

**OSU Center for Health Sciences**  
**2017-2018 Catalog**  
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## I. ACADEMIC CALENDAR FOR 2017-2018

- **Medical Students**
- **Biomedical Science Students Taking Shared Courses**
- **Bridge Program Students**

### Medical Students

#### **FALL 2017**

June 19	Class of 2019 rotations begin (see detailed schedule from Clinical Education)
July 6	Class begins for Bridge Program students
July 31 – Aug 4	MSI Required Orientation (see detailed schedule)
Aug. 5	White Coat Ceremony
Aug. 7	First Day of Class
Aug. 15	Last day to add Last day for 100% refund on withdrawal
Aug. 21	Last day for 50% fees refunded on withdrawal (withdrawal noted on transcript)
Sept. 4	Labor Day Holiday
Nov. 10	Last day to withdraw from all courses with automatic “W”
Nov. 23-24	Thanksgiving Holiday
Nov. 27	Last day to withdraw from all courses with assigned “W” or “F”
Dec. 8	Last day of class
Dec. 11-15	Finals
Dec. 19	Final grades due from faculty

#### **SPRING 2018**

Jan. 8	First Day of Class
Jan. 15	Martin Luther King holiday
Jan. 16	Last day to add (nonrestrictive-graduate students) Last day for 100% refund on withdrawal
Jan. 22	Last day for 50% fees refunded on withdrawal (withdrawal noted on transcript)
March 19-23	Spring Break
April 13	Last day to withdraw from all courses with automatic “W”
April 30	Last day to withdraw from all courses with assigned “W” or “F”
May 11	Last Day of Class
May 12	Graduation
May 14-17	Finals
May 21	Final grades due from faculty

Graduate Students

***(Biomedical Students taking shared medical school courses, please see medical school calendar)***

**FALL 2017**

Aug. 18	Final enrollment date – late fees assessed after this date
Aug. 21	First day of class (Students taking Foundations see Med calendar)
Aug. 28	100% Refund, Nonrestrictive Drop/Add Deadline
Sept. 1	Partial Refund, Restrictive Drop/Add Deadline Last day for 50% fees refunded on withdrawal (withdrawal noted on transcript)
Sept. 4	Labor Day Holiday
Oct. 14	Students' Fall Break (Grad students taking Foundations courses may have class meetings)
Nov. 1	Deadline to file Graduate Student diploma application (for name to appear in the fall main campus Commencement Program)
Nov. 10	Last day to drop a course with grade of "W" Last day to withdraw from all courses with automatic "W"
Dec. 1	Last day to withdraw from all courses with assigned "W" or "F"
Nov. 22-24	Thanksgiving Holiday (Grad students taking Foundations courses may have a class meeting on the 22 <sup>nd</sup> )
Dec. 8	Last day of class
Dec. 11-15	Finals
Dec. 19	Grades due electronically from faculty

**SPRING 2018**

Jan. 12	Final enrollment date – late fees assessed after this date
Jan. 15	Martin Luther King, Jr. Holiday
Jan. 16	First day of class (Students taking Systems see Med calendar)
Jan. 23	100% Refund, Nonrestrictive Drop/Add Deadline
Jan. 27	Partial Refund, Restrictive Drop/Add Deadline Last day for 50% fees refunded on withdrawal (withdrawal noted on transcript)
March 19-23	Spring Break
April 2	Deadline to file Graduate Student diploma application (for name to appear in the spring main campus Commencement Program)
April 13	Last day to drop a course with grade of "W" Last day to withdraw from all courses with automatic "W"
April 27	Last day to withdraw from all courses with assigned "W" or "F"
May 5	Last day of class
May 7-11	Finals
May 12	CHS Commencement Ceremony (Tentative)
May 16	Grades due electronically from faculty

## II. MISSION, VISION, AND GOALS OF OKLAHOMA STATE UNIVERSITY CENTER FOR HEALTH SCIENCES

### **Mission:**

Oklahoma State University Center for Health Sciences educates and trains osteopathic physicians, research scientists and other healthcare professionals with emphasis on serving rural and underserved Oklahoma.

### **Vision:**

Oklahoma State University Center for Health Sciences will be recognized for:

- Fulfilling the health care needs of rural and underserved Oklahoma
- Producing graduates who are dedicated, effective, and compassionate community leaders
- Advancing the frontier of medical research
- Providing excellent care and health-related community service
- Being a leader and innovator in education
- Being the medical and graduate school of choice

### **Goals and Objectives:**

The Oklahoma State University Center for Health Sciences will pursue goals in the areas of education, research, and service.

