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## 2008 - 09 Catalog

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### **An Equal Opportunity/Affirmative Action Institution**

This educational institution does not discriminate on the basis of race, color, national origin, gender, age, religion, disability, or status as a veteran in any of its policies, practices, or procedures. In fact, the Center for Health Sciences actively recruits underrepresented minority populations. This includes, but is not limited to, admissions, employment, financial aid, and educational services. Policies and regulations in this catalog are effective July 1, 2008, and apply to all students. The provisions of the catalog may be subject to change as a result of official administrative actions. We reserve the right to apply such changes to registered and accepted students as well as to new admissions. No contractual rights between the health sciences center and any student are intended and none may be deemed to be created by the issuance of this catalog. The Center for Health Sciences is not responsible for any misinterpretation of its requirements or provisions resulting from editorial or printing errors.

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### **2008-09 Academic Calendar Medical and Graduate Students**

#### **SUMMER 2008**

May 26.....Memorial Day Holiday  
May 29-May 30... Graduate Student Summer Enrollment  
May 30.....Last day to cancel enrollment  
June 2.....First day of Graduate Student Classes  
June 4.....Last day to add (nonrestrictive)  
Last day to drop a course with no grade & no fees charged  
Last day for 100% refund on withdrawal  
June 6.....Last day to enroll  
Last day to add (restrictive)  
Last day to drop a course (grade of "W") & 50% fees refunded for course  
Last day to file a diploma application (graduate students)  
July 1.....MSIII Rotations begin  
July 4.....Fourth of July Holiday  
July 7.....First day for Bridge Students and Pre-Histo Online Students  
July 11.....Last day to drop course (grade of "W")  
Last day to drop withdraw from all courses with automatic "W"  
July 18.....Last day to withdraw from all courses with assigned "W" or "F"  
July 25.....Class work ends for graduate students

#### **FALL 2008**

Aug. 11-15..... Enrollment for MSI and graduate students  
Aug. 15..... Last day to cancel enrollment  
MSII Required Orientation  
Aug. 16..... White Coat Ceremony  
Aug. 18..... First Day of Class  
Aug. 25..... Last day to add (nonrestrictive-graduate students)  
Last day to drop a course with no grade & no fees charged for course  
Last day for 100% refund on withdrawal  
Aug. 29.....Last day to enroll (graduate students)  
Last day to add (restrictive-graduate students)  
Last day to drop a course (grade of "W" & 50% fees refunded for course.)  
Last day for 50% fees refunded on withdrawal (withdrawal noted on transcript)  
Last day to file a diploma application for graduate students  
Sept. 1.....Labor Day Holiday  
Oct. 29..... Graduate Student Spring Enrollment  
Nov. 7..... Last day to drop a course with grade of "W"  
Last day to withdraw from all courses with automatic "W"  
Nov. 27-28..... Thanksgiving Holiday  
Nov. 30..... Last day to withdraw from all courses with assigned "W" or "F"  
Dec. 5..... Last day of Class  
Dec. 8-12..... Finals

#### **SPRING 2009**

Jan. 2.....Graduate student enrollment  
Jan. 2..... Last day to cancel enrollment  
Jan. 5..... First day of class  
Jan. 12.....Last day to add (nonrestrictive)  
Last day to drop a course with no grade & no fees charged for course  
Last day for 100% refund on withdrawal  
Jan. 16.....Last day to enroll

Last day to add (restrictive)  
 Last day to drop a course (grade of "W") & 50% fees refunded for course  
 Last day for 50% fees refunded on withdrawal (withdrawal noted on transcript)  
 Last day to file a diploma application  
 Jan. 19..... Martin Luther King, Jr., Holiday  
 March 2..... Student Summer/Fall enrollment  
 March 16-20..... Spring Break  
 April 3..... Last day to drop a course (grade of "W")  
 Last day to withdraw from all courses with automatic "W"  
 April 17..... Last day to withdraw from all courses with assigned "W" or "F"  
 April 29..... Last day of class  
 April 30-May 6..... Finals  
 May 15..... Graduation

## **II. Campus & Facilities**

Located on the west bank of the Arkansas River, minutes from downtown Tulsa, the main OSU College of Osteopathic Medicine campus is housed in a modern, four-building complex on 16 acres. The complex consists of classrooms, basic and clinical science teaching laboratories, offices, research areas, lecture halls, break-out rooms, a medical bookstore and a medical library. The OSU Health Care Center, located on six acres one-half mile south of the main campus, serves as both a teaching clinic for students and a health care resource for the community. Interstate Highway 244 borders the campus and provides convenient access to the college. The Phoenix Building across from the main campus houses the Oklahoma Rural Health Policy and Research Center and the Area Health Education Center program office.

### **Campus Security Policy**

In an effort to create a safe environment for working and learning, employees, students, vendors and visitors are asked to wear an official OSU photo identification card while on campus and at other campus-affiliated buildings and clinics. The photo ID should be clearly visible at all times and must be presented upon request of management personnel or other public safety officials. The photo ID issued by the Graphic Arts and Photography Department is the official OSU-CHS ID. Only the individual to whom the ID is issued is authorized to wear or possess his/her ID. Employees and students who loan their ID or attempt to use another's ID will be disciplined accordingly. It is the responsibility of the employee/student to replace his/her ID should it become lost or damaged. The ID is the property of the OSU-CHS and must be relinquished upon termination from employment or admission.

### **Procedures**

Upon admission or employment and completion of all necessary orientation and paperwork, all employees (full-time and part-time) and students will be issued an ID. The loss of a photo ID must be immediately reported to the lobby reception desk. A replacement card will be made for lost, stolen or defaced cards. There is a replacement fee for these cards. The lobby reception desk will issue a one-day temporary ID should any employee or student fail to wear his/her ID to campus. Verification of identity and employment status will be made before the temporary ID is issued. Should it be determined that a person is a habitual user of the temporary system, their name will be given to the appropriate supervisor or Dean of Students for potential disciplinary actions.

### **Vendors/Visitors**

Vendors and visitors are required to obtain a guest ID by checking in at one of the two reception desks on the ground floor. Visitors and vendors are required to wear their visitor ID in a clearly visible manner while conducting business on OSU-CHS property. Vendors and visitors who do not comply will be escorted off campus.

## **III. Medical Library**

The Medical Library provides biomedical information and library services that support teaching, learning, research, patient care, and community outreach. To support its service mission the Library has built one of the best biomedical information resource collections in Oklahoma, consisting of more than 350 print journals titles, 12,000 electronic journals, 25,000 books and 8,500 audiovisuals. The Library also provides access to numerous online databases, including OVID Medline, DynaMed, FIRSTConsult, UpToDate, EXAM MASTER Online, MDConsult, STAT!Ref, AccessMedicine, VisualDx, and PsycINFO. A complete list is available at <http://www.healthsciences.okstate.edu/medlibrary/resources.cfm>.

**Work-study** The College's medical library has job openings for work-study students year round. For information, please contact the Library at 918-561-8449.

## **IV. Osteopathic Medicine**

### **A. Mission**

Among the authorized functions of the Oklahoma State University College of Osteopathic Medicine is the education and training of osteopathic physicians. The institution offers a professional study program leading to the degree Doctor of Osteopathic Medicine (D.O.). Traditionally, the emphasis in osteopathic medical education has been placed on preparing physicians for family practice to assure health services for all members of the family. Campus and community based experiences included in the academic program emphasize the role of family physicians.

The Oklahoma State Regents for Higher Education prescribe standards of higher education and determine functions and courses of study to conform to the standards prescribed. The state regents authorized OSU to carry out the following functions, effective July 1, 1988.

1. To prepare osteopathic physicians and surgeons for the State of Oklahoma through approved and accredited programs which offer complete medical studies, provide bases for further professional advancement, and encourage entrance into family practice.
2. To establish postgraduate programs of medical study, including multi-year internships and residencies, which prepare osteopathic physicians for full participation in both primary and specialized care aspects of professional practice in the State of Oklahoma.
3. To provide a program of public service to Oklahoma communities which are deficient in physician manpower by means of the college-affiliated outpatient clinics, hospitals, and other health-related centers.
4. To offer programs in continuing education for osteopathic physicians and related professionals in order to guarantee the continuation of high standards of osteopathic medical practice for the citizenry of Oklahoma.
5. To cooperate with scientific, educational, and public health agencies in the development of programs which contribute to the improvement of health service and are responsive to general public needs.
6. To engage in scientific research designed to improve the quality of health care with special emphasis given to the application of osteopathic concepts and principles.

## **B. History**

Founded in 1972 to train primary care physicians to small towns and rural areas of Oklahoma, the Oklahoma State University College of Osteopathic Medicine continues to fulfill this mission. A 1971 study confirmed the feasibility of an osteopathic medical college, and the Oklahoma College of Osteopathic Medicine and Surgery was created on March 10, 1972. In the spring of 1988, the Oklahoma legislature adopted House Bill No. 1801, repealing the law that established the Oklahoma College of Osteopathic Medicine and Surgery and declaring the College of Osteopathic Medicine to be an agency of Oklahoma State University. According to this new bill, the College will "continue to give emphasis to the preparation of doctors of osteopathic medicine in the field of general practice." The merger became official on July 1, 1988, when the OSU College of Osteopathic Medicine became Oklahoma State University's ninth college. OSU College of Osteopathic Medicine students began study in 1974, and the first class of 34 students graduated in 1977. Since then, the college has graduated more than 2,000 students. The entering class size has increased from 36 in 1974 to its current 88 students. The college is governed by the Board of Regents for Oklahoma Agricultural and Mechanical Colleges, which also governs OSU, Langston University, Oklahoma Panhandle State University, Connors State College, and Northeastern Oklahoma A&M College. An advisory board advises the President of the OSU Center for Health Sciences and Dean of the College of Osteopathic Medicine, the administration of OSU, and the Board of Regents for the A&M Colleges regarding the education of osteopathic physicians at OSU College of Osteopathic Medicine.

## **C. Accreditation**

1. The university is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. The medical school is accredited by the Commission on Osteopathic College Accreditation (COCA) of the American Osteopathic Association, the recognized accrediting agency for institutions that train osteopathic physicians. The Oklahoma State Regents for Higher Education are empowered by the Oklahoma Constitution to prescribe standards for higher education applicable to each institution in the Oklahoma State System of Higher Education.

## **D. OSU Physicians Clinics**

The OSU Physician system covers a wide variety of specialties with more than 100,000 patient visits each year. The community-based Tulsa clinics serve as a teaching model for OSU medical students. They are staffed by medical residents and faculty physicians. Each clinic provides essential health care to the community, primarily taking care of Tulsa's sick poor.

**OSU Health Care Center** 2345 Southwest Boulevard, Tulsa, OK 74107

918-592-1980 (Center for Structural Medicine/OMM, Family Medicine, Women's Health, TakeCharge! Program, Radiology)

**OSU Physicians - Houston Parke** 635 W. 11<sup>th</sup> Street, Tulsa, OK 74127

918-382-3100 (Internal Medicine, AIDS/HIV, Pediatrics, Psychiatry, Cardiology)  
**OSU Physicians – Houston Center** 717 S. Houston, Tulsa, OK 74127  
918-586-4500 (OB/Gyn, Ophthalmology, Neurology)  
**OSU Physicians – Physicians Office Building** 802 S. Jackson, Tulsa, OK 74105  
918-584-5364 (Family Medicine) 918-747-5322 (Surgery) Center for Respiratory Medicine (584-5336)  
**OSU Physicians – Country Club Gardens** 446 W. Latimer, Tulsa, OK 74106  
918-594-8920 (Family Medicine)  
**OSU Physicians - Enid** 1101 E. Broadway, Enid, OK 73701  
580-977-5000 (Family Medicine)

### **E. Admission Information**

The College recruits and considers applications for admission from all qualified candidates without regard to age, gender, religion, race, national origin, or disabilities. The College actively recruits qualified minority students.

Prospective students must meet the requirements of OSU-COM's Technical Standards Policy (OSU-CHS Online Catalog p. 6) to be considered for admission to the Program.

#### **Eligibility**

Preference is given to applicants from Oklahoma. Non-U.S. citizens who do not have a permanent resident visa ("green card") at the time of application cannot be considered for admission. The admissions committee recommends applicants for admissions. Final selection of candidates to be offered admission is made by the Dean. All applicants must meet the minimum requirements to be considered for admission.

#### **Residency Requirements**

To qualify for Oklahoma residency, a student must be a lawful resident of the United States and meet one of the following two requirements:

1. **Non-independent students.** A non-independent student must have at least one parent, stepparent, or court-appointed guardian who is an Oklahoma resident. Additionally, this parent, stepparent, or court-appointed

guardian must have claimed the student as a dependent on his/her federal income tax return for the previous year.

2. **Independent students.** An independent student must have lived in Oklahoma, in some capacity other than as a full-time student at a post-secondary institution, for a period of at least twelve continuous months prior to matriculation.

#### **Minimum Requirements**

1. At the time of application, the applicant must have:

- a. Overall grade point average of 3.0 (on 4.0 scale)
- b. Minimum of 7.0 (21 total) on the Medical College Admissions Test (MCAT)
- c. Pre-professional science grade point average (GPA) of at least 2.75 (on 4.0 scale)

Under special circumstances, the College of Osteopathic Medicine may use discretion to admit students who do not meet these minimum requirements.

2. At the time of entry, the applicant must have completed:

a. At least three years (90 semester hours) and not less than 75 percent of the courses required for the baccalaureate degree at a regionally accredited college or university.

b. Satisfactory completion of the following courses with no grade below "C" (2.0 on a 4.0 scale): English, 6 semester hours Biology, 8 semester hours (including laboratory) Physics, 8 semester hours (including laboratory) General Chemistry, 8 semester hours (including lab.) Organic Chemistry, 8 semester hours (including lab.)

c. At least one upper division (3000-4000) level science course. Three to five upper division science courses are recommended for a competitive application. Some examples include, but are not limited to:

Human Anatomy or Comparative Anatomy

Biochemistry

Microbiology

Molecular Biology

Histology

Cellular Biology

Embryology

Physiology

d. Scores from the MCAT must be on file before an interview will be granted. Applicants may obtain information through [www.aamc.org](http://www.aamc.org), Association of American Medical Colleges

Medical College Admission Test

2450 N St., NW

Washington, DC 20037  
Phone: 202-828-0690  
E-mail: mcat@aamc.org

e. An on-campus interview with the Applicant Interview Committee (by invitation only). Applicants invited for a personal interview must participate to qualify for further consideration. Interviews are conducted by clinical and basic science faculty members. Interview results will be considered along with other data submitted in determining which applicants have demonstrated appropriate levels of scholarship, aptitude, and motivation for admission to the program.

#### **Admission with Advanced Standing**

Applicants from other medical schools accredited by the American Osteopathic Association **may be admitted to advanced standing** at the beginning of the third or fourth year, provided that vacancies exist. OSU-COM does not consider transfer of students from LCME only accredited programs. To be considered for admission with advanced standing, students must meet the College's general requirements for admission and submit documents required of applicants to the freshman class. Students from other colleges of osteopathic medicine admitted with advanced standing to OSU-COM must complete their last two years of instruction at OSU-COM.

#### **Applicants for transfer must meet all of the following conditions:**

1. An application must be filed with the director of admissions with official transcripts of all post-secondary schools attended
2. MCAT results must be verified
3. Medical coursework equivalent to that of Oklahoma State University must be completed up to the time transfer is sought
4. A letter must be sent from the dean of the applicant's medical school indicating the circumstances of the proposed withdrawal and that the student was in good standing at that time

**Following receipt of the required documents, the Director of Admissions will determine if the applicant warrants an on-campus interview. All transfer admissions will be made through the student selection committee upon approval of the Dean.**

#### **Technical Standards**

The General Faculty of OSU-COM has established the academic requirements of the Osteopathic Medical Education Program with the goal of training graduates who have the knowledge and skills to function as osteopathic physicians in a broad variety of clinical situations and to provide a wide spectrum of patient care. The General Faculty of OSU-COM considers the Technical Standards of the Program to be essential capacities that students must possess to meet the academic requirements of the Program. As such, the Technical Standards are prerequisites for admission, continuation, promotion, and graduation. All candidates for admission must meet these Technical Standards to be admitted to the Osteopathic Medical Education Program of OSU-COM, and all students in the Program must continue to meet these Technical Standards throughout their enrollment as students in the Program.

Students with adequately documented disabilities will be allowed to meet the Technical Standards and/or fulfill the academic requirements of the Program using approved accommodations. Accommodations for disabilities are intended to provide students with disabilities with access to equal opportunities; they are not intended to assure success. All students must be able to meet the Technical Standards and fulfill the academic requirements of the Program in a reasonably independent manner with or without approved accommodations. No student may meet Technical Standards or fulfill academic requirements using auxiliary aids or accommodations that provide cognitive support or medical knowledge, substitute for essential clinical skills, or supplement clinical and ethical judgment.

Students must possess all of the capacities listed in the five categories below:

1. Observation: The candidate must be able to observe demonstrations and experiments in the basic sciences including, but not limited to, microorganisms and tissues in normal and pathologic states. A candidate must be able to observe a patient accurately at a distance and close at hand. Observation requires the functional use of the sense of vision and somatic sensations. It is enhanced by the functional use of the sense of smell.
2. Communication: A candidate must be able to speak, hear, and observe the patients in order to elicit information; describe changes in mood activity and posture; and perceive nonverbal communications. A candidate must be able to communicate effectively and sensitively with patients. Communication includes not only speech but also reading and writing. The candidate must be able to communicate effectively and efficiently in oral and written form with all members of the health care team.
3. Motor: Candidates must have sufficient motor function to elicit information from patients by palpation, auscultation, percussion and other diagnostic and therapeutic maneuvers. A candidate must be able to execute motor movements reasonably required to provide general care,

osteopathic manipulation, and emergency treatment to patients. Examples of emergency treatment reasonably required of physicians are cardiopulmonary resuscitation, the administration of intravenous medication, the application of pressure to stop bleeding, the opening of obstructed airways, the suturing of simple wounds, and the performance of simple obstetrical maneuvers. Such actions require coordination of both gross and fine muscular movements, equilibrium and functional use of the senses of touch and vision.

4. Intellectual - Conceptual, Integrative and Quantitative Abilities: These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem solving, the critical skill demanded of physicians, requires all of these intellectual abilities. In addition, candidates must be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures.

5. Behavior and Social Attributes: Candidates must have the emotional health required for full use of their intellectual abilities, the exercise of good judgment, the prompt completion of all responsibilities attendant to the diagnosis and care of patients and the development of mature, sensitive, and effective relationships with patients. Candidates must be able to tolerate physically taxing workloads and to function effectively under stress. They must be able to adapt to changing environments, display flexibility, and learn to function in the face of uncertainties inherent in the clinical problems of many patients. Compassion, integrity, concern for others, interpersonal skills, interest and motivation are all personal qualities that will be assessed during the admission and education process.

## **F. Application Procedures**

### **College Application Service**

The College of Osteopathic Medicine participates in the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS). Applicants using AACOMAS must be applying for the first year of study leading to the D.O. degree. Applications for admission may be obtained on-line at <http://www.aacom.org> after June 1. Application inquiries to AACOMAS may be made online or at:

### **The American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS)**

5550 Friendship Blvd., Suite 310  
Chevy Chase, Maryland 20815-7231  
301-968-4190

### **Procedure**

The following information is required by the College:

1. To be sent to AACOMAS:

- a. A fully completed AACOMAS application, including the AACOMAS processing fee. Online application available at <http://www.aacom.org>.
- b. Complete official transcripts of scholastic records from all colleges and universities attended (required courses must be completed before matriculation).
- c. MCAT scores sent directly from the testing service. It is recommended that the MCAT should be taken no later than the spring of the year prior to application.

