a clinical setting observing all infection control guidelines, visually detect caries and independently develop an organized and finalized treatment plan on a simulated patient. The student is also expected to be able to enter into MiDent all patient treatment related data collected during routine dental treatment and assist in that treatment in the CompCare clinics.
**Course schedule:**

Seminars and lectures are scheduled on Tuesday and Thursday afternoons from 2 to 5 pm. Seminars and lectures are in G-378. Clinical sessions are on Tuesday, Thursday and Friday afternoons and Friday afternoon. Other clinical and seminar activities will be coordinated with Cariology and Perio Foundation experiences.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time &amp; Location</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Jan. 4 &amp; 6</td>
<td>2-3 pm: Seminar G-378</td>
<td>Orientation</td>
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<td></td>
<td>3-5 pm: VIC Clinics</td>
<td>Assisting experiences in VICs</td>
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<td>Jan. 7</td>
<td>9-12 am: VIC Clinics and FC Clinic</td>
<td>Patient care in VIC Clinics and FC Clinic (Perio)</td>
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<tr>
<td>Jan. 11 &amp; 13</td>
<td>2-5 pm: Seminar G-378 VIC Clinic Cariology Lab</td>
<td>Coordination with Cariology Course lab (hands on experience with current products) and Clinic Experience in VICs.</td>
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<td>9-12 am: VIC Clinics and FC Clinic</td>
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</tr>
<tr>
<td>Jan. 18 &amp; 21</td>
<td>2-5 pm: Seminar G-378 VIC Clinic Cariology Lab</td>
<td>Coordination with Cariology Course lab (hands on experience with current products) and Clinic Experience in VICs.</td>
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<tr>
<td>Jan. 22</td>
<td>9-12 am: VIC Clinics and FC Clinic</td>
<td>Patient care in VIC Clinics and FC Clinic (Perio)</td>
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<tr>
<td>Jan. 25 &amp; 27</td>
<td>2-5 pm: FC Clinic</td>
<td>Risk assessment and management</td>
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<tr>
<td>Jan. 28</td>
<td>9-12 am: VIC Clinics and FC Clinic</td>
<td>Patient care in VIC Clinics and FC Clinic (Perio)</td>
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<tr>
<td>Feb. 1 &amp; 3</td>
<td>2-5 pm: Seminar G-378 VIC Clinic Cariology Lab</td>
<td>Coordination with Cariology Course lab (Salivary and Bacterial Assessment and case study) and Clinic Experience in VICs.</td>
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<td>Feb. 8 &amp; 10</td>
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<td>Feb. 22 &amp; 24</td>
<td>Spring Break</td>
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<tr>
<td>Feb. 25</td>
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<td>Patient care in VIC Clinics and FC Clinic (Perio)</td>
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<td>Mar. 29 &amp; 31</td>
<td>2-5 pm</td>
<td>Seminar G-378</td>
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<td>Apr 1</td>
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**Clinical Seminars**
These seminars are for presenting new material, general discussion and trouble-shooting, Room G378

**Method of Evaluation:**

Grades will be Letter grade and based on the following:

1. Satisfactory attendance and participation in scheduled clinic and seminar sessions. (20%)
   Students must participate in a minimum of 90% of scheduled sessions.
2. Satisfactory completion and submission of Simulated Patient Treatment Plan Worksheets and Finalized Treatment Plans, each by its due date: (20%)
3. Reflective Assignments (40%)
4. Quiz (from questions on final exam for Caries Management) (20%)

Failure to meet the requirements in any one of the above criteria will result in an “E” or an “I” (Incomplete requiring additional work) at the faculty’s discretion. Failure to meet 2 or more of the above criteria will result in an “E” grade.
Curriculum Committee Review of New Courses  
DENT 522 Winter 2011

How are you teaching to the developmental goals as defined by the Vision Implementation Team (See reference below)?

Although this is an introductory course, it will begin to lay the foundation to a continuing progression of development in the following Characteristics:

a. has a deep knowledge and understanding of the science that underpins diagnosis, risk assessment, prevention, management, and treatment in the practice of dentistry;

b. practices with the understanding that the orofacial complex is the gateway to the body with principal roles in regulating life-essential functions;

c. interacts within other health professions to represent and promote oral health as a key component of total health;

d. models integrity and professional responsibility through ethical behavior in professional practice and daily life.

This course provides clinical relevance to the D1 Winter Perio, Clinical Foundations 520 and the Caries Risk Assessment and Management courses through seminars, simulated patient treatment plans, laboratory and clinical exercises in patient care and diagnosis. Thus, the very nature of the course content is tailored to achieve these goals. A knowledge and understanding of the science that underpins diagnosis, risk assessment, prevention, management, and treatment in the practice of dentistry is required and reinforced in this course. Students will learn the importance of and how to practice with the understanding that the orofacial complex is the gateway to the body with principal roles in regulating life-essential functions. Furthermore, they will be exposed to the fundamental skills that will allow them to interact with other health professions to provide and promote oral health as a key component of total health. Integrity and professional responsibility through ethical behavior in professional practice and daily life will be emphasized in all elements of the course.

How are you going to test students? (Please provide as much detail as possible.)

Grades will be Letter grade and based on the following:

1. Satisfactory attendance and participation in scheduled clinic, seminar and special MiDent Training sessions. (20%)  
   Students must participate in a minimum of 90% of scheduled sessions.

2. Satisfactory completion and submission of Simulated Patient Treatment Plan Worksheets and Finalized Treatment Plan, each by its due date: (20%)

3. Reflective Assignments (40%)

4. Quiz (from questions on final exam for Caries Management) (20%)

Failure to meet the requirements in any one of the above criteria will result in an “E” or an “I” (Incomplete requiring additional work) at the faculty’s discretion. Failure to meet 2 or more of the above criteria will result in an “E” grade.
How do concepts presented in your course integrate with concurrently offered courses in the new summer curriculum?

Concepts in this course integrate very tightly with courses presented in the summer and also the fall courses. Knowledge and skills developed in the Summer courses Introduction to the Profession, Head and Neck Anatomy, Dental Anatomy, Introduction to the Oral Facial Complex, Introduction to Clinical Skills will be applied to the concept and practice of treatment planning and patient treatment. Additionally, the course is carefully coordinated and sequenced with the Fall Semester courses Clinical Foundations 1 (519), D1 Fall Oral Diagnosis and Treatment Planning and Cariology I and Winter courses in Perio (530?), Introduction to Prosthodontics Treatment Options (536?), Cariology II, and Clinical Foundations 1 (520).

Please provide a copy of your syllabus (a template is attached for your convenience). (See above)
<table>
<thead>
<tr>
<th>Date</th>
<th>Time (hours)</th>
<th>Format</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Lecture</td>
<td>Introduction To Oral Pathology and Systematic Approach to Describing Lesions (Clinical)</td>
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<td>1</td>
<td>Case-Based Module (Small-Group; 27 per group; students randomly selected to describe lesions)</td>
<td>“Practical Description of Lesions (Clinical)”</td>
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<tr>
<td>1</td>
<td>Lecture</td>
<td>“Twenty Most Common Lesions” (by clinical appearance; pink, white, red, ulcerated)</td>
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<tr>
<td>1</td>
<td>Lecture</td>
<td>Systematic Approach to Describing Lesions (Radiographic)</td>
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<tr>
<td>1</td>
<td>Lecture</td>
<td>Advanced Radiographic Imaging in Oral Pathology</td>
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<td>1</td>
<td>Case-Based Module (Small-Group; 27 per group; students randomly selected to describe lesions)</td>
<td>“Practical Description of Lesions (Radiographic)”</td>
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<td>1</td>
<td>Lecture</td>
<td>Formulating a Differential Diagnosis (How and Why)</td>
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<tr>
<td>1</td>
<td>Lecture</td>
<td>Cervical Lymphadenopathy and Neck Swellings (Differential Dx and Management)</td>
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<td>1</td>
<td>Lecture</td>
<td>Dermatology (Pigmented)</td>
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<tr>
<td>1</td>
<td>Lecture</td>
<td>Dermatology (Red, White and Pink)</td>
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<tr>
<td>1</td>
<td>Lecture</td>
<td>Developmental Anomalies (Non-Syndromic)</td>
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<td>1</td>
<td>Case-Based Module (Clinic Session; Students to perform thorough head and neck exams including dermatologic examinations on “standardized” patients or regular clinic patients; describe all findings in depth; develop differential Dx as appropriate)</td>
<td>“Clinical Examination of Patients”</td>
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<tr>
<td>1</td>
<td>Lecture</td>
<td>Abnormalities of Teeth</td>
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<tr>
<td>1</td>
<td>Case-Based Module (Small-Group; 27 per group; students randomly selected to describe lesions)</td>
<td>“Abnormalities of Teeth”</td>
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<tr>
<td>2</td>
<td>Exam</td>
<td>FINAL EXAM</td>
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</tbody>
</table>
Syllabus draft

Course title: Development, Regeneration and Genetics

Course number: DENT 5XX.

Term and year: Winter (14 week-term) DS1

Location, time, and day
G390 (or equivalent) lecture hall with projection device and wireless access.
8:00-10:00 am (31 lectures – 1 hr ea; 1 hr Questions & Answers and 4 exams – 2 hrs each; total 40 hrs)

Course personnel and contact information
Course Director- Vesa M Kaartinen, Associate Professor of Dentistry, Department of Biologic and Materials Science, School of Dentistry, office: 2305 Dent; phone: 615-4726; email: vesak@umich.edu
Course Co-Director- Jan CC Hu, Professor, Department of Biologic and Materials Science, School of Dentistry. Office 1642 Dent; phone: 734-975-9315; email: janhu@umich.edu
Daniel J. Chiego, Jr., M.S. Ph.D.; Associate Professor, Department of Cariology, Restorative Sciences and Endodontics; office 5207 Dent, phone 763-4258; email: djchiego@umich.edu
Petros Papagerakis, Assistant Professor of Dentistry, Department of Pediatric Dentistry, School of Dentistry, office 1544Dent; phone: 734 647 9826; email: petrosp@umich.edu
David Kohn, Professor, Department of Biologic and Materials Science; Professor, Biomedical Engineering; office 2213 Dent; phone: 734-764-2206; email: dhkohn@umich.edu
James P. Simmer, Professor, Department of Biologic and Materials Science, School of Dentistry. Office 1642 Dent; phone: 734-975-9318; email: jsimmer@umich.edu

Course description
This course encompasses three major subject areas in developmental biology, specifically growth and development of craniofacial and dental structures, stem cells and tissue regeneration, and dental genetics.

The course is structured to deliver basic and applied scientific knowledge. The lectures will aim at enforcing the fundamental concepts in developmental biology while emphasizing the most cutting edge scientific evidences in the regulation of biological processes for normal, abnormal development and regeneration of the orofacial structures. The information delivered in this course will prepare the students to become familiar with the developmental processes of the craniofacial complex and the human dentitions. They will be exposed to stem cell biology and tissue regeneration and be adaptive to the concept of applying biomaterials as potential therapeutic approaches for their dental patients. They will receive a dental genetic lecture series that develops the concept of genetic regulation of tooth development and introduces the genetic
etiolities of frequently encountered inherited dental defects. It will build a knowledge base in the students and equip them with a good understanding in the subject area allowing the students essential tools in making proper diagnosis, assessing risk of recurrence, determining effective prevention, and projecting prognosis.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
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<td>X_Foundation</td>
<td>X_Basic</td>
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<td>X_Application</td>
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<td>_Advanced</td>
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Competencies addressed: 1a, 2a, 2b, 4a, 6e, 6f, 8a, 8b, 8c

1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
   The graduating student…
   1a. Practices as obliged by principles of ethics and the ADA Code of Ethics.

2. The graduating student participates in professional self-regulation.
   The graduating student…
   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
   2b. Understands the need for and establishes a plan for personal/professional growth and development.

4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.
   The graduating student…
   4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.

6. The graduating student obtains, records, updates and organizes accurate and complete medical/dental histories including pertinent psychological and sociocultural information.
   The graduating student…
   6e. Recognizes the oral manifestations of systemic disease and how the disease and its management may affect the delivery of dental care.
   6f. Initiates necessary consultations or referrals to clarify questions related to the patient's health.

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
The graduating student…
8a. Differentiates between health and disease.
8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases.
8c. Determines differential and/or provisional diagnoses for developmental disorders of the orofacial complex.

**How progression toward competency or competency is measured.**
Four cumulative, written, in class examinations are planned. The test may include multiple choice, true or false, and fill-in-the-blank questions.

The instructors will also give oral and written quizzes during the class without prior announcement.

**Objectives**
The “Development” series is designed to provide basic knowledge in human embryology and development with special emphasis in craniofacial and tooth development. Through this lecture series, students will develop basic understanding of embryology and organogenesis, understand molecular reasons behind common birth defects affecting craniofacial and understand different phases of tooth development.

The “Stem Cell and Regeneration” series will provide basic knowledge of stem cell biology and introduction to tissue regeneration. Through this lecture series, students will develop basic understanding of embryonic and tissue-specific stem cells and understand potential of stem cells in tissue regeneration and in possible clinical applications.

The “Dental Genetics” series is designed to provide basic knowledge in human genetics and present current understanding of the molecular basis of common disorders involving the orofacial complex. Through this lecture series, students will develop basic understanding of genetic materials, inheritance, pedigree and testing. The major types of genetic disorders will be introduced and selected genetic defects involving bone and teeth will be discussed in details enabling the students to recognize common craniofacial disorders, familiar with their underlying genetic etiology and comfortable in making proper diagnosis and initiating referrals.

**Session information**

<table>
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<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
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<td></td>
<td></td>
<td>Early Embryogenesis</td>
<td>Kaartinen</td>
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<td>- Fertilization</td>
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<td>- Preimplantation embryos &amp; pluripotency</td>
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<td>(infertility &amp; in vitro fertilization)</td>
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<td>- Implantation</td>
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<td>- Extraembryonal and embryonal tissues</td>
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<td>- Morphogens/Morphogen gradients</td>
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<td>Gastrulation (Kaartinen)</td>
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<td>- primitive streak and node</td>
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<td>- formation of germ layers and early derivatives</td>
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<td></td>
<td>Kaartinen</td>
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<tr>
<td>Establishment of the basic embryonic body plan</td>
<td>Kaartinen</td>
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<tr>
<td>Development of the ectodermal germ layer</td>
<td>Kaartinen</td>
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<tr>
<td>- neuroectoderm &amp; neurulation (neural tube closure defects)</td>
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<td>- outer epithelium of the body</td>
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<td>- segmentation</td>
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<tr>
<td>Development of the mesodermal germ layer (Kaartinen)</td>
<td>Kaartinen</td>
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<tr>
<td>- paraxial mesoderm (formation myotomes, dermatomes and sclerotomes)</td>
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<td>- intermediate mesoderm (kidney, gonads)</td>
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<td>- lateral plate mesoderm (splanchnic mesoderm, somatic mesoderm; early stages of formation of circulatory system (congenital cardiac defects)</td>
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<td>Development of the endodermal germ layer</td>
<td>Kaartinen</td>
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<td>- foregut, hindgut and their derivatives</td>
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<td>Neural Crest &amp; Development of pharyngeal arches</td>
<td>Kaartinen</td>
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<tr>
<td>- pigmentation defects,</td>
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<td>- Velocardiofacial/DiGeorge syndrome,</td>
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<td>- Treacher Collins etc</td>
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<tr>
<td>Craniofacial Development I :</td>
<td>Kaartinen</td>
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<tr>
<td>Early craniofacial development (holoprosencephaly; midfacial fusion defects)</td>
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<tr>
<td>- head induction (prechordal plate and endoderm)</td>
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<tr>
<td>- facial patterning</td>
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<tr>
<td>Development of calvaria (craniosynostosis)</td>
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<td>Craniofacial Development II:</td>
<td>Kaartinen</td>
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<tr>
<td>- Development of mandibular and maxillary processes (micrognathia, -maxillary hypotrophy)</td>
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<tr>
<td>- Development of lip and palate (CL/CP and CPO)</td>
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<tr>
<td>- lip fusion (cleft lip with or without cleft palate)</td>
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<td>- palate fusion (cleft palate only)</td>
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<tr>
<td>Exam 1</td>
<td>Kaartinen</td>
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<td>Topic</td>
<td>Author</td>
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<tr>
<td><strong>Tooth Dev. I</strong>: Induction and role of neural crest cells, early stages of bud, cap, bell, follicle and crypt.</td>
<td>Chiego</td>
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<tr>
<td><strong>Tooth Dev. II</strong>: Crown Dev. And Mineralization of Enamel and Dentin</td>
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<td><strong>Tooth Dev. III</strong>: Development of Root and Supporting Structures</td>
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<td><strong>Tooth Dev. IV</strong>: Tooth Eruption and Shedding</td>
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<td><strong>Tooth Dev. V</strong>: Enamel Formation</td>
<td>Simmer</td>
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<td><strong>Tooth Dev. VI</strong>: Dentin</td>
<td>Chiego</td>
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<td>Pulp Structure: Vascular, neural cells</td>
<td>Chiego</td>
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<td>Pulpal responses to injury</td>
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<td><strong>Exam 2</strong></td>
<td>Chiego</td>
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<td>Stem Cell Concepts and Properties (normal and cancer)</td>
<td>Papagerakis</td>
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<td>Human Embryonic Stem Cells</td>
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<td>Hematopoietic Stem Cells</td>
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<td>Epithelial Stem Cells</td>
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<td>Neural Stem Cells</td>
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<td>Introduction to tissue regeneration</td>
<td>Kohn</td>
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<td><strong>Exam 3</strong></td>
<td>Papagerakis</td>
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<td>The Human Genome</td>
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<td>-Chromosomes and heredity</td>
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<td>-Somatic vs. germline transmission</td>
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<td>-Chromosomal basis of segregation</td>
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<td><strong>Types of Genetic disorders-1</strong></td>
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<td>-Chromosomal abnormalities</td>
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<td>-Multifactorial traits</td>
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<td>-Mitochondria inheritance</td>
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<td><strong>Types of Genetic disorders-2</strong></td>
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<tr>
<td>-Single gene disorders</td>
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<td>-The main classes of mutation</td>
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<td>-Linkage and mutations—penetrance and expressivity</td>
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<td>-Pedigrees</td>
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<td>-Genetic testing</td>
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<tr>
<td>Genetics of craniofacial disorders affecting oral complex</td>
<td>Hu</td>
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<tr>
<td>-Syndrome, sequence, association</td>
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<td>-Malformation, deformation, dysplasia</td>
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<td>-Common and not so common CFA</td>
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<td>Genetic etiology and characteristics of trisomy 21</td>
<td>Hu</td>
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<td>Genetic control of early tooth development</td>
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<td>- Regulation of early odontogenesis</td>
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<td>- Supernumerary teeth</td>
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<td>- Oligodontia</td>
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<tr>
<td>Genetics of enamel malformations (Hu)</td>
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<tr>
<td>- Regulation of tooth development (late events)</td>
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<td>- Enamel structural and color defect</td>
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<td>- Isolated and syndromic A1</td>
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<tr>
<td>Genetics of dentin, bone and cementum defects -1</td>
<td>Hu</td>
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<tr>
<td>- Genetic etiologies of dentin defects—DSPP, Collagen, Collagen complex - Osteogenesis imperfect</td>
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<tr>
<td>Genetics of dentin, bone and cementum defects – 2</td>
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<tr>
<td>- Genetic etiologies of cementum defects—hypoposphatasia (ALP)</td>
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<td>- PTH and PTHRP</td>
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<tr>
<td>Genetic mutations affecting phosphate and calcium homeostasis</td>
<td>Simmer</td>
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<td>- VitD deficient Rickets: VDD and VDR rickets</td>
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<td>- Hypophosphatemic Rickets</td>
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<tr>
<td>FGF23, DMP1, KLOTHO, PHEX and CLCN5</td>
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<tr>
<td>Talking to your patient with genetic disorder</td>
<td>Hu</td>
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<tr>
<td>- What to say and what not to say?</td>
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<tr>
<td>- Making proper referrals (CFA clinic, genetic counseling)</td>
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<tr>
<td>- Dental management</td>
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<tr>
<td>- Resources</td>
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<tr>
<td>Questions &amp; Answers</td>
<td>Kaartinen, Chiego, Papagerakis, Hu</td>
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<td></td>
</tr>
<tr>
<td>Exam 4</td>
<td>Hu</td>
<td></td>
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</tr>
</tbody>
</table>

Textbooks/ Readings


Examination/grading policies
Student achievement will be evaluated by quizzes and four written examinations. The final grade will be based on the accumulation of scores for the quizzes and examinations. The content of the quizzes will include information from the lectures and reading assignments. There will be no make-up of quizzes. In case of an excused absence (authorized by the registrar’s office), the remaining quiz will count twice.

The written examination will include multiple choice, true or false, fill-in-the-blank questions and matching questions. The exams will also include identification of structures on projected photomicrographs.

The weights of each examination in computing the final grade are: each quiz = 2%, exam 1, 2, 3 = 20% and exam 4 = 30%. Remediation is at the discretion of the course director.

A standardized grading system within the core would be preferred. The final grades will be assigned according to the following final percentages: ≥95 is and A+, ≥92.5 is and A, ≥90 is and A-, ≥86.7 is a B+, ≥83.3 is a B, ≥80 is a B-, ≥76.7 is a C+, ≥ 73.3 is a C, ≥70 is a C-, ≥66.6 is a D and below 66.6 is an E. (The notation “≥ “ means greater than or equal to). The ranges are from the stated number to the bottom of the preceding range. As an example, a B grade would be equal to or greater than 83.3 and below 86.7.)

**Other Information**
Quizzes will be reviewed during class time. Reproducing (memorizing & transcribing, copying, photographing, etc) exam questions in anyway is an Honor Code violation. Additionally, if you are aware that questions are being reproduced, it is your responsibility to notify the course director; refraining from doing so is an Honor Code violation.
Syllabus Template

Course title: Fundamentals of Periodontics

Course number: D530

Term and year: D1 Winter (lectures and lab/clinic), Spring and Summer (lab/clinic)

Location, time, and day: 1 hour lecture per week during Winter semester (any lecture hall, time is flexible), 6 clinical/lab hours per week (25 students per session, so each student would have lab one half day every 2 weeks). Clinics/labs to be conducted in the Foundations Clinic requiring 2 half days per week (Tuesday, Thursday, Friday PM as possibilities to coincide with restorative/prosth labs?)

Course personnel and contact information.

Course Director:
Jill Bashutski
jillbash@umich.edu
Rm 3349

Course instructors:
Phil Richards
philrich@umich.edu
Rm 3343

Henry Temple
henryjt@umich.edu
Rm 3397

Carla Harrel
tipton@umich.edu
Rm 3397

One additional hygiene faculty will likely be involved, although this person has not been officially identified yet.

Course description.
This course is a comprehensive approach to the maintenance of oral health, drawing together the training and experiences of the first year into a culmination of actual patient care. Coordination of several disciplines will lead to provision of a dental health maintenance appointment, including taking and recording medical and dental histories, blood pressure determination when
indicated, examination of soft and hard tissues, possible radiographs, classification, diagnosis, dental prophylaxis, topical fluoride treatments when indicated, personal oral health instruction, behavioral considerations and recommendations for further treatment. Aspects of initial non-surgical periodontal therapy (diagnosis and scaling and root planing) will be introduced in the latter part of the course.

**Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:**

1a. Practices as obliged by principles of ethics and the ADA Code of Ethics.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>_X_Foundation</td>
<td>_X_Basic</td>
<td><em>X</em></td>
<td><em>X</em></td>
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<tr>
<td>_X_Application</td>
<td>_Intermediate</td>
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<td>_Advanced</td>
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</table>

4b. Routinely evaluates outcomes of clinical practice.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
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</table>

5a. Demonstrates effective interpersonal skills to establish rapport, obtain complete and accurate information from patients, and answer patient’s questions and address patient’s concerns.

5b. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventive measures, and obtain informed consent.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
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<td>_X_Application</td>
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</tbody>
</table>

6a. Identifies patient values, expectations and goals for oral health care.
6b. Obtains and records the chief complaint of the patient and the history of the present illness.
6c. Establishes and maintains the patient record as a document of patient encounters.
6d. Identifies and records the patient's medications, their potential effects on oral and systemic health, and their impact on treatment.
6e. Recognizes the oral manifestations of systemic disease and how the disease and its management may affect the delivery of dental care.
6f. Initiates necessary consultations or referrals to clarify questions related to the patient's health.
<table>
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<tr>
<td>Application</td>
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<td>Advanced</td>
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</table>

7a. Performs/records the findings of an appropriate behavioral assessment and physical examination not limited to the head and neck.
7b. Performs and records the findings of intraoral examinations.
7c. Performs/orders and records findings of other diagnostic procedures and tests as necessary.
7d. Identifies and assesses conditions that place patients at increased risk for disease.
7e. Identifies patient behaviors that impact oral and systemic health.

8a. Differentiates between health and disease.
8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases.

9c. Plans oral health instruction and treatments that include health promotion and maintenance care.

14c. Periodontal therapy.

16a. Establishes and maintains an environment that protects against transmission of disease.
16b. Implements protocols that establish and maintain an environment that protects against environmental hazards.
7.

**How progression toward competency or competency is measured.**
Student development toward competency is measured using daily grading of lab/clinic exercises, written examinations and periodic quizzes.

**Objectives.**
Upon completion of this course the student should be able to:

- Describe and use assessment instruments to collect information about the periodontal status of patients
- Describe the anatomy of periodontal health and disease
- Describe the data needed to provide a periodontal diagnosis and stability assessment for a patient
- Describe and provide an effective plaque control program for periodontal patients including motivation and individual behavioral considerations
- Describe and use therapeutic instruments to provide non-surgical therapy for a periodontal patient, including scalers, universal/site-specific curets, and ultrasonic instrumentation.
- Describe and use the correct technique for using assessment and therapeutic instruments to collect data and provide therapy for a periodontal patient
- Describe appropriate treatment strategies for patients with diagnoses of health, gingivitis, and periodontitis
- Describe the role of a dental prophylaxis and supportive periodontal therapy in maintaining periodontal health and perform these procedures
- Describe and use a patient chart/record system used to record periodontal data
- Perform a complete prophylaxis on a patient
- Describe and perform the mechanical and biologic principles of periodontal root instrumentation, including scaling, ultrasonic scaling and root planing

**Session information.**

Jill Bashutski and Phil Richards will provide the lectures for the course. Lab faculty will include all names mentioned above.

| Winter Semester |
|-----------------|-----------------|
| **Week** | **Lecture** | **Lab** |
| 1 | Introduction Assessment instruments | Examination instruments: Typodonts: Probing |
| 2 | Diagnosis I: Anatomy of Health and Disease | |
| 3 | Diagnosis II: | Examination instruments: |
CHIPS

4 Diagnosis III: Advanced Assessments
Partners: probing

5 OHI and polishing
Examination instruments:
Partners: CHIPS, OHI, polishing

6 Patient motivation

7 Therapeutic instruments I:
sickle scalers and universal curets
Therapeutic instruments:
Typodonts: sickle scalers and universal curets

8 Therapeutic instruments II:
adaptation, working end, angulation, different strokes

9 Therapeutic instruments III:
site specific curets, ultrasonic scalers
Therapeutic instruments:
Typodonts: site specific curets

10 Therapeutic instruments IV:
special considerations

11 Treatment Strategy I:
Healthy or gingivitis
Therapeutic instruments:
Partners: hand instruments

12 Treatment Strategy II:
Periodontitis

13 Case Studies

14 Complete prophy sequence (Start to finish)
Partners: ultrasonic instruments

Spring/Summer semester (no lectures)

<table>
<thead>
<tr>
<th>Week</th>
<th>Lab</th>
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<tbody>
<tr>
<td>1</td>
<td>Complete prophy sequence Partners (1st group)</td>
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<td>2</td>
<td>Complete prophy sequence Partners (2nd group)</td>
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<tr>
<td>3</td>
<td>Complete prophy sequence Patients (1st group)</td>
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<td>4</td>
<td>Complete prophy sequence Patients (2nd group)</td>
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<tr>
<td>5</td>
<td>Complete prophy sequence Patients (1st group)</td>
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<td>6</td>
<td>Complete prophy sequence Patients (2nd group)</td>
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<td>7</td>
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<tr>
<td>8</td>
<td>Complete prophy sequence Patients (2nd group)</td>
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<td>9</td>
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<td>10</td>
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<td>11</td>
<td>Complete prophy sequence Patients (1st group)</td>
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<tr>
<td>12</td>
<td>Complete prophy sequence Patients (2nd group)</td>
</tr>
<tr>
<td>13</td>
<td>Complete prophy sequence Patients (1st group)</td>
</tr>
<tr>
<td>14</td>
<td>Complete prophy sequence Patients (2nd group)</td>
</tr>
</tbody>
</table>

Textbooks/ Readings:

*Textbook:
**Examination/grading policies.**
Performance in the course will be assessed using written and OSCE examinations on course material which, include MCQs, matching, T/F, fill in the blank, and short answer questions. In addition, daily lab evaluations will be used to provide feedback.

The assessments are weighted as follows to determine your final grade:

- **70%** Final OSCE examination
- **20%** Daily lab/clinic evaluations
- **10%** Quizzes

The grading scale is as follows. The student must achieve a grade of 70% or better to pass the course. Remediation will be required for students scoring <70%.