#### **Education**

- Use best practices in graduate and medical education to provide state-of-art learning
- Be leaders, innovators and scholars in graduate and medical education
- Increase the number of graduate programs serving Oklahoma
- Develop new strategies for inter-disciplinary and inter-professional training

#### **Research/Scholarship**

- Actively pursue basic, clinical and education research
- Provide new career opportunities for graduates in graduate and professional programs
- Develop new strategies of health care delivery with an emphasis in rural and underserved Oklahoma
- Participate in and enable scholarly activity to advance knowledge of health care, osteopathic medicine and in the sciences and technologies that will shape medicine, science, and education.

#### **Service**

- Improve the health and well-being of rural and underserved populations
- Conduct innovative and collaborative research and integrate this knowledge into the health care.

## III. CAMPUS & FACILITIES

Located on the west bank of the Arkansas River, minutes from downtown Tulsa, the main OSU Center for Health Sciences campus is housed in a modern, nine-building complex on 16 acres. The complex consists of classrooms, biomedical and clinical science teaching and research laboratories, clinical simulation center, offices, lecture halls, break-out rooms, a medical bookstore and a medical library. The Tulsa Police Department forensic laboratory is also located on the campus in conjunction with the Forensic Sciences graduate program, one of only two facilities like it in the nation. Six OSU Physician clinics are located within 1 mile of the main campus serving as both teaching clinics for students and a health 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.

### **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 OSU-CHS Campus Security 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 student dismissal.

## **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 Security Office. A replacement card will be made for lost, stolen or defaced cards. There is not a replacement fee for these cards. The Security Officer at the kiosk located at the north end of Founders Hall 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 Associate Dean for Enrollment Management 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.

## **IV. MEDICAL LIBRARY**

The Medical Library provides biomedical information and library services (918-561-8449) that support teaching, learning, research, patient care, and community outreach. To support its service mission the Medical Library has built one of the best biomedical information resource collections in Oklahoma, consisting of more than 350 print journals titles, 16,000 electronic journals, 12,000 print books, 5,800 electronic books, and 5,500 audiovisuals. The Library also provides access to numerous online databases, including PubMed, DynaMed Plus, UpToDate, ClinicalKey, Bates' Visual Guide to Physical Examination Videos, TrueLearn (COMBANK), EXAM MASTER Online, BoardVitals, STAT!Ref, AccessMedicine, VisualDx, Acland's Anatomy Online, Natural Medicines, and Psychiatry Online. A complete list of databases is available at <http://libraryguides.healthsciences.okstate.edu/az.php>. The Medical Library provides 8 fully equipped group study rooms, more than 175 individual study carrels, and a variety of study tables and booths.

### **Work Study**

The Medical Library has job openings for work-study students year round. For information please contact the Library at 918-561-8449.

## **V. OKLAHOMA STATE UNIVERSITY COLLEGE OF OSTEOPATHIC MEDICINE**

### **A. Mission, Vision, and Goals**

#### **Mission**

Oklahoma State University College of Osteopathic Medicine educates osteopathic primary care physicians with an emphasis on serving rural and underserved Oklahoma.

#### **Vision**

Oklahoma State University College of Osteopathic Medicine will be recognized for:

- Fulfilling the health care needs of rural and underserved Oklahoma
- Producing graduates who are dedicated, effective, and compassionate community leaders
- Providing excellent care and health-related community service
- Being a leader and innovator in education
- Being the medical school of choice

#### **Goals and Objectives**

The Oklahoma State University College of Osteopathic Medicine will pursue goals in the areas of education, research and service.

#### **Education**

- Use best practices in graduate and medical education to provide state-of-art learning
- Be leaders, innovators and scholars in medical education
- Demonstrate and evolve the principles and practices of Osteopathic Medicine
- Increase the number of existing residency and training programs in Oklahoma focusing on rural and underserved areas.

### **Research/ Scholarship**

- Actively pursue basic, clinical, and education research
- Develop new strategies of health care delivery with an emphasis in rural and underserved Oklahoma
- The COM will participate in and enable scholarly activity to advance knowledge of health care, osteopathic medicine / osteopathic manipulative medicine and in the sciences and technologies that will shape medicine, science, and education.