2. Requests for MCAT application forms and general information concerning the test should be directed to **Association of American Medical Colleges**

Medical College Admission Test  
2450 N St., NW  
Washington, DC 20037  
Phone: 202-828-0690  
E-mail: [mcat@aamc.org](mailto:mcat@aamc.org)

3. To be sent to OSU College of Osteopathic Medicine by applicant:

- a. Supplemental application for admission.
- b. Supplemental application fee (\$40).
- c. Letters of evaluation sent directly to the College from the applicant's pre-professional/health professions advisory committee. If the applicant's college lacks such a committee, applicants may substitute evaluations from no fewer than three faculty members, two of whom teach sciences. Applicants without access to either of the above should use their own judgment in obtaining at least three evaluations that would be helpful in judging their candidacy.
- d. A written evaluation from an osteopathic physician.
- e. The deadline to submit AACOMAS applications for admission is February 1, 2009. The deadline to submit supplemental applications for admission is March 1, 2009. Applicants are encouraged to submit materials early for full consideration. Interviews are conducted approximately October – April.

Discovery of any intentional falsification or omission of information relative to academic and personal records or test scores may result in the student's immediate dismissal from the College and forfeiture of all fees paid.

In recommending candidates for admission, the College considers all factors, including pre-professional academic achievement, evaluations from pre-professional committees and osteopathic physicians, results of the MCAT, data obtained in the on-campus interview, and the student's motivation for a professional career in osteopathic medicine. Applicants receiving an invitation for admission must sign an Enrollment Agreement and return it with the required deposit to the Admissions Office within the specified time to complete the application process. For additional information, contact the Office of Student Affairs at 918-561-8421, 800-677-1972, or sarah.quinten@okstate.edu

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## **G. Tuition & Fees**

Tuition and fees are approved by the Oklahoma State Regents for Higher Education and are subject to change only after public notice has been given at least 120 days prior to the effective date. Tuition and fees must be paid prior to the first day of each semester.

### **Tuition**

- Oklahoma residents \$18,545.00 per year
- Nonresidents \$36,467.00 per year

### **Fees**

- Student Activity \$176.40 per year
- Library Resources \$120.00 per year
- Student Curriculum Materials & Laboratory (First-year students) \$330.00 (Second-year students) \$220.00
- Student Computer Laboratory \$161.25 per year
- Student Health Service \$108.00 per year
- Hepatitis Vaccine (optional) (First-year students) \$ 90.00
- Student Liability Insurance Direct cost of insurance \$300
- Wellness Center fee \$175.00 per year (first and second years)
- Printing fee \$55 (first and second years)

### **Other Fees**

- Application \$ 25.00
- Graduation (Fourth-year only) \$ 40.00
- Yearbook \$30.00 per year

## **Admission Deposit**

Upon acceptance, applicants must deposit \$100.00 which is applied toward first-term fees. This admission deposit is subject to forfeiture after April 15 if enrollment is not completed. In order for a student to be enrolled, tuition and fees must be paid or proof of payment must be established.

## **Student Health Status**

1. **Physical Examination.** Each student entering OSU College of Osteopathic Medicine is required to have a physical examination completed and recorded on a health form provided by the College prior to matriculation.

2. **Immunization.** Entering students are required to provide evidence, prior to matriculation, of immunization for or immunity to tetanus, polio, measles, mumps, rubella, diphtheria, and hepatitis B. If the hepatitis B immunization series has not been completed prior to matriculation, the series may be completed during the first year at the student's expense.

3. **Health Service Fees.** The student health service fee is intended to cover the co-payment and deductibles of OSU-CHS students that result from the charge for an office visit to a primary care physician employed by OSU-CHS. *This fee does not replace the requirement for students to obtain health insurance coverage.* Students must make an appointment with an OSU Physician and follow the normal check-in procedures for patients. The fee applies for the following services:

- The *physician fees* associated with sick and preventative care visits, including well woman exams.

Appointments for these visits must be made with Family Medicine, FM Women's Health, Internal Medicine, or OB/Gyn.

- Up to three visits to OMM for treatment that resulted from an injury. This is not intended to cover ongoing visits associated with chronic pain.
- Lab tests following an inadvertent needle stick.

The following services are not covered by the fee and will be the responsibility of the student and/or their insurance:

- Services provided by non OSU Physicians.
- Specialty care, procedural fees or hospitalization.

- Fees associated with a pregnancy.
  - Prescriptions and over-the-counter medications.
  - Laboratory tests (other than for needle stick accidents).
  - Radiology services.
  - Supplies (crutches, etc.).
  - Behavioral health services are available through OSU-Tulsa at no cost to students for the first five visits. Subsequent visits require co-payment.
- OSU will bill the student's insurance for services rendered and the balance (for the office visit only) will be covered by the student health services fee.

**4. Health and Hospitalization Insurance.** All students are required to provide for their own health care while attending OSU College of Osteopathic Medicine. All students must obtain and pay for health and hospitalization insurance and show proof of coverage prior to registration. Recognized proof of coverage is a photocopy of the policy naming the student as the insured or a letter from the insurance company stating that the student is insured for health/hospitalization care, as well as a photocopy of the insurance card itself. Proof of coverage must be submitted to the registrar each year. Insurance information and applications may be obtained from the Office of Student Affairs.

#### **Books and Supplies**

It is estimated that the cost of books and supplies during the first year of study will average approximately \$5,000.00.

#### **Student Fee Refund Policy**

The refund policy for fees and tuition (except for Title IV recipients who are first-time attendees) collected from students at institutions shall be as follows:

- Withdrawal from the institution during the first week (one to five class days) of a regular semester, or during the first two class days of a summer term - 80% refund.
- Withdrawal from the institution during the second week (six to ten class days) of a regular semester, or during the third and fourth class days of a summer term - 50% refund.
- Withdrawal from the institution during the third week (eleven to fifteen class days) of a regular semester, or during the fifth class day of a summer term -25% refund.
- Withdrawal after the third week (fifteen class days) of a regular semester, or after one week (five class days) of a summer term - No refund.

Fees are applicable only for the current semester. If a student withdraws and is entitled to a refund, the amount of a refund cannot be carried forward as a credit to a subsequent session.

#### **H. Financial Aid**

The Financial Aid Office is responsible for the administration of student financial aid and financial counseling to students applying for aid. Students who are interested in loans, scholarships, or work-study employment should apply to this office.

#### **General guidelines for financial aid are:**

1. The primary purpose of the College's aid program is to provide financial assistance to students who would be unable to attend without assistance.
2. The total amount of financial aid offered in various forms to a student by the College and all other financial aid sources will never be allowed to exceed his or her actual need.
3. All students requesting financial assistance of the Financial Aid Office of the College are required to submit a Free Application for Federal Student Aid (FAFSA). Listed below are the programs in this category:
  - Federal Perkins Loan
  - Federal Stafford Loan Program
  - Federal Work-Study
  - Federal Graduate PLUS Loan
4. There are a number of programs awarded under individualized application. The most commonly used programs are:
  - Armed Forces Health Profession Scholarship Program
  - Federal Stafford Loan
  - Indian Health Service Scholarship
  - National Health Service Corps Scholarship
  - Physician Manpower Training Commission - Oklahoma
  - Rural Education Scholarship Loan Program

## **Application for Financial Aid**

The Free Application for Federal Student Aid (FAFSA) and other required applications may be obtained by contacting the Office of Financial Aid, Oklahoma State University College of Osteopathic Medicine, 1111 West 17th Street, Tulsa, Oklahoma 74107-1898. Students may apply online at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). School code is G11282.

The basic philosophy of the Office of Financial Aid is to package aid according to federal standards and guidelines with the best interest of the student in mind. However, all students receiving assistance from sources other than this office must notify the financial aid office so the necessary adjustments can be made to the student aid package. If other campus-based aid is granted after the student receives notification from this office, that student's aid package will be adjusted accordingly.

## **I. Student Information**

### **Academic Standards**

Evaluation of achievement in a given subject is the official responsibility of the assigned instructor. Grading of achievement is based upon predetermined criteria that are announced to the students at the beginning of each course. For details regarding academic policies, please refer to the Academic Standards Handbook.

### **Academic Grading System**

The grading standard for all College courses is a numerical system ranging from 0 to 100 percent, with 70 percent as the lowest passing grade except for courses designated as pass/fail. Guidelines describing the method and factors involved in determining numerical grades will be presented in the course syllabus for each course.

### **Meaning of grades and grade points**

A — Excellent (numerical range 90-100%) 4

B — Good (numerical range 80-89%) 3

C — Satisfactory (numerical range 70-79%) 2

D — Marginal (numerical range 65-69%) 1

U — Unsatisfactory (numerical range 64 and below) 0

ST — Satisfactory 0

I — Incomplete 0

AU — Audit 0

W — Withdrawal 0

WP — Withdrawal in good academic standing 0

WU — Withdrawal not in good academic standing 0

Grades will be awarded based on students' class preparations, class attendance and participation, examination scores, and personal and professional conduct. A cumulative grade point average will be maintained for each student to be calculated as follows:

- The total number of credit hours attempted for which a permanent grade has been assigned (A, B, C, D or U) will be divided into the total grade points earned
- The total grade points earned is the sum of the grade point for each course multiplied times the number of course hours

### **Course Evaluation and Grade Posting**

Each student has a responsibility as a professional to provide constructive evaluation of each course, clinical rotation, and instructor in the curriculum. In the first and second years, this responsibility will be met by participation in the course evaluations routinely administered by the Office of Academic Affairs. The final grade for first and second year courses will not be posted with the registrar until the student has completed and submitted their evaluation of the course. At the time grades are submitted, and until the evaluation is completed (online), a grade of "I" will be posted for that course. For third and fourth year, the Site Evaluation Form is considered a requirement for each clinical rotation. The Site Evaluation Form is due within seven days of completing each clinical rotation. Failure to comply with the Site Evaluation deadline can result in being dropped a letter grade for the rotation, having to repeat the rotation or receiving an "N" non-cognitive grade.

### **Class Ranking**

While the Grade Point Average (GPA) is calculated as above, class ranking and academic awards are based on numeric grades. Rank is calculated based on the numeric grade earned multiplied by the credit hours in each course. Two different rank groups are calculated: one for students completing their medical school curriculum within the traditional 4 years (including D.O./M.B.A. students) and a second one including students completing their medical school curriculum in more than 4 years. Class rank will be released on an "as needed" basis when students begin applying for post-doctoral internship or residency programs or for award/scholarship, honor society, or other institutional reporting purpose. Students must provide supporting

documents (scholarship applications, etc.) to request a special release of rank.

**Non-Cognitive Academic Evaluation** Students are expected to conduct themselves in a manner consistent with the standards of the osteopathic medical profession. This expectation is embodied in the *Requirements for Graduation*, “that the student exhibits the ethical, professional, behavioral and personal characteristics necessary for the practice of osteopathic medicine.” A non-cognitive academic evaluation of S (satisfactory) or N (needs improvement) is assigned in every course and rotation. Refer to the academic standards handbook for details.

### **Promotion and Probation**

A student must have no marginal, incomplete, or unsatisfactory grades in order to be promoted to the next academic year. This standard must also be met before third-year students will be allowed to begin clinical clerkship rotations, and the same standard has to be achieved in the fourth year in order to graduate. The National Board of Osteopathic Examiners, Inc. prepares a three-part examination, which is accepted by most state licensing boards, as criterion for a license. A student may not be promoted to the third year of study without passing the COMLEX Level 1.

A student cannot graduate from the D.O. program without passing COMLEX Level 2. Testing for both Levels is done several times each year at computer testing sites and the national testing center in Conshohocken, PA; the student is responsible for identifying the time and place they will take each exam and may register for each exam by going to the NBOME website: <http://www.nbome.org/>

The College does not guarantee that any student, once enrolled, will achieve any level of academic or professional accomplishment.

Each student must meet the minimum College standards in order to remain in good academic standing. A student will be placed on academic probation if he or she receives a Marginal (“D”) or an Unsatisfactory (“U”) grade in any course. The student will be removed from academic probation only after successfully correcting the deficiency. Academic progress is reviewed by the Academic Standards Committee periodically throughout the year. Academic probation or other actions may be recommended for students whose performance in a number of courses is passing but marginal in nature. In addition, a student may be placed on professional probation or recommended for dismissal for ethical, professional, and/or personal conduct which falls below the standards established by the College.

### **Probation**

Probation is defined as a period of time specified by the dean when the student’s progress will be closely monitored by the Academic Standards Committee and the Dean. Probation represents an official sanction by the College for academic or professional misconduct.

### **Requirements for Graduation**

A student who has satisfactorily completed all academic requirements and who has been recommended by the College faculty may be awarded the Doctor of Osteopathic Medicine (D.O.) degree, provided the student has:

1. Passed COMLEX Level 2 CE and PE and reported the scores to the College prior to graduation. All students graduating in 2008 and later must take and pass the COMLEX Level 2 CE and PE as a requirement for graduation. Testing for Level 2 Cognitive Evaluation is done several times each year at computer testing sites; the student is responsible for identifying the time and place they will take each exam and may register for each exam by going to the NBOME website: <http://www.nbome.org/> The Level 2 Performance Evaluation is done numerous times each year at the testing center in Conshohocken, Pennsylvania and each student must arrange to travel to that site after registering for the exam online
2. No unremediated “D” or “U” grades and no grades of “I”;
3. Successfully completed all clinical rotations;
4. Complied with all legal and financial requirements of the College;
5. Exhibited the ethical, professional, behavioral, and personal characteristics necessary for the practice of osteopathic medicine;
6. Demonstrated acceptable competence in the knowledge, skills, and attitudes required of an osteopathic physician;
7. Been recommended for graduation by the appropriate bodies of the College;
8. Attended the commencement graduation rehearsal and ceremony (only in unusual circumstances, and with prior approval of the Dean, will a degree be awarded in absentia).

A student will meet the graduation requirements listed in the catalog in effect at the time of his/her initial enrollment, provided that no more than six years have elapsed between matriculation and graduation. A student who is required to repeat an academic year will meet the graduation requirements listed in the

catalog for the repeated year.

### **Withdrawal**

Application for voluntary withdrawal from the College must be made in writing to the Dean. Except in rare circumstances, the application will be accompanied by a personal interview. Every effort should be made to assure that no misunderstandings or errors occur in the withdrawal process. Students withdrawing from the College within the first 15 days of the semester or prior to examination (whichever comes first), will receive an unassigned grade of "W" for all courses in which the student is currently enrolled. If withdrawal is requested after this designated time period, the appropriate faculty member will assign a grade of "WP" or "WU" for each course in which the student is currently enrolled.

### **Leave of Absence**

A student in good academic standing may request a leave of absence due to a medical or severe personal problem. Students requesting a leave of absence must apply to the Dean in writing. After consultation with the student, the Dean will decide whether or not the leave is to be granted and the conditions under which the student may return to school.

### **Suspension**

Suspension is a forced absence from the College. It is a temporary situation imposed by the Dean when a student is having an academic, professional, or personal problem that requires additional time for the College to gather information. While on suspension, the student is not allowed to attend classes or clinical rotations.

### **Attendance Requirements**

Students are expected to attend all lectures, laboratories, and clinical assignments. Attendance is required at all clinical assignments and national board reviews. There may be isolated instances when an individual must be absent, but the student who misses class is still responsible for the materials presented during the lecture or laboratory period. Refer to the course syllabus for individual course attendance requirements.

### **Course Credit by Examination**

Qualified students may be able to satisfy requirements of certain courses by demonstrating competence in the course subject areas by successfully completing a comprehensive examination. Students who are repeating an academic year under probationary status are not permitted to obtain course credit by examination. Faculty members and the course coordinator responsible for the course determine a student's eligibility to obtain course credit by examination with approval from the Dean. Certain clinical education courses are excluded from credit by examination. Refer to the Student Handbook or the Academic Standards Handbook for this information.

### **Student Rights and Responsibilities**

The student is expected to be familiar with the policies and regulations governing students enrolled at the Oklahoma State University College of Osteopathic Medicine.

Students are expected to conduct themselves in a professional and ethical manner at all times. Students, faculty, and administration share responsibility for maintaining an effective learning environment. Academic dishonesty is not condoned nor will it be tolerated. Refer to the Student Handbook for the policy and procedure regarding academic dishonesty. The policy applies to all students at the Center for Health Sciences.

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Students having academic grievances should discuss such concerns with their faculty advisor. If a resolution cannot be reached, then the counsel of the departmental chairman is sought. If any further resolution is indicated, the grievance is passed on to the appropriate academic dean. If needed, the Dean is consulted. The action of the Dean is final and binding.

All nonacademic complaints are to be directed to the associate dean of students. If a resolution cannot be made at this level, the associate dean for student affairs may bring it to the attention of the Student Affairs Committee and/or appropriate College officials. Students with grievances relating to alleged discrimination on the basis of race, color, gender, national origin, disability, age, and/or status as a veteran may seek redress through the director of affirmative action.

**Students' Rights to Privacy** The Family Educational Rights and Privacy Act of 1974 (Buckley Amendment) was designed to protect the privacy of educational records, to establish the right of students to inspect and review their educational records in all offices, and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings.

**An OSU-CHS student has the right to:**

1. Inspect and review information contained in his or her educational records.
2. Challenge the contents of the educational record.
3. Have a hearing if the outcome of a challenge is unsatisfactory.
4. Submit an explanatory statement for inclusion in the educational record, if the outcome of the hearing is unsatisfactory.
5. Secure a copy of the institutional policy, which includes the location of all educational records.
6. Prevent disclosure, with certain exceptions, of personally identifiable information from the educational record.

### **Withholding Disclosure of Information**

Currently enrolled students may withhold disclosure of directory information. A student may file with the Office of the Registrar a written request not to release directory information. The university assumes that failure on the part of any student to specifically request the withholding of directory information indicates individual approval for disclosure.

### **Access to Records**

No other information regarding students' educational records may be disclosed to anyone without written consent of students, except to "school officials" who have a "legitimate educational interest" in the student. Upon request, the University discloses education records without consent to officials of another school in which a student seeks or intends to enroll. Students, or parents of dependent students, may inspect and review their educational records. Some form of photo identification must be displayed before access to educational records will be allowed.

### **Definitions**

"Educational record" refers to those records which are directly related to a student and are maintained by an educational institution.

"Directory information" includes: student's name, local and permanent addresses; electronic mail addresses assigned or provided by the institution or provided to the University by the student; telephone number, composite photograph, major field of study, dates of attendance at OSU-CHS; degrees, honors, and awards granted or received; academic classification such as MSI, MSII, MSIII, MSIV, etc.; sex; educational institutions previously attended; degree(s) held, date(s) granted, and institution(s) granting such degree(s); dissertation or thesis title; adviser or the thesis adviser; participation in officially recognized organizations and activities.

"School official" is defined as an individual currently serving as a member of the Oklahoma State University Board of Regents or classified as faculty, administrative, or professional, and the staff such school officials supervise.

"Legitimate educational interest" is defined as an interest which results from the duties officially assigned to a school official and which are related to such a school official's responsibility for facilitating the student's development.

The College observes all federal and state legal requirements regarding confidentiality, accessibility, and maintenance of student records.

**Disability** OSU-COM will provide reasonable accommodations to medical students with disabilities, as defined by the American with Disabilities Act (ADA) and /or Section 502 of the Federal Rehabilitation Act. Refer to the College's Policy on Accommodations for Students with Disabilities for procedures for requesting accommodations.