94-100 A  
90-93  A-  
87-89  B+  
84-86  B  
80-83  B-  
77-79  C+  
74-76  C  
70-73  C-  
60-69  D  
00-59  E  

**Other information.**
Ideally, the time allotted for the clinical/lab portion of this course could be “paired” with another discipline since only $\frac{1}{4}$ of the class will participate at any given time. Preliminary discussion with prosthodontic and restorative faculty have identified potential collaborative use of scheduling time together.
Course Syllabus

Course title
Grand Rounds – D1/D2 program

Course number
#5xx/#6xx

Term and year
Winter term; combined D1 and D2 students

Location, time, and day
Prefer early in the week; Tuesday mornings
Will require a lecture room capable of holding both dental classes simultaneously

Course personnel and contact information
Dr. Dennis J. Fasbinder, djfas@umich.edu

Course description
Grand Rounds #5xx/#6xx will follow a similar format as that introduced in Grand Rounds #505 in the summer term and reinforced through Grand Rounds #515 in the fall term.

General Format of the course:
A Grand Rounds (GR) topic will be introduced and discussed over two class sessions with time made available for student groups to prepare for the Topic Presentation.

1) Topic Preparation Sessions (unscheduled time) – students meet as groups to prepare for the topic
2) Scheduled Class Session - Topic Presentation with Q&A session immediately following
3) Scheduled Class Session - Topic Assessment by the Student Groups

Student Groups
Students will be assigned to a GR Student Group (GRSG) consisting of both D1 and D2 students. Each GRSG will have an assigned Faculty Mentor. The desired size of the GRSG is 0 students, but this will depend on the number of available Faculty Mentors.

Faculty Mentors will be a resource for the student groups to help focus their preparation for the topics, offer suggestions on the focus on the references considered for submission, discuss the “value” of the references considered, and help provide context for students as they plan the focus of their searches and assessments.

GRSG will be encouraged to meet with their Faculty Mentors at least once early in the preparation phase for each topic, and at least once when the group is assessing the topics to help the group focus on the assignments. Additional meetings are encouraged but it is understood that schedule conflicts may make this problematic.
Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

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<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
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<tr>
<td><em>X</em> Foundation</td>
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<td><em>X</em> Application</td>
<td>___ Intermediate</td>
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<tr>
<td>___ Advanced</td>
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</table>

How progression toward competency or competency is measured.

Students will be assessed on their search of the dental literature by each GRSG submitting four literature searches, one for each of the four Grand Round sessions. Assessment will be based on the ability to find, review, and determine the suitability of four articles per speaker on the assigned topic.

Students will submit three questions per speaker prior to each of the Grand Round sessions for discussion during the topic presentation.

Students will assess the relevance of their literature search relative to the topic presented for each of the four Grand Round topics in a class session following the presentation.

Faculty mentors will also evaluate and grade students relative to their active participation and involvement in the GRSG.

Objectives

Develop an understanding and appreciation for importance of evidence based patient care
Promote skill building in searching for and accessing dental literature
Promote skill building in developing questions for discussion based on discovered dental literature
Promote skill building in critical thinking and evidence-based decision making
Promote skill building in working as part of a collegial group with faculty and other students
Develop enthusiasm for active participation in Grand Round sessions
Session information.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic/Assignment</th>
<th>Presenter</th>
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<tbody>
<tr>
<td></td>
<td>Course Introduction</td>
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<tr>
<td></td>
<td>GR Preparation – Student Group Assignment</td>
<td>Dr. Fasbinder</td>
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<tr>
<td></td>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
</tr>
<tr>
<td>Grand Rounds Session #1</td>
<td>Topic: Oral-Facial Pain</td>
<td>Moderator: Faculty</td>
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<td></td>
<td>Assignment: Complete topic assessment</td>
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<tr>
<td>GR Session #1 Review and Assessment</td>
<td>Moderator: Faculty</td>
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<tr>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
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<tr>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
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<tr>
<td>Grand Rounds Session #2</td>
<td>Topic: Dental Ethics</td>
<td>Moderator: Faculty</td>
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<td></td>
<td>Assignment: Complete topic assessment</td>
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<tr>
<td>GR Session #2 Review and Assessment</td>
<td>Moderator: Faculty</td>
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<tr>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
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<tr>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
<td></td>
</tr>
<tr>
<td>Grand Rounds Session #3</td>
<td>Topic: The Xerostomic patient</td>
<td>Moderator: Faculty</td>
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<td></td>
<td>Assignment: Complete topic assessment</td>
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<tr>
<td>GR Session #3 Review and Assessment</td>
<td>Moderator: Faculty</td>
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<tr>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
<td></td>
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<tr>
<td>GR Preparation – Student Groups meet</td>
<td>Faculty Mentors</td>
<td></td>
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<tr>
<td>Grand Rounds Session #4</td>
<td>Topic: Chemotherapeutic Periodontal Treatment</td>
<td>Moderator: Faculty</td>
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<td></td>
<td>Assignment: Complete topic assessment</td>
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<tr>
<td>GR Session #4 Review and Assessment</td>
<td>Moderator: Faculty</td>
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</tbody>
</table>

Textbooks/ Readings
There are no assigned textbooks for the course.

Examination/grading policies
Attendance at all Grand Round Presentation and Review sessions is mandatory.
Students will be graded based on the four Grand Round sessions. 50% of the grade will be based on the GRSG submissions for each session. 50% will be based on an individual grade submitted by the Faculty Mentor for the group.
Course Title: Introduction to Prosthodontics Treatment Options
Course number: ........
Term and year: Winter Semester / D-1 year / 2011
Location, time and day: ...............
Course Director: Dr. D. Tarrazzi (dtarrazz@umich.edu)

Course Description: This course is an introduction to the scope and treatment modalities used in Prosthodontics. Prosthodontics as described in the Glossary of Prosthodontic Terms is: “The branch of dentistry pertaining to the restoration and maintenance of oral function, comfort, appearance, and health of the patient by the restoration of natural teeth and/or replacement of missing teeth and contiguous oral and maxillofacial structures with artificial substitutes”. More recently after review of current textbooks, medical and dental glossaries, Jokstad, et al, suggested an alternative addition to the definition. They postulated an alternate definition as: “Prosthodontics is the discipline of dentistry concerned with the consequences of congenital absence or acquired loss of oral tissues and with the methods for and assessment whether more good than harm is done by inserting artificial devices made from alloplastic materials”.

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them is measured at the following levels:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
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<th>Behaviors</th>
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<tbody>
<tr>
<td>X Foundation</td>
<td>X Basic</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Application</td>
<td>Intermediate</td>
<td></td>
<td>Advanced</td>
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</tbody>
</table>

How acquisition of knowledge, skills, attitudes, and behaviors required to meet the competencies is measured: The students will be given four short quizzes over the material presented in class. The quizzes will be multiple choice questions. A “virtual” station practical may also be part of the evaluation mechanism in the course. This type of assessment involves the projections of images on a screen from the lectures.

Objectives.

- Following this course students will have a knowledge of the scope of the specialty of Prosthodontics.
- Following this course students will have a knowledge of the scope of the discipline of Prosthodontics.
- Following this course students will have basic knowledge of how lost dental structures may be replaced by means of dental implants, fixed partial dentures, removable partial dentures, and complete dentures.
- Students will gain a preliminary knowledge supporting the use of one or a combination of the above mentioned treatment methods for treatment of a patient.
- Following this course students will have the foundation knowledge to begin making decisions relative to appropriate treatment choices for patients.
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Lecture</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan (3-7)</td>
<td></td>
<td>The Scope of Prosthodontics</td>
<td>Dr. Tarrazzi</td>
</tr>
<tr>
<td>Jan (10-14)</td>
<td></td>
<td>Diagnosis and Treatment Planning in Prosthodontics</td>
<td>Dr. Tarrazzi</td>
</tr>
<tr>
<td>Jan (17-21)</td>
<td></td>
<td>Overview of Fixed Prosthodontics</td>
<td>Dr. Tarrazzi</td>
</tr>
<tr>
<td>Jan (24-28)</td>
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<td>Restoration of badly broken teeth (single crown)</td>
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<tr>
<td>Jan – Feb</td>
<td>(31-4)</td>
<td>Three unit Fixed Partial Denture (Anterior-Posterior)</td>
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<tr>
<td>Feb (7-11)</td>
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<td>Articulators</td>
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<tr>
<td>Feb (14-18)</td>
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<td>Midterm</td>
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<td>Feb 21-25</td>
<td></td>
<td>No Class</td>
<td>Spring Break</td>
</tr>
<tr>
<td>Feb-Mar</td>
<td>(28-4)</td>
<td>Removable Prosthodontics (Complete Dentures): Treatment considerations when both arches are edentulous</td>
<td>Dr. Tarrazzi</td>
</tr>
<tr>
<td>Mar (7-11)</td>
<td></td>
<td>Removable Prosthodontics (Partial Dentures): Treatment considerations when both arches are partially edentulous</td>
<td>Dr. Tarrazzi</td>
</tr>
<tr>
<td>Mar (14-18)</td>
<td></td>
<td>Treatment considerations when one arch is edentulous and the opposing arch is partially edentulous</td>
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<tr>
<td>Mar (21-25)</td>
<td></td>
<td>Overview of Dental Implant Prosthodontics</td>
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<tr>
<td>Mar (28-31)</td>
<td></td>
<td>Veneers, inlays, and onlays</td>
<td>Dr. Tarrazzi</td>
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<tr>
<td>Apr (4-8)</td>
<td></td>
<td>Future of Implant Prosthodontics</td>
<td>Dr. Razzoog</td>
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<tr>
<td>April (11-15)</td>
<td></td>
<td>Clinical Implications</td>
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<tr>
<td>Apr (18-22)</td>
<td></td>
<td>Final Exam</td>
<td></td>
</tr>
</tbody>
</table>
**Textbooks/Readings:**
- Prosthodontic Treatment for Edentulous Patients, 12th ed, Zarb et al. Mosby

The textbooks listed above are reference texts for the course. You will need these books for courses that you will be taking over the next three years. If you choose not to purchase them now, you may find it useful to have them next year. Even though specific chapters will not be referenced during the class these textbooks provide background and a good review for the material presented in class.

**Examination/grading policies:**

Quizzes * 20%
Midterm 40%
Final Exam 40%

* The best three grades out of the four quizzes will make the 20%.
1. Muscles can only act by contraction of fibers.
2. “Contraction” of muscle tissue does not mean “shortening”, but rather simply “activity”.
3. Muscle contraction can occur:
   -- with no change of length (isometric contraction), as in holding a heavy weight in one position;
   -- with shortening of length (as in lifting a weight by flexing the elbow);
   -- with an increase in length (as in the anterior thigh muscles lengthening as you lower yourself to a seated position.
4. The normal resting length of fibers in muscles varies with normal functional demands on that particular muscle.
5. Muscles act across joints to produce, control or prevent movement of bones to which they are attached.
6. Muscles act across every joint they cross. For example, some muscles in the flexor forearm region extend from their origin from forearm bones to the distal phalanges of certain digits. Thus, they cross the wrist joint, intercarpal joints, carpometacarpal joints, metacarpophalangeal joints, proximal interphalangeal joints, and distal interphalangeal joints. Their activity would tend to produce movement at each of these joints.
7. Unwanted motion at any joint can be controlled by the countering activity of an antagonist muscle (e.g., extensors such as the triceps m. offsetting the flexion movement that would be created by activity of biceps brachii m. during the movement of pronation of the 90 degree-flexed forearm, as in driving in a screw with a manual screwdriver).
8. Striated muscle fibers can contract by only about 1/3 of their normal resting length. Muscles that cross numerous joints can “use up” so much of their shortening capacity in trying to move all these joints that they are unable to produce maximum movement in any of them. For instance, with your fingers extended flex the wrist as far as possible. Now try to flex your fingers as well and make a tight fist. You should find it impossible. Now extend your wrist as you continue to try to make a tight fist.
9. ANAT | Intro to MS system; shoulder region; arm & forearm; hand
   | 1. Muscles can only act by contraction of fibers.
   | 2. “Contraction” of muscle tissue does not mean “shortening”, but rather simply “activity”.
   | 3. Muscle contraction can occur:
   |   -- with no change of length (isometric contraction), as in holding a heavy weight in one position;
   |   -- with shortening of length (as in lifting a weight by flexing the elbow);
   |   -- with an increase in length (as in the anterior thigh muscles lengthening as you lower yourself to a seated position.
   | 4. The normal resting length of fibers in muscles varies with normal functional demands on that particular muscle.
   | 5. Muscles act across joints to produce, control or prevent movement of bones to which they are attached.
   | 6. Muscles act across every joint they cross. For example, some muscles in the flexor forearm region extend from their origin from forearm bones to the distal phalanges of certain digits. Thus, they cross the wrist joint, intercarpal joints, carpometacarpal joints, metacarpophalangeal joints, proximal interphalangeal joints, and distal interphalangeal joints. Their activity would tend to produce movement at each of these joints.
   | 7. Unwanted motion at any joint can be controlled by the countering activity of an antagonist muscle (e.g., extensors such as the triceps m. offsetting the flexion movement that would be created by activity of biceps brachii m. during the movement of pronation of the 90 degree-flexed forearm, as in driving in a screw with a manual screwdriver).
   | 8. Striated muscle fibers can contract by only about 1/3 of their normal resting length. Muscles that cross numerous joints can “use up” so much of their shortening capacity in trying to move all these joints that they are unable to produce maximum movement in any of them. For instance, with your fingers extended flex the wrist as far as possible. Now try to flex your fingers as well and make a tight fist. You should find it impossible. Now extend your wrist as you continue to try to make a tight fist.

ANAT | Neck
| - intro to superficial muscles of the anterior cervical triangle - definition of ant and post cervical triangle
| - intro to the infrahyoid mm.
| - intro to the cervical and brachial plexuses
| - intro to the larynx and emergency airway placement

ANAT | Muscles of Face

ANAT | Muscle of Jaw/Masticatory

HIST | Muscle histology

ANAT | Embryology of musculoskeletal system

PHYS | Contractile proteins

PHYS | Muscular Fiber types

Study/Review

Mid Term Exam
<table>
<thead>
<tr>
<th>Subject</th>
<th>Content</th>
</tr>
</thead>
</table>
| **HIST** | Structure of cartilage and bone  
The three major types of cartilage (hyaline, elastic and fibro cartilage) will be discussed and compared with regard to their development, structure, and matrix composition. The molecular and structural basis in the matrix for resilience of cartilages will be emphasized, and the differences in the matrix composition in the three types of cartilage will be related to their respective functions. The students are expected to be able to recognize the three major cartilage types in typical microscopic images, name the areas of the body where each type occurs, and know some of the structural changes during development, aging and damage. |
| **PHYS** | Bone growth and remodeling |
| **PHYS** | Bone and Growth Factors |
| **PATH** | Interplay between bone and muscle (stress induced growth) |
| **PATH** | Inflammation, muscle and bone turnover (including rheumatoid)  
Lore of local factors and bone loss...LPS and pro-inflammatory cytokine responses such as in periodontal diseases. |
| **PHYS** | Interplay with Endocrine system |
| **PATH** | Musculoskeletal disease I  
Brief review of normal anatomy and physiology of bone  
Congenital abnormalities (Achondroplasia and Osteogenesis Imperfecta)  
Osteoporosis  
Osteomyelitis  
Osteonecrosis  
Fractures and healing  
Brief review of anatomy and physiology of joints  
Osteoarthritis  
Rheumatoid arthritis  
Gout  
Introduction to bone and soft tissue tumors  
Osteosarcoma (including OS of jaws)  
Fibro-osseous lesions of jaws  
Metstatic carcinoma to bone  
Plasma cell myeloma  
Benign soft tissue tumors (lipoma and schwannoma) |
| **PATH** | Musculoskeletal disease II  
See musculoskeletal disease I |
| **PATH** | Musculoskeletal disease III / Bone fracture and healing  
See musculoskeletal disease I |
| **PHYS** | Clinical correlates: impact of osteoporosis thrptcs. on the oral cavity |
| **PHYS DX** | Dental management of patients with musculoskeletal disease  
Study/Review  
Final Exam |
<table>
<thead>
<tr>
<th>Lecturer</th>
<th>Day</th>
<th>Date</th>
<th>Time</th>
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<tbody>
<tr>
<td>Brzezinski</td>
<td>Wednesday</td>
<td>Mar. 16</td>
<td>10:00 AM</td>
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<tr>
<td>Brzezinski</td>
<td>Wednesday</td>
<td>Mar. 16</td>
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<tr>
<td>Crane</td>
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<td>Gerstner</td>
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<td>Mar. 18</td>
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<td>Welsh</td>
<td>Monday</td>
<td>Mar. 21</td>
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<tr>
<td>Stribley</td>
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<td>Larkin</td>
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<td>Mar. 23</td>
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<td>Wednesday</td>
<td>Mar. 23</td>
<td>11:00 AM</td>
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<tr>
<td>Mishina/Chiego</td>
<td>Friday</td>
<td>Mar. 25</td>
<td>10 AM, 11 AM</td>
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<tr>
<td></td>
<td>Monday</td>
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<td>Last Name</td>
<td>Day</td>
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<td>Time</td>
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<tr>
<td>Kim</td>
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<td>Mishina</td>
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<td>Apr. 1</td>
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<td>Dave Kohn</td>
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<td>Monday</td>
<td>Apr. 4</td>
<td>10 AM, 11 AM</td>
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<td>McCauley?</td>
<td>Wednesday</td>
<td>Apr. 6</td>
<td>10:00 AM</td>
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<tr>
<td>Lucas</td>
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<td>Lucas</td>
<td>Friday</td>
<td>Apr. 8</td>
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<tr>
<td>Sam Zwetchkenbaum</td>
<td>Monday</td>
<td>Apr. 11</td>
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<td>Apr. 13</td>
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<tr>
<td></td>
<td>Friday</td>
<td>Apr. 15</td>
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Course title.  
Musculoskeletal System

Course number  
DENT 5xx

Term and year  
Winter 2011

Location, time, and day  
Location: Varies – Dental Building G322 for most large lectures and exams. Medical Sciences Building II for select lectures
Times: see attached lecture schedule
Days: MWF

Course personnel and contact information

Course Director  
Dr. Yuji Mishina  
Dent. 763-5579  
mishina@umich.edu  
Dent. Rm. 4222A

Dr. Dan Chiego  
763-4258  
djchiego@umich.edu  
Dent. Rm. 1360B

Course description  
This course is designed to continue the introduction of the basic biology of human health and disease. It seeks to provide students with an intensive learning experience to integrate the acquired basic biomedical knowledge base as the foundation for clinical decision-making and clinical patient care. This course reviews basic biomedical information and provides in-depth information about the normal morphology, development, organization, and functions of the musculoskeletal system, as well as the alterations in structure and function associated with diseases and/or disorders related to this system and their medical (including pharmacologic) and/or surgical treatment and management. Functional interaction between musculoskeletal system and other systems including endocrine systems will be covered by this course. Functions of muscular systems in conjunction with neural system will be covered by the course for neural system.

Goals and Requirements  
The major goals of this course are to assist students in acquiring the biomedical knowledge base and critical appraisal skills required to perform a comprehensive review of the patient’s health histories, analyze the results of diagnostic tests, and use this information in the development of appropriate dental diagnoses and oral health maintenance and treatment plans, including appropriate referral to other health care professionals. To successfully complete this course the student must be able to apply basic science knowledge to the solution of clinical problems.
The inclusion of case based examples, small group work and rapid pace of material presented requires attendance at all lecture and labs in order to be successful. NOTE: You must call the Registrar’s office, 734-764-1512, before the class you intend to miss begins in order to be excused from the class.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>X</em> Foundation</td>
<td><em>X</em> Basic</td>
<td><em>X</em></td>
<td><em>X</em></td>
</tr>
<tr>
<td><em>X</em> Application</td>
<td><em>X</em> Intermediate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>_Advanced</td>
</tr>
</tbody>
</table>

How progression toward competency or competency is measured.
Assessment methods:

Student performance in BSMSS will be assessed using the following examination strategies:

Mid Term Examination
A Mid Term Examination will be given midway through the musculoskeletal system. This examination will be in multiple-choice, T/F, and short answer format and will include one or more case scenarios. The Mid Term examination will cover the material that has been taught in the course thus far. The Mid Term examination will constitute 40% of the course grade.

Final Examination
A Final Examination will be given at the end of the course. This examination will be in multiple-choice, T/F, and short answer format and will include one or more case scenarios. The Final Examination will cover all material, but will include more questions covering material from the final week of the course (which has been yet untested). The Final Examination scores will constitute 60% of the course grade.

Objectives.

Session information
See attached lecture schedule.

Textbooks/ Readings.
Some faculty will assign reading, while others will expect you to read as means of self-directed study and to supplement material covered in class. Texts for this course include:

Anatomy (Baker text required)

ISBN: 1416033858 (paperback)

**Dental Management (Required)**
ISBN: 0323011713

**Histology (Required)**
ISBN: 0781772214 (paperback)

ISBN: 0878938885 (CD-ROM)

**Skeletal Biology (Recommended)**
TBA

**Web Site**
General course information and lecture slides will be posted on the CTools site for the course.

Go to: https://ctools.umich.edu/
Select “Login” from the upper right hand corner of the home page
Login using your umich user/pass
Select “DENT 6XX 001 W11” from the tab style top navigation
Select “Resources” from the left navigation
Select the name of the module from the content area, etc.

**Examination/grading policies.**

**Examination Review**

Exams will not be posted, but a post-exam review will be held after each Exam. Reproducing (memorizing & transcribing, copying, photographing, etc.) exam questions in any way is a violation of the Honor Code. Additionally, if you are aware that any previous year’s questions are being reproduced, it is your responsibility to notify the course director; refraining from doing so is an Honor Code violation. It is an Honor Code Violation to review old exam questions or “key concept sheets” from previous years (from fraternities or individuals).

**Course Grade**
The final grade for the course will be based on the sum of the grades (weighted averages, based on time allocation) of the Mid Term Examination (40%) plus the score on the final exam (60%) for a total of 100%. The quizzes, exam, and course must be passed with a grade of 74.5% or higher.

Because the entire course is competency-based, the course cannot be passed should the student fail the final examination. Should the student fail the final examination, remediation of the examination will only be permitted if the student has successfully passed all quizzes (and/or remediated them to the course director’s satisfaction).

**Grading Scale**

Grades will be awarded as follows (rounding down from .4 and up from .5):

- 96-100 A
- 93-95 A-
- 90-92 B+
- 87-89 B
- 84-86 B-
- 81-83 C+
- 78-80 C
- 75-77 C-
- 00-74 F

**Other Important Policies And/Or Notes:**

**Concerns Regarding Examination Questions:** The class may select one individual as a liaison to collect any “contested questions” following each quiz/examination. These concerns can then be given to the course directors within 2 days of the quiz/examination for consideration and arbitration.

**Course Director Office Hours:** Drs. Mishina and Chiego will be available for “open office hours” each Thursday from 9-10 a.m. at the dental school office (4222 A). He is also available for office hours at other times by appointment. Dr. Mishina encourages students to meet with him for any questions or concerns throughout the course.

**Study Time:** Study time (as listed on the course schedule) is BSMSS time. It will occasionally be utilized for rearrangement of the course schedule (lectures), review sessions, etc. As such, this time needs to remain available for BSMSS. If no BSMSS class session is meeting, the time is intended to “decompress BSMSS material” and to study BSMSS material. Other things should not be scheduled in this time.

**Other information.**

**Content Outline:**
<table>
<thead>
<tr>
<th>Topic</th>
<th>Sub-topic</th>
<th>Estimated Lecture Hours</th>
</tr>
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<tbody>
<tr>
<td>1. Introduction</td>
<td></td>
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<tr>
<td>Introduction</td>
<td>Basic components</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Interplay with other systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Why dentists need to know bones</td>
<td></td>
</tr>
<tr>
<td>2. Anatomy of muscles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head and Neck</td>
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<td>1</td>
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<tr>
<td>Jaw and chewing function</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Face</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>3. Histology/Molecular biology of muscles</td>
<td></td>
<td></td>
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<tr>
<td>Histology</td>
<td></td>
<td>1</td>
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<tr>
<td>Contracting protein and fibers</td>
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<td>2</td>
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<tr>
<td>4. Bone formation and remodeling</td>
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<td></td>
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<tr>
<td>Embryology</td>
<td>Cellular components</td>
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<tr>
<td></td>
<td>Mode of ossification</td>
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<tr>
<td>Structure</td>
<td>Bone and Cartilage</td>
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<tr>
<td>Growth/remodeling (Including OPG/RANKL, coupling factors)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Growth factors</td>
<td>BMP/Wnt/HH/IGF etc</td>
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<tr>
<td></td>
<td>PTH and bone</td>
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</tr>
<tr>
<td>5. Interplay with other systems</td>
<td></td>
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<tr>
<td>Mechanical Stress</td>
<td>Stress and growth</td>
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<td></td>
<td>Signaling cascade</td>
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<tr>
<td>Endocrinology</td>
<td>Hormonal action and bone</td>
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<tr>
<td></td>
<td>(Estrogen/Androgen/VD etc)</td>
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<tr>
<td></td>
<td>Ca/P metabolism</td>
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<td>4. Pathological conditions</td>
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<td>Inflammation</td>
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<td>Skeletal disease</td>
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<tr>
<td>Fracture/healing</td>
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<td>Osteoporosis</td>
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<td>Dental Management</td>
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<td>5. Review/Study Time</td>
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<td>6. Exam</td>
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Total 28 hours (20 hours for lecture time, 4 hours for study, 4 hours for exam)
<table>
<thead>
<tr>
<th>Suggested instructor</th>
<th>Topic</th>
<th>Clinical correlate</th>
<th>Number of lecture hours; date of lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pierchala</td>
<td>Introduction – basic components of the nervous system; Historical perspectives</td>
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</table>

### Structure of the Nervous System

<table>
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<tbody>
<tr>
<td>Krull</td>
<td>CNS – Gross Organization</td>
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<td>0.33; Jan 3</td>
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<tr>
<td>Krull</td>
<td>CNS – Internal Organization</td>
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<td>0.33; Jan 3</td>
</tr>
<tr>
<td>Krull</td>
<td>CNS – Subdivisions</td>
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<td>0.33; Jan 3</td>
</tr>
<tr>
<td>Holland</td>
<td>Cortex – Lobes and Areas</td>
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<td>0.5; Jan 5</td>
</tr>
<tr>
<td>Holland</td>
<td>Cortex – Sensory, Motor and Association Areas</td>
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<td>0.5; Jan 5</td>
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<tr>
<td>Holland</td>
<td>Limbic System and Cerebellum</td>
<td></td>
<td>1; Jan 5</td>
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<tr>
<td>Krull</td>
<td>Thalamus</td>
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<td>0.5; Jan 7</td>
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<tr>
<td>Krull</td>
<td>Basal Ganglia</td>
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<td>0.5; Jan 7</td>
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<tr>
<td>Altshuler</td>
<td>Spinal cord (description of reflex circuits)</td>
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<td>1; Jan 7</td>
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<tr>
<td>Altshuler</td>
<td>Ascending and descending spinal pathways</td>
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<td>1; Jan 10</td>
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<tr>
<td>Altshuler</td>
<td>Brainstem-sensory and motor nuclei</td>
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<td>1; Jan 10</td>
</tr>
<tr>
<td>Altshuler</td>
<td>Cranial nerves I</td>
<td>Trigeminal neuralgia</td>
<td>1; Jan 12</td>
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<tr>
<td>Altshuler</td>
<td>Cranial nerves II</td>
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<tr>
<td>Pierchala</td>
<td>Autonomic nervous system</td>
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### Cellular Neuroscience

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<th>Topic</th>
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<tbody>
<tr>
<td>Holland</td>
<td>Microscopic structure of the nervous system – neurons and glia</td>
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<td>2; Jan 14,19</td>
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<tr>
<td>McReynolds</td>
<td>Generation and Spread of Electrical Signals</td>
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<td>2; Jan 19,21</td>
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<tr>
<td>McReynolds</td>
<td>Synaptic Transmission and Integration (Electrophysiology)</td>
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### Neurochemistry/Neuropharmacology

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<th>Topic</th>
<th>Clinical correlate</th>
<th>Number of lecture hours; date of lecture</th>
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<tbody>
<tr>
<td>Pierchala</td>
<td>Neurotransmitters and receptors; transporters - excitatory and inhibitory mechanisms; synthesis of neurotransmitters</td>
<td>Depression/anxiety</td>
<td>2; Jan 23,26</td>
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<tr>
<td>Pierchala</td>
<td>Neuropeptides</td>
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<td>1; Jan 26</td>
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<tr>
<td>Pierchala</td>
<td>Neuroendocrine system</td>
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<td>2; Jan 28,28</td>
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<tr>
<td>Smythe</td>
<td>General anesthesia</td>
<td>Anesthesia in dentistry</td>
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### OPEN

**Review for MIDTERM EXAM**

**MIDTERM EXAM**

### Sensory transduction and neural circuits

<table>
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<th>Clinical correlate</th>
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<tbody>
<tr>
<td>Altshuler</td>
<td>Audition</td>
<td></td>
<td>2; Feb 9,9</td>
</tr>
<tr>
<td>McReynolds</td>
<td>Vision</td>
<td></td>
<td>2; Feb 11,11</td>
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<tr>
<td>Gertsner</td>
<td>Neural Circuits (central brainstem circuits involved in mastication and swallowing/vomiting)</td>
<td></td>
<td>2; Feb 14,14</td>
</tr>
<tr>
<td>Krull</td>
<td>Principles of sensory system physiology</td>
<td></td>
<td>1; Feb 16</td>
</tr>
</tbody>
</table>

### Development of the Nervous system

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Topic</th>
<th>Clinical correlate</th>
<th>Number of lecture hours; date of lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Krull</td>
<td>Formation of the NS and regionalization</td>
<td></td>
<td>1; Feb 16</td>
</tr>
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<td>-----------------------------------------------------------------</td>
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</tr>
</tbody>
</table>
|          | Neurogenesis and differentiation                                 | 1;  
| Krull    | Axon guidance                                                   | .5; |
| Krull    | Synapse formation                                               | .5; |
|          | **DDS Spring Recess**                                           | Feb |
|          | **Development of the Nervous System (continued)**                | 21- |
| Krull    | Birth of new neurons (stem cells)                               | 28; |
|          | Neurotrophic Factors                                            | 1;  |
| Pierchala| Development of CF nervous system                                 | 28; |
| Pierchala| Degeneration and Regeneration of the nervous                    | 2;  |
|          | System (Wallerian Degeneration)                                 | 2;  |
|          | **Pathology and Infection of the nervous system**               |     |
| McKeever | Pathology of nervous system tissues                              | 4;  |
|          | Infections of nervous system (bacterial, viruses)               | 7;  |
| Kennedy  | Autism and Schizophrenia (treatment and pharmacology)           | 9;  |
| Kennedy  | Parkinson’s disease (treatment and pharmacology)                | 9;  |
| Kennedy  | Depression and Bipolar disorders                                 | 11; |
|          | **Review for Final Exam**                                       |     |
|          | **FINAL EXAM**                                                  |     |
Course Title: The Nervous System (NS)

Course Number: DENT 5XX

Term and Year: Winter 2011

Location, Time, Day:
- Location: Varies- Dental Building G322 for most large lectures and exams.
- Times: see attached lecture schedule
- Days: MWF 10 am to noon

Course Personnel and Contact Information

Dr. Catherine Krull
5211 Dental
(734) 764-5441
krullc@umich.edu

Dr. Brian Pierchala
3211 Dental
(734) 763-3394
pierchal@umich.edu

Course Description/Nature of Course Content

All orofacial functions require the coordinated activity of the nervous system. A thorough understanding of the anatomy and physiology of the nervous system is required for the practice of dentistry. This course describes the basic concepts of neuroscience. The emphasis of this course is on the molecular and cellular aspects of the nervous system, including function, anatomy and development of the nervous system. This course provides the background necessary for subsequent courses that directly examine the relevance and importance of the nervous system in the practice of dentistry.