### **Service**

- Improve the health and well-being of rural and underserved populations
- Work with the community and clinical affiliates to promote and provide distinctive osteopathic health care, including osteopathic manipulative medicine

### **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 3,000 students. The entering class size has increased from 36 in 1974 to its current 115 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 OSU Center for Health Sciences as well as the 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. Code of Ethics**

Administration, faculty, and staff of the OSU-College of Osteopathic Medicine adhere to the American Osteopathic Association’s Code of Ethics, adopted by the College in 2008. As student members of the osteopathic profession, OSU-COM students are expected to comply with the AOA Code of Ethics, which can be <http://www.healthsciences.okstate.edu/com/codeofethics.php>.

### **D. Accreditation**

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 (Commission on Osteopathic College Accreditation, American Osteopathic Association, 142 East Ontario Street, Chicago, IL 60611; telephone 312-202-8000; [predoc@osteopathic.org](mailto:predoc@osteopathic.org)). 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.

### **E. 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, including caring for the underserved population in Tulsa and northeastern Oklahoma.

#### **OSU Health Care Center**

2345 Southwest Boulevard, Tulsa, OK 74107

918-582-1980

(OMM, Family Medicine, Women’s Health, Take Charge! Program, Radiology))

#### **OSU Physicians – Houston Center**

717 S. Houston, Tulsa, OK 74127

918-586-4500

(OB/Gyn), 918-382-5064 (Internal Medicine, IMSS, Cardiology) 918-382-4600 (Pediatrics)

**OSU Physicians – Physicians Office Building**

802 S. Jackson, Tulsa, OK 74105

918-584-5364

(Family Medicine) 918-747-5322 (Surgery) 918-582-7711 (Cardiology) 918-582-7711

**OSU Physicians – Eastgate Metroplex**

14002 E. 21<sup>st</sup> Street, Suite #1130, Tulsa, OK 74134

918-439-1500

(Family Medicine)

**OSU-Tulsa Clinic**

700 N. Greenwood, North Hall, Room 265, Tulsa, OK 74106

918-594-8920

(Student Health)

**OSU-North Regional Health & Wellness**

5635 N. Martin Luther King Jr. Blvd.

Tulsa, OK 74126

918-732-4686

(Family Medicine)

**Catholic Charities**

2450 N. Harvard Ave.

Tulsa, OK 74115

918-949-4673

(OB/GYN)

**F. Admission Information**

The College actively recruits qualified minority students. Prospective students must meet the requirements of OSU-COM's Technical Standards Policy 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 Student Selection Committee recommends applicants for admission. 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:

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 appointed guardian 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, 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**

Minimum application requirements are as follows:

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 492 on the Medical College Admissions Test (MCAT)
  - c. Pre-professional science grade point average (GPA) of at least 2.75 (on 4.0 scale).



\*Effective with the 2016-2017 application cycle, only scores from the new MCAT will be accepted. MCAT must be taken within the last three years prior to application.

*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 laboratory); Organic Chemistry, 8 semester hours (including laboratory).
  - c. At least one upper division (3000-4000) level science course with no grade below "C" (2.0 on a 4.0 scale). Three to five upper division science courses are recommended for a competitive application. Examples include, but are not limited to: Human Anatomy or Comparative Anatomy, Biochemistry, Microbiology or Molecular Biology, Histology, Immunology, Embryology, Physiology.
  - d. 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.

*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: [mcats@aamc.org](mailto:mcats@aamc.org)

### **Admissions Options**

The College also offers three additional admissions options: A 3+1 Program, a Guaranteed Interview Program, and a Bridge Program.

#### 1) 3+1 Program

The Rural and Underserved Primary Care 3+1 Program seeks to admit students who desire to become primary care physicians in rural and underserved Oklahoma. The program allows students to complete their pre-doctoral training in seven years. The 3+1 Program provides an academic plan for students to complete at the following universities: Oklahoma State University College of Arts and Sciences, Oklahoma State University College of Agricultural Sciences and Natural Resources, Cameron University, East Central University, Northeastern State University, Southeastern Oklahoma State University, Southwestern Oklahoma State University, and University of Central Oklahoma. Utilizing an approved academic plan at one of these universities, students complete three years at the university, and combined with the OSU-COM first year curriculum, will earn a bachelor's degree. Students then progress through the second, third and fourth years of the rural medical track to graduate with a Doctor of Osteopathic Medicine (D.O.) degree. For more information on these programs, please visit our website: <http://www.healthsciences.okstate.edu/com/admissions/options.php>.