### **Chemical Substance Use Policy**

1. **College Position.** The mental and physical health and well-being of students is vital to the success of the College and to the student, and is necessary to maintain the high standards of health care provided to the general public. The College has the right and obligation to provide students with a safe, healthy, efficient, and effective learning environment free from outside influences, including alcohol and illegal chemical substances. Therefore, the College has established a policy regarding the use, possession, distribution, or sale of illegal drugs, which a student will follow while enrolled at the College. The College also will provide assistance to students experiencing personal, substance abuse, or family problems. The College does not intend to impose a particular moral standard on students. But in order for the College to maintain quality, productivity, and the safety and well-being of students, there can be no illegal use or possession of chemical substances in the learning environment.

2. **Definitions.** "Illegal chemical substance" is any substance that an individual may not sell, possess, use, or distribute under the laws of the federal government and state in which he or she is employed, resides, or is engaged in an approved course of study. The term also includes prescription drugs obtained without authorization, or prescribed drugs and over-the-counter drugs not being used for their intended purposes. The term includes, but is not limited to, marijuana and cocaine.

**3. Provisions.** The College strongly encourages students with problems of illegal chemical substance use to seek help through the College's Student Assistance Program. Anyone who voluntarily seeks treatment will receive help on a completely confidential basis. A student may be subject to dismissal or may be referred to legal authorities if he or she possesses, uses, distributes, sells, or is under the influence of an illegal chemical substance while in class, on campus, or as a representative of the College during or outside normal classroom hours. A student's written or oral consent is not required to put the terms of this policy into effect; consent is implicit as a condition of continued enrollment in the College. An investigation to put the policy into effect may include, but is not limited to, a search of lockers assigned by the College or other items belonging to the students while the items are on property owned, operated, or under the control of the College. If a student does not cooperate with an investigation, he or she may be subject to dismissal from the College. The College reserves the right to test all students enrolled in the academic program to determine the existence of chemical substances. The administration may randomly select students for screening by a supervised and nondiscriminatory method to identify students who are violating the College's policy. If test results are positive, the student has the option to request assistance. If the student refuses to participate or cooperate in the screening, he or she will be automatically dismissed from the College. Any student reasonably suspected of chemical abuse may also be required to submit to screening. Persons who fail selective screening will be subject to dismissal. Student consent to such screenings is not required as it is a condition of continued enrollment. Students who voluntarily request assistance through the College's Student Assistance Program prior to screening will be granted assistance without fear of disciplinary action.

#### **Housing, Transportation, Employment**

While it is the responsibility of each student to obtain his or her own housing, the Office of Student Affairs, with the assistance of various student organizations, maintains a listing of housing in the Tulsa area. The office assumes no liability regarding the accuracy of information in its student housing files. Students must notify the College of their current address and telephone number during their association with the College. Students are expected to make their own arrangements for transportation while attending the College. Depending on available funds, some opportunities for part-time employment (research and laboratory assistants, tutors, library assistants, etc.) are available to students.

**Student Organizations** The Student Senate is recognized by the College as the organization representing student governance. Senate officers and representatives of each class are elected by the student body. The Student Senate often represents students' interests to the faculty and administration. College-student communications are aided by student representatives serving on several College committees. For more information on student organizations refer to the Student Handbook.

#### **Other student organizations are:**

- American College of Osteopathic Emergency Physicians
- American College of Osteopathic Family Practitioners Undergraduate Chapter
- American College of Pediatricians
- American Medical Students Association
- American Medical Women's Association
- Association of Military Osteopathic Physicians and Surgeons
- ATLAS
- Christian Medical Association
- International Medicine Club
- Oklahoma Osteopathic Obstetrics and Gynecology Association
- Student Interest Group in Neurology
- Sigma Sigma Phi
- Student Associate Auxiliary
- Student National Medical Association
- Student Osteopathic Academy of Sports Medicine
- Student Osteopathic Association of Radiology
- Student Osteopathic Internal Medicine Association
- Student Osteopathic Medical Association
- Student Osteopathic Psychiatry Association
- Student Osteopathic Research Association
- Student Osteopathic Surgical Association
- SPINE
- Undergraduate American Academy of Osteopathy
- Wilderness Medicine

**Student Sponsored Programs** The director of student affairs must approve all student-organized programs and speakers presented under College auspices, including any speaker or program paid for from student activity funds, advertised through College-sponsored publications, or conducted on premises rented, owned,

or operated by the College. Student sponsors must submit speakers' names, program topic, and the date, time, and place of the presentation for consideration at least two weeks before the proposed date of the program.

#### **Student Grievance Procedures**

These procedures are designed to direct the hearing of all grievances relating to alleged discrimination on the basis of race, color, gender, religion, national origin, disability, age, and/or status as a veteran. The procedures are NOT applicable to academic evaluations and/or admissions decisions.

Any student who believes he/she has been discriminated against while attempting to gain access to, participate in, or receive benefits from any College program or activity may seek redress through this formal grievance procedure.

A standing Affirmative Action Compliance Committee is appointed by the dean. This committee includes the College affirmative action officer with representation from the faculty and student body.

Any student who believes that he/she has been aggrieved by treatment or judgment of another person within the College, or that the administration of any College policy has abridged his/her personal or human rights, should attempt internal resolution of the matter by first speaking with the dean of students. If this attempt fails, he/she should present a written account of the alleged act to the chairman of the Affirmative Action Compliance Committee no later than thirty (30) days after becoming aware of its occurrence. The chairman of the committee will receive the written account of the grievance and the response of the accused, will interview all parties, and will attempt to help the parties involved come to an informal settlement.

If a settlement cannot be reached, the complainant may submit to the chairman a request for a formal hearing before the entire committee. Within ten (10) days after receiving the written request, the Affirmative Action Compliance Committee will convene and review the grievance. Within five (5) days after the review, the committee will issue an opinion regarding the grievance.

The complainant will have ten (10) days to appeal to the College Dean the committee's decision. The Dean will investigate the appeal in consultation with any or all persons involved and will then decide either to support the decision of the committee or to support the complainant. His decision will be transmitted in writing to the complainant and the committee within fifteen (15) days following the investigation and is final. In all cases, the chairman of the committee will be responsible for coordinating the grievance and providing notices to all parties and witnesses.

#### **Complaints Regarding Non-Compliance with AOA Accreditation Standards**

OSU-CHS is committed to meeting and exceeding the standards for accreditation of colleges of osteopathic medicine as described by the American Osteopathic Association Commission on Osteopathic College Accreditation. A copy of the standards are available upon request from the Office of Academic Affairs. Students who believe that the College may not be in compliance with a standard of accreditation have the right to file a complaint through the following procedure:

1. A written, dated and signed complaint must be filed with the Office of Student Affairs.
2. Student Affairs will consult with the Senior Associate Dean and form an ad hoc committee of faculty and students to investigate the complaint.
3. The results of the investigation shall include findings of fact, a determination of standard compliance or non-compliance, and recommended corrective actions. The results will be communicated in writing to the Senior Associate Dean, Student Affairs and the student complainant.
4. If corrective action is indicated, the Senior Associate Dean will respond with a description/plan for such action within 30 days of receipt of the ad hoc committee results.
5. Records of all proceedings regarding complaints will be maintained by the Office of Student Affairs.
6. In the event that the student complainant is not satisfied with the ad hoc committee determination and/or corrective action, the student may communicate his/her complaint to:

Chairperson, Commission on Osteopathic College Accreditation  
American Osteopathic Association  
142 East Ontario Street  
Chicago, IL 60611-2864

#### **J. Educational Program Academic Programs**

This curriculum includes hands-on clinical experiences, student-centered and problem-based methods of instruction, and frequent consultation with faculty members and community-based physicians. Development

of problem-solving and information-retrieval skills are emphasized in order to produce osteopathic physicians with the capacity to be life-long learners. In a spiral curriculum, study matter is continuously reintroduced to the student in greater depth and complexity. This method serves to reinforce prior learning and promote meaningful retention. The curriculum emphasizes integration of basic sciences with clinical and behavioral sciences to permit full comprehension of the clinician's work and promote a holistic approach to the care of patients and their families.

The curriculum is designed to implement a twenty-two month clerkship program within the four-year program of professional education.

The first year is designed to bring all students to desired levels of competence in the biomedical sciences and preliminary clinical knowledge and skills. Students learn the terminology of medicine and acquire the knowledge for problem solving. During the first year, students are introduced to core concepts in anatomy, physiology, biochemistry, and microbiology. Students begin to develop competence in osteopathic clinical skills including physical examination, diagnosis and patient interviewing, and recognition of normal and abnormal patterns of physical conditions and diseases.

Students are introduced to a variety of medical resources including telecommunications technologies to enhance their learning experiences.

The second year emphasizes case-based learning, clinical problem-solving strategies and recognition and understanding of common diseases and conditions frequently seen in primary care settings. Small-group learning and independent study are key to students' development of the critical thinking for the clinical context. Students' clinical skills are honed through interactive lab sessions and simulated clinical experiences. Behavioral science courses provide students with an appreciation of the importance of preventative medicine, cultural sensitivity and mental health issues.

The final twenty-two months are clinically oriented and community based, consisting of clerkship experiences in hospitals and clinics where students observe patients on a daily basis under physician-faculty supervision. The Office of Clinical Education provides administrative control for coordination and evaluation of the Senior Clerkship Program. The student rotates through services including surgery, obstetricsgynecology, pediatrics, psychiatry, internal medicine, family medicine and emergency medicine. The balance of the clerkship program consists of supervised patient contact in small towns and rural areas throughout Oklahoma. The student spends at least one month at each of several locations including a community hospital, family medicine clinic and rural family practice. Students also complete eight months of elective rotations that they schedule at locations of their choice. Through this work, the student acquires skills in patient management, understanding of individual body functions, and experience in actual health care delivery under conditions similar to those in which primary care physicians practice.

### **Career Development Program**

The Career Development Program offers resources and tools to help students with the career planning process. The Career Development Specialist assists students with the processes of specialty selection and preparing for residency. The Career Development Specialist assists students with these processes by:

- Finding elective opportunities, summer externships and early clinical experiences
- Providing information about residency programs
- Providing personal and career assessments
- Providing instruction on using the Careers in Medicine software
- Locating specialty information
- Assisting with the preparation of documents required for residency application such as a curriculum vitae, personal statements, etc.
- Helping students navigate the ERAS system as well as the osteopathic and allopathic match processes

### **Standardized Patient Program**

The standardized patient experiences currently occur as part of the Primary Care Clinic Rotation during a student's third year of medical school. There are currently three standardized patient encounters.

Two encounters are behavioral health-related cases in which the student gets experience dealing with delivering bad news and conducting brief psychiatric screenings. The third encounter is a test called the Clinical Practical Exam. The Clinical Practical Exam is designed to imitate the structure of NBOME's Level 2 PE. Students have timed encounters with standardized patients who have been trained to act out a given scenario. Each encounter is 14 minutes long and during this time the student is expected to take a brief but focused history and conduct a focused physical exam. The students will then have 9 minutes to write a SOAP note (Subjective findings, Objective findings, Assessment and Plan). The students rotate through multiple stations performing the same sequence of events four times. The encounters are recorded and reviewed by faculty members who score the encounters as well as the SOAP note. The students then meet with faculty to get detailed feedback about their performance. The Office of Clinical Education is in the process of incorporating additional standardized

patient encounters into the medical school curriculum.

#### **Affiliated Clinical Institutions and Facilities**

Hospitals that provide osteopathic medical specialty care, as well as community hospitals, are used for clinical clerkships. Elective clinical clerkship experiences at other clinics and hospitals may be approved by the Office of Clinical Education.

Additional clinical clerkship experiences at other specialty clinics in the fields of pediatrics and psychiatry are utilized during the student clerkship program. The college-operated health care centers in Tulsa are also used as clinical training facilities for students.

#### **K. Four-Year Professional Curriculum for Academic Year 2008-09**

##### **First Year – MS I**

###### **Summer Electives/Incoming Students**

PCME 8123 Introductory Histology and Gross Anatomy of the Nervous System

###### **Fall Semester Hours**

PCME 8117 Gross and Developmental Anatomy 7

PCME 8124 Histology 4

PCME 8215 Medical Biochemistry 5

CLME 8312 Osteopathic Manual Medicine I 2

CLME 8211 Diagnostic Imaging 1

###### **Spring Semester Hours**

PCME 8134 Basic Neuroanatomy 4

PCME 8616 Medical Physiology 6

CLME 8322 Osteopathic Manual Medicine II 2

CLME 8912 Clinical Skills I 2

PCME 8316 Medical Microbiology 6

PCME 8211 Clinical Epidemiology

##### **Second Year – MS II**

###### **Fall Semester Hours**

PCME 8415 General Pathology I 5

CLME 8016 Clinical Problem Solving I 6

PCME 8513 Pharmacology I 3

CLME 8332 Osteopathic Manual Medicine III 2

CLME 8922 Clinical Skills II 2

CLME 8812 Health Promotion – Disease Prevention 2

PCME 8231 Multicultural Health 1

CLME 8711 Psychiatry I 1

###### **Spring Semester Hours**

PCME 8425 General Pathology II 5

CLME 8026 Clinical Problem Solving II 6

CLME 8342 Osteopathic Manual Medicine IV 2

CLME 8932 Clinical Skills III 2

CLME 8721 Psychiatry II 2

PCME 8523 Pharmacology II 3

CLME 8822 Health Promotion – Disease Prevention 2

CLME 8011 Advanced Cardiac Life Support 1

##### **Third and Fourth Year – MS III & MS IV**

Medicine I

Medicine II

Surgery

Obstetrics and Gynecology

Family Medicine Clinic

Community Clinic

Rural Clinic

OMM

Emergency Room

Pediatrics

Community Hospital I

Community Hospital II

Psychiatry

Electives/Primary Care Electives

Credit hours apply to entering class of 2006. Prior matriculants refer to previous catalog.

## **L. Course Descriptions**

### **First Year - Fall Semester**

**Gross and Developmental Anatomy** Designed to introduce the student to the general and specific concepts of regional morphology through didactic presentations and laboratory dissections. Emphasis is centered on the range of normal for the various organ systems and their interrelationships. These learning opportunities allow the student to apply anatomical knowledge in clinical situations later on.

#### **Histology**

Designed to familiarize the student with normal microscopic tissue architecture. Lecture and laboratories will serve as the format of presentation for the histologic concepts of the basic tissues and organ systems. This course will be the basis for future understanding of pathological and physiological principles.

#### **Medical Biochemistry**

Provides a broad survey of the chemical classes and metabolic processes that are consistent with the normal functions of biosystems. Special attention is given to the functions and interrelationships of these processes in human metabolism to provide a foundation for understanding the chemistry of disease states when discussed in the second-year program.

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#### **Osteopathic Manipulative Medicine I**

This course introduces the importance of the musculoskeletal system in health and disease. The course consists of both lecture and hands-on practicum sessions. Lectures provide the didactic base for the practical sessions while the development of palpatory skills for diagnosis and treatment are stressed in the practicums. Students are introduced to the osteopathic structural exam and a variety of manual techniques that will serve as the building block for osteopathic manipulative skills which are used throughout a lifetime of practice. Students practicing on each other are an essential element of the practicum setting.

#### **Diagnostic Imaging**

Diagnostic imaging is a course in which students can learn normal human anatomy as it is depicted in routine clinical diagnostic imaging studies. The course serves to introduce students to the various imaging modalities that they will use as physicians in clinical settings. A regional anatomy approach will be followed through the course. Basic image technique and positioning and various image modalities used in diagnostic imaging will be discussed.

#### **Special Studies**

In addition to the standard curriculum, medical students have the opportunity to participate in graduate courses and research projects. Enrollment in these courses and projects for credit may be completed in the Office of Student Affairs. Completion of these courses and projects will be posted on the student's official transcript with satisfactory/unsatisfactory credit.

### **First Year - Spring Semester**

#### **Neuroanatomy**

Encompasses the study of structure and integrative function of the central nervous system. Lectures and laboratory demonstrations emphasize the role of the brain and spinal cord in sensory perception and motor responses. Neuroanatomy presentations are offered to enhance the students' understanding of the normal anatomy of the central nervous system.

#### **Medical Physiology**

Descriptive and quantitative study involves the integration of structure and function of the human body with a functional analysis of the organ systems. Emphasis is placed on comprehension of the physiologic principles and control mechanisms that maintain homeostasis. All systems of the body are discussed, and various interrelationships are analyzed. Establishes the fundamental dynamic view of physiology upon which subsequent clinical learning is dependent. Problem-solving techniques are utilized to develop and examine student understanding.

#### **Osteopathic Manipulative Medicine II**

Continues the student's training in basic psychomotor skills in osteopathic principles and practice. The practicum sessions include simulated clinical experiences in osteopathic principles and practice using small group experiences, case studies, and audio visual aids using fellow students. Lectures provide the didactic base for practicums. Hands-on sessions develop student evaluation and treatment skills using muscle energy and counterstrain techniques for examining and treating the musculoskeletal system.

#### **Clinical Skills I**

Introduces the concepts of history taking and physical diagnosis skills. The practicum includes simulated clinical experiences through the use of small group discussion, case studies, audio visual aids using fellow students, and simulated patient models. Exposes students to the principles of clinical work and serves as a building block for osteopathic clinical skills which are used throughout a lifetime of practice.

### **Medical Microbiology and Immunology**

Designed to help the student observe and understand fundamental similarities and differences among pathogenic microorganisms. Laboratory exercises stress the basic serological and microbiological procedures used in the diagnosis of infectious diseases. Lectures emphasize characteristics, pathogenesis, and control of medically important microorganisms and disorders of the immune system.

### **Clinical Epidemiology**

Introduces students to concepts of clinical epidemiology and evidence-based medicine. Students learn to apply these concepts to evaluate evidence used in medical decision-making or presented in medical research studies. Small group discussions provide opportunities to practice application of concepts and skills presented in lectures.

### **Special Studies**

In addition to the standard curriculum, medical students have the opportunity to participate in graduate courses and research projects. Enrollment in these courses and projects for credit may be completed in the Office of Student Affairs. Completion of these courses and projects will be posted on the student's official transcript with satisfactory/unsatisfactory credit.

### **Electives/Medical Spanish I**

This elective course provides an introduction to Medical Spanish for medical students. It is a conversational course during which students initially will learn some basics of pronunciation and grammar for the Spanish language. Students will concentrate on learning and practicing vocabulary, phrases and sentences that will be useful in clinical encounters. Students also will learn some health related customs, norms and beliefs of Hispanic cultures. Although previous knowledge of Spanish is helpful, it is not required.

### **Second Year - Fall Semester**

#### **General Pathology I**

A field of knowledge that explores the reaction of the body to diseases and the description and identification of basic disease processes in terms of morphology, physiology, and chemistry. Major processes such as cell injury, cell death, healing, neoplasia, inflammation, and diseases of development and aging are emphasized. A student who completes this course successfully will have knowledge of basic disease processes and the ability to recognize and describe basic disease processes from gross and microscopic specimens.

#### **Clinical Problem Solving I**

A combination of several body systems modules. Each module will concentrate on a particular body system (e.g., cardiovascular system) and will be coordinated with the content of General Pathology. Each module is comprised of lectures containing clinical information relevant to that body system in addition to case-based problems that students will work to solve in a small group discussion format.

#### **Pharmacology: Pharmacological Agents I**

Presents general principles of drug action, drugs acting on the autonomic nervous system, and drugs used in treating infectious diseases and cancer. Emphasis is placed on the mode of action, pharmacokinetics, physiologic effects, therapeutic indications, and adverse reactions to these drugs.