Goals and Requirements

The major goals of this course are to assist students in acquiring the basic knowledge about the nervous system, required for the practice of dentistry.

The inclusion of case-based examples, small group work, and rapid pace of material presented requires attendance at all lectures in order to be successful. NOTE: You must call the Registrar’s office, 734 764-1512 before the class you intend to miss begins in order to be excused from the class.

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them are measured at the following levels:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td><em><strong>X</strong></em>_ Foundation</td>
<td>___X___Basic</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td><em><strong>X</strong></em>_ Application</td>
<td>___X___Intermediate</td>
<td></td>
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</tr>
</tbody>
</table>
Competencies Addressed

1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
   The graduating student...
   1a. Practices as obliged by principles of ethics and the ADA Code of Ethics

2. The graduating student participates in professional self-regulation.
   The graduating student...
   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
   2b. Understands the need for and establishes a plan for personal/professional growth and development.

3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.

4. The graduating student communicates effectively with patients and colleagues.
   The graduating student...
   4a. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventive measures, and obtain informed consent.

5. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
   The graduating student...
   6a. Differentiates between health and disease.
   6b. Recognizes medical emergencies.

6. The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses.
   The graduating student...
   7a. Develops treatment plans that reflect the impact of systemic disease and its management on the provision of oral health care.
   7b. Develops treatment plans that reflect the impact of disabilities on the provision and maintenance of oral health care.

7. The graduating student monitors and provides for patient comfort associated with oral health care.
   The graduating student...
   8a. Uses pharmacological agents to provide for control of pain and anxiety.
8. The graduating student uses basic science information to diagnose and treat patients, and manages medical emergencies.

9. The graduating student promotes health maintenance and disease prevention by collaborating with the patient to create an individualized self-care program.

How acquisition of knowledge, skills, attitudes, and behaviors are required to meet the competencies is measured.

Assessment methods:

Student performance in BMS-NS will be assessed using the following examination strategies:

**Mid-Term Examination**
A Mid-Term Examination will be given midway through the nervous system. This exam will be multiple-choice, T/F, and short answer format and will include one or more case scenarios. The Mid-Term Examination will cover the material that has been taught in the course thus far. The Mid-Term Examination score will constitute 40% of the course grade.

**Final Examination**
A Final Examination will be given at the end of the nervous system. This examination will be in multiple-choice, T/F, and short answer format and will include one or more case scenarios. The Final Examination will cover all material, but will include more questions covering material since the Mid-Term exam (which has been yet untested). The Final Examination score will constitute 60% of the course grade.

**REMEDICATION**

- **Remediation Examinations**
  These examinations will be comprehensive in that they will cover all course material, not just material with which a student had particular difficulty. Questions may be multiple-choice, T/F, short answer, and/or essay format. Students will be given the opportunity to increase their grade to the lowest passing score of 74.5%. Students must pass remediation exams with a grade of 74.5% in order to successfully complete the course.

- **Intervention for Success:**
  The purpose of the BMS component is to support the highest level of student success in this course and to assist students in developing skills required for self-assessment and lifelong learning. It is our goal in offering IFS to minimize the likelihood that students will fall behind.

  After each exam, remediation worksheets will be posted for completion. It will only be necessary to answer remediation questions corresponding to items missed on the exam.
• Those with scores below 89.5% on any given exam will be required to complete a remediation worksheet by the stated deadline.

• Those with scores below 74.5% on any given exam will be required to complete a remediation worksheet and meet with Dr. Krull or Dr. Pierchala, by the stated deadline.

• Those with scores of 89.5% or higher on any given exam may choose to or not to complete the remediation worksheet. Those who complete and submit remediation worksheets by the stated deadline for all quizzes/exams, whether required or not, will receive 0.5 percentage points on their overall course score at the end of the term.

The goal of Intervention for Success is to help students identify and address unmet learning needs and to ensure students receive needed or desired academic support. Any work assigned by Dr. Krull or Dr. Pierchala must be completed and is required to pass the course. Any student with a failing grade will be required to take a remediation exam (as described above) after completing IFS requirements.

The density of material and rapid pace requires attendance at all class meetings.

Session Information

See attached lecture schedule.

Textbooks / Readings
Some faculty will assign reading, while others will expect you to read as means of self-directed study and to supplement material covered in class. Texts for this course include:

Nervous System texts:

Neuroscience, Bear, Connors, Paradiso, 2007 (required)

Principles of Neuroscience, Kandel, Schwartz and Jessell, 2000. (recommended)

Neuroscience, D. Purves and company, 2007 (recommended)

Synapses, edited by Cowan, Sudhof and Stevens, 2001 (recommended)

BMS Course Web Site
General course information and lecture slides will be posted on the CTools site for the course.

Go to: https://ctools.umich.edu/
Select “Login” from the upper right hand corner of the home page
Login using your umich user/pass
Select “DENT 6XX 001 F11” from the tab style top navigation
Method of Evaluation
Examination / Grading Policies:

Examination Review

Exams will not be posted, but a post-exam review will be held after each Exam. Reproducing (memorizing & transcribing, copying, photographing, etc.) exam questions in any way is a violation of the Honor Code. Additionally, if you are aware that any previous year’s questions are being reproduced, it is your responsibility to notify the course director; refraining from doing so is an Honor Code violation. It is an Honor Code Violation to review old exam questions or “key concept sheets” from previous years (from fraternities or individuals).

Course Grade

The final grade for the course will be based on the sum of the grades (weighted averages, based on time allocation) of the mid-term exam (40%) plus the score on the final exam (60%) for a total of 100%. The exams and course must be passed with a grade of 74.5% or higher.

Because the entire part of this course is competency-based, the course cannot be passed should the student fail the final examination. Should the student fail the final examination, remediation of the examination will only be permitted if the student has successfully passed all quizzes (and/or remediated them to the course director’s satisfaction).

Grading Scale

Grades will be awarded as follows (rounding down from .4 and up from .5):

- 96-100 A
- 93-95 A-
- 90-92 B+
- 87-89 B
- 84-86 B-
- 81-83 C+
- 78-80 C
- 75-77 C-

Other Important Policies And/Or Notes:

Concerns Regarding Examination Questions: The class may select one individual as a liaison to collect any “contested questions” following each examination. These concerns can then be given to Dr. Krull or Dr. Pierchala within 2 days of the quiz/examination for consideration and arbitration.
**Course Director Office Hours:** Dr. Krull, or Dr. Pierchala will be available for “open office hours” each Thursday from 9-10 a.m. in their offices. Drs. Krull, or Pierchala encourage students to meet with her/him for any questions or concerns throughout the course.

**Study Time:** Study time (as listed on the course schedule) is BMS time. It will occasionally be utilized for rearrangement of the course schedule (lectures), review sessions, etc. As such, this time needs to remain available for BMS. If no BMS class session is meeting, the time is intended to “decompress Bms material” and to study BMS material. Other things should not be scheduled in this time.

**Content Outline:**

- Introduction to Nervous System- 1 hr.
- Anatomy of Nervous System – 12 hrs.
- Histology of Nervous System – 3 hrs.
- Pharmacology of Nervous System – 6 hrs
- Development of the Nervous System – 9 hrs.
- Pathology of Nervous System – 8 hrs.
- Plasticity and Higher Order Functions of the Nervous System – 4 hrs
- Physical Diagnosis of Nervous System/Dental Correlates of Nervous System – 2 hr.
Course title. **Oral Health Promotion, Healthcare System and Policy**

Course number. TBD

Term and year. D1, Winter 2011

Location, time, and day. TBD (1 hour per week for 14 weeks)

Course personnel and contact information
Course director: TBD
Course faculty: Woosung Sohn (Woosung@umich.edu; 615-6622)  
George W. Taylor (gwt@umich.edu; 764-1737)  
Robert A. Bagramian (robtbagr@umich.edu; 647-4239)

Course description.
The societal and healthcare environment changes dramatically; for example changes in healthcare system (healthcare reform), and increased public attention to healthcare and demand for access to quality care and high quality of life. These changes call for healthcare professions including dentists a higher level of awareness on these issues. Especially, Dentists need to be leaders rather than bystanders in surveillance, policy making and assurance to improve public’s oral health.

This course is providing the philosophy and principles of oral health promotion at individual, local, and national levels; healthcare delivery; and health policy. The student will be familiarized with an elementary understanding of health promotion, healthcare system, and health policy as it relates to the field of oral health. The student will also learn the role of dental professionals as primary healthcare providers in the health promotion and disease prevention through oral health, within overall healthcare system in collaboration with other health professionals.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

15. The graduating student promotes health maintenance and disease prevention by:
The graduating student…

15b. Recognizing and appreciating the need to contribute to the improvement of oral health beyond those served in traditional practice setting.

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<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
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</thead>
<tbody>
<tr>
<td>_x_Foundation</td>
<td>_x_Basic</td>
<td>___</td>
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</tr>
</tbody>
</table>
17. The graduating student applies business and practice management skills to clinical practice,

The graduating student…

17b. Applies principles of business and financial management and legal and regulatory concepts to dental practice

17c. Evaluates and assesses emerging trends in health care.

<table>
<thead>
<tr>
<th>Knowledge</th>
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<th>Attitudes</th>
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<td><em>x</em> Basic</td>
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<tr>
<td><em>x</em> Application</td>
<td><em>x</em> Intermediate</td>
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<td>___</td>
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<tr>
<td>___</td>
<td>___ Intermediate</td>
<td>___</td>
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</tbody>
</table>

How progression toward competency or competency is measured.

1. Multiple choice exam questions in quizzes, mid-term and final exams.
2. Web-based in-class and homework case study exercises to demonstrate understanding and application related to current issues of oral health promotion and disease prevention
3. Web-based in-class and homework case study exercises to demonstrate understanding and application related to current issues of oral health and healthcare policy

Course Objectives:

1. To gain basic knowledge and understanding of health promotion at different levels; individual, familial, neighborhood, community, state, and national.
2. To understand and critically evaluate the context or system including health status, healthcare care system, access to healthcare and utilization, financing, regulations, legislation, and policies beyond a clinical practice.
3. To gain understanding of role of dental professionals as primary care provider and leader in oral/general health promotion, surveillance, disease prevention in the community in collaboration other health professionals and community organizations.
Course Contents (Session information):

1. Definition of health and dental health
2. Healthy People Goals
3. Surveillance
4. Access to care and utilization
5. Financing healthcare
6. Evaluation of the healthcare delivery system
7. Health promotion & disease prevention
8. Identification of problems in the community context
9. Dental profession’s role in a community
10. Leadership in health promotion, surveillance, and disease prevention
11. Interdisciplinary and inter-professional approaches
12. Program planning, implementation, and evaluation
13. Health and health care policy

Textbooks/ Readings.

1. Burt BA and Eklund SA. Dentistry, Dental Practice and the Community. 6\textsuperscript{th} ed. Saunders Book Company, 2006.

Examination/grading policies.

1. A quiz will be given at the beginning of each session testing for knowledge and application of previous session’s topic area. Scores of the quizzes will contribute 30% toward final grade of this course.
2. Mid-term and final exam will contribute 70% toward the final grade. The exams will cover all topic areas of the course consisting of health promotion, disease prevention, healthcare delivery system, and oral health and healthcare policy.
Course title. Pathways Seminar Series
Course number. tbd
Term and year. D1 Winter, 2011
Location, time, and day. Wednesdays, 1 – 5 PM
1 – 2 PM, seminar, Rm. G378; 2 – 5 PM pathways specific activities

Course personnel and contact information.
Co - Directors
Russ Taichman 764-9952 rtaich@umich.edu
Robert Eber 647-4023 reber@umich.edu
Darnell Kaigler 615-4023 dkaigler@umich.edu

Course Website: Available on CTools

Course description.
This seminar course will provide the basic foundations necessary for students to progress through the respective pathways. Seminars will include fundamental of ethical conduct of research, scientific writing, presentation skills and human subjects principles.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:
The following competencies are all addressed at these levels:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>_X_Foundation</td>
<td>_X_Basic</td>
<td>_X</td>
<td>___</td>
</tr>
<tr>
<td>_X_Application</td>
<td>___Intermediate</td>
<td>___</td>
<td>___</td>
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<tr>
<td></td>
<td>___Advanced</td>
<td>___</td>
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</tbody>
</table>

1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
The graduating student...
1a. Practices as obliged by principles of ethics and the ADA Code of Ethics.
1b. Practices within the context of the appropriate state Dental Practice Act.

2. The graduating student participates in professional self-regulation.
The graduating student...
2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
2b. Understands the need for and establishes a plan for personal/professional growth and development.

3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.

4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.
The graduating student...
4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.

17. **The graduating student applies business and practice management skills to clinical practice.**
   The graduating student...
   17c. Evaluates and assesses emerging trends in health care.

**Contact Hours**

Classroom seminars and activities will be held for one hour during the winter semester. Small group meetings will occur during Pathways time.

**Objectives**

1. To gain valuable foundational skills on the 4-year DDS program combined with a research, leadership or health care delivery pathways

2. Provide skills that will enable students to engage in their scholarly activities and prepare for the development of their pathways project

3. Provide information to students regarding the identification and selection of mentors to individualize their experience
Seminar Topics (Topics will be selected from the following list)

What is a mentor?

Ethical Issues in the Conduct of Research

Careers in Dentistry

How does organized dentistry work?

Human Subject Research and PEERS Training

Presentation skills

Customer service skills

Proposal writing

Manuscript writing

Using Endnote

Business Writing Skills

Writing and CV/Resume

Use of survey instruments

Portfolio writing

Statistics in Dentistry

Scholarship overview

Project Presentation

Development of a CV

Textbooks/Readings. As recommended by each faculty presenter

Examination/grading policies.
This course is pass/fail. To successfully pass, the student must:

1. Attend a minimum of 90% of the scheduled sessions during the Winter Term.
2. Complete weekly assignment, which in some cases will be a minute paper, other days a specific class project.
3. Turn in certificate of completion of online PEERS training.
# Principles of Pharmacology - Proposed Syllabus

<table>
<thead>
<tr>
<th>Principles of Pharmacology</th>
<th>Lecturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction, inc frequently prescribed drugs in the US</td>
<td>Traynor</td>
</tr>
<tr>
<td>Pharmacokinetics 1</td>
<td>Maybaum</td>
</tr>
<tr>
<td>Pharmacokinetics II</td>
<td>Maybaum</td>
</tr>
<tr>
<td>Drug Metabolism</td>
<td>Maybaum</td>
</tr>
<tr>
<td>Drug dose-response relationships I</td>
<td>Maybaum</td>
</tr>
<tr>
<td>Drug dose-response relationships II</td>
<td>Maybaum</td>
</tr>
<tr>
<td>Drug Toxicity</td>
<td>Traynor</td>
</tr>
<tr>
<td>Pharmacogenomics</td>
<td>Rae</td>
</tr>
<tr>
<td>Drug Interactions</td>
<td>Rae</td>
</tr>
<tr>
<td>Herbal therapies - dental implications</td>
<td>Jutkiewicz</td>
</tr>
<tr>
<td>Review session</td>
<td>Traynor</td>
</tr>
<tr>
<td>Exam</td>
<td>Traynor</td>
</tr>
<tr>
<td>Exam Review</td>
<td>Traynor</td>
</tr>
</tbody>
</table>
Course Title: Dental Pharmacology

Course Number: DENT 5XX

Term and Year: Winter 2011?

Location, Time, & Day

Location: Not Known
Times: Not Known
Days: Not Known

Course Director

John Traynor
Pharmacology Department, A220 MSRB III
647-7479 (am) or 615-2929 (pm)
jtraynor@umich.edu

Course Description / Nature of Course Content

This course is designed to instruct students in basic pharmacological principles and the medications most often used in dentistry. It seeks to provide students with a learning experience enabling them to integrate the acquired knowledge of pharmacology as a foundation for future courses, for clinical decision-making, safe prescribing practice, and responsible patient care. This course considers basic pharmacological theory on how drugs work, provides information on how drugs are handled by the body, drug-drug interactions, adverse drug effects, and the mechanisms and use of anesthetic, analgesic, and antibiotic medications in dentistry.

Goals and Requirements

The major goals of this course are to assist students in acquiring knowledge and understanding of basic pharmacology and in particular dental medications. This is required to perform a comprehensive review of patient health history, to perform safe, and effective dentistry and for development of appropriate dental treatment plans and oral health maintenance. To successfully complete this course the student must be able to apply pharmacological knowledge to the management of clinical problems.

Assessment

Examinations

Four examinations will be administered throughout the course, each covering a group of lectures as indicated in the course syllabus. Each exam will constitute 25% of the final course grade. Questions may be in multiple-choice, true/false, or short answer format and may include one or more case scenarios. There will be no separate final examination.

Each examination will be taken twice. Students will take the examination and hand in their examination papers for marking. Students will then be assigned into groups of six and will re-
take the examination following group discussions of each question. Each student’s mark will consist of an average of the marks obtained in both components. By this method students will take part in meaningful discussion of pharmacological principles and benefit from peer interactions.

Grading
The final grade for the course will be based on the sum of the grades of all exams (25 % each) for a total of 100%. To pass the course each exam must be passed with a mark of at least 75 %.

Because the course is competency-based, the course cannot be passed should the student fail any examination.

Grading Scale
Grades will be awarded as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>96-100</td>
</tr>
<tr>
<td>A-</td>
<td>93-95</td>
</tr>
<tr>
<td>B+</td>
<td>90-92</td>
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<tr>
<td>B</td>
<td>87-89</td>
</tr>
<tr>
<td>B-</td>
<td>84-86</td>
</tr>
<tr>
<td>C+</td>
<td>81-83</td>
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<tr>
<td>C</td>
<td>78-80</td>
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<tr>
<td>C-</td>
<td>75-77</td>
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<td>F</td>
<td>00-74</td>
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</tbody>
</table>

Examination Review
Exam questions will not be posted after an exam, but a post-exam review will be held after each Exam. Reproducing (memorizing & transcribing, copying, photographing, etc.) exam questions in any way is a violation of the Honor Code. Additionally, if you are aware that questions from a previous year are being reproduced, it is your responsibility to notify the course director; refraining from doing so is an Honor Code violation. It is an Honor Code Violation to review old exam questions from previous years (from fraternities or individuals).

Remediation
Remediation Examinations: Students will be given the opportunity to increase their grade to the lowest passing score of 75 %. These examinations will be comprehensive and cover all course material, not just material with which a student had difficulty. Questions may be multiple-choice, true/false, short answer, and/or essay format. Students must achieve a pass mark of 75 % in any remediation exam in order to successfully complete the course successfully.

Intervention for Success (IFS): The goal of Intervention for Success is to help students identify and address learning needs and to ensure students receive needed or desired academic support.

After each exam, any students with a score below 83 % will be required to complete a remediation worksheet and meet with the course director by the stated deadline. Others may complete the remediation worksheet if they so desire. Any work assigned by the course director
must be completed and is required to pass the course. Any student obtaining less than the pass mark of 75% will be required to take a remediation exam (as described above) after completing IFS requirements.

**Textbooks / Readings**
Some faculty may assign reading, while others will expect reading as means of self-directed study and to supplement material covered in class. A textbook for this course is not required but if students wish to purchase a text Yagiela et al. *Pharmacology and Therapeutics for Dentistry, 5th ed.* Mosby, 2004; ISBN: 0323016189 (hardcover) is recommended.

**Other Important Policies and Notes**

**Concerns Regarding Examination Questions:** The class may select one individual as a liaison to collect any “contested questions” following each examination. These concerns can then be given to the course director within 2 days of the examination for consideration and arbitration.

**Course Director Office Hours:** Dr. Traynor will be available for 1 h after the last class of each week and at other times by appointment. Dr. Traynor encourages students to meet with him for any questions or concerns throughout the course.

**Study Time:** Any assigned study time will occasionally be utilized for rearrangement of the course schedule (lectures), review sessions, etc. As such, this time should remain available for Dental Pharmacology.

**Course Content**

Principles of Pharmacology: 10 hrs total
- Pharmacokinetics – 3 hrs
- Pharmacodynamics – 3 hrs
- Toxicity, Genetics, and Drug Interactions – 4 hrs

Dental Pharmacology: Analgesia and Anesthesia – 16 hrs total
- Narcotic Analgesic – 4 hrs
- Non-Narcotic Analgesics – 3 hrs
- Local Anesthetics – 4 hrs
- General Anesthetics – 5 hrs

Dental Pharmacology: Management of Infection – 7 hrs total
- Antibiotics – 5 hrs
- Antivirals and Antifungals – 2 hrs
Competency
The acquisition of knowledge, skills, attitudes, and behaviors required to meet these competencies are measured at the following levels:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Foundation</td>
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<td>X Application</td>
<td>X Intermediate</td>
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<td>X Advanced</td>
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Competencies Addressed

1. **The graduating student makes decisions affecting the practice of dentistry and patient care and safety based on ethical principles and as prescribed by law.**
   The student understands that no drugs are safe and so uses medications in dentistry safely and responsibly. The student recommends safe medication use to the patient, including medications and herbal substances that may be purchased by the patient without a prescription.

2. **The graduating student participates in professional self-regulation.**
   The student is aware of DEA and FDA drug regulations and the need to be up-to-date on all aspects of these potentially dangerous substances– including abuse of prescription analgesics.

3. **The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.**
   The student is aware that there are genetic differences in how individuals respond to drugs and handles this in a sensitive manner.

4. **The graduating students communicate effectively with patients and colleagues.**
   The student demonstrates effective interpersonal skills in being able to explain to other professionals and patients the role of and need for pharmacological agents in procedures and the use of prescribed and non-prescribed medications.

5. **The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.**
   The student is aware of drug efficacy, drug interactions and drug toxicity and the importance of the medical history in determining the choice of drugs to be used for treatment.

6. **The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.**
   The student understands the importance of medical history, including any drugs or supplements, whether prescribed or not, age, sex ethnicity and other factors in deciding on appropriate treatment for a patient.

7. **The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses.**
   The student should have an understanding of pharmacology such that he/she can decide on appropriate pharmacological intervention to address the needs of the patient.

8. **The graduating student monitors and provides for patient comfort associated with oral health care.**
The student is aware that not all drugs work similarly in all patients and that patients show different susceptibilities to side effects and so responses to drugs may need to be monitored. However the student is also aware that the use of medications can be a great aid in patient comfort.

9. **The graduating student manages medical emergencies.**
The student is aware of problems that can arise with over-dosage of drugs including analgesics, anesthetics and antibiotics. The student is able to make quick but accurate decisions about appropriate prescribing of medications to deal with dental emergencies

10. **The graduating student promotes health maintenance and disease prevention by collaborating with the patient to create an individualized self-care program.**
The student is aware of individual differences in the beneficial and side effects of drugs and that the patients themselves can be an important source of this information.
Syllabus draft

Course title: Development, Regeneration and Genetics

Course number: DENT 5XX (3 credit hrs).

Term and year: Winter (14 week-term) DS1

Location, time, and day
G390 (or equivalent) lecture hall with projection device and wireless access.
noon-2:00 pm on Mondays; 8:00-9:00 on Wednesdays (32 lectures – 1 hr ea; 2 hr questions & answers and 4 exams – 2 hrs ea; total 42 hours)

Course personnel and contact information
Course Director- Vesa M Kaartinen, Associate Professor of Dentistry, Department of Biologic and Materials Science, School of Dentistry, office: 2305 Dent; phone: 615-4726; email: vesak@umich.edu
Course Co-Director- Jan CC Hu, Professor, Department of Biologic and Materials Science, School of Dentistry. Office 1642 Dent; phone: 734-975-9315; email: janhu@umich.edu
Daniel J. Chiego, Jr., M.S. Ph.D.; Associate Professor, Department of Cariology, Restorative Sciences and Endodontics; office 5207 Dent, phone 763-4258; email: djchiego@umich.edu
Petros Papagerakis, Assistant Professor of Dentistry, Department of Pediatric Dentistry, School of Dentistry, office 1544Dent; phone: 734 647 9826; email: petrosp@umich.edu
David Kohn, Professor, Department of Biologic and Materials Science; Professor, Biomedical Engineering; office 2213 Dent; phone: 734-764-2206; email: dhkohn@umich.edu
James P. Simmer, Professor, Department of Biologic and Materials Science, School of Dentistry. Office 1642 Dent; phone: 734-975-9318; email: jsimmer@umich.edu
Catherine Krull, Associate Professor of Dentistry, Department of Biologic and Materials Science, School of Dentistry, office: 5211 Dent; phone: 764-5441; email: krullc@umich.edu
Nan Hatch, DMD, PhD, Assistant Professor, Department of Orthodontics and Pediatric Dentistry, office 5231 Dent; phone: 615 8790; email: nhatch@umich.edu

Course description
This course encompasses three major subject areas in developmental biology, specifically growth and development of craniofacial and dental structures, stem cells and tissue regeneration, and dental genetics.

The course is structured to deliver basic and applied scientific knowledge. The lectures will aim at enforcing the fundamental concepts in developmental biology while emphasizing the most
cutting edge scientific evidences in the regulation of biological processes for normal, abnormal
development and regeneration of the orofacial structures. The information delivered in this
course will prepare the students to become familiar with the developmental processes of the
craniofacial complex and the human dentitions. They will be exposed to stem cell biology and
tissue regeneration and be adaptive to the concept of applying biomaterials as potential
therapeutic approaches for their dental patients. They will receive a dental genetic lecture series
that develops the concept of genetic regulation of tooth development and introduces the genetic
etiologies of frequently encountered inherited dental defects. It will build a knowledge base in
the students and equip them with a good understanding in the subject area allowing the students
essential tools in making proper diagnosis, assessing risk of recurrence, determining effective
prevention, and projecting prognosis.

Which Competencies are addressed and for EACH competency covered, what domain
(knowledge, skills, attitudes, behaviors) and at what level:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
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Competencies addressed: 1a, 2a, 2b, 4a, 6e, 6f, 8a, 8b, 8c

1. The graduating student makes decisions affecting the practice of dentistry based on
ethical principles and as prescribed by law.
   The graduating student…
   1a. Practices as obliged by principles of ethics and the ADA Code of Ethics.

2. The graduating student participates in professional self-regulation.
   The graduating student…
   2a. Practices the skills required for continuous, life-long learning, including assessment of own
   skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of
   own scope of practice accordingly.
   2b. Understands the need for and establishes a plan for personal/professional growth and
   development.

4. The graduating student incorporates the methods of science and scientific inquiry into
clinical practice.
   The graduating student…
   4a. Uses information systems and other resources to access the knowledge base to solve clinical
   problems, and provide evidence-based approaches to care.

6. The graduating student obtains, records, updates and organizes accurate and complete
medical/dental histories including pertinent psychological and sociocultural information.
The graduating student...
6e. Recognizes the oral manifestations of systemic disease and how the disease and its management may affect the delivery of dental care.
6f. Initiates necessary consultations or referrals to clarify questions related to the patient's health.

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
The graduating student…
8a. Differentiates between health and disease.
8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases.
8c. Determines differential and/or provisional diagnoses for developmental disorders of the oro-facial complex.

How progression toward competency or competency is measured.
Four cumulative, written, in class examinations are planned. The test may include multiple choice, true or false, and fill-in-the-blank questions.

The instructors will also give oral and written quizzes during the class without prior announcement.