#### 2) Guaranteed Interview Program

Through the Guaranteed Interview Program, OSU-COM seeks to admit students into the D.O. program who are well grounded in the biological and physical sciences and who display academic and personal skills required to be successful in our program. The Guaranteed Interview Program provides an academic plan for students to complete at the following universities: Oklahoma State University Honors College, Oral Roberts University, University of Central Oklahoma, and the Master of Education in Education Program for Biomedical Science & Microbiology at Southwestern Oklahoma State University. Students meeting the requirements described in the program are guaranteed an interview for admission to the College of Osteopathic Medicine. OSU-COM will interview and assess Guaranteed Interview Program applicants on their personal characteristics, academic

preparedness, commitment to rural and underserved populations, and other factors based on the same standards as traditional applicants. For the undergraduate programs, students will typically complete four years of undergraduate coursework and then enter into the four year medical school program. More information on these programs can be found on our website: <http://www.healthsciences.okstate.edu/com/admissions/options.php>

### 3 ) Bridge Program

The objective of the Bridge Program is to promote entry into the osteopathic medical profession of high-potential students who come from disadvantaged or medically underrepresented backgrounds or are pursuing medicine as a second career. The Bridge curriculum lays out a program of study during the first year of training that incorporates summer academic preparation and focused coursework in the biomedical sciences. After successful completion of the Bridge year, students matriculate into the OSU College of Osteopathic Medicine and join the incoming medical school class. All coursework completed will transfer to the OSU-CHS College of Osteopathic Medicine. Once seated in the medical school class, students take a reduced course load during the first semester and then assume a full course load during the spring semester.

#### *Academic Requirements during the Bridge Year*

During the Bridge year, students must make an 80% or better on all biomedical sciences coursework during the fall semester, or otherwise be required to repeat this coursework during the first year of medical school. Any course failure (below 70%) during the Bridge year will result in dismissal from the program. Students will receive both an academic course grade and a non-cognitive grade for all courses. As members of the OSU-CHS community, students will be expected to adhere to the Student Code of Conduct; any behavioral incidents or unsatisfactory non-cognitive grades will be pursued through the Student Conduct and/or Academic Standards process. Once students matriculate into the medical school class, course failures and academic requirements will be governed by the Academic Standards Handbook..

#### *Admissions Criteria*

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

- Pre-professional academic achievement
- Evaluations from pre-professional committees or faculty and osteopathic physicians
- Results of MCAT
- Personal motivation for a career in osteopathic medicine
- Life experience/past career experience
- Data obtained during the on-campus interview

#### *Application*

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 demonstrate one or more of the following eligibility requirements:

1. Economic Disadvantage
  - Guidelines to consider in determining disadvantaged status can be found on our website at: <http://healthsciences.okstate.edu/com/admissions/bridge.php>.
  - Factors to consider include coming from a family with an annual income <200% of the Federal Poverty level. (See guidelines at: <https://aspe.hhs.gov/poverty-guidelines>.)
  - Applicants will be expected to provide an explanation for claiming disadvantage in this area.
  - All applicants must submit personal, parental, and/or guardian income tax returns for the year prior to matriculation.
2. Environmental/Educational Disadvantage
  - Guidelines to consider in determining disadvantaged status can be found on our website at: <http://healthsciences.okstate.edu/com/admissions/bridge.php>.
  - While not an exhaustive list, factors to consider include:
    - Being a first generation college student
    - Having graduated from a high school in a community of 7,500 or less
    - Having graduated from a high school where many students were eligible for free or reduced lunch prices
    - Having graduated from a high school with a low percentage of seniors having received a diploma
    - Coming from a school district where 50% or less of high school graduates pursue college
    - Being from a family which received public assistance (e.g., public housing, Medicaid)
  - Applicants will be expected to provide an explanation for claiming disadvantage in this area.

3. Underrepresented Minority in Medicine
4. Pursuit of medicine as a second career and interest in primary care and serving in rural/underserved Oklahoma

*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 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.

*Entrance Requirements*

At the time of entry, the applicant must have completed a baccalaureate degree at a regionally-accredited college or university and must have satisfactory completion of the following courses with no grade below "C" (2.0 on a 4.0 scale):

- English 2 semesters
- Biology (including Lab) 2 semesters
- Physics 2 semesters
- General Chemistry 2 semesters
- Organic Chemistry 2 semesters
- At least one upper division (3000-4000 level) sciences course

While a minimum of one upper division science course is required, completion of three to five upper division courses is strongly preferred. Examples include but are not limited to: Biochemistry, Human or Comparative Anatomy\*, Microbiology or Molecular Biology, Histology\*, Embryology, Immunology, Physiology, Genetics, Social Sciences and Humanities.