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#### **Osteopathic Manipulative Medicine III**

Continues the training in osteopathic manipulative medicine. It includes refinement of palpatory evaluation and diagnosis, and manipulative techniques. The osteopathic approach is emphasized in each presentation. The patient as a whole individual, not just a body system, is considered in context with the social and family unit. The effects of visceral elements on the somatic system, and vice versa, are explored, with emphasis on the respiratory, gastrointestinal, and cardiovascular systems. New manipulative models are introduced including high velocity / low amplitude, myofascial, and cranial osteopathic techniques. Review of previously learned materials is done in a multi-model approach as it applies to different systems and common diagnostic problems. Skills are presented and practiced through lectures and practicums, with students practicing on each other in most practicums. Professionalism appropriate to the osteopathic physician is demonstrated throughout the course.

#### **Clinical Skills II**

Continues training in the psychomotor skills needed by the osteopathic physician. Course topics include laboratory and other diagnostic techniques. Students practice on each other and simulated patient models.

#### **Health Promotion-Disease Prevention I**

Helps students develop the ability to plan, implement and evaluate a clinical practice-based program of health promotion and disease prevention. Follows a life-span developmental framework and includes instruction in age-appropriate immunization, screening and counseling activities.

#### **Multicultural Health**

Introduces students to issues related to practicing medicine in an increasingly diverse society. Students learn about diversity in health beliefs, behaviors, and outcomes. They also learn strategies to increase the likelihood of positive encounters with patients whose beliefs and behaviors are different from their own.

#### **Psychiatry I**

This course utilizes a biopsychosocial, evidence-based approach to teach effective strategies for recognition

and management of psychiatric problems in the primary care medical setting.

#### **Special Studies**

In addition to the standard curriculum, medical students have the opportunity to participate in graduate courses and research projects. Enrollment in these courses and projects for credit may be completed in the Office of Student Affairs. Completion of these courses and projects will be posted on the student's official transcript with satisfactory/unsatisfactory credit.

#### **Second Year - Spring Semester**

##### **General Pathology II**

Continuation of General Pathology I.

##### **Clinical Problem Solving II**

Continuation of Clinical Problem Solving I.

##### **Osteopathic Manipulative Medicine IV**

Continues osteopathic manipulative medicine training needed by the primary care physician including palpatory diagnosis and manipulative techniques. Integration of osteopathic manipulative management of different populations is stressed. Common problems such as scoliosis, fibromyalgia, and low back pain are covered.

##### **Clinical Skills III**

Builds on the skills learned in Clinical Skills II. Further training in history taking, physical examination, and common clinical skills is presented. Students will learn to integrate osteopathic concepts into the management of different patient populations through lecture and practicum sessions. Small group discussions, case studies, and real and simulated patient models are used. Prepares student for performing the clinical skills needed in clerkships in the third and fourth year.

##### **Psychiatry II**

Continuation of Psychiatry I.

##### **Pharmacology: Pharmacological Agents II**

Continuation of Pharmacology: Pharmacological Agents I.

##### **Health Promotion-Disease Prevention II**

Continuation of Health Promotion-Disease Prevention I.

##### **Advanced Cardiac Life Support**

Consists of a series of lectures derived from the Textbook for Advanced Cardiac Life Support, practical performance stations in which ACLS skills are taught, and stations for testing practical skills and cognitive knowledge of emergency cardiac care.

#### **Special Studies**

In addition to the standard curriculum, medical students have the opportunity to participate in graduate courses and research projects. Enrollment in these courses and projects for credit may be completed in the Office of Student Affairs. Completion of these courses and projects will be posted on the student's official transcript with satisfactory/unsatisfactory credit.

##### **Electives/Medical Spanish II**

Continuation of Medical Spanish 1 with an emphasis on interacting/dialoguing with the instructor and fellow students. Satisfactory completion of Medical Spanish 1 or permission of the course coordinator is required to enroll.

#### **Third and Fourth Year**

##### **Medicine I and II**

These clerkships take place in a College-affiliated facility and are designed to involve the student in the care of acutely ill general medicine patients. The student is assigned patients and under the supervision of the attending internal medicine physician and medicine resident staff, assists in their evaluation and care. Teaching conferences and rounds are conducted daily and assigned topics for reading are given and students are tested on the material.

##### **Surgery**

This clerkship takes place in a College-affiliated facility and is designed to involve the student in preoperative, operative, and postoperative care of general surgical patients. The student is assigned patient responsibility under the supervision of the attending surgeon and surgical resident staff. Basic principles of surgical technique are stressed at the operating table. Teaching conferences and rounds are held on a regular basis, and selected topics for reading and reporting may be assigned. Subspecialty surgical experiences are usually available. Outpatient surgical clinic allows evaluation of surgical problems in an office setting.

##### **Obstetrics and Gynecology**

This clerkship takes place in a College-affiliated facility and is designed to involve the student in: management and delivery of the hospitalized obstetrical patient; diagnosis and management of gynecological disorders; and family planning. Patient assignments and supervision are directed by the attending obstetrical and/or gynecological physician and resident staff. Teaching rounds and conferences are held regularly, and selected reading and report topics may be assigned.

### **Family Medicine Clinic**

This clerkship takes place at the College's Health Care Center and is designed to encourage involvement of third-year students in every aspect of family medicine. Full-time physician faculty supervise the students to prepare them for clerkships outside the college environment. One hour of morning didactics is followed by active participation in patient care. History taking, physical examination, proper laboratory and X-ray procedure, and long-term care are emphasized.

### **Community Clinic**

This clerkship gives third-year students continued preparation for clerkship training in rural and communitybased rotations. Students spend the early mornings in didactics covering topics relating to rural health care, i.e., distance learning, lecture prep, community resources, telemedicine and interdisciplinary health care. Students spend the remainder of the day in a physician's office in a small community surrounding Tulsa.

### **Rural Clinic**

This clerkship gives third-year students direct involvement and experience in a functioning rural family practice under the direct supervision of a family physician. It offers a wide variety of clerical and office management experiences including exposure to the role of physicians in rural communities and their interrelationships with community health agencies. Trainees participate in weekly didactic sessions, a videoconference lecture and community-oriented activities. Out of office experiences such as hospital records, staff meetings, and emergency room calls are all an integral part of this program. Students will prepare a paper on the use of rural resources utilizing an actual patient case.

### **Osteopathic Manipulative Medicine**

This clerkship is designed to provide students with an opportunity to experience OMM in the clinical setting. Students will perform Osteopathic Manipulative Treatment under the supervision of a licensed osteopathic physician. The rotation is one month in length. Students spend one week in the hospital setting and three weeks in the ambulatory clinic.

### **Emergency Room**

This clerkship takes place in an AOA-approved hospital or College-affiliated facility and is designed to familiarize the student with acute care and crises intervention of life-threatening medical, surgical, and psychiatric problems. Patient assignments are made by the director of emergency room services. Student supervision is under the direction of the emergency room director and attending staff.

### **Pediatrics**

This clerkship takes place in one of a variety of settings designed to involve the student in the basic principles of pediatric diagnosis and therapeutics. The student may be assigned patients and assumes responsibility for them under the supervision of the attending pediatrician and, in some cases, pediatric resident staff. Teaching conferences and rounds are provided when available at the location and readings are assigned from a required text. Competency in certain skills must be demonstrated, and an examination is given over the reading assignment.

### **Community Hospital I and II**

This two-month clerkship takes place in a community-based hospital which is designed to involve the fourthyear student in all areas of community hospital medical care as provided by primary care physicians. Trainees participate in academic sessions as well as review and post test from College-sponsored distance learning videos via the Web. Experiences may include emergency room, general medicine, OB/GYN, surgical care, and other subspecialties.

### **Psychiatry**

This clerkship takes place in College-affiliated psychiatric facilities and is designed to familiarize the student with the diagnosis and treatment of patients who have been referred for psychiatric care. Students are afforded the opportunity to observe physicians as they provide psychiatric care, and are typically involved in direct patient care as a physician-supervised member of the multi-disciplinary team. Students frequently participate in activities such as rounds, group therapy, physical diagnosis and case management. Students often have the opportunity to participate in a variety of additional learning experiences such as lectures, team conferences and individual supervision.

### **Electives/Primary Care Electives**

To be chosen at the student's discretion pending approval by the Office of Clinical Education.

### **Bridge Program**

The objective of the Bridge program is to promote entry and retain nine (9) underrepresented medical student applicants who have been unsuccessful in gaining entry into medical school by providing a program designed to allow students to take a reduced course load, completing the first year of medical school curriculum in two years.

Students enter in the summer then continue with courses in the fall and spring academic semesters on the same time schedule as entering first year medical students. Fall term coursework consists of 11 hours of

first year histology and biochemistry. Spring term coursework consists of 14 hours of medical physiology and medical microbiology/immunology.

In order to matriculate into the medical college Bridge students must pass coursework with an average of 70% or higher. Final grades of 70-84% will be repeated upon matriculation. Final grades of 85% or better will not be repeated upon matriculation. Students receiving below a 70% will be immediately dismissed from the Bridge program. All coursework completed will transfer to the OSU-CHS College of Osteopathic Medicine.

Tuition will be waived during the "Bridge" year. Fees will be paid by the student. Bridge students are eligible to apply for Federal Student Aid.

### **Admissions Criteria**

In recommending candidates for admissions, the College considers all factors, including:

- Pre-professional academic achievement
- Evaluations from pre-professional committees and osteopathic physicians
- MCAT results
- Data obtained in the on-campus interview
- Student motivation for a career in osteopathic medicine

Applicants to the Bridge Program will follow application procedures and meet technical standards as stated in this catalog for all students gaining entry into the College of Osteopathic Medicine.

Students applying to the Bridge Program must prove personal disadvantage in *at least* one of the following areas:

#### **1. Economic**

- See the Federal Guidelines for the consideration of economic disadvantaged status.
- All applicants must submit personal, parental, and/or guardian income tax returns for the year prior to matriculation

#### **2. Educational**

Factors for consideration include:

- Free lunch rate of high school
- Graduated high school in community with less than 7500
- First generation college student

#### **3. Underrepresented Minority in Medicine**

### **Entrance Requirements**

#### **Residency Requirements**

Preference is given to applicants from Oklahoma. Non-U.S. citizens who do not have a permanent resident visa ("green card") at the time of application cannot be considered for admission.

To qualify for Oklahoma residency, a student must be a lawful resident of the U.S. and meet one of the following two requirements:

#### **• Non-independent Students:**

A non-independent student must have at least one parent, stepparent, or court-appointed guardian who is an Oklahoma resident. Additionally, this individual must have claimed the student as a dependent on his/her federal income tax return for the previous year.

#### **• Independent Students:**

An independent student must have lived in Oklahoma, some capacity other than as a full-time student at a post-secondary institution, for a period of least twelve continuous months prior to matriculation.

#### **Required Coursework**

At the time of entry, the applicant must have completed:

A baccalaureate degree at a regionally accredited college or university

Satisfactory completion of the following courses with no grade below "C" (2.0 on 4.0 scale):

- **English 6 semester hours**
- **Biology 8 semester hours**
- **Physics 8 semester hours**
- **General Chemistry 8 semester hours**
- **Organic Chemistry 8 semester hours**

Satisfactory completion of at least one upper division (3000-4000) science course (3-5 strongly preferred), with no grade below "C" (2.0 on a 4.0 scale)

*Examples include but are not limited to:*

#### **Biochemistry**

**Human or Comparative Anatomy**  
**Microbiology or Molecular Biology**  
**Histology**  
**Embryology**  
**Immunology**  
**Physiology**  
**Genetics**

*\*Preferred Course*

OSU-CHS institutional research indicates that students with 4 or more upper division science courses, including lab, are better prepared for the medical school curriculum. Preference will be given to students who have demonstrated preparation for academic success in medical school.

#### **Minimum GPA and MCAT**

At the time of application, the applicant must have at minimum:

1. Overall GPA of 2.5 (on a 4.0 scale)
2. Minimum of 5.0 on MCAT
- MCAT must be taken within last three years prior to application
3. Pre-professional science GPA of at least 2.5 ( on a 4.0 scale)

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### **V. D.O./M.B.A. Program**

#### **A. Admission Information**

##### **Types of Admission**

The Oklahoma State University Center for Health Sciences (OSU-CHS) offers a joint Doctor of Osteopathy and Master's of Business Administration degree with Oklahoma State University College of Business Administration. Classes are held at the OSU-Tulsa campus, with an occasional course at the OSU Main Campus in Stillwater, OK.

Students may pursue the D.O./M.B.A. on one of two tracks: 2-1-2 or 1-4. Current students may apply for the dual degree on the 2-1-2 track at any time during their first or second year of medical school. New students admitted into the 1-4 track of the program must complete one full year of M.B.A. degree requirements, earning a grade of "B" or better in each course, to retain deferred admission into the D.O. program.

##### **The D.O./M.B.A. Experience**

Today's successful physicians must be able to excel on multiple levels. At Oklahoma State University, the M.B.A. Program is designed to integrate the knowledge, skills, and experiences necessary to help you achieve your career goals. The D.O./M.B.A. is an accelerated program that allows D.O. students to gain their M.B.A. through the College of Business Administration in a single year. This 36-hour program captures 30 hours of the M.B.A.'s core coursework in the fall and spring semesters with six elective hours taken in the summer.

##### **Quantitative & Behavioral Curriculum**

The M.B.A. curriculum is a blend of quantitative and behavioral classes, often with real-world applications, designed to reflect today's integrated and global marketplace. While basic tools, theories, and concepts are a constant, modifications as a result of feedback from the M.B.A. advisory committee, industry, and alumni help keep the curriculum fresh, current and timely.

##### **Real-World Applications**

The faculty, with varied academic, governmental, corporate and consulting backgrounds, bring real-world experience to the classroom. As a student, you will receive the necessary theoretical background but you will also learn about the latest trends and developments from faculty attuned to what is going on in the real world. Real-world applications may be in the form of a lecture, company-based consulting project, a practicum, or other means.

##### **Corporate Connections**

The College of Business Administration is dedicated to providing a dynamic learning environment by seeking partnerships between academics and industry. Currently, the College is home to the Center for Risk Management, the Williams Institute for Quantitative Finance, the Tulsa Business Forum, and the Executive Management Briefings. Each of these programs bring in national and international CEO's, policy makers, political leaders, and business innovators from all backgrounds to share their experience and expertise with you.

##### **Entrance Requirements**

The D.O./M.B.A. program is open to current and selected new students of the College of Osteopathic Medicine with the approval of both the College and the M.B.A. Program. The Graduate Medical Aptitude Test (GMAT) and business prerequisites are not required.

##### **B. Application Procedures**

Current MSI and MSII students applying to the 2-1-2 track must make direct inquiry to the Office of Admissions before beginning the M.B.A. application process.

Prospective students who wish to pursue application to the D.O./M.B.A. program on the 1-4 track must provide a written request to the Office of Admissions indicating their intention for dual application. This may be done through the D.O. supplemental application or by formal written correspondence. Prior to beginning the M.B.A. application process, dual degree candidates for the 1-4 track must have a successful interview with an offer of deferred admission to the D.O. Program.

**Upon the request of admissions, applicants must submit the following:**

- Official MCAT Score
- D.O./M.B.A. Application
- Statement of Objectives
- 3 Recommendations Forms
- Graduate College Application (with \$40 application fee)
- Resume

Applications for the 2-1-2 track will only be accepted from current students in good academic standing. Students on Academic Probation will not be allowed to enter the program. The application review process begins upon receipt of the application package. Students are urged to submit their completed application package as early as possible. Applications are reviewed for admission once all required documentation has been received. A D.O./M.B.A. application is valid for one year from date of submission.

**C. Tuition and Fees**

Tuition and fees are approved by the Oklahoma State Regents for Higher Education and are subject to change only after public notice has been given at least 120 days prior to the effective date.

**Tuition**

- Oklahoma Resident Tuition \$154.85 per credit hour
- Non-Resident Tuition \$602 per credit hour

**Fees**

Multiplied by the number of credit hours in which a student is enrolled. PLUS THE FOLLOWING GENERAL FEES FOR ALL STUDENTS:

General Fees: Fee Amount

Student Activity Fee \$2.50 per credit hour

Student Activity Fee - Athletic- \$3.00 per credit hour

Student Facility Fee \$7.70 per credit hour

Library Automation/Tech Fee \$10.80 per credit hour

Assessment & Advising Fee \$5.00 per credit hour

Academic Facility Fee \$10.50 per credit hour

Academic Excellence Fee- \$25.75 per credit hour (Freshman-08-09 & Transfers only)

(Freshman, Soph, Transfers \$19.75; all other students \$9.75)

University Technology Infrastructure-

-Maintenance Fee \$9.40 per credit hour

Transportation Fee \$2.30 per credit hour-

Student Union Renovation Fee \$4.35 (Freshman & Transfers only)

Academic Records Fee- \$3.25 per credit hour

Daily O'Collegian Fee \$0.30 per credit hour

Energy Fee \$3.00 per credit hour

Health Services Fee \$4.35 per credit hour

Student Development Fee \$2.00 per credit hour

Life Safety and Security Fee \$2.50 per credit hour (Freshmen, Soph. & Transfers only)

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**Scholarships**

Scholarships were established in 2004 by Stillwater National Bank, through the College of Business Administration, to provide scholarship assistance to current osteopathic medical students enrolling in the joint D.O./M.B.A. program. Three scholarships at \$2,500 each are awarded each year.

Scholarship qualifications:

- Applicant is a full-time osteopathic medical student
- 2nd year medical student in good academic standing
- Current application to the D.O./M.B.A. Program
- Demonstrated financial need
- Recipient required to attend Benefactor's Luncheon and any additional activities as appropriate
- DEADLINE: June 15

**D. Course Descriptions**

**First Semester - Fall**

**ACCT 5103 Financial Accounting**

Development of the ability to read and to analyze financial statements and to use this information along with other types of information in decision-making.

**FIN 5013 Business Finance**

An introduction to the major areas of business finance: the financial environment in which business decisions are made and the institutions found therein, the financial management practices of a firm securing financing and allocating resources among competing alternatives, and the valuation of financial assets available to the firm and individuals.

**MGMT 5113 Management & Organizational Theory**

Contemporary theories of organization. Structure and dynamics of organizational goals and environment.

**MKTG 5133 Marketing Management**

Consideration at an advanced level of the major elements of marketing from the point of view of the marketing executive. Emphasis on problem solving and decision-making, using an interdisciplinary approach. Development of an integrated, comprehensive marketing strategy.

**MSIS 5623 Information & Network Technology Management**

Design and use of management information systems in businesses and other organizations. Model building, information resource management and decision support systems.

**Second Semester - Spring****ACCT 5113 Managerial Accounting**

Interpretation of accounting data in planning, controlling and decision-making.

**FIN 5053 Financial Management**

Concepts and theories applicable to the financial administration of a firm. Cases, problems, and readings to illustrate various problems and techniques of solution.

**LSB 5163 Legal Issues**

Legal environment within which business must operate. Nature and source of law, the operation of the judicial system, the operation of administrative agencies, selected Constitutional provisions frequently involved in litigation of business problems, and selected substantive legal areas having a direct relationship with business operation and decision-making.

**MBA 5303 Corporate Strategy**

Key issues in formulation and implementing business and corporate strategies. The orientation of top management, diagnosis of what is critical in complex business situations and realistic solutions to strategic and organizational problems.

**MSIS 5303 Quantitative Methods**

Applications of quantitative techniques to business problems. Linear programming, transportation and assignment models, goal programming, integer programming and networks.