Objectives
The “Development” series is designed to provide basic knowledge in human embryology and development with special emphasis in craniofacial and tooth development. Through this lecture series, students will develop basic understanding of embryology and organogenesis, understand molecular reasons behind common birth defects affecting craniofacial and understand different phases of tooth development.
The “Stem Cell and Regeneration” series will provide basic knowledge of stem cell biology and introduction to tissue regeneration. Through this lecture series, students will develop basic understanding of embryonic and tissue-specific stem cells and understand potential of stem cells in tissue regeneration and in possible clinical applications.
The “Dental Genetics” series is designed to provide basic knowledge in human genetics and present current understanding of the molecular basis of common disorders involving the orofacial complex. Through this lecture series, students will develop basic understanding of genetic materials, inheritance, pedigree and testing. The major types of genetic disorders will be introduced and selected genetic defects involving bone and teeth will be discussed in details enabling the students to recognize common craniofacial disorders, familiar with their underlying genetic etiology and comfortable in making proper diagnosis and initiating referrals.
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<th>Date</th>
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<td>Early Embryogenesis</td>
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<td>Gastrulation (Kaartinen)</td>
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<td>Establishment of the basic embryonic body plan</td>
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<td>Development of the ectodermal germ layer</td>
<td>Krull</td>
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<td>Development of the mesodermal germ layer</td>
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<td>Development of the endodermal germ layer</td>
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<td>Neural Crest &amp; Development of pharyngeal arches</td>
<td>Kaartinen</td>
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<td>Craniofacial Development I:</td>
<td>Hatch</td>
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<td>Craniofacial Development II:</td>
<td>Kaartinen</td>
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<td>Exam 1</td>
<td>Kaartinen</td>
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<td><strong>Tooth Dev. I:</strong> Induction and role of neural crest cells, early stages of bud, cap, bell, follicle and crypt.</td>
<td>Chiego</td>
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<td><strong>Tooth Dev. II:</strong> Crown Dev. And Mineralization of Enamel and Dentin</td>
<td>Chiego</td>
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<td><strong>Tooth Dev. III:</strong> Development of Root and Supporting Structures</td>
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<td><strong>Tooth Dev. IV:</strong> Tooth Eruption and Shedding</td>
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<td><strong>Tooth Dev. V:</strong> Enamel Formation</td>
<td>Simmer</td>
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<td><strong>Tooth Dev. VI:</strong> Dentin</td>
<td>Chiego</td>
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<td>Pulp Structure: Vascular, neural cells</td>
<td>Chiego</td>
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<td>Pulpal responses to injury</td>
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<td>Exam 2</td>
<td>Chiego</td>
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<td>Stem Cell Concepts and Properties (normal and cancer)</td>
<td>Papagerakis</td>
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<td>Human Embryonic Stem Cells</td>
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<td>Hematopoietic Stem Cells</td>
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<td>Neural Stem Cells</td>
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<td>Introduction to tissue regeneration</td>
<td>Kohn</td>
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<td><strong>Transmitted Genetics</strong></td>
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<td></td>
<td>The Human Genome</td>
<td>Simmer</td>
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Textbooks/ Readings


Examination/grading policies
Student achievement will be evaluated by quizzes and four written examinations. The final grade will be based on the accumulation of scores for the quizzes and examinations.

The written examination will include multiple choice, true or false, fill-in-the-blank questions and matching questions. The exams will also include identification of structures on projected photomicrographs.
The content of the quizzes will include information from the lectures and reading assignments. There will be eight quizzes total; scores of the best five will be used for grading.

The weights of each examination in computing the final grade are: each quiz = 2%, exam 1, 2, 3 = 20% and exam 4 = 30%. Remediation is at the discretion of the course director.

A standardized grading system within the core would be preferred. The final grades will be assigned according to the following final percentages: ≥95 is an A+, ≥92.5 is an A, ≥90 is an A-, ≥86.7 is a B+, ≥83.3 is a B, ≥80 is a B-, ≥76.7 is a C+, ≥73.3 is a C, ≥70 is a C-, ≥66.6 is a D and below 66.6 is an E. (The notation “≥” means greater than or equal to). The ranges are from the stated number to the bottom of the preceding range. As an example, a B grade would be equal to or greater than 83.3 and below 86.7.)

Other Information
Reproducing (memorizing & transcribing, copying, photographing, etc) exam questions in anyway is an Honor Code violation. Additionally, if you are aware that questions are being reproduced, it is your responsibility to notify the course director; refraining from doing so is an Honor Code violation.
Curriculum Committee Review of Proposed D2 Spring-Summer Term Courses

Executive Summary

Review Process:

The Curriculum Committee continued their process for review of the courses that comprise the D2 Spring-Summer term. Each course director developed a course proposal consisting of a course outline and/or a course syllabus. At meetings with the Committee, each course director provided a brief introduction to the course and responded to a set of review questions developed by the Committee. The course review was lead by the chair and all members of the Committee were invited to contribute to the discussions. At the end of each course review session, course directors were apprised of any tasks remaining to be completed or any course materials needing to be revised or submitted to the Committee in order for the course to be approved.

Findings:

Fifteen courses are proposed for the new D spring-summer term and all have been approved by the Curriculum Committee (see Appendix 1 for the term schedule and Appendix 2 for syllabi). These courses are:

Course Name

- Applied Biomaterials
- Behavioral Science Practicum
- Cardiovascular System
- Comprehensive Care Clinic
- Dental Pharmacology
- Fixed Prosthodontics
- Fundamentals of Periodontics 530 (continued)
- Orthodontic Problems in Children: Diagnosis and Treatment Options
- Pathways
- Principles of Occlusal Development and Orthodontic Diagnosis
- Principles of Restorative Dentistry
- Respiratory System
- The Patient with Neoplasia
- The Patient with Periodontal Disease
- Treatment Planning
All course directors addressed at least to some extent, the goals of the Vision Implementation Team (VIT) in evolving our curriculum:

**Defining Characteristics of the U-M School of Dentistry Graduate (Draft: Sept. 15, 2009)**

The U-M DDS graduate is a highly skilled and self-motivated clinician who applies scientific knowledge and critical thinking to achieve optimal oral health.

The U-M dentist:

a. has a deep knowledge and understanding of the science that underpins diagnosis, risk assessment, prevention, management, and treatment in the practice of dentistry;
b. practices with the understanding that the orofacial complex is the gateway to the body with principal roles in regulating life-essential functions;
c. interacts within other health professions to represent and promote oral health as a key component of total health;
d. is prepared to influence policy for the profession through the ability to evaluate competing claims and positions, and through active participation in local and national organizations;
e. models integrity and professional responsibility through ethical behavior in professional practice and daily life.

**VIT goals** - The Committee discussed these defining characteristics with each of the course directors, particularly with respect to how their coursework planned to foster development of these characteristics by our students. We particularly focused discussion related to development of student’s critical thinking and problem-solving skills (global characteristic). Course directors were able to describe how their courses contributed to students’ acquisition of deep knowledge of science and understanding of the principle roles of the orofacial complex in regulating life essential functions (a and b) as appropriate for first year students.

**Testing/Assessment** - The Committee had discussions with each of the course directors regarding how course testing and other assessment strategies could be employed to help students develop their critical thinking and problem-solving skills and to assess their progress toward developing and attaining the other defining characteristics described by the VIT.

**Integration of concepts with other concurrently running courses** - Some of the course directors had well developed plans for integrating the content of their courses with other ongoing courses. The Committee was able to offer suggestions to all of the course directors regarding additional
“touch points” for potential integration of course work based on its review of all of the concurrently running courses.
Thematic issues that emerged in the review and Committee recommendations to address them

A/B Split – After extended discussions with the principal faculty involved in courses that use an A/B split it was decided to eliminate the split. It was decided that this plan will be a more efficient use of faculty and space and still allow for a complete clinical experience for students.

Assignment of Patient Family – Course planning is taking into account the VIT’s vision of preparing students to receive their patient family one semester earlier than now. This assignment will occur in January 2012 for the class of 2014.

New Academic Calendar – The new academic calendar has been distributed to students, faculty, and staff and incorporates some changes to the existing D3 and D4 spring-summer schedules. Highlights include clinic experiences during May for D3s on Tuesdays, Wednesday PMs, and Thursdays. Their course in endodontics will be on Wednesday and Friday mornings.

Overall Recommendation: The Committee recommends that the faculty vote approval of the proposed D2 spring-summer term courses.
# D2 Spring 2011

### Schedule

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<td>9:00</td>
<td>Intro to Perio</td>
<td>App Biomat</td>
<td>Neoplasia</td>
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<td>10:00</td>
<td>Cardiovascular System</td>
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<td>1:00</td>
<td>Fixed Pros Lect</td>
<td>Pt w/ Perio Dis</td>
<td>Clinic Rotations/Pathways</td>
<td>Pathways</td>
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<td>Clinic Rotations/Pathways *</td>
<td>Fixed Prosth Lab</td>
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<td>Clinic Rotations/Pathways *</td>
<td>Fixed Prosth Lab</td>
<td>Clinic Rotations/Pathways *</td>
<td>Flex Time *</td>
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<td>Fixed Pros Lab</td>
<td>Clinic Rotations</td>
<td>Fixed Prosth Lab</td>
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* Research Pathways students will use one of these sessions per week for Pathways. All other students will be on clinical rotation.

# D2 Summer 2011

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<td>Fixed Pros Lect</td>
<td>Tx Planning</td>
<td>Pt w/ Perio Dis</td>
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<tr>
<td>2:00</td>
<td>Fixed Pros Lab</td>
<td>Clinic Rotations</td>
<td>Fixed Prosth Lab</td>
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<tr>
<td>3:00</td>
<td>Clinic Rotations</td>
<td>Fixed Prosth Lab</td>
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<tr>
<td>4:00</td>
<td>Fixed Pros Lab</td>
<td>Clinic Rotations</td>
<td>Fixed Prosth Lab</td>
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* Research Pathways students will use this time for Pathways. All other students will use it for flex time.
Notes on the Syllabi

- Some syllabi are labeled for other semesters. They will be updated for students, but the all courses included here will be conducted in the Spring-Summer semester as shown in the attached schedule.

- The pathways course and the clinical rotations will be individualized for students. Syllabi will be produced, but are not available at this time because details of the courses are still being developed. The Curriculum Committee has reviewed and approved the course plans with the course directors.
**Course title:** Behavioral Science Practicum  
**Course number:** DENT 535  
**Term and year:** Spring Term, First year (D1)  
**Location, time, and day:** Lecture Hall G378

**Course personnel and contact information:**  
Course Director – Marita R. Inglehart, Dr. phil. habil.  
Office: Dent B393, Tel. 763-8073; E-mail: mri@umich.edu

**Schedule:**

This is a half credit course with 7 contact hours. Five of these hours are scheduled as lectures at regularly scheduled class times. Two contact hours will be spent in 4 small groups at different times. Most of these small group sessions will be scheduled at the regularly scheduled class time or from noon to 12:50 pm.

Lecture #1 – Communication during the clinical exam I  
Lecture #2 – Communication during the clinical exam II  
Lecture #3 – Health Education / Content considerations  
Lecture #4 – Health Education / Process considerations  
Lecture #5 – Final discussion / Debriefing

Students will be assigned to the same four groups as in the Introduction to patient Care course:

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**Times for Small Group Meeting #1 - Video Tape 1:**

Group A1 –  
Group A2 –  
Group B1 –  
Group B2 –

**Times for Small Group Meeting #1 - Video Tape 2:**

Group A1 –  
Group A2 –  
Group B1 –  
Group B2 –
Course description:

This Behavioral Science Practicum is the third of the three Behavioral Science courses. It complements the Behavioral Science I and II courses by offering communication skills training. In Behavioral Science I, you learned about your patient (e.g., oral health-related quality of life, dental fear, pain), your own situation as a provider, and your interaction with your patient in general. You also were videotaped while conducting a medical/dental history and learned how to analyze your and your peers’ behavior. The Behavioral Science II course focuses more specifically on your interactions with patients from certain social groups or with certain characteristics such as geriatric patients, persons with a disability, or patients with depression. The objectives of these two courses are (a) to make you aware of the significance of good patient – provider communication and the many factors that affect your interaction with your patient, and (b) to provide you with knowledge that will support your understanding of patient issues. These two courses are taught in a lecture format.

The purpose of the Behavioral Science Practicum is continue with the third component of your education about these issues, namely with the actual skills training. This course therefore crosses the gap from learning about communication with your patient in a lecture room setting to actually concretely experiencing it in a clinical setting. This skills training consists of being introduced to tw segments of your interaction with your patient, namely to

(a) nonverbal / verbal communication during the clinical exam and tx, and

(b) educating your patient about oral health-related issues.

For each of these segments, we will review what you learned before and will then see a videotape of a master clinician, Dr. Richards, as an example. We will discuss the ways that Dr. Richards communicated with his patient, and you will be able to evaluate his interactions on exactly the same evaluation sheets that you will use to evaluate your own and your peer’s interactions with patients. These presentations will help you to be prepared for your own interactions in the clinical setting. Following these introduction lectures and videos, you yourself will be videotaped first with a student / peer in the chair during a clinical exam / cleaning, and then with a regularly scheduled patient while you engage in health education. For each of the tapes, you will self evaluate your own taped sequence on the c-tools website, receive feedback from a peer, and from an instructor, as well as potentially receive feedback from a small group of your classmates in a small group setting.
**Video Tape 1:**

The first videotape will be filmed when you do a periodontal or oral examination on a classmate or your first patient. This tape focuses on your communication with your patient while examining your patient.

**When?**

This videotape will be filmed on

- A group clinicians: Date / Time
- B group clinicians: Date / Time

**Where?**

In your cubicle

**How do you sign up?** No need to sign up for this taping: The video taping assistants will be in the clinic and come to your cubicle.

**What do you do?**

If this taping is planned with a regularly scheduled patient, you have to get written consent from your patient before the taping can take place. If the patient does not give written consent, you have to wait to be videotaped until you treat your next patient.

At the end of the session: Fill out the “Tape 1 - immediate self evaluation” and ask for your patient’s feedback.

Two days later: Watch your tape on C-tools and fill out the “Tape 1 - 2 Day Self evaluation” and hand it in to Dr. Inglehart in the next class session.

Also: watch your peer’s Tape 1 on C-tools and respond to the “Tape 1 – PEER evaluation” and hand it in to Dr. Inglehart as well.

**DO NOT FORGET:**

Times for Small Group Meeting #1 - Video Tape 1:

- Group A1 –
- Group A2 –
- Group B1 –
- Group B2 –
Video Tape 2:

The second videotape will be filmed during your contacts with a regularly scheduled patient while you educate the patient about oral health promotion. We can only videotape you with your patient, if your patient gives written consent / permission. You need to explain to your patient what (only the health education part) and why we tape, and get a signature on the consent sheet. If your first patient does not give his / her consent, we will tape you with your next patient. If your next patient does not give consent, we will videotape you with your last patient. If this patient does not consent, we will videotape you while you provide health education to a standardized patient.

**When?**

The 2nd videotape will be filmed on
- A1 group clinicians: Date / Time
- A2 group clinicians: Date / Time
- B1 group clinicians: Date / Time
- B2 group clinicians: Date / Time

**Where?**

In your cubicle

**How do you sign up?** No need to sign up for Tape 2: the video taping assistants will be in the clinic and come to your cubicle.

**BUT:** IT IS YOUR RESPONSIBILITY TO ALERT A VIDEO TAPEING ASSISTANT WHEN YOU COME TO THE HEALTH EDUCATION PART!

**What do you do?**

You have to get written consent from your patient before the taping can take place. If the patient does not give written consent, you have to wait to be videotaped until you treat your next patient.

At the end of the session: Fill out the “Tape 2 - immediate self evaluation” and ask for your patient’s feedback.

Two days later: Watch your tape on C-tools and fill out the “Tape 2 - 2 Day Self evaluation” and hand it in to Dr. Inglehart in the next class session.

Also: watch your peer’s Tape 3 on C-tools and respond to the “Tape 2 – PEER evaluation” and hand it in to Dr. Inglehart as well.

**DO NOT FORGET:**

Times for Small Group Meeting #1 - Video Tape 2:

- Group A1 –
- Group A2 –
- Group B1 –
- Group B2 –
Dental Graduate Competencies addressed:

Competencies are addressed and acquisition of knowledge, skills, and behaviors required to meet them is measured at the following levels:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foundation</strong></td>
<td><strong>Basic</strong></td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
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<tr>
<td>Application</td>
<td><strong>Intermediate</strong></td>
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<td>Advanced</td>
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</table>

This course teaches foundation knowledge in the behavioral sciences and its application in clinical interactions. It aims to develop in the student the professional attitudes and behaviors required for developing the following competencies defined in the document “Competencies for the New Dental Graduate”: 1a, 2a&b, 3, 4b, 5 a to c, 6 a to e, 7a, e, g, 8a, d, 9b, c, f, g, h, 10a, 15, 17b.

Assessment of the acquisition of knowledge, skills, attitudes, and behaviors required to meet the competencies:
- At the beginning of each lecture, the students respond to questions that aim at raising awareness about the relevance of the subject matter of the upcoming lecture and how it applies to the students’ personal and professional situation.
- During the first four lectures, the students will respond to questions assessing the skills displayed and needed in the communication depicted in the video.
- During the two small group sessions, the students will provide feedback to their peers, and this feedback will demonstrate their understanding of the subject matter.
- Self evaluations and peer evaluations of video taped segments of provider – patient interactions will be analyzed to assess whether the student has the skill to self evaluate and to evaluate observed clinical interactions.

Examination / grading policies: The final grade will be based on

(a) Responses to questions at the beginning of the 5 lectures (5 points),
(b) Responses to the four movies shown in the first four lectures (8 points),
(c) Self evaluations of own 2 tapes immediately after the taping (6 points),
(d) Self evaluation of own 2 tapes during the 2 days following the taping at home (6 points),
(e) Peer feedback to the 2 tapes of another student (6 points),
(f) Attending both small group sessions and providing feedback to three of the videos shown and discussed there (6 points).

Total = 41 points;  A+ = 41;  A = 40 & 39;  A- = 38;  
B+ = 37;  B = 36 & 35;  B- = 34
Objectives:

**Topic: Communication during the clinical interaction**
- Define the term “rapport”.
- Identify behaviors that are likely to (a) increase, and (b) decrease rapport.
- Describe how rapport can be recognized / assessed.
- Identify the major elements of nonverbal communication and the ways in which they can be positive and / or negative for establishing rapport and communication.
- Identify how dental fear can be assessed.
- Identify the problems arising when a patient has dental fear.
- Identify strategies to prevent and reduce dental fear.
- Describe the ways communication between a dental health care provider and a patient should be structured if pain perception should be minimized.

**Topic: Health Education**
- Describe how and when you can identify issues that you need to address in health education.
- Identify the major factors affecting the degree of cooperation between patients and healthcare providers.
- Describe how you identify the stage in which a patient is when you identify a behavior you want to change.
- Describe the positive aspects of motivational interviewing.
- Identify the main features of motivational interviewing.
- Describe how you would proceed in a motivational interview.
DENT 535: Behavioral Science Practicum
INSTRUCTOR: Marita R. Inglehart, Dr. phil. habil
OFFICE: Dent B393, Tel. 763-8073; mri@umich.edu
CLASSROOM: G-378

Required Reading:

The readings are available on the c tools web site.

Lecture 1: Communication during the clinical exam – Part 1

Lecture 2: Communication during the clinical exam – Part 2

Lecture 3: Educating your patient about oral health promotion – Part 1
Required reading:

Lecture 4: Educating your patient about oral health promotion – Part 2
Required reading:

Lecture 5: Final debriefing
Syllabus Template

Course title. Parts of

Term and year. Winter/D1

Location, time, and day. Formally G378, F 1-2 PM

Course personnel and contact information. Course Director: Kenichi Kuroda, Ph.D. (936-1440; kkuroda@umich.edu)

Course description. This course is designed to focus on understanding the structure-property synergy in dental materials for indirect restorations through scientific basis and how these relations impact clinical function of materials and manipulation. Students will learn the rationale for material selection in their clinical applications and treatment plans. The lectures cover the topics of dental materials and current topics in dentistry: impression materials, cements, ceramic, casting, alloys, gypsum, and polymers.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

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<td>__Advanced</td>
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- The graduating student incorporates the methods of science and scientific inquiry into clinical practice. (Knowledge: Foundation)
- Identifies patient values, expectations and goals for oral health care. (Knowledge: Foundation)
- Develops treatment plans that address the patient’s esthetic concerns. (Knowledge: Foundation)
- The graduating student provides oral health care to treat/manage craniofacial and dental diseases/disorders and their effects, including:
  - Preservation and restoration of teeth. (Knowledge: Foundation)
  - Replacement of teeth. (Knowledge: Foundation)
  - Periodontal therapy. (Knowledge: Foundation)
  - Pulpal therapy. (Knowledge: Foundation)
  - Treatments for/management of soft tissue diseases/disorders. (Knowledge: Foundation)
  - Hard and soft tissue surgery. (Knowledge: Foundation)
  - Management of space and treatment/management of malocclusion. (Knowledge: Foundation)
• The graduating student applies the principles of infection control and environmental safety to clinical practice. (Knowledge: Foundation)

Attitudes Associated with Course
Esthetic dentistry - esthetic properties of material integrated into discussions of physical properties (e.g. Porcelain – selection of ceramic materials based on their esthetic properties.)

How progression toward competency or competency is measured.
Written examination

Objectives.
Students will demonstrate understanding of the processing-composition-structure-property synergy in biomaterials and how these interrelations impact clinical function of materials. Students will be able to select among materials for restorations, choosing best one for clinical application at hand.
Students will be able to convey fundamental physical, chemical and biological principles important for understanding, choosing, manipulating and evaluating specific types of dental materials that they are using in the preclinic and clinic.
Students will demonstrate understanding of impression materials and the role of components in their properties and functions.
Students will demonstrate understanding of cements and the mechanism of bonding.
Students will demonstrate the competency to progress from small to large restorations.
Students will demonstrate the competency to progress from more conservative to less conservative dental materials.
Students will be able to articulate the bases for success/failure of restorative dental materials rooted in fundamental principles.
Students will be able to articulate general scientific concepts rather than specific products.
Students will be able to provide their patients with scientific evidence for their treatment plans.

Session information.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1/7</td>
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<td>Impression Materials 1 (Classification + Elastic Mts)</td>
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<tr>
<td>1/14</td>
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<td>Impression Materials 2 (Comparison)</td>
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<td>1/21</td>
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<td>Precious metal casting alloys</td>
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<tr>
<td>1/28</td>
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<td>Dental casting (lost wax technique)</td>
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<td>2/4</td>
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<td>Temporary Materials</td>
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<td>2/11</td>
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<td>Dental Cements 1</td>
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<td>2/18</td>
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<td>Dental Cements 2</td>
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<td>(2/25)</td>
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<td>Spring Break</td>
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<tr>
<td>3/4</td>
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<td>Gypsum and waxes</td>
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<tr>
<td>3/11</td>
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<td>Polymers for denture bases and liners</td>
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<tr>
<td>3/18</td>
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<td>Porcelain and PFM Restorations</td>
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Partial Denture Alloys
All-Ceramic Systems
Color-Shade Matching
Review


Examination/grading policies. 1 cumulative exam at end of semester; class participation (asking and answering questions) is considered

Other information.
Biomedical Sciences: Cardiovascular System

DENT 5XX
Spring/Winter 2011

Location: Varies – Dental Building G322 for most large lectures and exams. Medical Sciences Building II for select anatomy lectures & labs
Times: see attached lecture schedule
Days: MWF

Course Personnel and Contact Information

Course Director(s)
Dr. David Brzezinski
Dent. 763-1036, Med. 647-9149
dbrzezin@umich.edu
Dent. Rm. 1376F, Med. Rm. 3761A

George W. Taylor, DMD, DrPH
Dent. 734-764-1737
gwt@umich.edu
Personal Office Dent. Rm. 2303; Dept. Office Dent. Rm. 2361

Course Description / Nature of Course Content

This course is designed to continue the introduction of the basic biology of human health and disease. It seeks to provide students with an intensive learning experience to integrate the acquired basic biomedical knowledge base as the foundation for clinical decision-making and clinical patient care. This course reviews basic biomedical information and provides in-depth information about the normal morphology, development, organization, and functions of the cardiovascular system, as well as the alterations in structure and function associated with diseases and/or disorders related to this system and their medical (including pharmacologic) and/or surgical treatment and management.

Goals and Requirements

The major goals of this course are to assist students in acquiring the biomedical knowledge base and critical appraisal skills required to perform a comprehensive review of the patient’s health histories, analyze the results of diagnostic tests, and use this information in the development of
appropriate dental diagnoses and oral health maintenance and treatment plans, including appropriate referral to other health care professionals. To successfully complete this course the student must be able to apply basic science knowledge to the solution of clinical problems.

The inclusion of case based examples, small group work and rapid pace of material presented requires attendance at all lecture and labs in order to be successful. NOTE: You must call the Registrar’s office, 734-764-1512, before the class you intend to miss begins in order to be excused from the class.

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them is measured at the following levels:

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<td>X Advanced</td>
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Competencies Addressed

1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
   The graduating student...
   1a. Practices as obliged by principles of ethics and the ADA Code of Ethics

2. The graduating student participates in professional self-regulation.
   The graduating student...
   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
   2b. Understands the need for and establishes a plan for personal/professional growth and development.

3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.

4. The graduating students communicates effectively with patients and colleagues.
   The graduating student...
   4a. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventive measures, and obtain informed consent.

5. The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.
   The graduating student...
5a. Performs/orders and records findings of other diagnostic procedures and tests as necessary.
5b. Identifies and assesses conditions that place patients at increased risk for disease.
5c. Identifies patient behaviors that impact oral and systemic health.
5d. Identifies the signs and symptoms of medical emergencies.

6. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
   The graduating student...
   6a. Differentiates between health and disease.
   6b. Recognizes medical emergencies.

7. The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses.
   The graduating student...
   7a. Develops treatment plans that reflect the impact of systemic disease and its management on the provision of oral health care.
   7b. Develops treatment plans that reflect the impact of disabilities on the provision and maintenance of oral health care.

8. The graduating student monitors and provides for patient comfort associated with oral health care.
   The graduating student...
   8a. Uses pharmacological agents to provide for control of pain and anxiety.

9. The graduating student manages medical emergencies.

10. The graduating student promotes health maintenance and disease prevention by collaborating with the patient to create an individualized self-care program.

How acquisition of knowledge, skills, attitudes, and behaviors are required to meet the competencies is measured.

Assessment methods:

Student performance in BSCS will be assessed using the following examination strategies:

Weekly Quizzes
Weekly quizzes will be administered. These quizzes will address material covered in the previous week’s lectures, and will generally be in multiple choice and T/F format. These quizzes will constitute 80% of the course grade.

Final Examination
A Final Examination will be given at the end of the course. This examination will be in multiple-choice, T/F, and short answer format and will include one or more case scenarios. The
Final Examination will cover all material, but will include more questions covering material from the final week of the course (which has been yet untested). The Final Examination scores will constitute 20% of the course grade.

REMEDICATION

- **Remediation Examinations**
  These examinations will be comprehensive in that they will cover all course material, not just material with which a student had particular difficulty. Questions may be multiple-choice, T/F, short answer, and/or essay format. Students will be given the opportunity to increase their grade to the lowest passing score of 74.5%. Students **must** pass remediation exams with a grade of 74.5% in order to successfully complete the course.

- **Intervention for Success:**
  The purpose of the IFS component is to support the highest level of student success in this course and to assist students in developing skills required for self-assessment and lifelong learning. It is our goal in offering IFS to minimize the likelihood that students will fall behind.

After each quiz/exam, remediation worksheets will be posted for completion. It will only be necessary to answer remediation questions corresponding to items missed on the quiz/exam.

- Those with scores below 89.5% on any given quiz/exam will be required to complete a remediation worksheet by the stated deadline.

- Those with scores below 74.5% on any given exam will be required to complete a remediation worksheet and meet with the course director, Dr. David Brzezinski, by the stated deadline.

- Those with scores of 89.5% or higher on any given exam may choose to or not to complete the remediation worksheet. Those who complete and submit remediation worksheets by the stated deadline for all quizzes/exams, whether required or not, will receive 0.5 percentage points on their overall course score at the end of the term.

The goal of Intervention for Success is to help students identify and address unmet learning needs and to ensure students receive needed or desired academic support. Any work assigned by Dr. Brzezinski must be completed and is required to pass the course. Any student with a failing grade will be required to take a remediation exam (as described above) after completing IFS requirements.

The density of material and rapid pace requires attendance at all class meetings.
Session Information

See attached lecture schedule.

Textbooks / Readings
Some faculty will assign reading, while others will expect you to read as means of self-directed study and to supplement material covered in class. Texts for this course include:

Anatomy (Baker text required)
ISBN: 0781794854 (paperback)


ISBN: 1416033858 (paperback)

Dental Management (Required)
ISBN: 0323011713

Histology (Required)
ISBN: 0781772214 (paperback)

ISBN: 0878938885 (CD-ROM)

Microbiology (Recommended)
ISBN: 0072919248 (hardcover)

Pathology (Required)
ISBN: 0721601871 (hardcover)

Pharmacology
ISBN: 0323016189 (hardcover)
Physiology
ISBN: 0073122866 (hardcover)

Web Site
General course information and lecture slides will be posted on the eTools site for the course.

Go to: https://ctools.umich.edu/
Select “Login” from the upper right hand corner of the home page
Login using your umich user/pass
Select “DENT 6XX 001 F11” from the tab style top navigation
Select “Resources” from the left navigation
Select the name of the module from the content area, etc.

Method of Evaluation
Examination / Grading Policies:

Examination Review
Quizzes/Exams will not be posted, but a post-exam review will be held after each Quiz or Exam. Reproducing (memorizing & transcribing, copying, photographing, etc.) exam questions in any way is a violation of the Honor Code. Additionally, if you are aware that any previous year’s questions are being reproduced, it is your responsibility to notify the course director; refraining from doing so is an Honor Code violation. It is an Honor Code Violation to review old exam questions or “key concept sheets” from previous years (from fraternities or individuals).

Course Grade
The final grade for the course will be based on the sum of the grades (weighted averages, based on time allocation) of all quizzes (80%) plus the score on the final exam (20%) for a total of 100%. The quizzes, exam, and course must be passed with a grade of 74.5% or higher.