\*Preferred course

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 483 on the new MCAT\*
3. Pre-professional science GPA of at least 2.5 (on a 4.0 scale)

\*Effective with the 2016-2017 admissions cycle, only the new MCAT will be accepted. MCAT must be taken within the last three years prior to application.

*Bridge Program Curriculum*

Bridge Year, Summer Semester

- Introduction to Clinical Anatomy (1)

Bridge Year, Fall Semester

- BMF I – Medical Biochemistry (2)
- BMF II (Part 1) – Developmental Anatomy (1)
- BMF III (Part 1) – Histology (1)
- BMF VI – Pharmacology (1)
- Microbiology in Biomedical Sciences (3)

Bridge Year, Spring Semester

- BMF IV – Medical Immunology (1)

- BMF V – Medical Microbiology (3)
- Histology and Introduction to Gross Anatomy of the Nervous System (3)
- Physiology in Biomedical Sciences (3)

OMS Year 1, Fall Semester

- BMF I – Medical Biochemistry (Audit)
- BMF II – Molecular Biology, Genetics, & Developmental Anatomy (Audit)
- BMF III – Cell & Tissue Biology (Audit)
- BMF VI – Medical Pharmacology (Audit)
- Clinical Anatomy (5)
- Osteopathic Manipulative Medicine I (2)
- Medical Sciences (4)
- BMF II (Part 2) – Medical Genetics & Molecular Biology (2)
- BMF III (Part 2) – General Pathology (1)

OMS Year 1, Spring Semester

- BMF IV – Medical Immunology (Audit)
- BMF V – Medical Microbiology (Audit)
- Cardiovascular System (4)
- Genitourinary System (3)
- Hematology System (3)
- Respiratory System (3)
- Service Learning/Senior Mentor (1)
- Clinical Skills (4)
- Osteopathic Manipulative Medicine II (2)
- Lab Medicine (1)
- Geriatric Focus Course (1)

*Tuition and Fees*

During the Bridge Program year, tuition will be waived; fees will be paid by the student.

Bridge students are eligible to apply for Federal Student Aid. The Office of Financial Aid and Scholarships can provide students with financial aid information and counseling.

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**Transfer Applicants/ 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 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.

A transfer applicant may be considered depending on vacancies (if any) available in the class. Consideration will be given only to a student who is in good standing at an AOA-accredited college of osteopathic medicine.

Applicants for transfer must submit the following to the Director of Admissions:

1. A written request, including the reason for the transfer
2. A complete AACOMAS application, including all medical coursework completed and MCAT scores.
3. A letter 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.

Medical coursework equivalent to that of Oklahoma State University must be completed up to the time transfer is sought.

Consideration of the request will be based upon the applicant's admissions qualifications and the number of vacancies (if any) that exist at that time. All complete requests for transfer must be received by the Director of Admissions by December 1 prior to the year in which the applicant wants to transfer. 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 of providing 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.

The technical standards can be found at  
<http://www.healthsciences.okstate.edu/com/admissions/technicalreq.php>

### G. Application Procedure

#### **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 May 4. 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  
617-618-2889

#### **Application 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, including foreign transcripts that have been evaluated for U.S. equivalence by a U.S.-based evaluation service (see instructions below for Foreign Transcripts/Coursework). Required courses must be completed before matriculation.
  - c. MCAT scores sent directly from the testing service. 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: [mcats@aamc.org](mailto:mcats@aamc.org)

2. Applicant must send the following to OSU College of Osteopathic Medicine:
  - a. Supplemental application for admission.
  - b. Supplemental application fee (\$65).
  - 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 may also submit letters to the college using Liaison, Interfolio, or Virtual Eval.
    - i. Applicants without access to either of the above should use their own judgment in obtaining at least two evaluations that would be helpful in judging their candidacy in addition to two letters from osteopathic physicians.
  - d. A written evaluation from an osteopathic physician sent directly to the College or by using Liaison, Interfolio or Virtual Eval.

The deadline to submit AACOMAS applications for 2017-2018 admission is February 28, 2018. The deadline to submit supplemental applications for admission is March 30, 2018. 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 918-561-8324, 800-677-1972, or [lindsey.yoder@okstate.edu](mailto:lindsey.yoder@okstate.edu).