**Third Semester - Summer Electives (x2)**

Finance, Accounting, Management, Marketing, Information Systems, or Economics.

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**VI. Biomedical Sciences****A. Admission Information****Types of Admission**

M.S., D.O./M.S. Ph.D. and D.O./Ph.D. graduate degree programs in biomedical sciences are offered by Oklahoma State University Center for Health Sciences in the areas of anatomy, biochemistry, cell biology, microbiology, pathology, pharmacology and physiology. The courses of study are designed around program and interdisciplinary guidelines which require the student to demonstrate classroom and laboratory competence in the selected field of biomedical science. The interdisciplinary approach recognizes that contemporary research requires expertise in a discipline as well as several topic areas. Any student that has completed a baccalaureate degree can enroll in nine hours or two courses in the biomedical sciences program as a special non-degree seeking student, subject to space availability. All laboratory courses are exempt. Contact the Office of Student Affairs for more information. Specific requirements of the Graduate College are listed in the Oklahoma State University Catalog. Catalog information is available in the biomedical sciences and student affairs offices

**The M.S. Program**

Successful completion of the M.S. degree requires a minimum of 32 semester credit hours (24 thesis or 30 non-thesis hours coursework and 8 hours thesis or 2 hours non-thesis research) and includes at least two courses within the interdisciplinary medical program (one course outside the major discipline), an original research project, the presentation of a formal research seminar and a public defense of the research thesis. The M.S. program is designed to be accomplished in two years; however, all degree requirements must be completed within seven years of entering the program.

**The D.O./M.S. Program**

Successful completion of the D.O./M.S. program requires fulfillment of the requirements for the D.O. medical degree and a minimum of 32 semester hours of graduate credit. Students in the dual degree D.O./M.S. Program, upon successful completion of required coursework, are guaranteed acceptance into OSU-COM in the following year. The student must complete one full year of M.S. requirements and remain in good standing with the Graduate College. The M.S. portion of the D.O./M.S. program is designed to be

accomplished in approximately 2 years; however, all degree requirements must be completed within 7 years of entering the D.O./M.S. program. The dual degree student will receive 9 hours of transfer credit from the osteopathic medical program. The M.S. degree will be awarded whenever the graduate degree requirements have been accomplished, which is usually during the D.O. portion of the program. Dual degree students are encouraged to consider a non-thesis Master degree.

#### **The Ph.D. Program**

Successful completion of the Ph.D. degree requires a minimum of 90 semester credit hours beyond the bachelor's degree (60 hours beyond the master's degree) and includes an interdisciplinary medical program, a comprehensive qualifying examination, a minimum of 30 hours of research, the presentation of a formal research seminar, a research dissertation and a public defense of the dissertation. The Ph.D. program is designed to be accomplished in four years; however, all degree requirements must be completed within nine years of entering the program.

#### **The D.O./Ph.D. Program**

Successful completion of the D.O./Ph.D. program requires fulfillment of the requirements for the D.O. medical degree, an additional minimum of 60 semester hours of graduate credit, a comprehensive qualifying examination, the presentation of a formal research seminar, a research dissertation and a public defense of the dissertation. The Ph.D. portion of the D.O./Ph.D. program is designed to be accomplished in approximately three years; however, all degree requirements must be completed within nine years of entering the Ph.D. portion of the program.

#### **Minimum Requirements**

Prospective students must have completed the baccalaureate degree. Each application is considered individually on its own merit and all available information will be taken into account. Applicants must have successfully completed courses in general biology, general chemistry, organic chemistry and physics. The undergraduate grade point average (GPA) is expected to be at least 3.0 on a 4.0 scale. All applicants are required to take the Graduate Record Examination (GRE) and the score is expected to be at least 1000 (total for verbal and quantitative) with a writing score of at least 4. Applicants to the D.O./Ph.D. program are expected to have a Medical College Admissions Test (MCAT) score of 27. With approval of the Biomedical Sciences Graduate Committee (BSGC), a student may be allowed to make up deficiencies during the course of graduate study.

#### **International Student Admission**

Please refer to the Oklahoma State University Catalog. (TOEFL is necessary for graduate admission)

#### **B. Application Procedures**

##### **Procedure**

Initial inquiries and correspondence may be sent directly to the program director. All formal application materials should be sent to Oklahoma State University Center for Health Sciences, Office of Student Affairs, 1111 West 17th Street, Tulsa, Oklahoma 74107-1898.

##### **Formal application includes:**

1. Completed, official application; an AACOMAS application and supplemental application for D.O./Ph.D. applicants (obtained from the Admissions Office, OSU College of Osteopathic Medicine);
2. Official transcript from each college and university attended;
3. Payment of application fee;
4. Test scores for the GRE, MCAT and Test of English as a Foreign Language (TOEFL) examinations.
5. Three letters of recommendation from persons familiar with the educational background of the applicant. Comments should be made regarding the applicant's research experience and expected motivation and productivity in research.

##### **Enrollment Procedure**

Please contact the OSU-CHS Office of Student Affairs at 1-800-677-1972 or (918) 561-8469.

##### **Records and Transcripts**

All permanent records are stored in the Office of Student Affairs. Requests for grades, transcripts and diplomas should be made to that office.

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#### **C. Tuition and Fees**

##### **Tuition**

- Oklahoma Residents \$154.85 per credit hour
- Non-residents \$602 per credit hour

##### **Fees**

- Laboratory Materials Fee (on courses marked with\*) up to \$125.00
- Student Activity Fee \$7.35 per credit hour  
(enrolled in five or fewer credit hours) \$2.15 per credit hour
- Library Automation Fee \$2.42 per credit hour
- Technology Services Fee \$9.68 per credit hour
- Health Fee \$54.00 per semester

(enrolled in six or fewer credit hours) \$7.00 per semester

- Wellness Fee (on campus courses only) \$7.29 per credit hour
- Printing materials fee (on campus only) \$1.53 per credit hour

#### **Other Fees**

- Application \$40.00
- Graduation (graduating semester) \$40.00
- Yearbook (optional) \$30.00 per year

#### **Student Fee Refund Policy**

Please refer to the academic calendar for a schedule of refunds.

#### **Financial Aid**

Stipends are available to full-time students on a competitive basis from the Office of Basic Sciences and Graduate Studies. For students without stipend support, other forms of financial aid may be available from the department, faculty research grants or through the Office of Financial Aid.

#### **Application for Financial Aid**

The Free Application for Federal Student Aid (FAFSA) and other required applications may be obtained by contacting the Office of Financial Aid, Oklahoma State University College of Osteopathic Medicine, 1111 West 17th Street, Tulsa, Oklahoma 74107-1898. Students may apply online at <http://www.fafsa.ed.gov>. School code is G11282.

The basic philosophy of the Office of Financial Aid is to package aid according to federal standards and guidelines with the best interest of the student in mind. However, all students receiving assistance from sources other than this office must notify the financial aid office so the necessary adjustments can be made to the student aid package. If other campus-based aid is granted after the student receives notification from this office, that student's aid package will be adjusted accordingly.

#### **Transfer of Graduate Credits and Audit**

Refer to the Oklahoma State University Catalog.

#### **D. M.S. Program Requirements and Restrictions**

##### **Thesis**

Successful completion of the M.S. degree requires a minimum of 32 semester credit hours (24 hours coursework and 8 hours research) and includes at least 2 courses within the interdisciplinary biomedical program (one course outside the major discipline), an original research project, the presentation of a formal research seminar and a public defense of the research thesis.

##### **Non-Thesis**

Successful completion of the non-thesis M.S. degree requires a minimum of 32 semester credit hours. At least 2 courses within the interdisciplinary biomedical program are required, as well as 30 hours of course work and two hours of Research. A research project must be completed and presented to the student's advisory committee. The non-thesis option does not require a public defense of the project.

The thesis and non-thesis M.S. programs are designed to be accomplished in 2 years; however, all degree requirements must be completed within 7 years of entering the program.

**Credit for Course Work:** The M.S. student must successfully complete at least 24 (thesis) or 30 (nonthesis) semester hours of course work. Students are required to take at least 2 interdisciplinary medical courses. The student can include no more than 3 hours of special topics and 2 hours of seminar credit in their program. An academic review will occur in May at the end of each year of coursework to evaluate the progress of the student in the program.

#### **Required Courses**

Course # Course Title Credit Hours

BIOM 5020 Biomedical Sciences Seminar 1

BIOM 5215 Medical Biochemistry 5

BIOM 6175 Molecular and Cellular Biology 5

BIOM 6662 Research Ethics and Survival Skills for the  
Biomedical Sciences

2

Statistics Graduate level course in statistics 3

The student selects a minimum of one additional biomedical course from the list below.

Course # Course Title Credit Hours

BIOM 5117 Gross and Developmental Anatomy 7

BIOM 5124 Histology 4

BIOM 5134 Neuroanatomy 4

BIOM 5316 Medical Microbiology and Immunology 6

BIOM 5415 & 5425 General Pathology I & II 10

BIOM 5513 & 5523 Pharmacology I & II 6

BIOM 5616 Medical Physiology 6

**Credit for Research and Thesis:** For M.S. thesis students, a minimum of 8 hours of research and thesis

are required. For M.S. non-thesis students, a minimum of 2 hours of research are necessary, representing the student's research project.

**Minimum Number of Hours:** The total graduate hours shall not be less than 32 for either the M.S. thesis student or the M.S. non-thesis student.

**Transfer Hours:** Upon approval by the student's advisory committee (see p. 15), the student may transfer a maximum of 9 hours of graduate credit toward the M.S. degree. Required biomedical courses must be taken at OSU-CHS.

**Time of Study and Residence Requirements:** The minimum time for a student to complete the M.S. program (recognizing the sequence of required courses) is one and a half years. However, 2 years is the usual time required by a full-time student. The M.S. student must spend at least one semester in full-time residence at the Center for Health Sciences. A student must complete the program within 7 years.

#### **E. D.O./ M.S. Program Requirements and Restrictions**

**Credit for Course Work:** The D.O./M.S. student is required to successfully complete a minimum of 32 hours of graduate credit, 9 of which are earned as part of the Osteopathic medical program, 9 hours in each of the Fall and Spring semesters and 2 or more hours in the Summer semester. If the student receives a grade of "C" or lower they will not be allowed to enter the medical curriculum at OSU-COM. The biomedical science courses taken in the medical program provide 9 semester hours of credit toward the M.S. degree. OSU-CHS interdisciplinary medical courses taken outside the medical curriculum, i.e. as a BIOM course, are not included in the 9 hours of transfer credit. The M.S. student must successfully complete a total of 32 hours for the M.S. degree. Dual degree students are encouraged to pursue a non-thesis degree. Non-thesis students must take 2 hours of Research and 30 hours of course work while thesis students must take 8 hours of Research and Thesis and 24 hours of course work. The student can include no more than 3 hours of special topics and 2 hours of seminar credit in their program. The dual degree student is expected to complete the requirements for the M.S. degree in the summer term between MSI and MSII. Failure to complete the M.S. degree will prohibit the student from continuation in the medical program.

For the non-thesis Masters degree, the minimum of 2 hours of research represent a project performed under their advisor's guidance. Projects that contribute to a peer review publication or a presentation by the student at a regional, national or international meeting are desired. For the thesis Masters degree, the minimum of 8 hours of research and thesis represent a significant research project performed under the guidance of their advisor and the student's M.S. Advisory Committee. A public defense of the research is required for the M.S. degree with a notice being posted no later than 10 days prior to the defense.

In the first year in the graduate program the D.O./M.S. student curriculum is:

#### **Required Courses**

Course # Course Title Credit Hours

BIOM 5020 Biomedical Sciences Seminar 1

BIOM 5215 Medical Biochemistry 5

BIOM 6175 Molecular and Cellular Biology 5

BIOM 6662 Research Ethics and Survival Skills for the

Biomedical Sciences

2

Statistics Graduate level course in statistics 3

The dual degree student selects a minimum of one additional biomedical course from the list below.

#### **Courses fulfilling biomedical course requirement**

Course # Course Title Credit Hours

BIOM 5117 Gross and Developmental Anatomy 7

BIOM 5124 Histology 4

BIOM 5134 Neuroanatomy 4

BIOM 5316 Medical Microbiology and Immunology 6

BIOM 5415 & 5425 General Pathology I & II 10

BIOM 5513 & 5523 Pharmacology I & II 6

BIOM 5616 Medical Physiology 6

Further graduate courses must be selected to ensure a minimum of 9 hours for each of the Fall and Spring semesters and 2 or more credit hours for the Summer term in the first year. An academic review will occur in May at the end of each year of coursework to evaluate the progress of the student in the program.

**Minimum Number of Hours:** The total graduate hours shall not be less than 32 for either a thesis master's degree or a non-thesis master's degree.

**Transfer Hours:** Because the D.O./M.S. student receives 9 hours of credit for the biomedical sciences courses, additional transfer credit must be approved by the advisory committee. The student may only transfer graduate credit from other OSU courses. Required biomedical courses must be taken at OSU-CHS.

**Time of Study and Residence Requirements:** The minimum time for a student to complete the M.S. portion of the dual degree program (recognizing the sequence of required courses) is two years. The M.S. student must spend at least one semester in full-time residence at the Center for Health Sciences. A

student must complete the program within seven years. The M.S. degree is conferred when the graduate degree requirements are complete.

#### **F. Ph.D. Program Requirements and Restrictions**

**Credit for Course Work:** Students are required to complete a minimum of 45 semester hours, with no more than 9 hours of special topics and 4 hours of seminar. All students take the following required biomedical courses.

##### **Required Courses:**

Course #	Course Title	Credit Hours
BIOM 5020*	Biomedical Sciences Seminar	1
BIOM 5215	Medical Biochemistry	5
BIOM 6175	Molecular & Cellular Biology	5
	Statistics Graduate level course in statistics	3
BIOM 6662	Research Ethics and Survival Skills for the Biomedical Sciences	2

\*Taken prior to the semester of the dissertation defense.

The doctoral student selects a minimum of two additional biomedical courses from the list below.

##### **Courses fulfilling interdisciplinary biomedical course requirement**

Course #	Course Title	Credit Hours
BIOM 5117	Gross and Developmental Anatomy	7
BIOM 5124	Histology	4
BIOM 5134	Neuroanatomy	4
BIOM 5316	Medical Microbiology and Immunology	6
BIOM 5415 & 5425	General Pathology I & II	10
BIOM 5513 & 5523	Pharmacology I & II	6
BIOM 5616	Medical Physiology	6

Additional credits in course work and research for the student's program are determined by the advisory committee, tailoring an individual program to fit the student's educational needs. Students are required to maintain a GPA of 3.0 or better in their coursework. An academic review will occur in May at the end of each year of coursework to evaluate the progress of the student in the program.

**Credit for Research and Dissertation:** Because of the importance of research, a minimum of 30 hours of research and dissertation is required.

**Minimum Number of Hours:** The total number of graduate hours shall not be less than 90 beyond the bachelor's degree.

**Transfer Hours:** Upon approval by the student's advisory committee (see p.15), the student may transfer up to 30 hours for an acceptable master's degree. The student must complete at least 30 hours at OSU. No more than 9 hours may be transferred from institutions that do not grant doctoral degrees. Required biomedical courses must be taken at OSU-CHS.

**Research Proposal:** The Ph.D. student is required to write a research proposal, which must be approved by the student's advisory committee. This research proposal must be approved by the advisory committee at least 12 months prior to graduation.

**Qualifying Examination:** The Ph.D. student is required to pass a comprehensive qualifying examination administered by the advisory committee. The examination will be written and oral. The timing and format of the examination will be established by the student's advisory committee.

**Time of Study and Residence Requirements:** Four years is the usual time required by a full-time student. The program must be completed within 9 years.

##### **Teaching Experience**

Teaching is an important component of a well rounded Ph.D. graduate. Ph.D. candidates are encouraged to teach lectures at the undergraduate and graduate level. Teaching undergraduate courses at Tulsa Community College or similar regional institutions is desirable.

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#### **G. D.O./Ph.D. Program Requirements and Restrictions**

**Credit for Course Work:** The D.O./Ph.D. student is required to successfully complete all basic science medical courses in order to fulfill the requirements of the D.O. degree. These basic science courses provide 30 semester hours of graduate credit toward the Ph.D. degree. An additional 30 semester hours of graduate courses are required. No more than 9 hours of special topics and 4 hours of seminar can be taken for credit. This 60 hours of course work, and the minimum of 30 hours of Research and Dissertation, comprise the 90 graduate credit hours necessary for the Ph.D. degree. Students are required to maintain a GPA of 3.0 or better in their biomedical coursework. An academic review will occur in May at the end of each year of coursework to evaluate the progress of the student in the program. The D.O./Ph.D. student is required to enter the Ph.D. portion of the program after completing the first 2 years of the medical curriculum.

##### **Required Courses:**

Course # Course Title Credit Hours  
BIOM 5020\* Biomedical Sciences Seminar 1  
BIOM 6175 Molecular & Cellular Biology 5  
Statistics Graduate level course in statistics 3  
BIOM 6662 Research Ethics and Survival  
Skills for the Biomedical Sciences  
2

\*Taken prior to the semester of the dissertation defense.

**Transfer Hours:** Because the D.O./Ph.D. student receives 30 hours of credit for the basic sciences courses, additional transfer credit must be approved by the advisory committee.

**Research Proposal:** The student is required to write a research proposal, which must be approved by the student's advisory committee. This research proposal must be approved by the advisory committee at least 12 months prior to graduation.

**Qualifying Examination:** The student is required to pass a comprehensive qualifying examination administered by the advisory committee. The examination will be written and oral. The timing and format of the examination will be established by the student's advisory committee.

**Time of Study and Residence Requirements:** The Ph.D. portion of the D.O./Ph.D. program, which includes graduate courses, comprehensive qualifying examination, research and a dissertation, will take approximately 3 years. Thus, the time for completion of the D.O./Ph.D. dual degree program is approximately 7 years. The program must be completed no later than 9 years after entering the program. The student is required to enter the Ph.D. portion of the program after completing the first 2 years of the medical curriculum.

**Draft of Dissertation:** The student must prepare a draft of the dissertation and submit it to the advisory committee before entering the clinical portion (Third year) of the D.O. program.

#### **H. Probation and Dismissal – All Programs**

Courses are graded A, B, C, or U on a 4.0 scale, unless specified pass/fail. A student who fails to maintain a 3.0 average will be placed on probation and may lose stipend support. Further program restrictions may be implemented to assist the student in completing his/her graduate program. The student will be expected to return to a cumulative GPA of 3.0 or higher by the end of the semester subsequent to that in which the GPA fell below 3.0. Failure to do so may be cause for dismissal. Each case of probation or dismissal will be reviewed by the advisory committee and the BSGC and a recommendation forwarded to the Director of the graduate program in Biomedical Sciences. Students must also meet the minimum requirements of the Graduate College as specified in the University Catalog.

#### **I. Enrollment Status – All Programs**

**Full-time Status** The student will matriculate in the program with the first enrollment after formal acceptance by the Director of the graduate program in Biomedical Sciences. It is important that the graduate student in Biomedical Sciences understand the apprenticeship nature of graduate education. Therefore, a full-time graduate student will work in a department full-time performing tasks (coursework, research, teaching) as assigned by the major advisor. The graduate program is not a two-semester per year program but a 12-month per year program. If the degree is not completed by the end of the second year for the M.S., fourth year for the Ph.D., or seventh year for the D.O./Ph.D., the student must enroll in Research and Thesis/Dissertation for two hours per semester or summer term until degree requirements have been completed.