Because the entire course is competency-based, the course cannot be passed should the student fail the final examination. Should the student fail the final examination, remediation of the examination will only be permitted if the student has successfully passed all quizzes (and/or remediated them to the course director’s satisfaction).
Grading Scale

Grades will be awarded as follows (rounding down from .4 and up from .5):

96-100   A
93-95    A-
90-92    B+
87-89    B
84-86    B-
81-83    C+
78-80    C
75-77    C-
00-74    F

Other Important Policies And/Or Notes:

Concerns Regarding Examination Questions: The class may select one individual as a liaison to collect any “contested questions” following each quiz/examination. These concerns can then be given to the course director within 2 days of the quiz/examination for consideration and arbitration.

Course Director Office Hours: Dr. Brzezinski will be available for “open office hours” each Thursday from 7-8 a.m. at the dental school office (1376 F). He is also available for office hours at other times (before 8 a.m. and during the 12-1 p.m. hour on select weekdays) by appointment. Dr. Brzezinski encourages students to meet with him for any questions or concerns throughout the course.

Study Time: Study time (as listed on the course schedule) is BSCS time. It will occasionally be utilized for rearrangement of the course schedule (lectures), review sessions, etc. As such, this time needs to remain available for BSCS. If no BSCS class session is meeting, the time is intended to “decompress BSCS material” and to study BSCS material. Other things should not be scheduled in this time.

Laboratory Attendance: Laboratory sessions are mandatory. Students must attend the laboratory sessions during their assigned times. Students may not “switch” laboratory sessions with other students or attend different laboratory sessions without prior permission from the course director.
Content Outline:

Intro to Cardiovascular system: Case Study – 2 hr
Anatomy of Cardiovascular system – Thorax, Mediastinum, Heart, Great Vessels,
  Coronary Vessels – 4 hrs
Anatomy Lab of Cardiovascular system – 2 hr
Histology of Cardiovascular system – 2 hrs
Physiology of Cardiovascular system – 8 hrs
Pathology of Cardiovascular system – 3 hrs
Microbiology of Cardiovascular system – 4 hrs
Pharmacology of Cardiovascular system – 10 hrs
Physical Diagnosis of the Cardiovascular system – 1 hr
Dental Correlations of the Cardiovascular system – 1 hr
Hematology Lectures - 8
Final Case Study Wrap – 1 hr
Course Title          Dental Pharmacology

Course Number          DENT 503

Term and Year          Winter and Spring 2011

Location, Time, & Day  Winter 2011 only:
                       Location: G378  
                       Times: 8-9 am 
                       Days: Mondays

Course Personnel and Contact Information

Course Director
Dr. John R Traynor
Pharmacology Dept: 647-7479 (am) or 615-2929 (pm)
jtraynor@umich.edu
A220 MSRB III

Course Description / Nature of Course Content
This course is designed to instruct students on basic pharmacological principles and the medications most often used in dentistry. It seeks to provide students with a learning experience enabling them to integrate the acquired knowledge of pharmacology into their foundation for future courses, for clinical decision-making, safe prescribing practice, and responsible patient care. This course considers basic pharmacological theory on how drugs work, provides information on how drugs are handled by the body, drug-drug interactions, adverse drug effects, and the mechanisms and use of anesthetic, analgesic, and antibiotic medications in dentistry.

Goals and Requirements
The major goals of this course are to assist students in acquiring knowledge and understanding of basic pharmacology and in particular dental medications. This is required to perform a comprehensive review of patient health history, to perform safe and effective dentistry, and for development of appropriate dental treatment plans and oral health maintenance. To successfully complete this course the student must be able to apply basic science and pharmacological knowledge to the treatment of clinical problems.

Due to the inclusion of case based examples and the rapid pace of material presented students need to attend at all lecture in order to be successful. If missing a class is unavoidable you should inform Dr. Traynor before the class begins.

Assessment

Examinations
Four examinations will be administered throughout the course, each covering a series of lectures as indicated in the lecture listing. Questions may be in multiple-choice, true/false, or short
answer format and may include one or more case scenarios. There will be no separate final examination.

**Grading**
The first exam on Principles of Pharmacology in the winter semester will be a stand-alone exam. The next three exams covering analgesia, anesthesia and management of infection will be added together for a total of 100%. These exams will be equally weighted. To pass a mark of at least 70% is required.

Because the entire course is competency-based, the course cannot be passed should the student fail any examination.

**Grading Scale**
Grades will be awarded as follows:

- 97-100  A+
- 94-96   A
- 90-93   A-
- 87-89   B+
- 84-86   B
- 80-83   B-
- 77-79   C+
- 74-76   C
- 70-73   C-
- <70    F

**Remediation**
*Remediation Examinations*: Failing students will be given the opportunity to increase their grade to the lowest passing score of 70%. These examinations will be comprehensive and cover all course material, not just material with which a student had particular difficulty. Questions will be multiple-choice, and may include short answer questions. Students must achieve a pass mark of 70% in any remediation exam in order to successfully complete the course.

*Intervention for Success (IFS):*
The goal of Intervention for Success is to help students identify and address learning needs and to ensure students receive needed or desired academic support.

After each exam, any students with a score below 80 % will be required to complete a remediation worksheet. It is only necessary to answer remediation questions corresponding to items missed on the examination.

**Textbooks / Readings**
Some faculty may assign reading, while others will expect reading as means of self-directed study and to supplement material covered in class. A textbook for this course is not required but if students wish to purchase a text Yagiela et al. *Pharmacology and Therapeutics for Dentistry, 5th ed.* Mosby, 2004; ISBN: 0323016189 (hardcover) is recommended.
Other Important Policies and Notes

Concerns Regarding Examination Questions: The class may select one individual as a liaison to collect any “contested questions” following each examination. These concerns can then be given to the course director within 2 days of the examination for consideration and arbitration.

Course Director Office Hours: Dr. Traynor will be available by appointment. Dr. Traynor encourages students to meet with him for any questions or concerns throughout the course.

Study Time: Any assigned study time will occasionally be utilized for rearrangement of the course schedule (lectures), review sessions, etc. As such, this time should remain available Dental Pharmacology.

Course Content

Principles of Pharmacology: 11 hrs total
- Pharmacokinetics – 3 hrs
- Pharmacodynamics – 3 hrs
- Introduction, Toxicity, Genetics, and Drug Interactions – 5 hrs

Dental Pharmacology: Analgesia and Anesthesia – 17 hrs total
- Sedatives and Anxiolytics – 1 hr
- Narcotic Analgesic – 4 hrs
- Non-Narcotic Analgesics – 3 hrs
- Local Anesthetics – 4 hrs
- General Anesthetics – 5 hrs

Dental Pharmacology: Management of Infection – 7 hrs total
- Antibiotics – 5 hrs
- Antivirals and Antifungals – 2 hrs

Competencies

The acquisition of knowledge, skills, attitudes, and behaviors required to meet these competencies are measured at the following levels:

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</table>

Competencies Addressed

1. The graduating student makes decisions affecting the practice of dentistry and patient care and safety based on ethical principles and as prescribed by law.
   The student understands that no drugs are safe and so uses medications in dentistry safely and responsibly. The student recommends safe medication use to the patient, including
medications and herbal substances that may be purchased by the patient without a prescription.

2. **The graduating student participates in professional self-regulation.**
The student is aware of DEA and FDA drug regulations and the need to be up-to-date on all aspects of these potentially dangerous substances- including abuse of prescription analgesics.

3. **The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.**
The student is aware that there are genetic differences in how individuals respond to drugs and handles this in a sensitive manner.

4. **The graduating students communicate effectively with patients and colleagues.**
The student demonstrates effective interpersonal skills in being able to explain to other professionals and patients the role of and need for pharmacological agents in procedures and the use of prescribed and non-prescribed medications.

5. **The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.**
The student is aware of drug efficacy, drug interactions and drug toxicity and the importance of medical history in determining the choice of drugs to be used for treatment.

6. **The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.**
The student understands the importance of medical history, including any drugs or supplements, whether prescribed or not, age, sex, ethnicity and other factors in deciding on appropriate treatment for a patient.

7. **The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses.**
The student should have an understanding of pharmacology such that he/she can decide on appropriate pharmacological interventions to address the needs of the patient.

8. **The graduating student monitors and provides for patient comfort associated with oral health care.**
The student is aware that not all drugs work similarly in all patients and that patients show different susceptibilities to adverse effects and so responses to drugs may need to be monitored. However the student is also aware that the use of medications can be a great aid in patient comfort.

9. **The graduating student manages medical emergencies.**
The student is aware of problems that can arise with over-dosage of drugs including analgesics, anesthetics and antibiotics. The student is able to make quick but accurate decisions about appropriate prescribing of medications to deal with dental emergencies.

10. **The graduating student promotes health maintenance and disease prevention by collaborating with the patient to create an individualized self-care program.**
The student is aware of individual differences in the beneficial and side effects of drugs and that the patients themselves can be an important source of this information.
**DENT 503 Session Information**

### Dental Pharmacology - Principles

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/3</td>
<td>8-9am</td>
<td>Introduction, inc frequently prescribed drugs in the US</td>
<td>Traynor</td>
</tr>
<tr>
<td>1/10</td>
<td></td>
<td>Drug dose-response relationships I</td>
<td>Traynor</td>
</tr>
<tr>
<td>1/24</td>
<td></td>
<td>Drug dose-response relationships II</td>
<td>Traynor</td>
</tr>
<tr>
<td>1/31</td>
<td></td>
<td>Drug Toxicity</td>
<td>Traynor</td>
</tr>
<tr>
<td>2/7</td>
<td></td>
<td>Pharmacokinetics I</td>
<td>Maybaum</td>
</tr>
<tr>
<td>2/14</td>
<td></td>
<td>Pharmacokinetics II</td>
<td>Maybaum</td>
</tr>
<tr>
<td>2/28</td>
<td></td>
<td>Drug Metabolism</td>
<td>Maybaum</td>
</tr>
<tr>
<td>3/7</td>
<td></td>
<td>Pharmacogenomics</td>
<td>Rae</td>
</tr>
<tr>
<td>3/14</td>
<td></td>
<td>Drug Interactions</td>
<td>Rae</td>
</tr>
<tr>
<td>3/21</td>
<td></td>
<td>Herbal remedies - dental implications</td>
<td>Jutkiewicz</td>
</tr>
<tr>
<td>3/28</td>
<td></td>
<td>Drug and Substance Abuse</td>
<td>Jutkiewicz</td>
</tr>
<tr>
<td>4/4</td>
<td></td>
<td>Review session</td>
<td>Traynor</td>
</tr>
<tr>
<td>4/11</td>
<td></td>
<td>Exam</td>
<td></td>
</tr>
</tbody>
</table>

### Dental Pharmacology - Analgesia/Anesthesia

<table>
<thead>
<tr>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narcotic analgesics</td>
<td>Traynor</td>
</tr>
<tr>
<td>Comparisons and uses of narcotic analgesics</td>
<td>Traynor</td>
</tr>
<tr>
<td>Case studies with narcotic analgesics</td>
<td>Betts</td>
</tr>
<tr>
<td>Non-steroidal anti-inflammatory analgesics /acetaminophen</td>
<td>Traynor</td>
</tr>
<tr>
<td>NSAIDs, analgesic combinations-therapeutic comparisons</td>
<td>Traynor</td>
</tr>
<tr>
<td>Case studies with non-narcotic analgesics</td>
<td>Betts</td>
</tr>
<tr>
<td>Review session?</td>
<td></td>
</tr>
<tr>
<td>Exams</td>
<td></td>
</tr>
<tr>
<td>Local anesthetics</td>
<td>Traynor</td>
</tr>
<tr>
<td>LA armamentarium</td>
<td>TBA</td>
</tr>
<tr>
<td>LA injection methods</td>
<td>TBA</td>
</tr>
<tr>
<td>Case studies with local anesthetics</td>
<td>Betts</td>
</tr>
<tr>
<td>Sedatives and Anxiolytics</td>
<td>Jutkiewicz</td>
</tr>
<tr>
<td>Nitrous oxide: Techniques and complications</td>
<td>Betts</td>
</tr>
<tr>
<td>Nitrous Oxide: Pain and anxiety control; armamentarium</td>
<td>Betts</td>
</tr>
<tr>
<td>IV sedation, medications, techniques, complications</td>
<td>Smythe</td>
</tr>
<tr>
<td>IV sedation: Monitors, routes of administration, armamentarium</td>
<td>Smythe</td>
</tr>
<tr>
<td>General anesthesia; armamentarium, medications, techniques</td>
<td>Smythe</td>
</tr>
<tr>
<td>Review Session?</td>
<td></td>
</tr>
<tr>
<td>Exam</td>
<td>Traynor/Smythe</td>
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### Dental Pharmacology - Management of Infection

<table>
<thead>
<tr>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penicillins, Cephalosporins, vancomycin</td>
<td>Canman</td>
</tr>
<tr>
<td>Macrolides, Clindamycin, tetracyclines, metronidazole</td>
<td>Canman</td>
</tr>
<tr>
<td>Aminoglycosides, quinolones, Antifoliates, TB Drugs</td>
<td>Carey</td>
</tr>
<tr>
<td>Factors affecting antimicrobial selection</td>
<td>Edwards</td>
</tr>
<tr>
<td>Clinical case studies with antibiotics</td>
<td>Edwards</td>
</tr>
<tr>
<td>Antivirals and Antifungals</td>
<td>Canman</td>
</tr>
<tr>
<td>Clinical case studies with antiviral and anti fungal drugs</td>
<td>Edwards</td>
</tr>
<tr>
<td>Review Session?</td>
<td></td>
</tr>
<tr>
<td>Exam</td>
<td>Canman/Traynor</td>
</tr>
</tbody>
</table>
Inherently, each one of us has a substance within to achieve whatever our goals and dreams define. What is missing from each of us is the training, education, knowledge, and insight to utilize what we already have.

Mark Twain
Course title: CLINICAL FOUNDATION II
Course number: 621
Term and year: Spring/Summer term, Second year
Location, time, and day: Pre-clinic lab G360
9:00 AM-12:00 Noon Tuesday and Thursday
Course personnel and contact information:

Dr. Mauricio Moeller  Rm. G363C,  647-4152,  moellerm@umich.edu
Dr. Mark Fitzgerald  Rm. 2351,  647-3904,  markfitz@umich.edu

Course description: This course is the foundation for all indirect restorative and fixed prosthodontic procedures. This is a laboratory course supplemented by reading assignments.

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them is measured at the following levels:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>X</em> Foundation</td>
<td><em>X</em> Basic</td>
<td><em>X</em></td>
<td><em>X</em></td>
</tr>
<tr>
<td>___ Application</td>
<td>___ Intermediate</td>
<td>___</td>
<td>___ Advanced</td>
</tr>
</tbody>
</table>

Competencies addressed: This course teaches foundation knowledge regarding the biologic basis and technical aspects of all indirect restorative and fixed prosthodontic procedures. It aims to develop in the student the behaviors and attitudes required for developing the following competencies defined in the document Competencies for the New Dental Graduate: 2, 3, 5, 14. (a), (b), (f) and (g); 16 (b).

How acquisition of knowledge, skills, attitudes, and behaviors required to meet the competencies is measured: Development toward meeting competencies 2, 3, and 5 is measured by means of a Criteria-based self assessments and Row Instructor evaluations. Development toward meeting competencies 14 and 16 is measured by means Criteria-based Independent Projects

Goals and Requirements:

On completion of this course the graduating student should:

• Understand nomenclature and instrumentation used in clinical dentistry
• Develop basic psychomotor skills for clinical dentistry
• Use management and clinical self-evaluation skills in delivering clinical dental care
• Apply basic occlusal function and stability principals to restorative procedures.
• Apply factors of biological and mechanical design for the preparation of teeth for extracoronal cast gold, metal ceramic restorations and all-ceramic restorations.
• Apply factors of biological and mechanical design for complex amalgam restorations and foundational restorations

Textbooks:

RA = reading assignment


## Course #621
### Schedule Spring/Summer 2011

**Session Information:**

<table>
<thead>
<tr>
<th>Tuesday</th>
<th>Thursday</th>
</tr>
</thead>
</table>
| **May 3** | - Intro. to Course  
- Review of Hanau Articulator  
- Mounting Wade models and equilibration |
| **May 5** | - Adjust new typodont to shimstock occlusion |
| **May 10** | - Diagnostic Waxing: #3 and 30  
RA: Shill: pp335-354 |
| **May 12** | - Diagnostic Waxing (con’t) |
| **May 17** | - Diagnostic Waxing (con’t)  
MiDent training |
| **May 19** | - Occlusal adjustment of typodont  
- Complex Amalgams  
Tooth #13 - Fractured buccal cusp  
RA: Shill: pp 76, 181-187  
Sumnic: pp. 321-335 |
| **May 4** | Independent Project I  
- Diagnostic waxing |
| **May** | - Complex Amalgams  
Tooth #30 - Fractured lingual cusps |
| **May 31** | - Complete Complex amalgams |
| **June 2** | - Full gold crown preparations.  
RA: Shill: pp 119-141 |
| **June 7** | Independent Project II  
- Complex Amalgams |
| **June 9** | - Full gold crown preparations (con’t) |
| **June 14** | - PVS Impressions  
- (FPD #19-21)  
Shill: pp 260-267, 281-284, 299-302 |
| **June 16** | - Simulated restoration using acrylic.  
RA: Shill pp 225-227 |
| **June 28** | - Simulated restoration using acrylic |
| **June 30** | - Simulated restoration using acrylic |
| **July 5** | - Simulated restoration using acrylic |
| **July 7** | - Finishing and delivering cast restorations.  
RA: Shill: pp 385-412 |
| **July 12** | Independent Project III  
- FGC prep |
| **July 14** | - PFM Preparations  
RA: Shill pp 142-154, 455-462 |
| **July 19** | PFM Preparations |
| **July 21** | PFM Preparations |
| **July 26** | - All-ceramic preparations.  
RA: Shill: pp 155-169, 175-178 |
| **July 28** | - All-ceramic #8 Preparation |
| **Aug. 2** | Independent Project IV  
- Acrylic interim restoration. |
| **Aug. 4** | - Impression # 8, opposing cast, IOR |
| **Aug. 9** | Impressions and Die fabrication |
| **Aug. 11** | - Die fabrication |
| **Aug. 16** | Trimming dies and Mounting case.  
RA: Shill: pp 321-330 |
| **Final Exam** | Independent Project V  
- PFM prep and Acrylic interim restoration. |
Outcome Competencies

Upon completion of this course the student should:

- Understand the nomenclature and instrumentation used in the clinical restorative discipline for indirect single tooth restorations
- Develop the basic psychomotor skills for clinical restorative discipline for indirect single tooth restorations and perform them in a simulated clinical environment, including the interaction with peers.
- Use time management and clinical self-evaluation skills in delivering clinical restorative care using indirect single tooth restorations, performing them in a simulated clinical environment, including the interaction with peers and completing procedures within a scheduled clinic session.
- Apply basic occlusal function and stability principals to indirect single tooth restorative procedures, performing them in a simulated clinical environment, including the interaction with peers.
- Apply the factors of biological and mechanical design for the placement of indirect single tooth restorations, performing them in a simulated clinical environment, including the interaction with peers.

Tests of Competency:

- Knowledge and psychomotor skills evaluated using 5 independent project examinations.
- Independent projects evaluated using published criteria that the students use in daily work.
Course Directors and Information

Dr. Mauricio Moeller  Rm. G363C,  647-4152,  moellerm@umich.edu
Dr. Mark Fitzgerald  Rm. 2351,  647-3904,  markfitz@umich.edu

Grading:

Grades in this course will be determined based on the following:

1. Daily Projects (completed in a timely manner and following protocol)
2. Attendance
3. Independent projects

At the beginning of the year every student will start with 105 points. As you proceed through the year, points will be deducted based on grades earned, or failure to follow protocol. Points are earned on the Independent Projects. Points are lost by failing to following proper procedures and/or failure to complete daily projects in a timely or acceptable manner. Each student receives 5 extra credit points.

Attendance:

Attendance is of primary importance. Important demonstrations are given and critical points are made during the course of a class period. It is not possible to scribe notes to adequately transmit this information. Attendance will be taken at the course director's discretion. Class starts at 9:00 AM and ends at noon. Demonstrations will begin at 9:00 am. The doors will be locked at 9:05 am to prevent disruptions during the demonstrations. Do not attempt to enter after the doors are locked. Once the demonstration is completed, the doors will be opened. Attendance will be taken during the time that doors are locked. For each absence, 1 point is deducted from the total points. Any attempt to enter after the doors are locked or any behavior that, in the eyes of the course directors, is unprofessional or disruptive will result in additional points lost. Five extra points (that is why you start with 105) are given to provide five absences or tardies. There is no differentiation between tardy, excused or unexcused. In the practice of dentistry, whenever you are not at chairside, you lose income. The same is true in this class. Do not misuse the five extra credit points you have been given on frivolous tardies or absences. You never know when a real emergency will come up and you will need them. You will be treated as adults and as adults; we make decisions as to what is important and establish priorities.

Work missed due to unexcused absences will receive a "0" grade. In order for an absence to be excused, it must be on record with the Registrar on the day of the absence. The decision as to whether an absence is excused or unexcused is at the discretion of the course directors. Excused absences are allowed for sickness and death
in the family. Just because you informed the registrar, does not mean the absence is excused. Absences due to observation of religious holidays and observances must be on record with the course directors within the first week of class. This requires a typed written note, given to Kari by Week 2, no exceptions. We will make every effort to accommodate these absences. (Note: these absences will still result in loss of one point. That is why you are given five extra credit points to allow for emergencies and planned absences.) Make-up Independent Projects missed due to excused absences are the responsibility of the student. All missed Independent Projects must be made up within two weeks of the original date or December 8 whichever is earlier.

**Daily Projects:**

For each Daily Project there is a Daily Project sheet. When you have completed your project, you must complete a self-evaluation, if indicated (mark with a circle), have your row instructor complete an evaluation using the same sheet (mark with a large X). All projects will be evaluated as: Acceptable/Poor/Fail (A/P/F). The P and F are both considered deficient and demonstration of lack of competence. On selected daily projects (noted on the Daily project sheet) receiving an “F” will result in loss of 0.5 points. Keep all evaluation sheets in the three ring binder you received for this course. If there is any question as to whether you have competed these, you must have these in your records. Once you have completed this, have your row instructor sign your Daily project sheet. You must turn in the originals, top copy, to Kari. The colored copy is for your records to be kept in your three ring binder. You are responsible for maintaining this. This is your proof that you have finished these projects. The projects themselves must be put into a plastic coin envelope and turned into Kari. Each project has a “No Later Than:” (NLT) date. For every late day that they are turned in, 1 point is deducted from your original 105 points. All projects must be turned in by 12:00 Noon on the due date.

**Row Instructors Reports:**

On an “as needed” basis, your row instructor may be completing reports on individual basis. The purpose of these reports is to aid communication between course directors, row instructors and students and document potential problems. We try to identify potential problems as quickly as possible. Your row instructor in a form with three copies will complete these reports. One copy will be given to the student; one to the course directors and the instructor will retain one. This report will also be used to assign tutors to students. If you feel that you need a tutor and have not been assigned one, please talk to Dr. Moeller. It is not possible to assign tutors to all students, therefore students who fail daily projects and/or independent projects will receive first priority. These reports should not be viewed negatively but they should be viewed as evidence of concern for your well-being and progress. If you receive a report recommending a tutor, and do not receive one, it is your responsibility to notify Dr. Moeller in writing in order to correct this.
Independent Projects (IPs)

The majority of your grade is determined by your performance on the Independent Projects. The major goal of this course is to prepare you to work in clinic on real patients. This is your last "preclinic" experience before entering the Comprehensive Care Clinics. We are responsible to certify that you are prepared to enter into Comp Care. For this reason we try to simulate actual clinic conditions in this course, including taking the Independent Projects. Comp Care clinics are very busy with many students, patients and faculty working in harmony to provide the highest quality comprehensive patient care. Working in this environment requires being able to interact with faculty, patients and peers while maintaining one's composure and focus, while instilling confidence in the patient. The clinician must be able to make sound decisions in this environment. This can be stressful; it is important for the student to understand that this is part of the preclinical preparation for clinic. In addition, in the clinic, being able to start and complete procedures within the 3-hour time framework is imperative. Patients cannot be dismissed in the middle of a procedure. For this reason, the time given for each Independent Project is an essential and integral part of the examination. Part of working in clinic is learning to manage time, being organized, prepared, anticipating and adapting to the unforeseeable. These requirements are all an integral part of this course and each Independent Project.

It is not our goal to create unnecessary stress, but it is a natural part of clinic activity. We strive to do everything possible to have the Independent Projects organized in order to prevent adding unnecessary stress. Any suggestions you may have to help in this endeavor are welcomed and encouraged.

There will be five Independent Projects. Each will have a minimum of two parts. Each part will receive a separate grade and will be worth a specific number of points. The total number of points possible combined for all of the independent projects will be 100 points. The lowest passing grade on an independent project will be C-. There will be no D's.

Points earned or lost

Points will be earned or deducted based on the following schedule no points awarded for failure:

- **A+** = You earn 104% the points or you earn extra points
- **A** = 100% of the points or you lose no points
- **A-** = 93% of the points or lose 7% of the points
- **B+** = 88% of the points or lose 12% of the points
- **B** = 85% of the points or lose 15% of the points
- **B-** = 80% of the points or lose 20% of the points
- **C+** = 78% of the points or lose 22% of the points
- **C** = 75% of the point or lose 25% of the points
- **C-** = 70% of the points or lose 30% of the points
F = 0 points

Protocol:

As we proceed through this course, you will notice that some of the procedures and protocols prescribed by the course directors in the daily live demonstrations, are different from that described in your manuals. In some cases, a row instructor may show you a special way to do something. In the event of discrepancies, the procedures and protocols prescribed by the course directors are the ones to be followed.

Grading and Re-Grades:

Drs. Moeller, Fitzgerald and O'Kray will grade the Independent Projects. All Independent Projects will be graded by three faculty. You will be given the opportunity to review these once they are returned. The grades are not open for debate. If a student attempts to debate any grade, they will be warned, if the unprofessional behavior continues, points will deducted at the discretion of the course directors. If there is an error in the math or recording of the grade, Kari can make these corrections. Independent Projects are scheduled on Tuesdays. We will try to grade these the following Wednesday, posting the grades as soon as possible. You will be required to self-evaluate your independent projects. If your evaluation agrees with ours on 70% of the criteria, we will give extra credit by raising the lowest grade on that independent project by 1/3 of a grade. If the lowest grade is an F, it cannot be raised.

Appeal of Independent Projects grades

We have established an "appeal process". We will officially return your Independent Projects on the Monday following each practical, barring any unforeseen problems that would make this impossible. When possible, we will make the return earlier on an individual basis: however, students who opt to pick-up their Independent Projects at any time other than the official return day, negate their right to appeal.

Note: There will be certain CRITERIA that will not be appealable, for example: open proximal contacts and high occlusion in centric occlusion.

On the official return day, students will pick-up their blue box with their Independent Projects, carry it to the "REVIEW AREA" as specified by the faculty. Students will not be allowed to discuss or consult with other students during this review process. Students will not be allowed to adjust any screws during the review process. The presence of a screwdriver in the review area or discussion with anyone during the review process will automatically negate a student's right to appeal. Once a student removes their Independent Project from the "review area", an appeal is no longer possible. Students will be given 10 minutes to review their Independent Project and make a decision as to whether they wish to appeal a grade, or grades. If a student decides NOT to appeal, they can take their Independent Project to their lab bench, examine it and discuss it with their bench instructor. If a student decides to appeal, the student shall outline with a Sharpie pen, the "BOXES" on their criteria sheets they wish to appeal. The
student will then give the blue box with the Independent Project and criteria sheets to Kari or a person designated by the course directors. All Independent Projects returned for appeal, will be locked back in the cabinets and secured until the course graders have the opportunity to review them. All "appealed Independent Projects" will be evaluated by all three graders. Only the marked criteria will be re-graded. If the graders agree that the original evaluation should be changed, the grade change will be recorded and the Independent Project returned to the student.

In order to discourage frivolous appeals:

- Each student will be allowed one unsuccessful "appeal" Independent Project per term. If an appeal is successful, the student retains the right to appeal again.

Professionalism:

One of the learning objectives of this course is professionalism and professional responsibility. Cleanliness and organization are critical in the delivery of quality health care. Your lab drawers and contents are University property. There will be periodic inspections of your lab drawers checking for content, cleanliness and organization. These drawers are not for storage. Drawer inspections can occur at any time. These will be pass/fail. FAILURE WILL RESULT IN A 5 POINT LOSS.

Cleanliness in lab attire will be evaluated daily. Maintain a clean professional atmosphere, personally and in the lab area. Lab coats or clinic coats must be worn at all times in the lab. Baseball caps are not permitted. Shorts are not permitted. Anyone found to be wearing a baseball cap or shorts will have points deducted (1 point for the first infraction and 2 for any following). No warning will be given. Shirts and undergarment worn under lab coats must not have any advertisements, slogans or pictures on them. Lab coats MUST be clean. If a student is observed with a dirty lab coat or shirts and undergarment worn under lab coats with any advertisements, slogans or pictures on them. (As determined by any faculty), they will be so informed and must immediately put on a clean lab coat. Failure to do so will result in loss of 5 points. This is not open for debate. Debate will result in loss of additional points. Be sure that you keep a clean lab coat in your locker at all times. It is suggested that you have multiple lab and clinic coats. Always have a clean one available. Ignorance of the rule or failure to hear the warning is not an excuse.