**Foreign Transcripts/Coursework:**

The COM will only accept credit for foreign coursework that has been evaluated by a U.S. evaluation service, when that evaluation report indicates that the coursework was similar to coursework taken at an institution that is comparable to a regionally accredited college or university in the U.S. As such, any coursework taken at a foreign institution must undergo evaluation for U.S. equivalence by one of the evaluation services accepted by AACOMAS (refer to AACOM website/AACOMAS application for a current listing). Applicants should request that an official copy of the evaluation report be sent directly to AACOMAS from the evaluation service. OSU-College of Osteopathic Medicine will not accept student copies of an evaluation or transfer credit that appears on a U.S. transcript. Applications will not be considered complete without an official course-by-course evaluation. Foreign evaluation services listed by AACOMAS as of July 1, 2017 are as follows:

World Education Services (WES) P.O. Box 5087 New York, NY 10274-5087 Telephone: 212.966.6311 www.wes.org	Educational Credential Evaluators, Inc. (ECE) P.O. Box 514070 Milwaukee, WI 53203-3470 Telephone: 414.289.3400 www.ece.org
Josef Silny & Associates, Inc. 7101 SW 102 Avenue Miami, FL 33173 Telephone: 305.273.1616 www.jsilny.com	International Education Research Foundation, Inc. (IERF) P.O. Box 3665 Culver City, CA 90231-3665 Telephone: 310.258.9451 www.ierf.org

Prior to matriculation, accepted students will be required to submit a copy of the evaluation report to the Admissions Office for the student's file. The Admissions Office will review the file to ensure that the required process has been completed.

**H. Student Health Status**

**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.

### **Immunizations and Tuberculosis Testing**

Entering students are required to provide evidence, prior to matriculation, of immunization for or immunity to tetanus Tdap within the last 10 years, polio, measles, mumps, rubella, varicella, hepatitis A and hepatitis B. If the hepatitis B immunization series has not been completed prior to matriculation, it must be completed during the first year at the student's expense. Students must also provide evidence of a 2 step TST Tuberculosis test done with the last year prior to matriculation.

### **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 and/or the OSU Medical Clinic.

### I. Tuition & Fees

Tuition and fees are approved by both the Board of Regents for the Oklahoma Agricultural and Mechanical Colleges and the State Regents for Higher Education and are subject to change only after consideration in public meetings of those bodies. Tuition and fees must be paid prior to the first day of each semester. Tuition and fees are charged annually based on a student's year in medical school.

#### **Tuition**

- Oklahoma Residents \$ 25,415.36
- Nonresidents \$ 50,872.48

#### **Fees**

##### *First Year/Bridge Students*

- Library Automation and Materials Fee \$ 120.00
- Student Activity Fee \$ 185.22
- Student Health Fee \$ 108.00
- Student Technology Services Fee \$ 161.26
- Student Malpractice Insurance Fee \$ 125.00
- Laboratory Fee \$ 330.00
- Student Wellness Fee \$ 175.00
- Academic Services Printing Fee \$ 55.00
- Clinical Skills Equipment Fee \$ 250.00
- Board Exam Preparation Fee \$ 500.00

##### *Second Year Students*

- Library Automation and Materials Fee \$ 120.00
- Student Activity Fee \$ 185.22
- Student Health Fee \$ 108.00
- Student Technology Services Fee \$ 161.26
- Student Malpractice Insurance Fee \$ 125.00
- Laboratory Fee \$ 220.00
- Student Wellness Fee \$ 175.00
- Academic Services Printing Fee \$ 55.00
- Clinical Skills Equipment Fee \$ 250.00
- Board Exam Preparation Fee \$ 500.00

##### *Third Year Students*

- Library Automation and Materials Fee \$ 120.00
- Student Activity Fee \$ 185.22
- Student Health Fee \$ 108.00
- Student Technology Services Fee \$ 161.26
- Student Malpractice Insurance Fee \$ 125.00
- Board Exam Preparation Fee \$ 500.00

#### *Fourth Year Students*

- Library Automation and Materials Fee \$ 120.00
- Student Activity Fee \$ 185.22
- Student Health Fee \$ 108.00
- Student Technology Services Fee \$ 161.26
- Student Malpractice Insurance Fee \$ 125.00
- Graduation Fee \$ 40.00
- Board Exam Preparation Fee \$ 500.00

**Tuition and Fees are subject to change.**

#### **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 Service Fees**

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 following are covered under the student health fee:

- Flu shots
- Immunizations needed after matriculation due to non-immune titer results
- Follow up immunizations if titers show not immune.
- Annual TB screening
- Lab tests following an inadvertent needle stick and treatment associated with needle stick.

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

- Sick and preventative care visits
- Any service 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 or titers)
- Radiology services
- Supplies (crutches, etc.)