During the summer, when fewer courses are offered, each student is expected to be working on research as assigned by the major advisor. If a major advisor has not been chosen, each student will be under the supervision of the program director or a designated faculty member.

**Part-time Students** M.S. or Ph.D. students may enroll in the programs on a part-time basis for coursework but not for research. M.S. students must spend at least one semester and Ph.D. students one year in fulltime

residence for the research project. For part-time students, all degree requirements must be completed within seven years for the M.S. and nine years for the Ph.D.

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#### **J. Advisory Committee and Plan of Study**

Before the end of the first year each student must select a major advisor to direct his/her graduate program. The chair of a Ph.D. advisory committee must be a full member of the Graduate Faculty although an associate member may be the major advisor. An associate member of the Graduate Faculty may serve as major advisor and chair for an M.S. advisory committee. The advisory committee is chosen by the major advisor in consultation with the student. The committee must be selected prior to the commencement of the second year of coursework. Members of the advisory committee must be graduate faculty. The advisory committee is approved by the BSGC. The M.S. advisory committee shall consist of at least 3 members of the Graduate Faculty. The Ph.D. advisory committee shall consist of at least 4 members of the Graduate Faculty, one of whom must be from outside the biomedical sciences program. Additional clinical or basic

sciences faculty may be added. The major advisor is ultimately responsible for the integrity and progress of the student's program. Advisory committees are required to meet twice a year, once during the fall semester and again during the spring semester. The plan of study, which lists coursework and research, is developed by the student and advisor and is approved by the advisory committee. The plan of study must be submitted to the BSGC prior to the completion of the 17

<sup>th</sup> graduate credit hour of enrollment for the M.S. degree and

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<sup>th</sup> credit hour for the Ph.D. degree.

#### **Annual Graduate Student Review**

**As a part of its role in overseeing and guiding the Biomedical Sciences Graduate Program, the Biomedical Sciences Graduate Committee conducts a formal review of graduate student progress on an annual basis. The goal of this process is to review and support the student's progress through the Biomedical Sciences Graduate Program. The BSGC conducts this review in the May of each year, to assess the progress of each graduate student, and to allow each student to review his or her own progress to see if personal goals are being met and to plan for the next year.**

#### **K. Financial Aid**

Stipends are available to full-time Ph.D. students on a competitive basis from the Office of Basic Sciences and Graduate Studies. For students without stipend support, other forms of financial aid may be available from departments, faculty research grants or through the Office of Financial Aid.

#### **L. Research Thesis and Dissertation**

A research thesis is required for the M.S. degree and a research dissertation for the Ph.D. degree. The format should adhere to the *Graduate College Style Manual*, available online at <http://gradcollege.okstate.edu/student/thesis/default.html>. A public defense of the research is required for the M.S. degree and the Ph.D. degree with a notice being posted no later than 10 days prior to the defense. A final draft copy of the thesis or dissertation, available for review in the Office of Research, will be ready at the time the defense is posted. The format of the defense is left to the design of the major advisor but must include an opportunity for members of the audience to ask questions.

The student must submit four copies of the thesis or dissertation and six copies of the abstract to the Graduate College. Copies of the thesis or dissertation become the property of the University. Two copies are filed in the University Library and two copies are kept at the Center for Health Sciences, one in the Library and one in the Office of Basic Sciences and Graduate Studies. There is a binding fee for the four copies.

**Graduation** Participation in graduation is restricted to students who have completed all degree requirements. Students are expected to be present at the official College graduation exercises when the M.S. and Ph.D. degrees are awarded. Diplomas will not be released until all degree requirements have been satisfied including submission of copies of the thesis or dissertation and payment of fees.

#### **Outstanding Biomedical Sciences Graduate Student Award**

Each year, the Biomedical Sciences Graduate Student Committee (BSGSC) will present an award to an exceptional graduate student. The recipient of this award will receive special recognition at commencement and a framed award certificate that will be presented at the annual graduate student luncheon. In addition, this exceptional student will receive a monetary award of \$500 from the Office of Biomedical Science and Graduate Studies.

#### **Eligibility:**

All biomedical sciences graduate students pursuing an M.S., Ph.D., D.O./M.S. or D.O./Ph.D. degree, who have met all requirements for graduating by the third Friday in March each year, will be considered for this award.

#### **Nominations:**

Nominations for graduate students meeting the eligibility requirements are encouraged, but not necessary. All nominations should be submitted in writing to the BSGC no later than the third Friday of March each year and address any of the award criteria listed below. Specific examples and/or supporting documentation for each pertinent award criteria is also encouraged.

#### **Criteria:**

All graduate students meeting the award eligibility requirements will be judged on the following criteria:

- 1) Academic achievement. As demonstrated by their GPA and the difficulty of their curriculum.
- 2) Achievement in research. As established by published abstracts and/or manuscripts, meeting posters, and research presentations (e.g., annual Oklahoma State University Research Week).
- 3) Scholarly/professional potential. All characteristics of the student will be considered, which include but are not limited to: productivity, work ethic, collegiality, and participation in their scientific and/or professional communities.
- 4) Service to the University and/or community.
- 5) Any other noteworthy or outstanding characteristics that make the student exceptional. This

may include: 1) a leadership role in a student or professional organization; 2) recognition from an University, professional, or scientific organization for some accomplishment; 3) an unpublished, but significant accomplishment in the laboratory, etc.

**Presenter:**The Chair of the BSGC will present the award to the recipient at an annual spring awards banquet.

#### **M. Course Descriptions**

##### **5000 Research & Thesis\***

1-6 credits, maximum 6. Prerequisite: consent of major advisor. Research in biomedical sciences for M.S. degree.

##### **5013 Biomedical Statistics**

Prerequisite: graduate standing. Fundamentals of biostatistics including parametric and non-parametric statistical methods with applications to biomedical research, clinical epidemiology and clinical medicine.

##### **5020 Biomedical Sciences Seminar**

Prerequisite: graduate standing. Literature and research problems in biomedical sciences.

##### **5117 Gross and Developmental Anatomy\***

Lab 3. Prerequisite: graduate standing in the biomedical sciences program. General and specific concepts of regional morphology through didactic presentations and laboratory dissections. Emphasis on the range of normal for the various organ systems, their interrelationships and development. Application of anatomical knowledge in clinical situations.

##### **5124 Histology\***

Lab 2. Normal microscopic tissue architecture. Lecture and laboratory presentation for the histologic concepts of the basic tissues and organ systems. Basis for pathological and physiological principles.

##### **5134 Neuroanatomy\***

Lab 1. Prerequisite: graduate standing in the biomedical sciences program. Study of the structure and integrative function of the central nervous system. Laboratory sessions on head and brain dissection and special demonstrations. The relation of basic principles with osteopathic medicine and neurology in clinical correlation sessions.

##### **5215 Medical Biochemistry**

Broad survey of the chemical classes and metabolic processes that are consistent with the normal functions of these processes in human metabolism to provide a foundation for understanding the chemistry of disease states when discussed in the second-year program.

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##### **5316 Medical Microbiology and Immunology\***

Lab 1. Prerequisite: 5215. Similarities and differences among pathogenic microorganisms. Characteristics, pathogenesis and control of medically important microorganisms and disorders of the immune system. Laboratory exercises on the basic serological and microbiological procedures used in the diagnosis of infectious diseases.

##### **5415 General Pathology I**

Prerequisite: graduate standing. The reaction of the body to diseases and the description and identification of basic disease processes in terms of morphology, physiology and chemistry. Major processes such as cell injury, cell death, healing, neoplasia, inflammation, and diseases of development and aging. Basic disease processes and ability to recognize and describe basic disease processes from gross and microscopic specimens.

##### **5425 General Pathology II**

Prerequisite: graduate standing. Continuation of General Pathology I.

##### **5513 Pharmacology I**

Prerequisite: 5215, 5616. General principles of drug action, drugs acting on the autonomic nervous system, and drugs used in treating infectious diseases and cancer. The mode of action, pharmacogenetics, physiologic effects, therapeutic indications, and adverse reactions to these drugs.

##### **5523 Pharmacology II**

Prerequisite: 5513. Continuation of Pharmacology I.

##### **5616 Medical Physiology**

Prerequisite: 5215. The integration of structure and function of the human body with a functional analysis of the organ systems. Comprehension of the physiologic principles and control mechanisms that maintain homeostasis. Discussion of all systems of the body, and analysis of various interrelationships. The fundamental dynamic view of physiology upon which subsequent clinical learning is dependent.

Problemsolving

techniques utilized to develop and examine student understanding.

##### **6000 Research and Dissertation\***

1-15, credits, maximum 15. Lab 1-15. Prerequisite: consent of major adviser. Research in biomedical sciences for Ph.D. degree.

##### **6010 Topics in Biomedical Sciences**

Prerequisite: consent of instructor. Tutorials in areas of biomedical sciences not addressed in other courses.

**6023 Research Methods and Design**

Prerequisite: graduate standing. Introduction to concepts of research design, methodology, sampling techniques, internal and external validity and the scientific method.

**6113 Human Embryology\***

Lab 1. Prerequisite: gross and developmental anatomy (5117). Formation of the fetus from conception through development of the organs and organ systems with discussions of congenital malformations.

**6124 Advanced Histology\***

Lab 2. Prerequisite: 5124. Histochemical techniques used in the identification of cells or tissues based on the localization of cell organelles or cell products using electron microscopy, immunofluorescence, cryosectioning, and immunoperoxidase labeling.

**6143 Biomedical Electron Microscopy\***

Lab 2. Prerequisite: graduate standing. A course designed to familiarize the graduate student with the theory and application of transmission and scanning electron microscopy in a biomedical setting.

**6163 Cellular Molecular Neurobiology**

Prerequisites: 5215 and 5616. Current aspects of cellular and molecular neurobiology, including cell biology of neurons and glia, communication between neurons and the molecular and cellular aspects of brain development and plasticity.

**6175 Molecular and Cellular Biology**

Prerequisite: approval of course coordinator. Cell biology, including cellular macromolecules, energetics, metabolism, regulation, organization and function of cellular organelles, flow of genetic information and the regulation of selected cell activities.

**6183 Cellular and Molecular Biology of Pain**

Prerequisite: medical physiology (5616) or neuroanatomy (5134). A graduate course designed to provide an understanding of the cellular and molecular events that occur in the initiation and transmission of nociceptive (painful) sensory signaling.

**6193 Paleomammalogy**

Lab 1. Prerequisite: consent of instructor. The study of mammalian paleobiology through seminars and field work. Field trips are required.

**6214 Advanced Topics in Medical Biochemistry**

Prerequisite: 5215 or concurrent enrollment. Chemical basis of protein, carbohydrate, lipid, nucleic acid, steroid and porphyrin structure, function and metabolism as related to health and disease.

**6233 Enzyme Analysis\***

Lab 1. Prerequisite: 6214. Characteristics, separation, detection, assays, kinetics, mechanisms of catalysis, inhibition or inactivation, and clinical applications of enzyme analysis.

**6243 Human Nutrition\***

Lab 1. Prerequisite: 5215. Role of vitamins and minerals in maintaining normal metabolism, role of nutrients in providing athletic and immune system performance, and pathophysiology associated with nutrient deficits and nutrient excesses. Role of drugs in inducing cancer and increasing nutrient requirements.

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**6263 Techniques in Molecular Biology\***

Lab 2. Prerequisite: 5215, 5316, instructor's permission. Transformation of bacterial and mammalian cells. Purification of nucleic acids. Cloning of DNA fragments. Labeling of nucleic acids with non-radioactive probes. Analysis of DNA and RNA by electrophoresis and hybridization. DNA sequencing design, synthesis and use of oligonucleotides. Site-directed mutagenesis. Detection of rare nucleic acids by the polymerase chain reaction and expression of proteins.

**6313 Diagnostic Parasitology\***

Lab 1. Prerequisite: 5316. Animal parasites of humans with a focus on the laboratory identification of the medically important protozoan and helminthic diseases.

**6323 Diagnostic Virology\***

Lab 2. Prerequisite: 5215, 5316. Viruses causing disease in humans with emphasis on the laboratory diagnosis, prevention, and treatment of viral diseases.

**6333 Immunology**

Prerequisite: 5215, instructors permission. An introduction to medical immunology.

**6343 Microbial Physiology\***

Lab 1. Prerequisite: 5215, 5316. The chemical composition, growth and metabolism of prokaryotic organisms including regulation and control of metabolic pathways with emphasis on metabolism unique to microbes.

**6353 Molecular Virology**

Lab 1. Prerequisite: 5215, 5316, instructor's permission. A course to familiarize students with the fundamental molecular biology of the virus life cycle using one virus as a model to examine: penetration, gene regulation, replication, assembly and egress, as well as host immunological response and

epidemiology.

### **6363 Immunobiology of Infectious Disease**

Prerequisite: 5215, 5316. Graduate course to provide an understanding of cellular and molecular events that occur during initiation of immune response to main causes of human pathogens.

### **6413 Graduate General Pathology and Laboratory Medicine\***

Lab 1. Prerequisite: graduate standing. An introduction to the structural and functional abnormalities at the tissue level that manifest as disease states in organ systems, with emphasis on a pathophysiologic approach to etiology and pathogenesis of disease.

### **6513 Neuropharmacology**

Prerequisite: 5513, 5523. The pharmacology of agents affecting central nervous system (CNS) function, the interaction of drugs with receptors, and the action of endogenous neuromodulators at CNS sites of action.

### **6523 Cardiovascular Physiology and Pharmacology**

Prerequisite: 5513, 5523. Physiologic and pharmacologic mechanisms of cardiac and vascular smooth muscle function and control at the molecular, cellular, tissue and organ system levels.

### **6533 Principles of Drug Action**

Prerequisite: 5513, 5523. The molecular basis of drug uptake, distribution, physiologic action, and elimination from the body including pharmacogenetics, drug allergy, drug resistance, drug tolerance and physical dependence, and chemical mutagenesis, carcinogenesis, and teratogenesis.

### **6543 Neurochemical Toxicology**

Prerequisite: 5215, 5616. The fundamental aspects of neurochemistry and neurotoxicology using both cellular and molecular approaches in neurotoxicology will be emphasized using the effects of exogenous toxins such as heavy metals, pesticides, solvents and drugs of abuse and their role in the pathogenesis of neurological toxicity.

### **6583 Neuroinflammation**

Prerequisite: Instructor's permission. Inflammation is an integral component of many neuropathologic conditions including Alzheimer's disease, Parkinson's disease, multiple sclerosis, infection, HIV-associated dementia, stroke and trauma. This is graduate level course is designed to provide a better understanding of inflammation in the central nervous system (CNS). We will also discuss current and experimental pharmacologic strategies designed to modulate neuroinflammation. Insights will be attained through critical evaluation and study of scientific literature. Educational modalities will include assigned readings, lecture/discussion, and preparation of summary/critique papers, an oral presentation and a final exam (essay/short answer).

### **6613 Environmental Physiology**

Prerequisite: 5616. Environmental parameters, including barometric pressure, temperature, light, gravity, noise and crowding, having an impact on homeostatic mechanisms in the normal human with special emphasis on acute and chronic adaptations in response to changes in environmental parameters.

### **6643 Neurophysiology**

Prerequisite: 5616. Fundamental concepts of the motor and sensory components of the nervous system with emphasis on integrative mechanisms.

### **6653 Graduate Seminar in Signal Transduction**

Prerequisite, 5215, 5616: A cellular and sub-cellular seminar course with an emphasis on signal transduction.

\* Denotes lab fee

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## **VII. Forensic Sciences: Admissions and Cost**

### **ADMISSION AND ENROLLMENT**

#### **Types of Admission**

The Graduate Program in Forensic Sciences offers the following options:

- The Master of Science in Forensic Sciences
- The Master of Forensic Sciences Administration
- The M.F.S.A. with an emphasis on questioned documents
- The Graduate Certificate in Forensic Examination of Questioned Documents
- Special enrollment for non-program students

#### **The Master of Science degree (M.S.)**

The M.S. program prepares students for teaching, specialization, or research in the forensic sciences.

Participants may pursue

advanced studies and research in one of four areas: forensic DNA/molecular biology, forensic pathology,<sup>1</sup> forensic

psychology,<sup>2</sup> and forensic toxicology. M.S. students complete 39 hours of coursework, including 6 hours of research. A thesis

must be written and defended as the culmination of the research project. With at least 17 of the 29 hours of required core

courses offered online, full-time M.S. students may delay relocation to the Tulsa area until the third semester, at which time the student must attend classes on campus.

**M.S. Core Courses** (29 credit hours required)

FRNS 5000 Supervised Forensic Research Project (6 credit hours, taken in 1- to 3-hour segments)

FRNS 5013 Survey of Forensic Sciences (3)\*

FRNS 5063 Scientific Research, Writing, and Presentation (3)\* or equivalent course

FRNS 5073 Quality Assurance in Forensic Sciences<sup>3</sup> (3)\*

FRNS 5413 Forensic Pathology and Medicine<sup>4</sup> (3)\*

FRNS 5613 Criminalistics and Evidence Analysis (3)\*

FRNS 5622 Advanced Criminalistics or equivalent course (2)

FRNS 5653 Scientific Evidence (3)\*

STAT 5013 Statistics for Experimenters I (3)

**M.S. Electives** (10 credit hours required)

Directed electives and/or research studies as approved by advisor, usually within the specialty area.

**M.S. Comprehensive Examination**

Candidates for the M.S. degree must take a two-part comprehensive examination as a requirement for graduation. The

successful candidate must achieve a satisfactory score on the examination, as determined by the student's faculty advisory committee.

**The Master of Forensic Sciences Administration degree**

The M.F.S.A. program is designed for individuals with academic or professional experience in forensic-related fields. Studies

develop a broad understanding of the various disciplines as well as specific knowledge of critical administrative issues in the

forensic sciences. In addition to the regular administrative track, an emphasis in forensic examination of questioned

documents is available. The M.F.S.A. includes 36 credit hours, with core courses assigned according to track and elective

courses directed or approved by the advisor. The program consists of online courses and requires no attendance on campus.

<sup>1</sup> The M.S. degree is not a path toward a career as a forensic pathologist, which requires a medical degree.

<sup>2</sup> A career as a forensic psychologist requires a Ph.D. Any applicant wishing to become a psychologist should check with the intended doctoral program to coordinate plans for the M.S. degree.

\* Indicates a Web-based course

<sup>3</sup> FRNS 5713 Forensic Psychology replaces this course in the forensic psychology track.

<sup>4</sup> FRNS 5723 Forensic Psychology II replaces this requirement in the forensic psychology track.

**M.F.S.A. Core Courses for the administrative track** (24 credit hours required)

FRNS 5013 Survey of Forensic Sciences (3)\*

FRNS 5073 Quality Assurance in Forensic Science (3)\*

FRNS 5213 Molecular Biology (3)\*

FRNS 5413 Forensic Pathology and Medicine (3)\*

FRNS 5613 Criminalistics and Evidence Analysis (3)\*

FRNS 5653 Scientific Evidence (3)\*

FRNS 6010 Forensic Specialization: Ethical Leadership (3)\*

FRNS 6043 Forensic Management and Organizational Development (3)\*

**M.F.S.A. Electives for the administrative track** (12 credit hours required)

Advisor-approved courses or directed electives related to forensic management

**The M.F.S.A. option in questioned documents**

Offered in conjunction with the Graduate Certificate in Forensic Examination of Questioned Documents, this online program provides academic support for individuals in apprenticeship or journeyman programs that prepare document examiners, trainees, and laboratory interns for certification. Participation requires associated training or experience as well as permission from the lead instructor for questioned documents.