It is your responsibility to keep the lab clean. Throw all waste into proper waste receptacles. If a student is observed, leaving waste on lab benches and/or floor, including pour-up areas and general areas, they will be warned. We do not care if the waste is yours or someone else’s. If immediate corrective action is not taken, points will be deducted. If you see someone throw waste on the floor, point it out to him or her, because if we see it and you are near by, we will ask you to pick it up. The lab will be open nights and weekends.
DO NOT THROW AWAY ANY OF THE PREPARED TEETH THAT WE HAND OUT OR TEETH YOU HAVE PREPARED FOR YOUR DAILY PROJECTS. DO NOT THROW AWAY YOUR DAILY PROJECTS UNTIL YOU HAVE COMPLETED BOTH COURSES #621 and #631. As a professional, you are responsible for maintaining proper records. These are equivalent to records. There is price to pay for loss of records.

Cheating will not be tolerated. Any student determined to be cheating by the faculty will receive an automatic failure on the individual project or exam. In respect for fellow classmates and to insure that the work represents your own effort, there will be no talking during the Independent Projects. Failure to comply will be considered cheating. Failure to follow protocol and/or methodology on daily and Independent Projects is considered cheating. All daily projects must be turned in at the noted time. The Independent Projects must be turned in by 12:00pm. Late projects will not be accepted.

FINAL GRADE:

At the end of the semester you will have earned or retained a given amount of the original 105 points. The final grade is based on the total points earned or the points you have retained. Grades will be calculated as follows:

<table>
<thead>
<tr>
<th>Points</th>
<th>Grade</th>
</tr>
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<tbody>
<tr>
<td>98-100</td>
<td>A+</td>
</tr>
<tr>
<td>94-97</td>
<td>A</td>
</tr>
<tr>
<td>90-93</td>
<td>A-</td>
</tr>
<tr>
<td>77-79</td>
<td>C+</td>
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<tr>
<td>74-76</td>
<td>C</td>
</tr>
<tr>
<td>70-73</td>
<td>C-</td>
</tr>
<tr>
<td>67-69</td>
<td>D</td>
</tr>
<tr>
<td>less than 67</td>
<td>F</td>
</tr>
</tbody>
</table>

87-89 points = B+
84-86 points = B
80-83 points = B-
67-69 points = D
less than 67 points = F
### Daily Project 1 Sign-off Form

**Student Name_________________________________________________________Lab Bench #___________**

| DATE (NLT DATE) | Mounting and Occlusal Adjustment of Viade models  
|                 | Setting Hanau Articulator  
|                 | Occlusal Adjustment of new Typodont  
|                 | Diagnostic wax-up #3 and 30 (four of each)  
|                 | The mounting and occlusal adjustments must be signed off prior to starting waxing. |

Your row instructor must sign off all wax-ups. Your first one of each tooth must have an evaluation sheet completed including your self-evaluation and your faculty's evaluation. Of the remainder, select your best one of each tooth, self evaluate and then have your faculty evaluate it.

**NOTE:** For those teeth not having a formal evaluation sheet completed, the faculty will sign off as "Acceptable/Poor/Fail (A/P/F)". These grades will not be used in determining your course grade but will be used as an documentation of your progress towards competency in this area.

1. **Mounting and occlusal adjustment of Viade models**

<table>
<thead>
<tr>
<th>Inst. signature</th>
<th>Date</th>
<th>A/P/F</th>
</tr>
</thead>
</table>

2. **Occlusal adjustment of new Typodont**

<table>
<thead>
<tr>
<th>Inst. signature</th>
<th>Date</th>
<th>A/P/F</th>
</tr>
</thead>
</table>

3. **Tooth #3**

   **Cusp cone placement:**
   | Inst. signature | Date | A/P/F |
   
   **Cusp ridges and marginal ridges placed**
   | Inst. signature | Date | A/P/F |

   **Triangular ridges placed**
   | Inst. signature | Date | A/P/F |

   **Axial contours**
   | Inst. signature | Date | A/P/F |

   **Finished wax up**
   | Inst. signature | Date | A/P/F |
4. **Tooth #30**

<table>
<thead>
<tr>
<th>Description</th>
<th>Inst. Signature</th>
<th>Date</th>
<th>A/P/F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cusp cone placement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inst. signature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cusp ridges and marginal ridges placed</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inst. signature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Triangular ridges placed</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inst. Signature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Axial contours</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inst. Signature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Finished wax up</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inst. Signature</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above must be completed and signed off by Sept. 8. If signed later than that, 1 point will be deducted

5. **Tooth #3**

<table>
<thead>
<tr>
<th>Description</th>
<th>Inst. Signature</th>
<th>Date</th>
<th>A/P/F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finished wax up</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inst. signature</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. **Tooth #30**

<table>
<thead>
<tr>
<th>Description</th>
<th>Inst. Signature</th>
<th>Date</th>
<th>A/P/F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finished wax up</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inst. Signature</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above must be completed and signed off by Sept. 13. If signed later than that, 1 point will be deducted

7. **Tooth #3**

<table>
<thead>
<tr>
<th>Description</th>
<th>Inst. Signature</th>
<th>Date</th>
<th>A/P/F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finished wax up</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inst. Signature</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. **Tooth #30**

<table>
<thead>
<tr>
<th>Description</th>
<th>Inst. signature</th>
<th>Date</th>
<th>A/P/F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finished wax up</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inst. signature</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above must be completed and signed off by Sept. 15. If signed later than that, 1 point will be deducted

9. **The BEST Tooth #3**
Finished wax up
Inst. signature  Date  A/P/F

(NOTE: an “F” on # 4 results in loss of 0.5 points)  □□ points lost

10. The BEST Tooth #30

Finished wax up
Inst. signature  Date  A/P/F

(NOTE: an “F” on # 4 results in loss of 0.5 points)  □□ points lost

The above must be completed and signed off by Sept. 20. If signed later than that, 1 point will be deducted

TOTAL POINTS LOST ON PROJECT:
1 = MAXIMUM POSSIBLE

□□□
Daily Project 2 Sign-off Form

Student Name______________________________________________Lab Bench #__________

| DATE (NLT DATE) | • Occlusal adjustment of all typodonts.  
|                | • A formal evaluation must be completed for each typodont |

Typodont I Completed

Inst. signature A/P/F Date

(Must be completed prior to starting complex amalgam restoration)

Typodont II Completed

Inst. Signature A/P/F Date

Typodont III Completed

Inst. Signature A/P/F Date
Daily Project 3 Sign-off Form

Student Name____________________________________ Lab Bench #__________

| DATE  (NLT DATE) | Complex amalgams  
|------------------|--------------------
|                  | • Preparation and pin placement  
|                  | • Amalgam restorations on three teeth  
|                  | • Composite core restoration on one tooth  

Your instructor must sign all off. Your first one of each tooth must have an evaluation sheet completed including your self-evaluation and your faculty's evaluation. Of the remainder, select your BEST one of each tooth, self evaluate and then have your faculty evaluate it.

For those teeth not having a formal evaluation sheet completed, the faculty will sign off as "Acceptable/Poor/Fail (A/P/F)". These grades will not be used in determining your course grade but will be used as an documentation of your progress towards competency in this area.

#13 - MOD w/ missing buccal cusp:

This must be completed and signed off by Sept. 22. If signed later than that, 1 point will be deducted

1. **Prep and pin placement**
   Inst. SIG. Date A/P/F
   **Finished restoration**
   Inst. SIG. Date A/P/F

2. **Prep and pin placement**
   Inst. SIG. Date A/P/F
   **Finished restoration**
   Inst. SIG. Date A/P/F

3. **Prep and pin placement**
   Inst. SIG. Date A/P/F
   **Finished restoration**
   Inst. SIG. Date A/P/F

4. **The BEST prep and pin placement**
   Inst. SIG. Date A/P/F
   **The BEST-finished restoration**
   Inst. SIG. Date A/P/F

(Note: an “F” on # 4 results in loss of 0.5 points) □ points lost
#30 - MOD w/ missing lingual cusp

This must be completed and signed off by Sept. 27. If signed later than that, 1 point will be deducted.

1. **Prep and pin placement**
   - Inst. SIG.
   - Date
   - Finished restoration
   - Inst. SIG.
   - Date
   - A/P/F

2. **Prep and pin placement**
   - Inst. SIG.
   - Date
   - Finished restoration
   - Inst. SIG.
   - Date
   - A/P/F

3. **Prep and pin placement**
   - Inst. SIG.
   - Date
   - Finished restoration
   - Inst. SIG.
   - Date
   - A/P/F

4. **The BEST prep and pin placement**
   - Inst. SIG.
   - Date
   - The BEST finished restoration
   - Inst. SIG.
   - Date
   - A/P/F

(NOTE: an “F” on # 4 results in loss of 0.5 points) [ ] points lost

TOTAL POINTS LOST ON PROJECT: [ ]
2 = MAXIMUM POSSIBLE
**Daily Project 4 Sign-off Form**

Student Name__________________________________________________________Lab Bench #__________

<table>
<thead>
<tr>
<th>DATE (NLT DATE)</th>
<th>Full gold crown preparations.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A total of 10 acceptable preparations must be turned in and an evaluation sheet for each one. Your instructor must sign all off. Your first one of each tooth must have an evaluation sheet completed including your self-evaluation and your faculty’s evaluation. Of the remainder, select your best one of each tooth, self evaluate and then have your faculty evaluate it.</td>
</tr>
<tr>
<td></td>
<td>NOTE: For those teeth not having a formal evaluation sheet completed, the faculty will sign off as &quot;Acceptable/Poor/Fail (A/P/F)&quot;. These grades will not be used in determining your course grade but will be used as an documentation of your progress towards competency in this area</td>
</tr>
</tbody>
</table>

**Tooth #30,**

1. Prep  Inst. signature  Date  A/P/F
2. Prep  Inst. Signature  Date  A/P/F
3. Prep  Inst. Signature  Date  A/P/F
4. The BEST Prep  Inst. signature  Date  A/P/F

(Note: an “F” on # 4 results in loss of 0.5 points) □ points lost

The above must be completed and signed off by Oct. 4. If signed later than that, 1 point will be deducted.
**Tooth #14,**

1. Prep  
   Inst. Signature  
   Date  
   A/P/F  

2. Prep  
   Inst. signature  
   Date  
   A/P/F  

3. Prep  
   Inst. signature  
   Date  
   A/P/F  

4. The BEST Prep  
   Inst. signature  
   Date  
   A/P/F  

(NOTE: an “F” on # 4 results in loss of 0.5 points)  

points lost

The above must be completed and signed off by Oct. 6. If signed later than that, 1 point will be deducted.

**Tooth #13,**

1. Prep  
   Inst. signature  
   Date  
   A/P/F  

4. The BEST Prep  
   Inst. signature  
   Date  
   A/P/F  

(NOTE: an “F” on # 4 results in loss of 0.5 points)  

points lost

The above must be completed and signed off by Oct. 6. If signed later than that, 1 point will be deducted.

**TOTAL POINTS LOST ON PROJECT:**

2 = MAXIMUM POSSIBLE
Daily Project 5 Sign-off Form

Student Name_________________________________________________________Lab Bench #__________

<table>
<thead>
<tr>
<th>DATE (NLT DATE)</th>
<th>Impressions for FPD #19-21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Mandibular PVS impression</td>
</tr>
<tr>
<td></td>
<td>• Maxillary alginate impression</td>
</tr>
<tr>
<td></td>
<td>• Inter occlusal record with Blue-Bite</td>
</tr>
<tr>
<td></td>
<td>(No evaluation sheet)</td>
</tr>
</tbody>
</table>

- **Maxillary Alginate Impression: (Cast poured and properly trimmed)**
  
  Inst. Signature  
  A/P/F  
  Date

- **Mandibular PVS Impression:**

  Inst. Signature  
  A/P/F  
  Date

- **Interocclusal record with Blue-Bite:**

  Inst. Signature  
  A/P/F  
  Date

The above must be completed and signed off by Oct. 11. If signed later than that, 1 point will be deducted.
Daily Project 6 Sign-off Form

Student Name_________________________________________________________Lab Bench #________

<table>
<thead>
<tr>
<th>DATE (NLT DATE)</th>
<th>Simulated restoration using acrylic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A total of 8 restorations must be turned in.</td>
</tr>
<tr>
<td></td>
<td>A self-evaluation and a faculty evaluation sheet must be completed for your first one of each tooth and then the best of the other three.</td>
</tr>
<tr>
<td></td>
<td>NOTE:</td>
</tr>
<tr>
<td></td>
<td>For those restorations not having a formal evaluation sheet completed, the faculty will sign off as &quot;Acceptable/Poor/Fail (A/P/F)&quot;. These grades will not be used in determining your course grade but will be used as a documentation of your progress towards competency in this area.</td>
</tr>
</tbody>
</table>

Tooth #30:

1. Rest. Inst. Signature Date A/P/F
2. Rest. Inst. Signature Date A/P/F
3. Rest. Inst. Signature Date A/P/F
4. The Best Rest. Inst. Signature Date A/P/F

(NOTE: an “F” on # 4 results in loss of 0.5 points) □ points lost

The above must be completed and signed off by Oct 20. If signed later than that, 1 point will be deducted.

Tooth #14:

1. Rest. Inst. signature Date A/P/F
2. Rest. Inst. signature Date A/P/F
3. Rest. Inst. signature Date A/P/F
4. THE BEST Rest. Inst. signature Date A/P/F

(NOTE: an “F” on # 4 results in loss of 0.5 points) □ points lost

The above must be completed and signed off by Nov. 27. If signed later than that, 1 point will be deducted.
# Daily Project 7 Sign-off Form

Student Name_________________________________________________________Lab Bench #__________

| DATE (NLT DATE) | • Finishing and delivery of cast gold restoration  
| | • Cementation of provisional restoration  
| Note: | • We will cement the FGC with a provisional cement in order to be able to retrieve the crown for reuse for the upcoming year.  
| | • We will cement the provisional restoration with permanent cement.  
| | (No evaluation sheet) |

1. **Finish #30 raw casting**

   **Prepare #30 for cementation:**

   - Adjust proximal contacts
   - Adjust occlusion
   - Re-polish
   - Cementation with **Temp-Bond**

<table>
<thead>
<tr>
<th>Inst. signature</th>
<th>Date</th>
</tr>
</thead>
</table>

2. **Prepare best provisional restoration (#14) for cementation:**

   **Prepare #14 for cementation**

   - Adjust proximal contacts
   - Adjust occlusion
   - Re-polish
   - Cementation with **Fuji-Plus RMGI**

<table>
<thead>
<tr>
<th>Inst. signature</th>
<th>Date</th>
</tr>
</thead>
</table>

The above must be completed and signed off by Nov. 16. If signed later than that, 1 point will be deducted.
Daily Project 8 Sign-off Form

Student Name_________________________________________________________Lab Bench #__________

<table>
<thead>
<tr>
<th>DATE (NLT. DATE)</th>
<th>• PFM preparations.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A total of 8 acceptable preparations must be turned in and an evaluation sheet for each one. Your instructor must sign all off. Your first one of each tooth must have an evaluation sheet completed including your self-evaluation and your faculty’s evaluation. Of the remainder, select your best one of each tooth, self evaluate and then have your faculty evaluate it.</td>
</tr>
</tbody>
</table>

NOTE: For those teeth not having a formal evaluation sheet completed, the faculty will sign off as "Acceptable/Poor/Fail (A/P/F)". These grades will not be used in determining your course grade but will be used as an documentation of your progress towards competency in this area.

Tooth #3:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prep</td>
<td>Inst. Signature</td>
<td>Date</td>
<td>A/P/F</td>
</tr>
<tr>
<td>2. Prep</td>
<td>Inst. Signature</td>
<td>Date</td>
<td>A/P/F</td>
</tr>
<tr>
<td>3. Prep</td>
<td>Inst. Signature</td>
<td>Date</td>
<td>A/P/F</td>
</tr>
<tr>
<td>4. The BEST Prep</td>
<td>Inst. Signature</td>
<td>Date</td>
<td>A/P/F</td>
</tr>
</tbody>
</table>

(NOTE: an “F” on # 4 results in loss of 0.5 points) □ points lost

The above must be completed and signed off by Nov. 3. If signed later than that, 1 point will be deducted

Tooth #13:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prep</td>
<td>Inst. Signature</td>
<td>Date</td>
<td>A/P/F</td>
</tr>
<tr>
<td>2. Prep</td>
<td>Inst. signature</td>
<td>Date</td>
<td>A/P/F</td>
</tr>
<tr>
<td>3. Prep</td>
<td>Inst. signature</td>
<td>Date</td>
<td>A/P/F</td>
</tr>
<tr>
<td>4. The BEST Prep</td>
<td>Inst. signature</td>
<td>Date</td>
<td>A/P/F</td>
</tr>
</tbody>
</table>

(NOTE: an “F” on # 4 results in loss of 0.5 points) □ points lost

The above must be completed and signed off by Nov. 10. If signed later than that, 1 point will be deducted

TOTAL POINTS LOST ON PROJECT: □
1.5 = MAXIMUM POSSIBLE
Daily Project 9 Sign-off Form

Student Name_________________________________________________________Lab Bench #__________

| DATE (NLT DATE) | • All-ceramic preparation  
• Total of 4 all-ceramic preparations |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Your instructor must sign all off. Your first one must have an evaluation sheet completed including your self-evaluation and your faculty’s evaluation. Of the remainder, select your best one, self evaluate and then have your faculty evaluate it.</td>
</tr>
<tr>
<td></td>
<td>NOTE: For those restoration not having a formal evaluation sheet completed, the faculty will sign off as &quot;Acceptable/Poor/Fail (A/P/F)&quot;. These grades will not be used in determining your course grade but will be used as an documentation of your progress towards competency in this area</td>
</tr>
</tbody>
</table>

• Tooth # 8

<table>
<thead>
<tr>
<th></th>
<th>Inst. Signature</th>
<th>Date</th>
<th>A/P/F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Prep</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Prep</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above must be completed and signed off by Nov. 10. If signed later than that, 1 point will be deducted

• Tooth #7

<table>
<thead>
<tr>
<th></th>
<th>Inst. Signature</th>
<th>Date</th>
<th>A/P/F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Prep</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Prep</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

The above must be completed and signed off by Nov. 15. If signed later than that, 1 point will be deducted
## Daily Project 10 Sign-off Form

Student Name_________________________________________________________Lab Bench #__________

<table>
<thead>
<tr>
<th>DATE (NLT DATE)</th>
<th>Impressions, Die fabrication and mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Maxillary PVS impression for all-ceramic crown on #8 (2X: one for lab; one for die fabrication exercise)</td>
</tr>
<tr>
<td></td>
<td>• Mandibular alginate impression poured and trimmed</td>
</tr>
<tr>
<td></td>
<td>• Interocclusal record with Blue Bite</td>
</tr>
<tr>
<td></td>
<td>• Shade selection</td>
</tr>
<tr>
<td></td>
<td>• Lab script</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maxillary Impression (PVS):</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Impression</td>
</tr>
<tr>
<td>2 Impression</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mand. Impression poured and trimmed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inst. Signature</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interocclusal record with Blue-Bite:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inst. Signature</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shade Selection:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inst. Signature</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab script:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inst. Signature</td>
</tr>
</tbody>
</table>

The above must be completed and signed off by Nov 22. If signed later than that, 1 point will be deducted.
• First pour in die stone for working cast with pins in place:

  Inst. Signature   A/P/F   Date

• Trimmed dies:

  Inst. Signature   A/P/F   Date

  The above must be completed and signed off by Nov. 29. If signed later than that, 1 point will be deducted.

• Mounted casts:

  Inst. Signature   A/P/F   Date

  The above must be completed and signed off by Dec. 1. If signed later than that, 1 point will be deducted.
# Daily Project 11 Sign-off Form

Student Name_________________________________________________________Lab Bench #___________

<table>
<thead>
<tr>
<th>DATE (NLT DATE)</th>
<th>• CAD/CAM Exercise</th>
</tr>
</thead>
</table>

- **CAD/CAM Exercise #1**
  - Inst. signature
  - A/P/F
  - Date

- **CAD/CAM Exercise #2**
  - Inst. signature
  - A/P/F
  - Date
### Summary of Independent Projects:

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>PROCEDURES</th>
<th>POINTS</th>
<th>TOTAL POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Project I</td>
<td>Diagnostic waxing</td>
<td>Wax-up max. #3 Wax-up mand. #30</td>
<td>10 points 10 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent Project II</td>
<td>Complex Amalgams</td>
<td>Preparation #1 Preparation #2 Restoration. #1 Restoration #2</td>
<td>5 points 5 points 5 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent Project III</td>
<td>FGC preparation</td>
<td>Preparation #1 Preparation #2</td>
<td>10 points 10 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent Project IV</td>
<td>FGC prep and simulated rest.</td>
<td>Preparation Restoration</td>
<td>10 points 10 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent Project V</td>
<td>PFM prep and simulated rest.</td>
<td>Preparation Restoration</td>
<td>10 points 10 points</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

Each procedure will receive a separate grade and you will receive points based on the scale printed earlier in the handout. In this manner you will receive 12 separate independent grades.
## Calculation Of Final Grade For Course # 621

You can calculate your final grade using the following chart:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent based on Table I</th>
<th>Point value</th>
<th>Points earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Misc.</td>
<td>5</td>
<td>= 5</td>
<td></td>
</tr>
<tr>
<td>IP I - Max. Wax-up</td>
<td>X 10</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>IP I - Mand wax-up</td>
<td>X 10</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>IP II - Preparation</td>
<td>X 5</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>IP II - Preparation</td>
<td>X 5</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>IP II - Amal. rest</td>
<td>X 5</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>IP II - Amal. rest</td>
<td>X 5</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>IP III - FGC prep.</td>
<td>X 10</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>IP III - FGC prep.</td>
<td>X 10</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>IP IV - FGC prep.</td>
<td>X 10</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>IP IV - Sim. Rest.</td>
<td>X 10</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>IP V - FGC prep.</td>
<td>X 10</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>IP V - Sim. Rest.</td>
<td>X 10</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>Points lost</td>
<td>-</td>
<td>=</td>
<td></td>
</tr>
<tr>
<td>Final Total</td>
<td>105</td>
<td>Sum of above = 105</td>
<td></td>
</tr>
</tbody>
</table>
• Everyone has been given 5 extra points, which can be lost based on the variables outlined in your syllabus.

• Points will be earned or deducted based on the following schedule no points awarded for failure:

- A+ = you earn 104% of the points or you earn extra points
- A  = 100% of the points or you lose no points
- A-  = 93% of the points or lose 7% of the points
- B+  = 88% of the points or lose 12% of the points
- B   = 85% of the points or lose 15% of the points
- B-  = 80% of the points or lose 20% of the points
- C+  = 78% of the points or lose 22% of the points
- C   = 75% of the points or lose 25% of the points
- C-  = 70% of the points or lose 30% of the points
- F   = 0 points

• The final grade is based on the total points earned or the points you have retained. Grades will be calculated as follows:

- 98-100 points = A+
- 94-97 points = A
- 90-93 points = A-
- 87-89 points = B+
- 84-86 points = B
- 80-83 points = B-
- 77-79 points = C+
- 74-76 points = C
- 70-73 points = C-
- 67-69 points = D
- Less than 67 points = F
Row Instructor Report

Date: ___________________

Faculty: ___________________

Student name: ___________________

Student bench # ______

Description of student’s problem:
_______________________________________________________________________________________________________
_______________________________________________________________________________________________________

Rx tutor: Yes NO

Comments:
_______________________________________________________________________________________________________
_______________________________________________________________________________________________________

Faculty signature: _______________
### E-CUTTER USAGE AND CARE

#### Recommended E-cutter type and speed:

<table>
<thead>
<tr>
<th>Material</th>
<th>Procedure</th>
<th>Tooothing/Speed (rpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model Plaster</strong></td>
<td>Bulk material reduction on wet and dry plaster</td>
<td>SGE 10,000</td>
</tr>
<tr>
<td></td>
<td>Bulk material reduction on wet and dry plaster</td>
<td>GE 10,000</td>
</tr>
<tr>
<td></td>
<td>Trimming stone dies</td>
<td>E/EF 10,000</td>
</tr>
<tr>
<td><strong>Acrylic and Composite Appliances</strong></td>
<td>Trimming</td>
<td>E/EA/EF/Q 15,000</td>
</tr>
<tr>
<td>and Restorations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Soft Reline: Denture</strong></td>
<td>Trimming</td>
<td>GSQ/FSQ 15,000</td>
</tr>
<tr>
<td><strong>Acrylic Trays</strong></td>
<td>Trimming</td>
<td>E/EA/Q 15,000</td>
</tr>
<tr>
<td><strong>Acrylic and Composite Veneers</strong></td>
<td>Trimming - contouring</td>
<td>UK/E 15,000</td>
</tr>
<tr>
<td></td>
<td>Corrections - smoothing of surfaces</td>
<td>UK/E/EF 15,000</td>
</tr>
<tr>
<td><strong>Denal Ceramics:</strong></td>
<td>Trimming - contouring - Corrections - smoothing of surfaces</td>
<td>UK 15,000</td>
</tr>
<tr>
<td>Veneers - Inlays - Crowns</td>
<td>Shaping occlusal surfaces</td>
<td>UK 15,000</td>
</tr>
<tr>
<td><strong>Precious Metals:</strong></td>
<td>Trimming - contouring</td>
<td>UM/E 15,000</td>
</tr>
<tr>
<td>Inlays - Crowns - Bridges</td>
<td>Corrections - smoothing of surfaces</td>
<td>UM/EF/EUF 15,000</td>
</tr>
<tr>
<td></td>
<td>Shaping occlusal surfaces</td>
<td>UM/EF 10,000 - 15,000</td>
</tr>
<tr>
<td></td>
<td>Roughening of the surfaces prior to veneering</td>
<td>DF 12,000</td>
</tr>
<tr>
<td><strong>Non-precious Metal Alloys:</strong></td>
<td>Trimming - contouring</td>
<td>E/UM/EF 15,000</td>
</tr>
<tr>
<td>Crowns - Bridges</td>
<td>Corrections - smoothing of surfaces</td>
<td>UM/EF 15,000</td>
</tr>
<tr>
<td></td>
<td>Shaping occlusal surfaces</td>
<td>UM/EF 15,000</td>
</tr>
<tr>
<td></td>
<td>Roughening of the surfaces prior to veneering</td>
<td>DF 12,000</td>
</tr>
<tr>
<td><strong>Model Cast:</strong></td>
<td>Trimming - contouring</td>
<td>E/EA 15,000</td>
</tr>
<tr>
<td>Denture Bases or Metal Framework</td>
<td>Corrections - smoothing of surfaces</td>
<td>EF 15,000</td>
</tr>
<tr>
<td><strong>Titanium: Implant</strong></td>
<td>Trimming - contouring</td>
<td>FSQ 15,000</td>
</tr>
</tbody>
</table>

#### Insertion of Bur:

Open the chuck by turning the Bur Lock Ring in a counter-clockwise manner. Once the chuck is opened, fully seat the bur in the chuck until it won’t progress further. Once fully seated, turn the Bur Lock Ring in a clockwise manner until it clicks into the locked position. Always make sure the bur lock ring is fully locked prior to starting the handpiece. *Only 3 – 5mm of shank will be exposed if properly seated.*

Following bur insertion, use the above grid to determine the proper recommended speed based on the type of E-cutter being utilized, the type of material being cut, and the procedure being performed.
Each white line around the speed control dial represents ~ 4,000 RPMs.

*** NEVER RUN A BUR IN THE HANDPIECE THAT HAS NOT BEEN FULLY SEATED ***
*** NEVER ATTEMPT TO UNLOCK THE CHUCK WHILE THE HANDPIECE IS RUNNING ***

Removal of Bur and Post-use Maintenance:
After use, ensure the handpiece has come to a complete stop. Open the chuck by turning the Bur Lock Ring in a counter-clockwise manner. Once the chuck is unlocked, remove the bur.

Following bur removal, utilize a steel scratch cleaning brush to remove debris from the E-cutter. Additionally, use the Black Bench Top Air Hose to blow any loose/excess debris out of the chuck of the handpiece.
Syllabus Template

Course title:  Fundamentals of Periodontics

Course number: D530

Term and year:  D1 Spring (lectures & lab/clinic) and Summer (lab/clinic)

Location, time, and day:  Lectures on Mondays, 3-4 p.m., room G378 during the Spring Term, Clinical/lab sessions, Tuesday or Thursday afternoons during the Spring/Summer Term, based on the master schedule provided (27 students per session, so each student will have lab one half day every 2 weeks).

Course personnel and contact information.

Course Director:
Jill Bashutski
jillbash@umich.edu
Rm 3349

Course instructors:
Phil Richards
philrich@umich.edu
Rm 3343

Henry Temple
henryjt@umich.edu
Rm 3323C

Carla Harrel
tipton@umich.edu
Rm 3323?

Grace Cucuru
cucuru@umich.edu
Rm 3397
Course description.
This course is designed to develop a comprehensive approach to the maintenance of oral health, drawing together the training and experiences of the first year into a culmination of actual patient care. Coordination of several disciplines will lead to provision of a dental health maintenance appointment, including taking and recording medical and dental histories, blood pressure determination when indicated, examination of soft and hard tissues, possible radiographs, classification, diagnosis, dental prophylaxis, topical fluoride treatments when indicated, personal oral health instruction, behavioral considerations and recommendations for further treatment. Aspects of initial non-surgical periodontal therapy (diagnosis and scaling and root planing) will be introduced in the latter part of the course.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

1a. Practices as obliged by principles of ethics and the ADA Code of Ethics.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>_Foundation</td>
<td>_X_Basic</td>
<td><em>X</em></td>
<td><em>X</em></td>
</tr>
<tr>
<td>_X_Application</td>
<td>_Intermediate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>_Advanced</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4b. Routinely evaluates outcomes of clinical practice.