#### **Books and Supplies**

For financial aid purposes, OSU estimates that the cost of books and supplies during the first year of study will be \$6,000.00. For the second and third years of study, OSU estimates books and supplies will be \$2,500.00. For the fourth year of study, OSU estimates books and supplies will be \$4,000.00. Bridge students will have books and supplies expenses of \$2,000 during their Bridge year and \$4,000 during their first year.

#### **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.



## J. Student Health and Behavioral Health Services

### **Student Health**

The OSU Health Care Center is located just a short distance from the main campus at 2345 Southwest Boulevard, Tulsa, Oklahoma and can be reached at 918-582-1980. For an office visit, students must make an appointment with an OSU Physician and follow the normal check-in procedures for patients. Please see the section above on services covered under Student Health Service Fees. For additional information regarding services or to schedule a visit with the Occupational Health Nurse, call 918-561-1256.

### **Behavioral Health**

All students have access to confidential counseling services through ComPsych and the OSU-Tulsa Counseling Center. Information about these services can be found at <http://centernet.okstate.edu/behavioralhealth.php>.

### **ComPsych**

ComPsych provides around the clock behavioral health services to all students. Students can call toll free at 866-591-8354 on a 24 hours per day/7 days per week basis to discuss their concerns with professionals with Master's degree in counseling, social work, or other related behavioral areas. Students can also initiate contact between 8:00 a.m. to 6:00 p.m. Central time with an intake clinician via an online chat feature, accessed at [guidanceresources.com](http://guidanceresources.com). An access code will be available to students to initiate contact with this resource. Communication is offered in multiple languages and for hearing impaired individuals. Referrals for face-to-face counseling by state-licensed clinicians can be provided. ComPsych has a network of more than 50,000 providers to support OSU medical students wherever they live, study or travel. ComPsych's network includes only ComPsych-credentialed, state-licensed clinicians with expertise in areas such as: adolescents and children, anxiety disorders and depression, domestic violence, marriage and families, stress management, and substance use. Counseling services are free of charge to students for up to ten sessions.

### **OSU-Tulsa Counseling Clinic**

Students can be seen at the OSU-Tulsa Counseling Clinic, located on the OSU-Tulsa campus, just a few miles from OSU-CHS. Counseling services are free of charge for the first five sessions; subsequent sessions are at a cost of \$10 per session. Appointments can be made by calling 918-594-8568. For more information, please visit the OSU-Tulsa Counseling Clinic website at <https://www.osu-tulsa.okstate.edu/services/counseling.php>.

### **Community Resources**

There are also a variety of community resources, which students may wish to access independent of the services provided by OSU-COM. A listing of community resources can be found at <http://centernet.okstate.edu/behavioralhealth.php>. One of these services is Community Outreach Psychiatric Emergency Services (COPES), a part of Family and Children's Services. COPES provides mobile crisis assistance, including on-site intervention, stabilization, and connection to other community services. COPES services are free, confidential, and available 24/7 to anyone in Tulsa County. COPES can be reached at 918-744-4800.

## K. Financial Aid

### **Campus Address and Phone**

Oklahoma State University Center for Health Sciences  
Office of Financial Aid  
1111 West 17<sup>th</sup> Street  
Tulsa, OK 74107-1898  
918-561-8278  
918-561-1228

**Website:** <http://www.healthsciences.okstate.edu/com/financialaid/index.php>

Students who need financial assistance are encouraged to consider the many types of financial aid available through the OSU Center for Health Sciences Office of Scholarships and Financial Aid. These programs include scholarships, loans, and work-study.

### **Scholarship Programs**

Oklahoma State University Center for Health Sciences annually offers scholarships to qualifying students each year. OSU-CHS scholarships are awarded on the basis of academic achievement, academic potential, leadership, community service, and financial need. Many scholarships are based on a preference for rural and/or primary care careers.

### **Federal Aid Programs**

Federal aid at OSUCHS is awarded on the basis of demonstrated financial need. Each student who wishes to be considered for federal aid should submit the Free Application for Federal Student Aid (FAFSA) as soon after January 1 as possible.

Students can apply for assistance by submitting the FAFSA electronically at [www.fafsa.ed.gov](http://www.fafsa.ed.gov)

The following is a list of federal aid programs available at OSUCHS:

- Federal Work-Study
- Federal Direct Unsubsidized Loan
- Federal Direct Graduate PLUS Loan

### **Return of Title IV Funds Policy**

The OSU-CHS Office of Scholarships and Financial Aid, in accordance with federal regulations, calculates the return of Title IV Funds for any student who receives Title IV aid and subsequently withdraws before the end of the enrollment period/term. A copy of the policy detailing the requirements is available in the Office of Scholarships and Financial Aid.