**M.F.S.A. Core Courses for the questioned documents track** (33 credit hours required)

FRNS 5013 Survey of Forensic Sciences (3)\*

FRNS 5023 Forensic Examination of Questioned Documents (3)\*

FRNS 5033 Forensic Handwriting Examination: Theory and Practice (3)\*

FRNS 5043 Technical Aspects of Forensic Document Examination (3)\*

FRNS 5053 Historical Aspects of Questioned Documents (3)\*

FRNS 5073 Quality Assurance in Forensic Science (3)\*

FRNS 5613 Criminalistics and Evidence Analysis (3)\*

FRNS 5653 Scientific Evidence (3)\*

FRNS 5713 Forensic Psychology (3)\*

FRNS 5913 Forensic Accounting and Fraud Investigation (3)\*

FRNS 6043 Forensic Management and Organizational Development (3)\*

**M.F.S.A. Electives for the questioned documents track** (3 credit hours)

Advisor-approved courses or directed electives related to forensic management or examination of questioned documents.

#### **Graduate Certificate in Forensic Examination of Questioned Documents**

Established in cooperation with the American Board of Forensic Document Examiners, the Graduate Certificate offers online

courses in support of apprenticeship/journeyman programs that prepare document examiners, trainees, and laboratory interns

for certification. Associated training or experience is required. All participants in the certificate program must have prior

approval from the lead instructor for questioned documents and from the Program Director. Participants may also apply for

admission to the M.F.S.A. program.

**Graduate Certificate Courses** (12 credit hours required)

FRNS 5013 Survey of Forensic Sciences (3)\*

FRNS 5023 Forensic Examination of Questioned Documents (3)\*

FRNS 5033 Forensic Handwriting Examination: Theory and Practice (3)\*

FRNS 5043 Technical Aspects of Forensic Document Examination (3)\*

#### **Internet Courses**

The M.F.S.A., M.S., and Graduate Certificate programs feature Web-based (online) courses, which require basic computer

skills and self-direction and also involve an additional fee. Online classes engage students in a variety of learning activities

and assign students greater responsibility for independent reading, course communications, assignments, and projects. In

addition, participants must have computer skills, appropriate equipment, and Internet/e-mail access needed for online courses.

Web-based courses are offered entirely online without requiring on-campus attendance, although some on-campus courses

may have Web components.

#### **Enrollment**

Admitted students will receive directions for enrollment along with a list of available classes from the Graduate Program in

Forensic Sciences. For more information, contact the Program office at 1-800-677-1972, Extension 11108 or 918-561-1108.

#### **Non-Program Enrollment**

Special enrollment for non-program students is available for courses not filled by M.F.S.A., M.S., or Graduate Certificate

students. Applicants must submit the Application for Special Graduate Admission along with the application fee and must also

provide an official transcript showing an undergraduate degree conferred. Course openings are assigned on a first-come, firstserved

basis according to the date the application is received.

#### **APPLICATION**

##### **Admission Requirements**

To be considered, the applicant must meet minimum qualifications for admission to the Graduate College at Oklahoma State

University, which include a grade point average of 3.0 or above.

In addition, the M.S. program requires an undergraduate degree in the behavioral, biological, medical, or physical sciences or

in a forensics-related discipline. Admission also requires a combined GRE score of at least 1000 for the verbal and

quantitative sections, with the analytical writing score also considered as a factor in admission.

Additional requirements for M.F.S.A. applicants include at least one year of academic or professional experience in the

forensic sciences or in related fields and either a score above the 50th percentile on the Miller Analogy Test (MAT) or a GRE

score that meets M.S. program requirements.

With permission from the Director of Forensic Sciences, the following scores may be substituted for individuals with advanced degrees: Medical College Admissions Test (MCAT); Dental College Admissions Test (DAT); and passing scores on the national board examination in dentistry, nursing, medicine, psychology, or accounting or on the state bar exam.

International students must have a minimum score of 600 on the Test of English as a Foreign Language (or 250 on the computerized version) and a minimum score of five (5) on the Test of Written English (TOEFL/TWE).

#### **Forensic Employment Background Checks**

Anyone considering a career in the forensic sciences should be aware that the job applications typically go beyond normal requirements for transcripts, employment history, references, interviews, and criminal-record checks.

Because of the

comprehensive screening involved, students applying for permanent positions or even for internships in forensic laboratories

are encouraged to apply well in advance, as the approval process may take several months.

Though varying by agency or employer, background checks may extend to inquiries about social companions, financial

history, military history, use of alcohol and illegal drugs, medical history, mental health conditions, motor vehicle accidents,

police records, personal weapons records, and civil court actions. In addition, personal information posted on the Internet,

including for Web sites like MySpace and FaceBook may be subject to review. Work samples and medical examinations may

also be required along with drug, personality, and polygraph tests. Although the OSU-CHS application asks about felony

convictions only, the prospective student should consider all factors that could influence future employment.

#### **Application Procedures**

Most students begin degree programs in the fall term, but the program also may admit students for the spring term if space is

available in the applicant's designated program. Exceptional candidates completing applications prior to deadlines may

receive early offers of admission. Late applications are accepted for any positions that remain open after the regular

admissions process.

Applications and transcripts must be sent by the specified due date to the Admissions Office, Oklahoma State University

Center for Health Sciences, 1111 West 17th Street, Tulsa, Oklahoma 74107-1898. Mailed items must be postmarked no later

than the designated due date.

International students should obtain and submit an International Application for Admission along with any forms required for

international students. All forms should be sent to the Admissions Office, Oklahoma State University Center for Health

Sciences, 1111 West 17th Street, Tulsa, Oklahoma 74107-1898.

**Due from the applicant by October 1, 2008, for spring 2009 admission or by March 1, 2009, for fall 2009 admission**

1. Letter of Application that includes

a. personal career goals or reasons related to the choice of the program, with the area of interest or specialty

identified for M.S. applicants;

b. a brief description of experience or qualifications reflected in supporting information (recommendations, transcripts, or employment);

c. any other pertinent information that the applicant wants the Forensic Sciences Graduate Committee to consider

2. Application for Graduate Admission (use form provided by Graduate Office)

3. Application fee of \$40.00, or \$75.00 for International applicants, by check or money order payable to OSU

4. Two official transcripts sent from each institution attended after high school

**Due from other sources by October 1, 2008, for spring 2009 admission or by March 1, 2009, for fall 2009 admission**

1. **Test scores and reporting:**

- a. Spring 2009 applicants should take the required test by August 15, 2008
- b. Fall 2009 applicants should take the required test by January 15, 2009
- c. **Required codes** must be entered on the test to ensure that scores arrive by the postmark deadline, as follows:

- i. For **GRE** and **TOEFL/TWE** tests, applicants should use **6546** as the Institutional Code for Oklahoma State University AND **0612** as the Department Code for **Osteopathic**, unique to the Center for Health Sciences—the only OSU campus with an Osteopathic program.

- ii. For the **MAT** test, applicants should use **2183** as the Recipient Code.

- iii. **If no code can be entered**, as with computer-based tests, scores should be sent directly to: Admissions Office, ATTN: Graduate Coordinator, OSU Center for Health Sciences, 1111 West 17th Street, Tulsa, Oklahoma 74107-1898.

2. **Three letters of recommendation** sent directly by the individuals recommending the applicant to the program,

with the Graduate Program Recommendation form attached and signed by the applicant.

3. **Verification of Forensic-Related Work Experience** form sent directly by the employer to the Graduate Office

(for M.F.S.A. applicants only).

Applicants are chosen on the basis of academic background, examination scores, recommendations, and pertinent information

from the letter of application or background. Also taken into consideration is the ability of the Graduate Program to support the applicant's career goals.

Notification of admission status will be mailed within six weeks of the application deadline. Offers of admission are sent by

mail, along with an Agreement to Enroll, which the applicant must return along with a \$100 deposit to reserve a place in the

Program. M.S. applicants must respond within two weeks of receiving the offer to secure a place in the program.

## **FINANCIAL INFORMATION**

### **Tuition and Fees**

Oklahoma Residents

- Resident Tuition (total for on-campus courses) \$154.85 per credit hour
- Supplemental Off-Campus Fee (Web courses) \$ 50.00 per credit hour
- Total Resident Tuition for Web-based courses \$204.85 per credit hour

Non-Residents

- Total Non-Resident Tuition for on-campus courses \$ 602.05 per credit hour
- Supplemental Off-Campus Fee (Web courses) \$ 50.00 per credit hour
- Total Non-Resident Tuition for Web courses \$ 652.00 per credit hour

Additional Fees

- Student Technology Services Fee (all courses) \$ 9.68 per credit hour
- Library Automation Fee (all courses) \$ 2.42 per credit hour
- Student Activity Fee (on-campus courses only) \$ 7.35 per credit hour
- Wellness Center Fee (on-campus courses only) \$ 7.29 per credit hour
- Student Health Fee (on-campus students only) \$ 54.00 PER SEMESTER (enrolled in 6 or fewer on-campus credit hours) \$ 7.00 PER SEMESTER
- Laboratory Fee (on-campus laboratory courses) \$ 125.00 PER COURSE
- Printing materials fee (on campus only) \$ 1.53 per credit hour

Other Fees

- Application fee \$ 40.00 (\$75 for International)
- Graduation (graduating semester) \$ 40.00
- Yearbook (optional) \$ 30.00 per year

**Student Fee Refund Policy:** Please refer to the Graduate Programs Academic Calendar for a schedule of refunds.

### **Academic Common Market/Electronic Campus Waiver**

M.F.S.A. students residing in the following states may qualify for reduced tuition under provisions of the Academic Common

Market and the Southern Regional Education Board:

Alabama Georgia Mississippi Texas

Arkansas Kentucky North Carolina Virginia

Delaware Louisiana South Carolina West Virginia

Florida Maryland Tennessee

Contact the Program Coordinator at 918-561-1108 or 800-677-1972, Ext. 11108, for details.

## **ACADEMIC REGULATIONS**

### **Advisory Committee**

With approval of the department chair, the M.S. student will select a major advisor to direct his/her graduate program before the end of the first year. Before beginning the research project, the student will consult with the major advisor to establish an advisory committee consisting of at least three faculty members, although clinical or basic sciences faculty or outside experts may be added. This committee must have the approval of the Program Director, the Forensic Sciences Graduate Faculty Committee, and the Associate Dean for Graduate Studies. The major advisor, who usually chairs the advisory committee, has ultimate responsibility for monitoring the integrity and progress of the student's program.

### **Application for Diploma and Graduation**

Students must file a Diploma Application for the semester of graduation, even if a previous Diploma Application was submitted.

Degree candidates are requested to attend graduation exercises when the M.S. and M.F.S.A. degrees are awarded.

Diplomas will not be released until all degree requirements have been satisfied, including submission of copies of the thesis or dissertation and payment of fees.

### **Comprehensive Examination**

The M.S. degree requires a comprehensive examination, with a satisfactory score (as determined by the advisory committee) required for those entering the program after January 1, 2008. No comprehensive examination is required for the M.F.S.A. and Graduate Certificate programs.

### **Minimum Grade Requirements**

- **Assigned Letter Grades** serve as the basis for grading in most courses. All grades of A, B, C, D, or F are based on a 4.0 scale.

- **Grades for Research and Thesis (5000):** Refer to "Grades for Thesis and Dissertation" under Academic Regulations in the Oklahoma State University Catalog for details.

- **Pass-No Pass Grading System:** An occasional course may use a Pass/No-Pass system. Refer to the Oklahoma State University Catalog for details.

- **Probation and Dismissal:** The student must maintain a 3.0 average. If the GPA falls below 3.0, the student may lose stipend support if involved in funded research. The Forensic Sciences Graduate Faculty Committee may recommend probation following an evaluation of a student's progress. Further program restrictions may be implemented to assist the student in completing his/her graduate program. The student will be expected to return to a cumulative GPA of 3.0 or higher by the end of the semester subsequent to that in which the GPA fell below 3.0.

Failure to do so is cause for probation or dismissal. The advisory committee will review each case of probation or dismissal with the Forensic Sciences Graduate Committee; the recommendation will then be forwarded to the Dean of the Graduate College. Students must also meet the minimum requirements of the Graduate College as specified in the University Catalog.

### **Records and Transcripts**

All permanent records are stored in the Office of Student Affairs. Requests for grades, transcripts, and diplomas should be made to that office.

### **Research and Thesis**

The M.S. candidate is required to present and defend the research to the advisory committee. The timing and format will be established by the faculty advisor in cooperation with the advisory committee.

### **Transfer Hours**

With the approval of the advisory committee and the Program Director, the applicant may receive up to nine hours of credit for courses taken in another graduate program or within the Graduate Program in Forensic Sciences under Special Graduate Admission (special student status).

#### **Time of Study and Residence Requirements**

All requirements must be completed within seven years after admission to the M.S. or M.F.S.A. program.

#### **CONTACT INFORMATION**

For more information, contact:

Cathy Newsome, Program Coordinator  
Graduate Program in Forensic Sciences  
1111 W. 17<sup>th</sup> St., Tulsa, OK 74107  
918-561-1108 OR 800-677-1972, Ext. 11108.  
forensic@okstate.edu.

#### **FORENSIC SCIENCES COURSES**

**FRNS 5000 Supervised Forensic Research Project and Thesis** *Prerequisites: Consent of major advisor, 5063 Scientific Writing and Presentation (or equivalent course), and STAT 5013 Statistics for Experimenters I.* Research in forensic sciences for M.S. degree. [Independent Study, laboratory course]

**FRNS 5013 Survey of Forensic Sciences** *Prerequisites: None.* Provides overview of various forensic sciences and their relation to presentation of evidence and problems of law. Covers major areas and reviews current guidelines for quality assurance/control, and certification/accreditation. [Web course]

**FRNS 5023 Forensic Examination of Questioned Documents** *Prerequisites: FRNS 5013 Survey of Forensic Sciences, including concurrent enrollment, or consent of instructor.* Instructs students in functions of questioned document examiners, beyond document analysis to related services and issues. Covers history of field, process for obtaining exemplars, types of document examination, collection/preservation of evidence, and courtroom procedures. (This course does not train the student as a document examiner and in no way certifies or qualifies the student to conduct questioned document analysis at the conclusion of the course.) [Web course]

**FRNS 5033 Forensic Handwriting Examination: Theory and Practice** *Prerequisite: FRNS 5023 Forensic Examination of Questioned Documents and approval of lead instructor for questioned documents.* Theoretical and practical aspects of handwriting as forensic evidence. Covers production of normal and false handwriting, variables in handwriting production, standards of comparison, identification theories, examination methodologies, expression of conclusions, characterization and validation of examiner skills, legal admissibility of handwriting expertise, and challenges to professional practice. [Web course]

**FRNS 5043 Technical Aspects of Forensic Document Examination** *Prerequisite: FRNS 5023 Forensic Examination of Questioned Documents and approval of lead instructor for questioned documents.* Basic theory in visual examination of questioned documents. Includes visual and color theory, measuring tools, instruments, simple microscopy, and photographic techniques. Also provides technical description, theory, operation, and practical use of various instrumentation used in the field such as the Electrostatic Detection Apparatus (ESDA) and Video Spectral Comparator (VSC). [Web course]

**FRNS 5053 Historical Aspects of Forensic Document Examination** *Prerequisites: None.* This course presents historical aspects of forensic document examination. It covers the development of handwriting, the acceptance of document examination expertise in Britain and North America, the early luminaries, and famous cases. [Web course]

**FRNS 5063 Scientific Research, Writing, and Presentation** [Web course] Develops scientific and individual writing abilities, especially relative to thesis development around a scientific question. Explores organization and design of various types of scientific writing; grammar and usage challenges for scientists; and aspects of presenting findings, including slide/poster design.

**FRNS 5073 Quality Assurance in Forensic Science** *Prerequisites: None.* Preparation for the forensic scientist to develop and implement quality assurance and quality control procedures to ensure the excellence of a laboratory. Covers preparation of laboratory procedures and policies, use of appropriate standards and controls, and validation methods for establishing an effective quality assurance program in the laboratory. [Web course]

**FRNS 5213 Molecular Biology** *Prerequisites: College-level biology.* Develops a solid foundation of knowledge in molecular biology for understanding the concepts of genetic marker analysis, especially DNA typing. [Web course]

**FRNS 5223 Forensic Biology** *Prerequisites: FRNS 5013 Survey of Forensic Sciences and FRNS 5213 Molecular Biology.* Covers derivation of forensic evidence from biological sources for criminal and civil investigation. Includes progression of laboratory testing to identify human body fluid and its source, detection and characterization of stains or fluids, and genetic marker testing.

**FRNS 5242 Population Genetics** *Prerequisites: FRNS 5513 Forensic Bioscience.* Population genetics relevant to DNA analysis technologies to identify perpetrators of crime. Includes foundation of statistical

knowledge in forensic DNA analysis and family relatedness testing, history and application of statistical and population genetic theory to assigning weight to matches in DNA profiles for the court. Students will perform appropriate calculations in sample cases and interpret in layman's terms.

**FRNS 5282 Methods in Forensic Biology and Forensic Toxicology** *Prerequisites: Permission of the instructor.* Advanced-level laboratory course in which students apply knowledge from earlier coursework in a hands-on setting and employ fundamental techniques and methodologies pertinent to forensic biology and forensic toxicology. [Laboratory course]

**FRNS 5413 Forensic Pathology and Medicine** *Prerequisites: None.* Deals with medico-legal investigation of death and injury due to natural causes, accidents, and violence. Covers analysis/investigation of transportation injuries, homicides/suicides due to various causes, rape, or injury; methods for identification; and guidelines for quality control/assurance. [Web course]

**FRNS 5513 Forensic Bioscience** *Prerequisites: FRNS 5233 Molecular Biology or instructor permission and college-level biology.* Teaches concepts of identity testing, relating history, theory, application, and quality assurance concepts to the material presented. Covers effects of identity testing in the laboratory. Presents basic concepts in genetics and use in tracing origin of biological samples. [Web course]

**FRNS 5523 Forensic Toxicology** *Prerequisites: None.* Introduces fundamental aspects of forensic toxicology and emphasizes major subfields of postmortem forensic toxicology, human performance toxicology, and forensic drug testing. Also examines methodologies and analytes associated with these three major subfields. [Web course]

**FRNS 5533 Drug Toxicity** *Prerequisites: None.* Introduces fundamental aspects of abused drugs from a toxicological perspective and examines major disciplines of toxicology. Also covers basic principles of toxicology applied to different classes of commonly abused drugs. [Web course]

**FRNS 5613 Criminalistics and Evidence Analysis** *Prerequisites: None.* Introduces crime investigation techniques and tools; analysis, operation, and function of laboratory; application of scientific concepts; instrumentation and microscopy; use of physical evidence; and guidelines for quality control/assurance and accreditation in the gathering of evidence. [Web course]

**FRNS 5622 Advanced Criminalistics** *Prerequisites: FRNS 5073 Quality Assurance in Forensic Sciences, FRNS 5616 Criminalistics and Evidence Analysis, FRNS 5653 Scientific Evidence, and basic coursework in the speciality area. FRNS 5000 Research and Thesis.* Examines practical aspects of criminalistics, duties of crime scene investigator, and techniques/procedures of crime scene processing. Also covers lawenforcement/

crime-lab relationships, evidence recovery, and investigation types. One meeting is moot court session. [Laboratory course with collaboration, assigned times]

**FRNS 5653 Scientific Evidence** *Prerequisites: None.* Reviews of ways in which the law, particularly the law of evidence, affects the work of the forensic scientist. Starts with the beginning of the case, most often the crime scene, and works through the legal process up through trial and including appeals and motions for a new trial. Covers, at each stage, legal doctrines of interest to the forensic scientist, such as chain of custody, work product privileges, laying the proper foundation, exhibits, and the standards necessary to obtain a new trial. [Web course]

**FRNS 5713 Forensic Psychology** *Prerequisites: FRNS 5013 Survey of Forensic Sciences.* Introduction to the relationship between the disciplines of law and psychology by examining and contrasting the issues at the interface of both disciplines. Covers legal terminology; criminal behavior; ethical, competency, defense, and testimony issues; insanity defense; polygraph testing; and the role and functioning of legal and mental health systems. [Web course]

**FRNS 5723 Advanced Forensic Psychology** *Prerequisites: FRNS 5013 Survey of Forensic Sciences and FRNS 5713 Forensic Psychology.* Expands on topics covered in FRNS 5713 Forensic Psychology; also covers function of the mental health professional in criminal cases, nature and impact of mental illness on individual life and freedom, reasons behind crimes, gender differences in the criminal justice system, laws pertinent for mental health professionals. [Web course]

**FRNS 5913 Forensic Accounting and Fraud Investigation** *Prerequisites: FRNS 5013 Survey of Forensic Sciences.*<sup>6</sup> Introduces concepts and tools used in the fields of forensic accounting and financial fraud investigations. Focuses on aspects of fraud investigation, including overview and types of fraud,

<sup>5</sup>This course, previously offered as a Web course, will be offered as *FRNS 6010 Advanced Crime Scene Investigation* in 2007, then re-offered under the original course name in 2008, with all meetings on campus.