<table>
<thead>
<tr>
<th>Knowledge</th>
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<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>_X_Foundation</td>
<td>_X_Basic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>_X_Application</td>
<td>_Intermediate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>_Advanced</td>
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</tr>
</tbody>
</table>

5a. Demonstrates effective interpersonal skills to establish rapport, obtain complete and accurate information from patients, and answer patient’s questions and address patient’s concerns.

5b. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventive measures, and obtain informed consent.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>_X_Foundation</td>
<td>_X_Basic</td>
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<tr>
<td>_X_Application</td>
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<tr>
<td></td>
<td>_Advanced</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6a. Identifies patient values, expectations and goals for oral health care.

6b. Obtains and records the chief complaint of the patient and the history of the present illness.

6c. Establishes and maintains the patient record as a document of patient encounters.

6d. Identifies and records the patient's medications, their potential effects on oral and systemic health, and
their impact on treatment.

6e. Recognizes the oral manifestations of systemic disease and how the disease and its management may affect the delivery of dental care.

6f. Initiates necessary consultations or referrals to clarify questions related to the patient's health.

<table>
<thead>
<tr>
<th>Knowledge</th>
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<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>_X_Foundation</td>
<td>_X_Basic</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>_X_Application</td>
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<td>_</td>
</tr>
<tr>
<td>_Advanced</td>
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</tbody>
</table>

7a. Performs/records the findings of an appropriate behavioral assessment and physical examination not limited to the head and neck.

7b. Performs and records the findings of intraoral examinations.

7c. Performs/orders and records findings of other diagnostic procedures and tests as necessary.

7d. Identifies and assesses conditions that place patients at increased risk for disease.

7e. Identifies patient behaviors that impact oral and systemic health.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
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<th>Behaviors</th>
</tr>
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<td>_</td>
</tr>
<tr>
<td>_Advanced</td>
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</tr>
</tbody>
</table>

8a. Differentiates between health and disease.

8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>_X_Foundation</td>
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<td>_</td>
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<tr>
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<td>_</td>
</tr>
<tr>
<td>_Advanced</td>
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</tr>
</tbody>
</table>

9c. Plans oral health instruction and treatments that include health promotion and maintenance care.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
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</tr>
</thead>
<tbody>
<tr>
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<td>_</td>
</tr>
<tr>
<td>_X_Application</td>
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<td>_</td>
</tr>
<tr>
<td>_Advanced</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14c. Periodontal therapy.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
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<td>_X_Basic</td>
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<td>_</td>
</tr>
<tr>
<td>_X_Application</td>
<td>_Intermediate</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>_Advanced</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
16a. Establishes and maintains an environment that protects against transmission of disease.
16b. Implements protocols that establish and maintain an environment that protects against environmental hazards.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>__Foundation</td>
<td>_X_Basic</td>
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</tr>
<tr>
<td>_X_Application</td>
<td>__Intermediate</td>
<td>__</td>
<td>Advanced</td>
</tr>
</tbody>
</table>

7. How progression toward competency or competency is measured.
Student development toward competency is measured using daily grading of lab/clinic exercises, written examinations and periodic quizzes.

Objectives.
Upon completion of this course the student should be able to:
- Describe and use assessment instruments to collect information about the periodontal status of patients
- Describe the anatomy of periodontal health and disease
- Describe the data needed to provide a periodontal diagnosis and stability assessment for a patient
- Describe and provide an effective plaque control program for periodontal patients including motivation and individual behavioral considerations
- Describe and use therapeutic instruments to provide non-surgical therapy for a periodontal patient, including scalers, universal/site-specific curets, and ultrasonic instrumentation.
- Describe and use the correct technique for using assessment and therapeutic instruments to collect data and provide therapy for a periodontal patient
- Describe appropriate treatment strategies for patients with diagnoses of health, gingivitis, and periodontitis
- Describe the role of a dental prophylaxis and supportive periodontal therapy in maintaining periodontal health and perform these procedures
- Describe and use a patient chart/record system used to record periodontal data
- Perform a complete prophylaxis on a patient
- Describe and perform the mechanical and biologic principles of periodontal root instrumentation, including scaling, ultrasonic scaling and root planing

Session information.
Jill Bashutski and Phil Richards will provide the lectures for the course. Lab faculty will include all individuals identified above.
Spring/Fall Semester

<table>
<thead>
<tr>
<th>Date</th>
<th>Week</th>
<th>Lecture</th>
<th>Lecturer</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2</td>
<td>1</td>
<td>Therapeutic instruments IV: ultrasonic scalers</td>
<td>Bashutski</td>
<td>Therapeutic instruments: Partners: ultrasonic scalers</td>
</tr>
<tr>
<td>May 9</td>
<td>2</td>
<td>Therapeutic instruments V: special considerations</td>
<td>Bashutski</td>
<td></td>
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<tr>
<td>May 16</td>
<td>3</td>
<td>Complete prophy sequence (Start to finish)</td>
<td>Bashutski</td>
<td>Complete prophy sequence: Partners</td>
</tr>
<tr>
<td>May 23</td>
<td>4</td>
<td>What is stability</td>
<td>Bashutski</td>
<td></td>
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<tr>
<td>May 30</td>
<td>5</td>
<td>Home care products</td>
<td>Richards</td>
<td>Complete prophy sequence: Partners</td>
</tr>
<tr>
<td>Jun 6</td>
<td>6</td>
<td>Health behavior 2</td>
<td>Richards</td>
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<tr>
<td>Jun 13</td>
<td>7</td>
<td>Scaling and Root Planing techniques</td>
<td>Richards</td>
<td>Complete prophy sequence: Patient</td>
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<tr>
<td>Jun 20</td>
<td>8</td>
<td>Final exam</td>
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<tr>
<td>Jun 27</td>
<td>9</td>
<td></td>
<td></td>
<td>Complete prophy sequence: Patient</td>
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<td>Jul 4</td>
<td>10</td>
<td></td>
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<td>Complete prophy sequence: Patient</td>
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<td>Jul 11</td>
<td>11</td>
<td></td>
<td></td>
<td>Complete prophy sequence: Patient</td>
</tr>
<tr>
<td>Jul 18</td>
<td>12</td>
<td></td>
<td></td>
<td>Complete prophy sequence: Patient</td>
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<tr>
<td>Jul 25</td>
<td>13</td>
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<td>Aug 1</td>
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<tr>
<td>Aug 8</td>
<td>15</td>
<td></td>
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<tr>
<td>Aug 15</td>
<td>16</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Final Exam:** June 20, 2011 8-10am  
Old Simulation Lab (Rm G340)  
OSCE format
Textbooks/ Readings:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page Numbers*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical and Operator Position</td>
<td>9-43</td>
</tr>
<tr>
<td>Grasp</td>
<td>49-63</td>
</tr>
<tr>
<td>Dental Mirror, Wrist Position, Fulcrum</td>
<td>65-75</td>
</tr>
<tr>
<td>Examination Instruments</td>
<td>161-163, 175, 185-196, and 243-272</td>
</tr>
<tr>
<td>Scaling Instruments (Universal Curettes)</td>
<td>149-160,185-214 &amp; 307-329</td>
</tr>
<tr>
<td>Periodontal Examination</td>
<td>217-240</td>
</tr>
<tr>
<td>Infection Control</td>
<td>Infection Control Manual Sec. 2 &amp; 3 Dental School Intranet</td>
</tr>
<tr>
<td>Scaling Instruments (Gracey Curets)</td>
<td>333-354</td>
</tr>
<tr>
<td>Sickle Scalers</td>
<td>285-303</td>
</tr>
</tbody>
</table>

Examination/grading policies.
Performance in the course will be assessed using written and OSCE examinations on course material which include MCQs, matching, T/F, fill in the blank, and short answer questions. In addition, daily lab evaluations will be used to provide feedback.

The assessments are weighted as follows to determine your final grade:
- 70% Final OSCE examination
- 20% Lab/clinic assignments
- 10% Quizzes

The grading scale is as follows. The student must achieve a grade of 70% or better to pass the course. Remediation will be required for students scoring <70%

94-100 A
90-93 A-
87-89 B+
84-86 B
80-83 B-
77-79 C+
74-76 C
70-73 C-
60-69 D
00-59 E

Other information: The time allotted for the clinical/lab portion of this course is shared among various lab and clinical activities and only ¼ of the class will participate at any given time. Students must refer to the master schedule provided to them in order to identify the times and locations for their own individual sessions.
**Grading for D522:**
This course is a pass/fail course. The perio portion of the grade (45%) will be determined from a letter grade from each lab session (6 total) based on the following criteria:

- Meeting assignment deadlines
- Handing in all assignments
- Attending all sessions
- Preparedness for sessions
- Staying for the complete session
Course title. Neoplasia: General Concepts and Oral Cancer (“The Patient with Neoplasia”)

Course number.

Term and year. Spring D1

Location, time, and day.

Course personnel and contact information.
Nisha D’Silva
Periodontics and Oral Medicine,
Dental School, Rm G018

Course description. This course provides the foundation and intermediate knowledge and skills for tumor biology and oral cancer. It will expand upon the knowledge gained in Oral Environment II. Learning will take place through lectures and case-based discussion of a progression of Neoplasia topics. In order to develop the background knowledge required to participate actively in the discussion, the student will need to complete assigned readings in the textbook and review material covered in the Oral Mucosa section of the Oral Environment II course. The course will have a lecture and case-based format.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

<table>
<thead>
<tr>
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<tr>
<td>_X_Foundation</td>
<td>_X_Basic</td>
<td>___</td>
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<tr>
<td>_X_Application</td>
<td>_X_Intermediate</td>
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</tbody>
</table>

Competencies Addressed:
“The graduating student…”

Competency 4a: “incorporates methods of science and scientific inquiry into clinical practice by using information systems and other resources to access the knowledge base.”

Competency 7:
7b. Performs and records the findings of intraoral examinations.
7d. Identifies and assesses conditions that place patients at increased risk for disease.
7e. Identifies patient behaviors that impact oral and systemic health.

Competency 8: “determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.”
8a. Differentiates between health and disease.
8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases.

**How progression toward competency or competency is measured.**
The final grade will be based on examinations with multiple choice, true/false and clinical cases. Each exam will be between 50-100 points. Lecture material and text assignments will be the subject matter for the tests. The exams will be comprehensive and will also draw on material from the Oral Environment II and Diagnostic Sciences I courses. The “Patient with Neoplasia” course is built upon integration and accumulation of ideas and concepts.

**Testing and Grading**
1. There will be two examinations including a final examination, which will account for 100% of the final grade. Each exam will be between 50-100 points. They will be spaced proportionately throughout the semester. Lecture material and text assignments will be the subject matter for the tests. The factual matter in the tests will be cumulative, unless otherwise specified for specific topics. The content and ideas will frequently carry over from lecture to lecture and test to test. The course is built upon merging and accumulation of ideas and concepts.

2. A number grade will be given for each test. Each student score will be accumulated through and including the final exam. Letter grades will then be assigned as shown in the table below.

3. 70% or above, is required to pass the course.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100%</td>
<td>80-89%</td>
<td>70-79%</td>
<td>65-69%</td>
<td>64% and below</td>
</tr>
</tbody>
</table>

**Objectives.**
To equip students with the information and skills necessary to:
1. Understand the fundamentals of neoplasia including nomenclature, clinical features of benign and malignant tumors, mechanisms of tumor growth and spread and laboratory diagnosis of a tumor.
2. Understand the molecular basis of cancer and the factors that regulate tumor growth.
3. Understand the molecular pathogenesis, demographics, risk factors, diagnostic tests, clinical presentation and basics of management of oral cancer.
<table>
<thead>
<tr>
<th>Date</th>
<th>Time (hours)</th>
<th>Topic</th>
<th>Synopsis</th>
<th>Reading</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>Introduction to neoplasia</td>
<td>Basic definitions Basic nomenclature Naming neoplasms Concepts of benign vs malignant tumors</td>
<td></td>
<td>D’Silva</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Salivary gland tumors</td>
<td>Benign and Malignant</td>
<td></td>
<td>D’Silva</td>
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<tr>
<td>1</td>
<td></td>
<td>Patient visit</td>
<td></td>
<td></td>
<td>Cote</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Concepts in Carcinogenesis Biology of Tumor Growth</td>
<td>Kinetics of growth Angiogenesis Progression Mechanisms of invasion Carcinogenic agents Host defense against tumors</td>
<td></td>
<td>Polverini</td>
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<tr>
<td>1</td>
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<td>Benign, Premalignant Epithelial Lesions</td>
<td>White and Red</td>
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<td>Edwards</td>
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<tr>
<td>1</td>
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<td>Neoplastic epithelial lesions</td>
<td>Oral Cancer: Diagnostic Tests Risk factors</td>
<td></td>
<td>Edwards</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td><strong>Mid-Term Exam</strong></td>
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<td>D’Silva</td>
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<tr>
<td>1</td>
<td></td>
<td>Neoplastic epithelial lesions</td>
<td>Oral Cancer: Demographics, and Presentation by Location and Clinical Appearance Metastatic disease to the oral cavity</td>
<td></td>
<td>D’Silva</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Neoplastic epithelial lesions</td>
<td>Oral Cancer: Management Grading and staging of tumors Effects of tumor on host</td>
<td></td>
<td>Ward</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Anti-neoplastic drugs</td>
<td>Classes of drugs Drug resistance Alkylating agents</td>
<td></td>
<td>Carey</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Soft tissue tumors</td>
<td></td>
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<tr>
<td>2</td>
<td></td>
<td>Hematopoietic malignancies</td>
<td></td>
<td></td>
<td>Edwards</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td><strong>Final Exam</strong></td>
<td></td>
<td></td>
<td>D’Silva</td>
</tr>
</tbody>
</table>
Textbooks
REQUIRED TEXTS:
Required textbooks:
Robbins Pathologic Basis of Disease, 8th edition
Kumar, Fausto, Abbas, Aster
Saunders Publishers.

Oral and Maxillofacial Pathology (3rd edition)
Neville, Damm, Allen and Bouquot.
ISBN 1416034358
Course title: Principles of Occlusal Development and Orthodontic Diagnosis

Course number: 531(?)

Term and year: Spring, 2011 (students- Classes of 2014 and ITDP 2013)

Location, time, and day: Thursdays, 8:00 am -12:00 pm. G360 and G340 for testing

Course personnel and contact information:
Course Director- Richard A. Johnson, D.D.S., M.S. (canne@umich.edu)
Staff- Second and Third year Orthodontic Residents
Course Assistant Kari Gregerson (kgreg@umich.edu)

Course description:
Part I: Occlusal Development-
Introduction to the dynamic process of dental occlusal development within the growing and aging face. It emphasizes the proper sequence and timing and introduces students to the role of the family dentist in managing important events in the transition from the primary to the mixed and from the mixed through to the early permanent dentition. Long term normal aging changes are also studied. Topics are presented briefly with introductory lectures, however, the majority of class time is spent in student problem-solving exercises, using duplicated dental models, x-rays and photographs. Much of the diagnostic material is accessible on the course internet sites (UMSD MiTools and UM CTools)

Part II: The Problem Solving Approach to Orthodontic Diagnosis-
Introduction to adult orthodontic diagnosis and problem solving, utilizing data from:
1) facial and intra-oral photographs;
2) dental study models poured from alginate impressions and trimmed, using an interocclusal wax bite registration
3) panoramic, periapical and cephalometric radiographs
These “diagnostic records” are analyzed during class time, and problem/treatment options lists developed for each real or simulated patient studied.
Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

Major:

4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.
   The graduating student…
   4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care (knowledge- foundation and skills- basic).

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
   The graduating student…
   8c. Determines differential and/or provisional diagnoses for developmental disorders of the oro-facial complex (knowledge- foundation and skills- basic)

9. The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses.
   The graduating student…
   9a. Identifies treatment options (knowledge- foundation and skills- basic)

Minor:

14. The graduating student provides oral health care to treat/manage craniofacial and dental diseases/disorders and their effects, including:
   14g. Management of space and treat/management of malocclusion (knowledge-foundation).

16. The graduating student applies the principles of infection control and environmental safety to clinical practice.
   The graduating student…
   16a. Establishes and maintains an environment that protects against transmission of disease.
   16b. Implements protocols that establish and maintain an environment that protects against environmental hazards. (knowledge-foundation and skills-intermediate)

How competency is measured:
Part I- instructor evaluation of in-class and homework exercises and one short answer, case-based quiz
Part II- instructor evaluation of in-class, homework and clinical exercises along with one short answer, case based quiz and a summative short answer and objective case-based final examination.
Objectives:

**Part I, Occlusal development**

*Know:*
- The Angle occlusal classification system and be able to apply it to the recognition of malocclusion
- Stages of normal dental development, including calcification, eruption/emergence and exfoliation
- Size differences between the primary and permanent teeth
- Expected developmental changes in arch size/perimeter and tooth position without treatment

*Be familiar with:*
- Nomenclature of tooth position (Labioversion, linguoversion, etc.)

*Be able to:*
- Identify teeth on dental casts, photographs and radiographs
- Using radiographs, casts, and photographs, determine the “dental age” of patients
- Classify malocclusion on dental casts and photographs
- Complete a Tanaka-Johnston mixed dentition analysis when given tooth size and arch perimeter values

**Part II, the Problem Solving Approach to Orthodontic Diagnosis**

*Know:*
- Skeletal basis for malocclusion in the three planes of space

*Be familiar with:*
- The cephalometric method, including: 1) tracing techniques; 2) measurement/analysis; 3) population standards vs. “norms” vs. “ideals”; 4) superimposition to assess treatment and growth effects; and, 5) fallacies and limitations.
- How to collect diagnostic data and develop a problem list for an adult patient
- The “generic” treatment alternatives for dental and skeletal orthodontic problems in adults.

*Be able to:*
- Perform adequate infection control procedures for alginate impressions
- Select trays for and collect adequate alginate impressions on a partner with an uncomplicated, dentulous mouth
- Take an occlusal bite registration for the trimming of orthodontic study models in “centric occlusion” and understand the difference between this “wax bite” and other occlusal registrations used in dentistry
- Locate cephalometric landmarks, trace and record measures for an adequate adult lateral cephalogram
- Perform a “Facial Form Analysis” and relate the results to cephalometric measures for the same patient
- Judge the adequacy of a set of adult orthodontic study models
- Complete an orthodontic analysis on a set of adequate orthodontic study models
- Complete an orthodontic analysis of a panoramic x-ray
- Produce a problem / treatment alternative list from a duplicated adult data set.
- Fully utilize class time by participating in class and completing course exercises in the lab
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td></td>
<td>8:30 (G360)</td>
<td>In class problem solving exercises I (classification, etc., internet or hard copy records)</td>
</tr>
<tr>
<td></td>
<td>9:00 (G360)</td>
<td>In class problem solving exercises II (classification, etc., internet or hard copy records)</td>
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<tr>
<td></td>
<td>10:45 (G360)</td>
<td>In class problem solving exercises (timing and sequence, developmental stages, etc.)</td>
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<tr>
<td>In your mailbox</td>
<td>Homework exercises I (internet radiographic, etc.) distributed (references, Bishara, Chapters 5 and 6, pages 53-65 and 531 manual).</td>
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</tr>
<tr>
<td>May 12</td>
<td>8:15 (G360)</td>
<td>Homework exercise I due at 8:15 and discussion Development of Occlusion III (arch dimensional and occlusal changes during the exchange of primary to permanent teeth; M.D.A., effect of differential growth of the maxilla and mandible) Bishara, Chapter 7, pages 66-80 and Chapter 12, pages 134-144 (we will use the Tanaka-Johnston M.D.A. on page 142) and in the Manual, Day 2) Also Ch. 18, pages 266-275.</td>
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<tr>
<td></td>
<td>9:15 Break</td>
<td>In class problem solving exercises II (occlusal development, Tanaka-Johnston M.D.A.)</td>
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<td></td>
<td>9:30 (G360)</td>
<td>Finish exercises</td>
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<td>10:30 Break</td>
<td>Practice quiz, Q and A. session</td>
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<tr>
<td>Note:</td>
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<td>room assignment depends on need for G360 by Class of 2012 in Molar Endo</td>
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<tr>
<td>May 19</td>
<td>8:00 (G340)</td>
<td>Quiz #1 on Occlusal Development</td>
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<tr>
<td>Part II: The Problem Solving Approach to Orthodontic Diagnosis</td>
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<tr>
<td>8:45 (G360)</td>
<td>Diagnostic Data I: Alginate impressions for study models</td>
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<tr>
<td>9:00 (Clinics)</td>
<td>Alginate impressions and occlusal bite registration on a partner.</td>
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<tr>
<td>11:00 (Lab)</td>
<td>Pouring of impressions. Manual, Days 3 &amp; 4</td>
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<tr>
<td>May 26</td>
<td>8:15 (G360)</td>
<td>Quiz #1 discussion</td>
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<td>Time</td>
<td>Event</td>
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<tr>
<td>8:30</td>
<td>The dental basis for malocclusion and adult study model analysis</td>
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<td></td>
<td>Bishara, (see also Day 1) Chapter 12, pages 134-144</td>
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<tr>
<td>9:00</td>
<td>Study model analysis with partner/own models</td>
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<tr>
<td>9:45</td>
<td>Break</td>
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<tr>
<td>10:00</td>
<td>Finish analyses and discussion</td>
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<tr>
<td>11:00</td>
<td>In class problem solving exercises III</td>
<td></td>
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<tr>
<td></td>
<td>In your mailbox Homework exercises II distributed</td>
<td></td>
</tr>
</tbody>
</table>

**June 2**  
8:15  (G340)  Homework exercise II due and discussion  
**8:30**  (G340)  Quiz #2  
9:15  Break  
9:30  (G360)  Introduction to Radiographic Analysis. Bishara, Chapter 9, page 112 and Manual, Day 5; Diagnostic Data II: Radiographic Problem Solving Exercises  
10:15  Break  
10:30  (G360)  In class problem solving exercise III (and discussion)  
In your mailbox  Homework Exercise III

**June 9**  
8:15  (G360)  Homework Exercise III due and discussion  
8:30  (G360)  Skeletal Basis for Malocclusion. Bishara, Chapter 9, pages 98-10  
9:00  (G360)  Introduction to Radiographic Cephalometrics (adult). Bishara, Chapter 10, pages 113-125 & Manual, Day 5 (exercises, predoctoral norms, etc.)  
9:15  Break  
9:30  (G360)  Diagnostic Data II: Cephalometrics and Cephalometric Exercises. Manual day 5, Correlation with “Facial Form.”  
10:30  Break  
10:45  (G360)  Diagnostic Data III: Clinical Examination- Facial Form Analysis. Manual, Day 5, Cephalometric exercises; Bishara, Chapter 9, pages 104-105)  
11:15  (G360)  In class Problem Solving Exercise III and discussion.  
11:30  (G360)  Course summary and practice final exam (answers posted on CTools ))

**June 14**  
9:00  (G340)  Final Examination (120 minute time limit)  

**Textbooks/ Readings**  
The 531 Course Manual

**Examination/grading policies.**
• All examinations are open book notes, including returned homework exercises and use of MiTools and CTools data. Laptops are permissible with webcams turned off or covered,
• Grades are based on numerical total of 100 possible points, using Foundation I scale.
• Make-ups must be scheduled personally with Dr. Johnson, assuming excused absence

Other information.
• Notify Dr. Johnson or Kari if you must miss class in an emergency or schedule ahead with Dr. Johnson
• Unexcused absences will result in a 5 point deduction due to the inconvenience to your partner.
Course title: Orthodontic Problems in Children: Diagnosis and Treatment Options

Course number: 642(?)

Term and year: Summer, 2011. Students- Classes of 2014 and ITDP 2013 (?)

Location, time, and day: Thursdays (?) 8:00 – 10:00, 9:00-11:00 or 10:00 -12:00 pm. G360 (and G340 for testing if ITDP included)

Course personnel and contact information:

Course Director- Richard A. Johnson, D.D.S., M.S. (cannes@umich.edu)

Faculty- Mark E. Berkman, D.D.S., M.S. (mberkman@umich.edu)

Course Assistant= Kari Gregerson (kgreg@umich.edu)

Course description:
A course in orthodontic diagnostic procedures for children as used in the predoctoral orthodontic patient evaluation clinics here at UMMS and in general practice. Emphasis is placed on early recognition of the most commonly seen skeletal and dental orthodontic problems of the primary, mixed, and young permanent dentitions using a rigorous, step-by-step clinical examination scheme and diagnostic data analyses learned in course 531. Treatment options for each problem are studied with expected outcomes based on a survey of published studies. Topics are presented briefly with focused lectures, however, much of class time is spent in a discussion format, with student groups completing problem-solving exercises, using simulated and real patient diagnostic data accessible on the course internet sites, the course manual and a textbook.

Which Competencies are addressed and for EACH competency covered, what domain (knowledge, skills, attitudes, behaviors) and at what level:

4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.
   The graduating student...
   4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care (knowledge- foundation and basic; application and skills- basic and intermediate).

5. The graduating student communicates effectively with patients and colleagues.
   The graduating student.....
   5c. Demonstrates effective interpersonal skills in consultation and referrals (knowledge-foundation, attitudes and skills-basic).

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
   The graduating student…
8c. Determines differential and/or provisional diagnoses for developmental disorders of the oro-facial complex (knowledge- foundation and basic; and skills- basic and intermediate)

9. The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses.

The graduating student…

9a. Identifies treatment options (knowledge- foundation and skills- basic)

14. The graduating student provides oral health care to treat/manage craniofacial and dental diseases/disorders and their effects, including:

The graduating student…

14g. Management of space and treatment/management of malocclusion (knowledge and skills- intermediate)

How competency is measured:
Instructor evaluation of in-class and home work exercises, two case-based, objective quizzes and a summative objective case-based final examination.

Objectives:

Know:
- The skeletal basis for malocclusion in all three planes of space
- The dental basis for malocclusion in the primary, mixed and early permanent dentitions.
- The appropriate diagnostic data needed to adequately assess the most common orthodontic problems of children.
- The “generic” treatment alternatives for dental and skeletal orthodontic problems in children.
- How to differentiate the “complex” from the “simple” orthodontic problems in children.
- The appropriate developmental age to refer each type of complex problem to the specialist

Understand:
- Facial and oral muscle imbalances affecting the dentition and occlusion of the child patient.
- The biologic basis for “dento-facial orthopedics.”

Be able to:
- For a child patient, using data from a clinical examination and interview, pertinent radiographs, and extra- and intraoral photographs produce an adequate problem/treatment option list.

Session information:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 30</td>
<td>10:00</td>
<td>Introduction to the course format, rules, requirements and deadlines for homework</td>
</tr>
</tbody>
</table>
10:10  “Orthodontic Triage” for Children and In-class exercise #1 and group discussions
10:30  Summary session for exercise #1
10:50  Break
11:00  “Space Problems I” and exercise #2 in groups
11:20  Summary session for exercise #2
11:40  Introduction to Space Problems II- Early loss of Primary Teeth and homework assignment

July 7
10:00  Homework #1 due at 10:00 and discussion
10:10  Space Problems II- In-class exercise #3 in groups
10:25  Summary Session for Ex. #3
10:40  Introduction to Space Problems III- Anomalies and other Complex Problems
10:55  Break
11:05  In class Exercise #4 in groups
11:25  Summary Session for Ex. #4
11:40  Review of Space problems and discussion of Quiz #1 next week

July 14
10:00  Quiz #1
10:40  Introduction to Crossbites- In-class Exercise # 5 in groups.
11:00  Break
11:10  Summary Sessions for Ex. 5
11:30  Introduction to Vertical Problems and homework #2 assignment

July 21
10:00  Homework #2 due at 10:00 and Quiz #1 Discussion
10:20  Summary Session for Vertical Problems
10:50  Introduction to Skeletal Problems and In-class Exercise #6
11:00  Break
11:10  Finish Ex. #6
11:20  Summary Session for Ex. #6 and discussion of Quiz #2 next week

July 28
10:00  Quiz #2
10:40  The Biologic Basis for Dento-facial Orthopedics (Dr. Berkman)
11:10  Break
11:20  Dr. Berkman (cont’d). Homework #3 assignment

August 4 10:00  Homework #3 due at 10:00 and discussion
10:10  In-class Summative Exercises and Case Studies #7 in groups
10:30  Summary Session for Ex. 7
10:50  Break
11:00 In-class Exercise #8 and case studies as Course Summary
11:20 Summary Session for Ex. #8
11:40 Summary and Final Exam preparation

August 11 10:00 Final Exam

Textbooks/ Readings
- The 642 Course Manual

Examination/grading policies.
- All examinations are open book notes, including returned homework exercises and use of MiTools and CTools data. Laptops are permissible with webcams turned off or covered,
- Grades are based on numerical total of 100 possible points, using Foundation II scale.
- Make-ups must be scheduled personally with Dr. Johnson, assuming excused absence
- Exams will not be returned. They will be available, along with a key, in Kari’s office for study. Challenges or other questions must be in writing on a 3x5 card labeled with honor no.

Other information.
- Notify Dr. Johnson or Kari if you must miss class in an emergency or schedule ahead with Dr. Johnson
Course title: Principles of Restorative Dentistry
Course number: 614
Term and year: Spring and Fall term, Second year
Location, time, and day: G322, 8-8:50 AM Tuesday Fall
To be announced Thursday Winter

Course personnel and contact information.

Dr. Mauricio Moeller Rm. G363C, (734) 647-4152, moellerm@umich.edu
Dr. Mark Fitzgerald Rm. 2351, (734) 647-3904, markfitz@umich.edu

Course description:

This course is the lecture compliment to the Foundation laboratory courses #621 and #631. It is a lecture/discussion format presenting the theoretical and philosophical support for all indirect restorative and fixed prosthodontic procedures. It is supplemented with reading assignments.

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them is measured at the following levels:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>X</em> Foundation</td>
<td><em>X</em> Basic</td>
<td><em>X</em></td>
<td><em>X</em></td>
</tr>
<tr>
<td>___ Application</td>
<td>___ Intermediate</td>
<td>___ Advanced</td>
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</table>

Competencies addressed:

This course presents the theoretical and philosophical foundation knowledge regarding the biologic basis and technical aspects of all indirect restorative and fixed prosthodontic procedures. It aims to develop in the student the behaviors and attitudes required for developing the following competencies defined in the document Competencies for the New Dental Graduate 14. (a), (b), (f) and (g)

How acquisition of knowledge, skills, attitudes, and behaviors required to meet the competencies is measured:

- Development toward meeting is measured by means of 3 written examinations
Goals and Requirements:

On completion of this course the graduating student should:

• Understand nomenclature and instrumentation used in clinical restorative dentistry.
• Understand the clinical restorative procedures and principles used in the delivery of indirect restorations and fixed prosthodontics.
• Understand the basic occlusal function and stability principals to restorative procedures.
• Understand the biological and mechanical design factors for the preparation of teeth for indirect restorations and fixed prosthodontics.
## Session information:

<table>
<thead>
<tr>
<th>DATE</th>
<th>SUBJECT</th>
<th>Reading Assignment</th>
</tr>
</thead>
</table>
|      | Introduction to course | Fitzgerald  
Restoration of extensively damaged teeth | Shill: pp. 76, 181-187  
Summit: pp. 321-335 |
|      | Restoration of extensively damaged teeth (con't.) | Fitzgerald  
Shill: pp. 76, 181-187  
Summit: pp. 321-335 |
|      | Principles of crown preparations – Margin design | Moeller  
Shill: pp. 119-179 |
|      | Principles of crown preparations – Retention and resistance design | Moeller  
Shill: pp. 119-179 |
|      | Provisional restoration design and fabrication | Moeller  
Shill: pp. 225-256 |
|      | Working Casts and dies | Moeller  
Shill: pp. 309-334 |
|      | Written Examination-covers all material covered in lecture and preclinic lab up to this point |  |
|      | Mid-term break |  |
|      | ¾ crowns, inlays and onlays-gold and ceramic | Fitzgerald  
Shill: pp. 155-168, 171-179  
Summit: pp. 476-497, 506-516 |
|      | ¾ crowns, inlays and onlays-gold and ceramic (con't.) | Fitzgerald  |
|      | All ceramic preparation design and restoration | Moeller  
Shill: pp. 433-454 |
|      | Tissue management | Fitzgerald  
Shill: pp. 260-268 |
|      | Metal ceramic restoration design | Moeller  
Shill: pp. 455-483 |
|      | Cements and luting agents | Fitzgerald  
Shill: pp. 400-415 |
|      | Written Examination-covers all material covered in lecture and preclinic lab |  |
**Winter term**

<table>
<thead>
<tr>
<th>DATE</th>
<th>SUBJECT</th>
<th>Reading Assignment</th>
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<tbody>
<tr>
<td>Session 1</td>
<td>Principles of fixed prosthodontics</td>
<td>Moeller</td>
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<tr>
<td></td>
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<td>Shill: pp. 85-179</td>
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<tr>
<td>Session 2</td>
<td>Principles of fixed prosthodontics</td>
<td>Moeller</td>
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<td>Shill: pp. 85-179</td>
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<td>Session 3</td>
<td>Color and esthetic considerations</td>
<td>Fitzgerald</td>
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<td></td>
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<td>Shill: pp. 419-4314</td>
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<td>Session 4</td>
<td>Treatment planning of Fixed Partial Dentures</td>
<td>Moeller</td>
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<td></td>
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<td>Shill: pp. 85-179</td>
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<tr>
<td>Session 5</td>
<td>Restoration of endodontically treated teeth</td>
<td>Fitzgerald</td>
</tr>
<tr>
<td></td>
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<td>Shill: pp.181-209</td>
</tr>
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<td>Session 6</td>
<td>Pontic design</td>
<td>Moeller</td>
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<tr>
<td></td>
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<td>Shill: pp.485-507</td>
</tr>
<tr>
<td>Session 7</td>
<td>Written Examination-covers all material covered in lecture and preclinic lab up to this point</td>
<td></td>
</tr>
</tbody>
</table>

**Textbooks/readings:**


**Examination/grading policies:**

**Attendance:**

Kari will take attendance with 1 point lost for each absence starting with your second absence. Attendance is mandatory and will be taken at each session as determined by course directors. Each student will have an assigned seat according to lab bench number. Doors will be locked at 5 minutes after the hour, and will be opened after attendance has been taken. Students coming in after attendance has been taken must sit in the front row. If there is not sufficient room in the first row, the overflow can sit in the back row. No one is allowed to sit on the stairs or chairs brought into the room. **Baseball caps are not permitted in lecture.** If students use the lecture as an opportunity to sleep, they will be asked to leave. Students failing to comply with class protocol will be asked to leave. Students, who are asked to leave, will be marked as absent. Any unprofessional behavior will result in lost of points.
Examinations:

The examinations will cover any and all material presented. The questions will deal with both the “why” and the “how”. The total points earned on the 3 examinations will be averaged and a grade assigned using the following schedule:

<table>
<thead>
<tr>
<th>Points Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>98-100</td>
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<td>94-97</td>
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<td>90-93</td>
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<td>77-79</td>
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<tr>
<td>74-76</td>
<td>C</td>
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<tr>
<td>Less than 67</td>
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<tr>
<td>87-89</td>
<td>B+</td>
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<td>84-86</td>
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<td>67-69</td>
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<tr>
<td>70-73</td>
<td>C-</td>
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</tbody>
</table>

All written examinations in this course are time limited. Time limits for each exam will be written on the exam and announced at the beginning of the exam. Exams not handed in by the time announced during the exam are subject to point deductions at the discretion of the faculty.
Course Title               Integrated Medical Sciences – Respiratory System

Course Number              DENT 645

Term and Year              Winter 2011

Location, Time & Day       Location: Varies – Dental Building G322 for most large lectures, labs, and exams, Medical Sciences building II for select anatomy lectures and labs time: see attached lecture schedule. Day: M-F.

Course Personnel and Contact Information

Course Director            Course Manager

Dr. B. Craig Cornwall      Sherry McCune
UM Hospital TC B1 208      763-3337
bcwall@med.umich.edu       mccunes@umich.edu
                         Suite 1208

Dr. Michael Hortsch

Course Description/Nature of Course Content

This course is designed to continue introduction of basic biology of human health and disease, as well as to provide students with an intensive learning experience to integrate the acquired basic biomedical knowledge base as the foundation for clinical decision-making and clinical patient care. This module will review basic information and provide in-depth information about the normal structure, derivation, organization, and functions of the Respiratory System as well as the alterations in structure and function associated with diseases and/or disorders associated with this system including their pharmacologic treatment/management. Finally, dental therapeutics will provides students in-depth information about the effects of frequently prescribed drugs on patients that must be considered during the planning and delivery of oral health care. It also provides in-depth information on special considerations for prescribing drugs frequently used in the practice of dentistry.

Competencies are addressed and acquisition of knowledge, skills, attitudes, and behaviors required to meet them is measured at the following levels:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Foundation</td>
<td>X Basics</td>
<td>X</td>
<td>X</td>
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<tr>
<td>X Application</td>
<td>X Intermediate</td>
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<td></td>
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<td></td>
<td>X Advanced</td>
</tr>
</tbody>
</table>
1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
   The graduating student......
   1a. Practices as obliged by principles of ethics and the ADA Code of Ethics

2. The graduating student participates in professional self-regulation.
   The graduating student......
   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
   2b. Understands the need for and establishes a plan for personal/professional growth and development.

3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.

4. The graduating students communicate effectively with patients and colleagues.
   The graduating student......
   4a. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventive measures, and obtain informed consent.

5. The graduating student performs records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.
   The graduating student......
   5a. Performs/orders and records findings of other diagnostic procedures and tests as necessary.
   5b. Identifies and assesses conditions that place patients at increased risk for disease.
   5c. Identifies patient behaviors that impact oral and systemic health.
   5d. Identifies the signs and symptoms of medical emergencies.

6. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
   The graduating student......
   6a. Differentiates between health and disease.
   6b. recognizes medical emergencies.

7. The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses.
   The graduating student....
   7a. Develops treatment plans that reflect the impact of systemic disease and its management on the provision of oral health care.
   7b. Develops treatment plans that reflect the impact of disabilities on the provision and maintenance of oral health care.
8. The graduating student monitors and provides for patient comfort associated with oral health care. The graduating student......
   8a. Uses pharmacological agents to provide for control of pain and anxiety.

9. The graduating student manages medical emergencies.

10. The graduating student promotes health maintenance and disease prevention by collaborating with the patient to create an individualized self-care program.

How acquisition of knowledge, skills, attitudes, and behaviors are required to meet the competencies is measured.

Assessment methods:

Student performance will be assessed using the following examination strategies.

Examinations
An examination will be given at the end of the module. This examination will be in multiple-choice, T/F, and short answer format and will include one or more case scenarios. The examinations will cover all module material but will also cover material from previous modules. Examination scores will constitute 100% of the grade for this module. Those that do not pass the module exam with a grade of 69.5% will be required to do remediation work and take a remediation exam for that module.

Module Remediation Examinations
These examinations will be comprehensive in that they will cover all module material, not just material with which a student had particular difficulty. Questions may be multiple-choice, T/F, short answer and/or essay format. Students will be given the opportunity to increase their grade to the lowest passing score of 69.5%. Students must pass remediation exams with a grade of 69.5% in order to be eligible to remediate the final exam. Those who do not successfully pass a module remediation exam will not be eligible to remediate the final exam should they fail the final course examination.

Intervention for Success (IFS) Program: the purpose of the IFS program is to support the highest level of student success in IMS-IV and to assist students in developing skills required for self-assessment and lifelong learning. IMS-IV is an intense learning experience, and our goal in offering IFS is to minimize the likelihood that students will fall behind.

After the module exam, remediation worksheets will be posted for completion. As in IMS-II, it will only be necessary to answer remediation questions corresponding to items missed on the exam.

- Those with scores below 89.5% on any given exam will be required to complete a remediation worksheet by the stated deadline.

- Those with scores below 69.5% on any given exam will be required to complete a remediation worksheet and meet with the course director, Dr. David Brzezinski, by the stated deadline.
Those with scores of 89.5% or higher on any given exam may choose to or not to complete the remediation worksheet. Those who complete and submit remediation worksheets by the stated deadline for all exams, whether required or not, will receive 0.5 percentage points on their overall course score at the end of the term.

The goal of Intervention for Success is to help students identify and address unmet learning needs and to ensure students receive needed or desired academic support. Any work assigned by Drs. Cornwall or Hortsch must be completed and is required to pass the course. Any student with a failing grade will be required to take a remediation exam (as described above) after completing IFS requirements.

Goals and Requirements:

The major goals of this course are to assist students in acquiring the biomedical knowledge base and critical appraisal skills required to perform a comprehensive review of patient's health histories, analyze the results of diagnostic tests, seek appropriate information from other health professionals and to use all of this information in the development of appropriate dental diagnoses and oral health maintenance and treatment plans, including appropriate referral to other health care professionals. To successfully complete this course the student must be able to apply basic science knowledge to the solution of clinical problems.

The density of material and rapid pace requires attendance at all class meetings.

Session Information

See attached lecture schedule.

Textbooks/Readings

Some faculty will assign reading, while others will expect you to read as means of self-directed study and to supplement material covered in class. Texts for this course include:

Anatomy
ISBN: 0781794853 (paperback)

ISBN: 0875638066 (paperback)

ISBN: 0781721660 (hardback)

One of the following atlases:

ISBN: 0781751039 (paperback)


**Dental management (Required)**

**Histology (Required)**


**Microbiology (Recommended)**

**Pathology (Required)**

**Pharmacology**

**Physiology**

**Web Site**
General course information and lecture slides will be posted on the CTools site for the course.

Go to: [https://ctools.umich.edu/](https://ctools.umich.edu/)
Select “Login” from the upper right hand corner of the home page
Login using your umich user/pass
Select “Dent 646 001 F08” from the tab style top navigation
Select “Resources” from the left navigation
Select the name of the module from the content area, etc.

**Method of Evaluation**

**Examination/Grading Policies**
Examination Review

Exams will not be posted, but a post-exam review will be held after the module exam. Reproducing (memorizing & transcribing, copying, photographing, etc.) exam questions in any way is a violation of the Honor Code. Additionally, if you are aware IMS questions are being reproduced, it is your responsibility to notify the course director; refraining from doing so is an Honor Code violation.

Module Grade

Because the entire course is competency-based, the course cannot be passed should the student fail the final examination. Should the student fail the final examination, remediation of the examination will only be permitted if the student has successfully passed all module examinations.

A passing grade of 69.5% must be achieved to pass the module.

Grading Scale

Grades will be awarded as follows (rounding down from .4 and up from .5):

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<th>Percentage</th>
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<td>90-95</td>
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</table>
Course Title: The Patient with Periodontal Disease, 1 and 2

Course Number: XXX

Term and Year: Segment 1: D2 Spring and D2 Summer (1 session per week)  
Segment 2: D2 Fall (1 session per week)

Location, Time, Day: Thursday morning, 8-9 am is the initial assumption upon which the associated lecture dates are based

Course Personnel and Contact Information: Course Coordinators: Dr. Phil Richards, philrich@umich.edu 
Dr. J. Christopher Fenno, fenno@umich.edu

Course Description: This course:
1. introduces the structures and biology of the periodontium
2. outlines the microbial features and mechanisms of periodontal health and disease
3. differentiates the host defenses and pathogenic processes underlying periodontal diseases
4. describes the many periodontal diseases and their characteristics/behaviors
5. serves as the scientific foundation for the provision of periodontal therapy

Key Concepts:
1. The periodontium is unique, complex and in many cases, vulnerable
2. Periodontal health and periodontal disease represents a spectrum of possibilities
3. Periodontal status is influenced by both local and systemic factors
4. Periodontal diagnoses are based on a thorough analysis and understanding of scientific evidence

Pre-Requisite Knowledge and Skills: This course assumes only a general foundational knowledge of biomedical sciences.

Intended Learning Outcomes – Objectives: Upon completion of the course, the student will be able to:
• discuss general principles of periodontal patient management in clinical practice
• describe the periodontal tissues and specifically, the gingival sulcus environment
• describe the tissue characteristics and structural variations seen in the periodontium as well as how these features are recorded/measured
• characterize the inflammatory and immune processes that defend and/or destroy the periodontium
• describe the factors influencing the composition and development of microbial biofilms and the importance of these deposits in periodontal health and various disease states
• outline the importance of plaque-retentive factors, including dental calculus, on periodontal health and disease
• define and characterize specific periodontal disease entities by major and minor categories
• describe the microscopic characteristics and progression of inflammatory periodontal diseases
• discuss the importance of systemic diseases, conditions and habits/behaviors in periodontal health and disease
• outline the clinical and histological "impact" of occlusal forces on periodontal structures and disease processes
• describe epidemiological indices, prevalence, patterns of progression and risk factors for periodontal diseases
• characterize the clinical features of periodontal health and disease conditions and how these elements may influence prognosis
• describe potential influences of periodontal diseases on systemic health and wellness
• understand the roles for the different members of the dental care team in managing periodontal treatment needs

Support Which Clinical Science Courses?: This course will provide the required foundation knowledge to support the initial clinical skill development and patient care experiences in preventive periodontics (particularly the clinical elements of course #530) as well as the subsequent periodontal therapy didactic curriculum and general dentistry and periodontal patient care clinical activities.

Learning Activities: Primarily lecture-based instruction, utilizing literature-based and case-based examples whenever possible.

Assessment of Learning Outcomes – How competency is measured:
1. Multiple choice, True/False, short answer and short essay examinations
2. Case analysis assignments as preparation for classroom discussions
3. Possibly literature review or summary writing assignments…

Achieving the Defining Characteristics of the U-M School of Dentistry Graduate:
This course will enhance the focus and depth of understanding of the topics within the realm of the underlying subject matter. This will be achieved by including elements that were previously presented in several separate courses and integrating them into a single course sequence. The focus on the influence of gingival inflammatory events in the context of systemic health will be presented here and will also be coordinated with other offerings in other courses and clinical activities.

Topics – Session Information:

Segment 1 (Spring/Summer)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/5/2011</td>
<td>The periodontal patient – concepts and expectations</td>
<td>Richards</td>
</tr>
<tr>
<td>5/12/2011</td>
<td>Structures and functions of the periodontium – part 1</td>
<td>Richards</td>
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<tr>
<td>5/19/2011</td>
<td>Structures and functions of the periodontium – part 2</td>
<td>Richards</td>
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<tr>
<td>5/26/2011</td>
<td>The gingival sulcus and periodontal pocket environment</td>
<td>Kapila</td>
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<tr>
<td>6/2/2011</td>
<td>Periodontal evaluation, examination and recording – clinical applications</td>
<td>Bashutski</td>
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<td>6/9/2011</td>
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<tr>
<td>6/16/2011</td>
<td>Microbial ecology and biofilms in periodontal health and disease</td>
<td>Fenno</td>
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<tr>
<td>6/23/2011</td>
<td>The role of local retentive oral features in periodontal pathology</td>
<td>Richards</td>
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<td>6/30/11</td>
<td>Inflammatory mechanisms specific to the periodontium</td>
<td>Lopatin</td>
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<td>7/7/2011</td>
<td>Immunological responses specific to the periodontium</td>
<td>Lopatin</td>
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<tr>
<td>7/14/2011</td>
<td>Classification and diagnosis of periodontal diseases</td>
<td>Padbury</td>
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<tr>
<td>7/21/2011</td>
<td>Overview of periodontal diseases: gingivitis</td>
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Segment 2 (Fall)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>9/8/2011</td>
<td>The microbiology of chronic periodontitis</td>
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<tr>
<td>9/15/2011</td>
<td>The microbiology of aggressive periodontitis</td>
<td>Fenno</td>
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<tr>
<td>9/22/2011</td>
<td>Microbial tissue invasion</td>
<td>Fenno</td>
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<tr>
<td>9/29/2011</td>
<td>Specific systemic/host influences on the periodontium</td>
<td>Taichman</td>
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<tr>
<td>10/6/2011</td>
<td>Specific systemic/host influences on the periodontium</td>
<td>Taichman</td>
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<tr>
<td>10/13/2011</td>
<td>Periodontal responses to occlusal forces</td>
<td>Richards</td>
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<tr>
<td>10/20/2011</td>
<td>Hour Exam</td>
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<td>10/27/2011</td>
<td>Pathogenesis and progression of periodontal diseases</td>
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<td>Periodontal epidemiology – part 1</td>
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<td>Periodontal epidemiology – part 2</td>
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<td>11/17/2011</td>
<td>Periodontal diagnostic tests and clinical applications</td>
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<td>12/1/2011</td>
<td>Establishment of periodontal prognosis</td>
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<td>Potential periodontal disease influences on systemic</td>
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**Competencies Addressed:** This course teaches *foundation knowledge* regarding the biological and pathological features underlying periodontal health and disease. It further aims to develop *attitudes* and *skills* needed for the students’ future roles as periodontal care providers and as defined in the document *Competencies for the New Dental Graduate* (11/11/08):

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<th>Skills</th>
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2. The graduating student participates in professional self-regulation.

   The graduating student…

   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.

4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.

   The graduating student…

   4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.
6. The graduating student obtains, records, updates and organizes accurate and complete medical/dental histories including pertinent psychological and sociocultural information.
   The graduating student…
   6e. Recognizes the oral manifestations of systemic disease and how the disease and its management may affect the delivery of dental care.

7. The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.
   The graduating student…
   7d. Identifies and assesses conditions that place patients at increased risk for disease.
   7e. Identifies patient behaviors that impact oral and systemic health.

8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.
   The graduating student…
   8a. Differentiates between health and disease.
   8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases.

How competency is measured:
Development of attitudes and practice of basic skills required to achieve competencies 2a and 4a is achieved via utilization of printed and electronic resources.

Acquisition of foundation knowledge required to satisfy competencies 6e, 7d, 7e, 8a and 8b is measured using written examinations.

Textbooks/Readings:
Recommended textbooks:
• Lamont, R.J. et al., *Oral Microbiology and Immunology*, ASM Press. 2006.
• Other assigned readings
Course Title: D-2 Treatment Planning Seminar
Course Number: XXX
Term and Year: Summer 2011 Term, D-2 year
Location, Time, Day: TBA (2 one-hour sessions each week)

Course Personnel and Contact Information: Course Director - Dr. Phil Richards
office: 3343, voice: 763-3359, e-mail: philrich@umich.edu

Course Website: available on CTools

Course Description: The D-2 Treatment Planning Seminar provides students with clinically-based decision making experiences to supplement their didactic and clinical/foundational coursework. During the Term, faculty will initially present lecture content pertinent to the treatment planning process and the goals of the course. Students will then participate in the presentation of patient scenarios and management strategies. Students will gain experience in analyzing patients’ medical, dental, emotional and psychosocial needs. Emphasis will be placed on identification and management of common oral disease processes and associated risk factors by using a systematic approach to collecting and interpreting diagnostic information and patient needs. Students will formulate strategies for managing these needs as they develop treatment planning skill and experience.

Competencies Addressed: This course teaches foundation knowledge regarding identification of medical and dental care needs and planning for the clinical management of these conditions. During the Term, students participate in basic patient-based treatment planning simulation group exercises. The course aims to build the behaviors and attitudes required for developing the following competencies defined in the document Competencies for the New Dental Graduate:

1. The graduating student makes decisions affecting the practice of dentistry based on ethical principles and as prescribed by law.
   The graduating student…
   1a. Practices as obliged by principles of ethics and the ADA Code of Ethics.
   1b. Practices within the context of the appropriate state Dental Practice Act.

2. The graduating student participates in professional self-regulation.
   The graduating student…
   2a. Practices the skills required for continuous, life-long learning, including assessment of own skills and knowledge, recognition of the limits of own skills and knowledge, and limitation of own scope of practice accordingly.
3. The graduating student functions successfully in a multicultural work environment by demonstrating sensitivity to and accommodation for cultural differences in interactions with patients and colleagues.

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4. The graduating student incorporates the methods of science and scientific inquiry into clinical practice.

   The graduating student...

   4a. Uses information systems and other resources to access the knowledge base to solve clinical problems, and provide evidence-based approaches to care.

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5. The graduating student communicates effectively with patients and colleagues.

   The graduating student...

   5b. Demonstrates effective interpersonal skills to explain diagnostic tests, explain treatment options and assist patients in making treatment choices, implement preventive measures, and obtain informed consent.

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7. The graduating student performs, records and organizes a physical and behavioral assessment of the patient appropriate for the provision of oral health care.

   The graduating student...

   7d. Identifies and assesses conditions that place patients at increased risk for disease.

   7e. Identifies patient behaviors that impact oral and systemic health.

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8. The graduating student determines differential, provisional or definitive diagnoses by correlating and interpreting examination and assessment findings.

   The graduating student...

   8a. Differentiates between health and disease.

   8b. Determines differential and/or working diagnoses of oral diseases, oral manifestations of systemic diseases, and common systemic diseases.

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9. The graduating student develops treatment plans that are sequenced to address the chief complaint, control oral disease, restore oral form, function, and esthetics, maintain health, and prevent disease consistent with assessment and diagnoses.

The graduating student…


9b. Plans treatments that reflect and manage the impact of behavioral, social and cultural beliefs and habits on oro-facial conditions.

9c. Plans oral health instruction and treatments that include health promotion and maintenance care.

9d. Develops treatment plans that reflect the impact of systemic disease and its management on the provision of oral health care.

9g. Develops treatment plans that address the patient’s esthetic concerns.

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11. The graduating student modifies the treatment plan as required by changing circumstances.

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15. The graduating student promotes health maintenance and disease prevention by:

15a. Collaborating with the patient to create an individualized self-care program.

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How competency is measured:
Development toward meeting all of the listed competencies is evaluated as students participate in problem solving exercises during case-based discussions and participate in basic patient-based treatment planning group exercises.

The simulated cases pose ethical dilemmas that students must address in their working groups and case presentations (competencies 1 and 2).

Exploring new clinical situations in the simulated cases requires students, in groups, to seek out and utilize new information (competencies 2, 4, 7 and 8) and manage the clinical scenarios in their working groups and case presentations (competencies 9, 11 and 15).

Each simulated case constitutes a “real life” set of circumstances, requiring students to consider and manage the cultural conditions of the patients as well as their professional peers and faculty (competency 3).

The communication elements addressed in competency 5 are applied significantly and frequently during this course in discussion of the cases with peers and attending faculty.
Objectives:
The D-2 Treatment Planning Seminar serves as an introduction to the process of developing and presenting a well-conceived dental treatment plan in a patient-centered environment. The intent is to expose students to the process of gathering and initially analyzing diagnostic data to inspire consideration of how disease processes and risk factors may be managed in comprehensive dental care.

Goal I: Increase D-2 students’ abilities to identify common oral diseases and associated risk factors
Goal II: Introduce strategies for managing patients’ medical, dental, emotional and psychosocial needs
Goal III: Expose students to more diverse clinical scenarios that may not typically be encountered in D-2 didactic and clinical experiences

Upon successful completion of this course each D-2 student will be capable of:
• identifying the medical, emotional, behavioral and dental needs of a patient and applying strategies for managing risk factors and patient needs when developing dental care plans
• identifying and interpreting complete and appropriate dental diagnostic information
• identifying common oral disease processes and associated risk factors, including psychosocial risk factors
• utilizing reference sources and peer discussions to supplement clinical/didactic knowledge pertinent to patient care issues

Session Information, Summer Term, 2011

<table>
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<tr>
<th>Week</th>
<th>Session</th>
<th>Topic</th>
<th>Presenter</th>
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<tr>
<td>1</td>
<td>1</td>
<td>Course Introduction; The Chief Concern and Patient History, Resources, Priorities and Behavior</td>
<td>Richards</td>
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<td>2</td>
<td>Systemic and Urgent Care</td>
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<td>Prevention and Disease Control</td>
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<td>Re-Evaluation, Contingencies and Prognosis</td>
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<td>3</td>
<td>1</td>
<td>Corrective Options and Maintenance Care</td>
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<tr>
<td>3</td>
<td>2</td>
<td>Introduction to Case Presentations I</td>
<td>Richards</td>
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<tr>
<td>4</td>
<td>1</td>
<td>Introduction to Case Presentations II</td>
<td>Richards</td>
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<td>4</td>
<td>2</td>
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<td>Groups 1 and 2</td>
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<td>5</td>
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<td>Groups 3 and 4</td>
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<td>Case 3</td>
<td>Groups 5 and 6</td>
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<td>6</td>
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<td>Case 4</td>
<td>Groups 7 and 8</td>
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<td>6</td>
<td>2</td>
<td>Case 5</td>
<td>Groups 9 and 10</td>
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<td>7</td>
<td>1</td>
<td>Course Review &amp; Preparation for Written Exam</td>
<td>Richards</td>
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<td>7</td>
<td>2</td>
<td>Patient Care Planning Simulation Test Case</td>
<td>Richards</td>
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Examination/Grading Policies:
To successfully complete all segments of this course, the student must:

1. **Attend a minimum of 70% of the scheduled sessions during the Term**
2. **Participate as a team member in the presentation of a patient care scenario and satisfactorily address the associated study questions in class during the Winter Term**
3. **Successfully complete the “Patient Care Planning Simulation Exercise” at the end of the Term**

**Course Information**
The course is fully graded (A, B, C, etc.). **Attendance** at both scheduled sessions each week is required and accounts for one half of the overall course grade (see below).

- Attend 70% or more of the Seminars to receive a C for this portion of the grade
- Attend 80% or more of the Seminars to receive a B for this portion of the grade
- Attend 90% or more of the Seminars to receive an A for this portion of the grade

In addition to attendance, an additional one quarter of the course grade will be based on each D-2 student participating in a small **group presentation** of a patient scenario. The entire class is divided into 10 groups consisting of approximately 11 D-2 students. Each group is responsible for analyzing, researching and presenting one patient case during the course. During each presentation session, two different groups will be responsible for and present aspects of the patient case for that week. The two presenting groups will be provided with slight variations regarding patient histories, patient resources or patient expectations ahead of time. During each class session, the in-class discussion will focus on how these slight variations may influence the treatment planning process.

All patient-based material (e.g. clinical images, patient histories and other basic diagnostic information) are provided ahead of time on a secure website. Each group is also given a specific list of **study questions** that pertain to their case ahead of time. Before the day of their presentation, the members of each group analyze, research and prepare a strategy for managing the patient’s oral disease risk factors, focusing on the patient’s medical, dental, emotional and behavioral needs. During class, they present their preferred patient care approach and strategy, including the answer to the study questions.

The D-2 presentations should:

- summarize the case
- identify, research and discuss all dental, systemic/medical and/or behavioral implications
- specifically address the study questions
- develop and present a systematic approach to management of the patient’s condition.

The format for abbreviated patient-based presentations will be established. Dr. Richards will provide example materials and give an orientation presentation before the student group presentations begin. During the group presentations, each group member will generally be responsible for summarizing/analyzing one main aspect of the case, addressing one of the study questions or serve as group coordinator or spokesperson. The group will be evaluated based on the criteria to be established.
How to access the patient information on-line:

Course materials (including the on-line patient cases) will be accessible via both CTools and the School of Dentistry Intranet (MiTools).

Finally, during the final session for the course, all students will complete a **Patient Care Planning Simulation Test Case**. During this one hour exam, students will be provided with an abbreviated patient history (printed) and other clinical/radiographic information (projected) for the example patient. In order to successfully complete this exercise, students must individually answer a group of clinically based questions based on the patient care scenario. Each student’s individual score on this exercise will constitute the remaining one quarter of their individual course grade.