<sup>6</sup>With permission from the advisor and instructor, this course may be taken concurrently with Prerequisite course.

indicators, and international investigations. Covers methods for litigation/investigation and compliance issues for expert reports. [Web course]

**FRNS 6010 Forensic Specialization (up to 5 repeats)** *Prerequisites: FRNS 5013 Survey of Forensic Sciences. Additional prerequisites specified by Program Director or major advisor may be required.* Advanced research study in a related specialty. [Independent study or specially arranged courses may be offered as Web or campus-based courses.]

**FRNS 6043 Forensic Management and Organizational Development** *Prerequisites: FRNS 5013 Survey of Forensic Sciences and FRNS 5073 Quality Assurance in Forensic Science.* Application of managerial and organizational leadership skills to the demands of forensic sciences, including attention to the human resource/relations and development issues. Attention also given to interagency cooperation, quality control/assurance, certification/accreditation issues, and internal security. [Web Course]

**BIOM 5013 Medical Biostatistics** *Prerequisites: Graduate standing.* Fundamentals of biostatistics including parametric and non-parametric statistical methods with applications to biomedical research, clinical epidemiology and clinical medicine. [On-campus course, offered fall semester, even years]

**BIOM 6543 Neurochemistry** *Prerequisites: BIOM 5215 Medical Biochemistry and BIOM 5616 Medical Physiology. Instructor permission required.* Graduate level course designed to introduce a student to the fundamental aspects of neurochemistry using both cellular and molecular approaches in neurochemistry and toxicology. The fundamental aspects of neurochemistry and neurotoxicology using both cellular and molecular approaches in neurotoxicology will be emphasized using the effects of exogenous toxins such as heavy metals, pesticides, solvents, and drugs of abuse as well as their role in the pathogenesis of neurological toxicity.

**HCA 5990 Special Topics: Human Resources in Health Care and Public Administration** (No description available; available beginning Fall 2008 as a Web course or on-campus in Tulsa or Stillwater)

**SOC 5773 Seminar in Victimology** Critical overview of contemporary theory and research on Victimology. Relationships between victim and offenders, social institutions such as media, police, business, advocacy groups, and various social movements. (Available on the Stillwater campus.)

**SOC 5990 Special Topics:** Courses offered under this heading include **Criminal Behavior Analysis**, a class offered on the Stillwater campus, and **Advanced Forensics**, a Web course with a one-time weekend meeting in Stillwater.

**SOC 6763 Theory in Criminal Behavior Analysis** Current research and theory on criminal behavior analysis. (Available on the Stillwater campus.)

**STAT 5013 Statistics for Experimenters I** <sup>7</sup> *Prerequisites: Graduate standing and MATH 1513 (college algebra).* Introductory statistics course for graduate students. Descriptive statistics, basic probability, probability distributions, fundamentals of statistical inference, hypothesis testing, regression, one-way classification, analysis of variance, comparative experiments, correlations and linear regression, introduction to categorical data analysis. [Available at OSU campuses in Tulsa and in Stillwater; Web option available through OSU Arts & Sciences Extension]

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#### **VIII. M.S. in Health Care Administration**

The **Health Care Administration (HCA) Program** is a Master's degree in Natural and Applied Sciences (MSNAS) with a specialization in health care administration. This graduate level program is designed for the busy individual who is already working in the health care profession. The curriculum provides exposure to management concepts, processes and techniques associated with administration functions in a variety of health care organizations. This interdisciplinary degree offers on-site courses at OSU Stillwater and OSU Tulsa as well as distance learning opportunities. While it is currently not possible to graduate through distance learning alone, we know that our students have truly benefited from the shared curriculum with the OSU MBA program and the Public Administration option in the Master's of Political Science as well as other programs within the Graduate College.

The **MSNAS program** consists of 32 total hours with a creative component and including six hours of general graduate level electives.

#### **HCA Program application deadlines:**

Fall admission – July 1

Spring admission – Dec. 1

Summer admission – Please contact HCA Program Coordinator

#### **A. Admissions Information**

Students must apply for admission to the OSU Graduate College and the HCA program, following steps listed.

#### **B. Required elements:**

<sup>7</sup>Meets the requirement for a statistical analysis course for the M.S. program.

##### **1. Graduate Application Admission Form**

- Please mark '**Degree Candidate**' as the Admission status.
- Please list '**Health Care Administration**' as the proposed major.
- Please list '**Master of Science**' as the degree sought.

##### **2. Application Fee**

Online application fee is \$40.00. Paper application fee is \$50.00. Please make checks payable to Oklahoma State University.

##### **3. Official Transcripts**

In order to be fully accepted into the program, you must have at least a 3.0 in your last 60 hours of

course work. Students who do not meet this requirement may still be able to enter the program on probationary status. These students may be subject to certain restrictions. Please submit an official transcript from each college or university you have attending, including if you attended OSU. Applicants are responsible for contacting these schools and requesting official transcripts.

#### **4. Health Care Experience**

This program is designed for applicants who have at least two to three years experience and are currently employed in the U.S. health care industry. This program serves as continuing education for health care professionals wishing to move into management and executive positions. **Due to the design of this program, it is not recommended for applicants without current U.S. health care experience.** Please outline your health care experience and how you see this program benefiting your career in your goal statement, below.

#### **5. Statement of Qualifications, Goals & Objectives**

Please prepare a one to two page, typed, double-spaced essay that includes the following:

- Description of your current job
- Description of current and past health care experience
- What are your career goals?
- How will the HCA program help you in achieving these goals?
- Why are you applying to OSU's HCA program?
- What personal strengths will help you attain your goals?
- What personal challenges do you face to attain your goals?

Please send official transcripts and any paper application materials to:

#### **Graduate Admissions**

**202 Whitehurst Hall  
Stillwater, OK 74078**

Please email your goal statement to [amanda.sumner@okstate.edu](mailto:amanda.sumner@okstate.edu) The application process will begin after the OSU HCA program receives your completed application packet. All materials in the packet become OSU property and will not be returned. Please note that admission offers are valid for one year only. If you do not enroll in that year, you must re-apply.

#### **Curriculum**

##### **Core Required Courses 6 hours**

Social Structures of Health Care Organizations 3 hours

Statistics & Research Methods 3 hours

##### **Core Elective Courses (one course from six areas below) 18 hours**

Accounting & Finance 3 hours

Human Resource Management 3 hours

Health Information Systems 3 hours

Operations Management & Qualitative Tools 3 hours

Management & Organizational Theory 3 hours

Marketing & Communications 3 hours

Program Planning & Evaluation 3 hours

Social, Legal & Ethical Issues 3 hours

##### **General Elective Courses 6 hours**

From list above or any graduate level class upon approval from Program Director.

##### **Creative Component Course 3 hours**

May be an independent study project or an approved course that has a significant written report requirement.

#### **Contact Information**

If you have any questions or need additional information, please do not hesitate to contact our offices. We are open weekdays from 8 a.m. to 5 p.m. central time.

**Amanda Sumner**, Graduate Coordinator

Graduate Program in Health Care Administration

OSU Center for Health Sciences

1111 West 17th Street

Tulsa, OK 74107

(918)561-8312 Fax: (918) 561-8421 email: [amanda.sumner@okstate.edu](mailto:amanda.sumner@okstate.edu)

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#### **IX. Governance and Administration**

##### **Oklahoma State Regents for Higher Education**

Chairman: Bill W. Burgess, Jr., Lawton

Vice Chair: Ronald H. White, MD, Oklahoma City

Secretary: William Stuart Price, Tulsa  
Asst. Secr: Joseph L. Parker, Jr., Tulsa  
Julie Carson, Claremore  
Marlin Glass, Newkirk  
James D. Harrel, Leedey  
Cheryl P. Hunter, Oklahoma City  
John Massey, Durant

**Board of Regents for Oklahoma Agricultural and Mechanical Colleges**

Chair: Lou Watkins, Stillwater  
Vice Chair: Douglas E. Burns, Norman  
Executive Secretary: W. Douglas Wilson, Ed.D.  
Calvin J. Anthony, Stillwater  
Fred L. Boettcher, Ponca City  
Joe D. Hall, Elk City  
Jay Helm, Tulsa  
Greg L. Massey, Durant  
Terry L. Peach, Mooreland  
Andy Lester, Edmond

**Advisory Council**

Chairman: Terry L. Nickels, D.O., Oklahoma City  
John G. Polkinghorne, D.D.S., Edmond  
Dennis J. Carter, D.O., Poteau  
James P. Riemer, D.O., Pawnee  
LeRoy E. Young, D.O., Oklahoma City  
B. Frank Shaw, D.O., Muskogee  
Thomas H. Conklin, Jr., D.O., Stigler  
Executive Director: Lynette McLain, Oklahoma City

**Administration**

V. Burns Hargis  
President, Oklahoma State University and OSU System  
John J. Fernandes, D.O., M.B.A.  
President, OSU Center for Health Sciences  
Dean, OSU College of Osteopathic Medicine

**X. Center Personnel**

**Administration/Professional Staff**

Jenny Alexopoulos, D.O. Senior Associate Dean and Vice President for Academic Affairs  
Ellen Averill Director, Public Relations and Marketing  
Damon Baker, D.O. Chief Medical Officer – OSU Medical Center  
Bruce Benjamin Ph.D. Associate Dean for Biomedical Sciences  
W. Daniel Cogan, Ed.D. Director of Academic Affairs and Accreditation  
Larry D. Cherry, D.O. Professor of Family Medicine  
Sandra D. Cooper, M.S. Director of Human Resources  
Beth Ann Freeman, M.L.S. Director of Libraries  
Jonathan Franklin, M.S. Director for Clinical Education  
Stanley E. Grogg, D.O. Medical Director Clinical Research  
Leah Haines Director of Admissions and Student Records  
James Hess, Ed.D. COO - Vice President of Healthcare Administration  
Dana A. Livingston, Director of Student Affairs  
Ryan N. Miller Director of Alumni Affairs  
William J. Pettit, D. O. Associate Dean for Rural Health  
Eric Polak, M.B.A. Director of Fiscal Affairs/Business Office, CFO for Medical Practice Plan  
JoAnn Ryan, D.O. Medical Director OSU Clinic System  
Gary L. Slick, D.O. Associate Dean for Graduate Medical Education  
Joan Stewart, D.O. M.P.H. Associate Dean for Clinical Education  
Brad Walker Associate Vice President for Development  
David R. Wallace, Ph.D. Assistant Dean for Research  
Richard A. Wansley, Ph.D. Associate Professor of Behavioral Sciences  
Michael Young Director of Telemedicine and Distance Learning

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**XI. Faculty**

**ANATOMY AND CELL BIOLOGY**

Kirby L. Jarolim Ph.D. Professor of Anatomy and Cell Biology and Chair

William D. Meek Ph.D. Professor of Anatomy and Cell Biology  
Kenneth Miller Ph.D. Professor of Anatomy and Cell Biology  
Doris Patneau Ph.D. Associate Professor of Anatomy and Cell Biology  
Kent S. Smith Ph.D. Assistant Professor of Anatomy and Cell Biology  
Anne Weil Ph.D. Assistant Professor of Anatomy and Cell Biology  
Nedra F. Wilson Ph.D. Assistant Professor of Anatomy and Cell Biology

#### **BEHAVIORAL SCIENCES**

Richard H. Bost Ph.D. Professor of Behavioral Sciences  
Teri L. Bourdeau Ph.D. Clinical Assistant Professor of Behavioral Sciences  
Ray Cordry D.O. Assistant Professor of Psychiatry  
Michael H. Pollak Ph.D. Professor of Behavioral Sciences  
Susan K. Redwood Ph.D. Professor of Behavioral Sciences  
Vivian M. Stevens Ph.D. Professor of Behavioral Sciences and Chair  
Nancy S. Van Winkle Ph.D. Professor of Behavioral Sciences  
Richard Wansley Ph.D. Associate Professor of Behavioral Sciences

#### **BIOCHEMISTRY/MICROBIOLOGY**

Martin Banschbach Ph.D. Professor of Biochemistry  
Earl L. Blewett Ph.D. Associate Professor Microbiology  
Franklin R. Champlin Ph.D. Associate Professor of Microbiology  
Robert S. Conrad Ph.D. Professor of Microbiology and Chair  
Rashmi Kaul Ph.D. Associate Professor of Immunology  
Gervald Köhler Ph.D. Assistant Professor of Microbiology  
Charles G. Sanny Ph.D. Professor of Microbiology and Interim Chair  
Gregory W. Sawyer Ph.D. Associate Professor of Biochemistry  
Dorothy Turetsky Ph.D. Assistant Professor of Biochemistry

#### **FAMILY MEDICINE**

Jenny Alexopoulos D.O. Professor of Family Medicine  
Dennis E. Blankenship D.O. Clinical Assistant Professor of Family Medicine  
Mark E. Blubaugh D.O. Clinical Assistant Professor of Family Medicine  
Jeffrey Chasteen D.O. Clinical Assistant Professor of Family Medicine  
Larry D. Cherry D.O. Professor of Family Medicine  
Laurie Clark D.O. Associate Professor of Family Medicine  
Lora D. Cotton D.O. Assistant Professor of Family Medicine  
William S. Eddy D.O. Professor of Family Medicine  
Jennifer Jo Eischen-Galbraith D.O. Clinical Assistant Professor of Family Medicine  
Michele M. Fowler D.O. Clinical Assistant Professor of Family Medicine  
David Gearhart D.O. Clinical Assistant Professor of Emergency Medicine  
James D. Hess Ed.D. Assistant Professor of Family Medicine  
Aaron Q. Lane D.O. Clinical Assistant Professor of Family Medicine  
Regina Lewis D.O. Clinical Assistant Professor of Family Medicine  
Cornelia O. Mertz D.O. Clinical Assistant Professor of Family Medicine  
William J. Pettit D.O. Associate Professor of Family Medicine  
Thomas R. Pickard D.O. Associate Professor of Family Medicine  
John C. Stepanek D.O. Clinical Assistant Professor of Family Medicine  
Joan E. Stewart D.O., M.P.H. Associate Professor of Family Medicine  
Chuck Thurman D.O. Assistant Professor of Family Medicine and Interim Chair  
William Wylie D.O. Clinical Assistant Professor of Family Medicine

#### **FORENSICS**

Robert W. Allen Ph.D. Professor of Forensic Sciences and Chair  
R. Tom Glass D.D.S., Ph.D. Professor of Forensic Sciences  
Jarrad R. Wagner Ph.D. Assistant Professor of Forensic Sciences

#### **INTERNAL MEDICINE**

Damon L. Baker D.O. Professor of Medicine and Chair  
John D. DeWitt D.O. Clinical Associate Professor of Internal Medicine  
Scott Hendrickson D.O. Assistant Professor of Internal Medicine  
David F. Hitzeman D.O. Professor of Medicine  
Daniel A. Nader D.O. Clinical Assistant Professor of Internal Medicine  
Randall S. Reust D.O. Assistant Professor of Internal Medicine  
Montgomery L. Roberts D.O. Assistant Professor of Internal Medicine  
Paul B. Rock D.O., Ph.D. Professor of Medicine  
Gary Slick D.O. Professor of Internal Medicine  
Johnny R. Stephens Pharm.D. Associate Professor of Internal Medicine

Jeffrey S. Stroup Pharm.D., R.Ph. Clinical Assistant Professor of Internal Medicine

**OBSTETRICS/GYNECOLOGY**

Terry Badzinski D.O. Assistant Professor of Obstetrics and Gynecology

Fred Fumia D.O. Clinical Assistant Professor of Obstetrics and Gynecology

Joseph R. Johnson D.O. Clinical Assistant Professor of Obstetrics and Gynecology and Interim Chair

Kimberly Sorensen D.O. Associate Professor of Obstetrics and Gynecology

William Po M.D. Clinical Associate Professor of Obstetrics and Gynecology

**OSTEOPATHIC MANIPULATIVE MEDICINE**

Robin R. Dyer D.O. Associate Professor of Osteopathic Manipulative Medicine

Leigh Goodson Ph.D. Associate Professor of Medical Education

Kenneth E. Graham D.O. Professor of Osteopathic Manipulative Medicine

Kelley J. Joy D.O. Clinical Assistant Professor of Osteopathic Manipulative Medicine

Caryn Jean Roelofs D.O. Clinical Assistant Professor of Osteopathic Manipulative Medicine

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**PATHOLOGY**

Edward F. Goljan M.D. Professor of Pathology

Joseph A. Price Ph.D. Professor of Pathology

Karlis I. Sloka D.O. Associate Professor of Pathology and Interim Chair

**PEDIATRICS**

Rhonda L. Casey D.O. Assistant Professor of Pediatrics

Christine Clary D.O. Associate Professor of Pediatrics

Shawna Duncan D.O. Assistant Professor of Pediatrics

M. Hany Elsayed M.D. Clinical Associate Professor of Pediatrics

Amanda Foster D.O. Clinical Assistant Professor of Pediatrics

Colony S. Fugate D.O. Clinical Assistant Professor of Pediatrics

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Stanley E. Grogg D.O. Professor of Pediatrics

Jay D. Johnson D.O. Associate Professor of Pediatrics

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**PHARMACOLOGY/PHYSIOLOGY**

Bruce A. Benjamin Ph.D. Associate Professor of Physiology

J. Thomas Curtis Ph.D. Assistant Professor of Physiology

Kathleen S. Curtis Ph.D. Assistant Professor of Physiology

Randall L. Davis Ph.D. Assistant Professor of Pharmacology

Warren E. Finn Ph.D. Associate Professor of Physiology

Alexander J. Rouch Ph.D. Associate Professor of Physiology

Craig W. Stevens Ph.D. Professor of Pharmacology and Chair

David R. Wallace Ph.D. Professor of Pharmacology

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**SURGERY**

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Laurie Duckett D.O. Clinical Assistant Professor of Surgery

Douglas C. Foster D.O. Associate Professor of Surgery

Dan Langlely D.O. Clinical Assistant Professor of Surgery

Michael Thomas M.D. Clinical Assistant Professor of Surgery

Michael Whitworth D.O. Associate Professor of Surgery

Susan B. Young D.O. Clinical Assistant Professor of Surgery