### **Satisfactory Academic Progress for Financial Aid Eligibility**

Students enrolled in the College of Osteopathic Medicine must show satisfactory academic progress to remain eligible for financial aid. Students who have completed all coursework towards a degree but who have not yet passed their Comprehensive Osteopathic Medical Licensing Examination (COMLEX) Level 2 will not be eligible for financial aid through the OSU College of Osteopathic Medicine. A copy of the policy detailing financial aid requirements is available in the Office of Scholarships and Financial Aid.

### **VA Benefits**

Students wishing to apply for Veteran's benefits should contact the campus [School Certifying Official](#). Students utilizing VA benefits for school must submit all prior transcripts and training records to be evaluated for prior credit, whether or not prior credit is granted. Students receiving benefits may be in debt to the VA for early dismissal or withdrawal from courses

### **Military Leave/Call up**

#### *Active Military Duty*

Per Oklahoma State law (SB 1830), OSU offers a military leave of absence (MLOA) to students who are members of the active uniformed military services of the United States who are called to active duty.

An MLOA allows a student to be absent from the University for active duty without penalty to admission status or grade point average and without loss of institutional financial aid. It also allows the student to be eligible for withdrawal from all or some classes with a full refund of tuition and fees or to be eligible for incomplete grades in classes for which he/she has successfully completed at least 50% of the coursework at the time of leave, if the student intends to complete the classes upon return from active duty. MLOAs shall not exceed a cumulative five years. Graduate student LOAs are for a period of one year with annual extensions possible up to the five-year cumulative limit. Students apply for MLOA by submitting the appropriate form and supporting documentation. See OSU Military Leave of Absence FAQs for more information [Military Leave of Absence FAQs](#).

If time allows, contact the Veterans Benefit Services office to inform them of your pending activation. Notification will be made to the Veterans Administration and education benefits will be placed in a pending status. You will not be required to repay benefits previously received for the term in which you are activated.

#### *Short-Term Military Leave*

If you will miss classes for short-term military leave or military training exercises, (example: Annual training for National Guard and Reserve members) please contact your instructors as soon as you become aware of this so that any appropriate accommodations can be made between you and the instructor.

Benefits are terminated immediately the day of leave, and may start up again upon return

*For College of Osteopathic Medicine students, military obligations that conflict with matriculation will take two forms:*

1) A military commitment that arises before the student matriculates in the D.O. program. In this case, a deferred admission will be negotiated.

2) A military commitment that arises during matriculation. In this case, the student applies for a leave of absence, and the circumstances of return to the professional program will be negotiated and documented according to OSU-COM policy. Due to the “once a year” design of most of the D.O. curriculum, it may not be possible to return to the curriculum immediately after completing military duty.

#### L. Financial Responsibility

A monthly electronic billing statement is generated on the last business day of every month detailing charges and payments that occurred during that month on a semester timeframe. The statement notification is emailed to the student's okstate email address at the beginning of each month. Payment is due no later than the 15th of each month. It is the student's responsibility to check his or her individual bursar account to verify that University-administered scholarships and waivers, as well as external scholarships, have been credited to the account. Billing statements can be viewed online and paid online at <http://prodosu.okstate.edu>. Failure to receive a bill does not relieve the student from financial obligation, or from any late charges or other penalties that may occur on past due accounts. All past due accounts accrue a penalty at the rate of 1.5% monthly.

By sending a check as payment, the student authorizes Oklahoma State University to clear his or her check electronically. The student's checking account may be debited on the same day payment is received. The electronic transaction will appear on the corresponding bank statement although the check itself will not be presented to the financial institution or returned to the student. Any resubmission due to insufficient funds may also occur electronically. Please be aware that all checking transactions will remain secure and payment by check constitutes acceptance of these terms.

Accounts must be cleared before the student can obtain the release of any academic records such as a transcript, receive a diploma or enroll for subsequent semesters. Any charges incurred by the University in an effort to collect on delinquent accounts will be assessed to and will be the responsibility of the account holder. Delinquent account information is disclosed to credit reporting agencies, which could endanger the student's credit rating on a local or national level. Past due accounts may receive payment from the warrant intercept program (WIP) which captures state income tax refunds to pay outstanding OSU debt.

#### M. Student Information & Academic Regulations

##### **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 . The Handbook and additional policies, including the student travel policy, can be found at <http://www.healthsciences.okstate.edu/com/academics/policies.php> and/or in the Office of Academic Affairs.

##### **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**

Grades will be awarded based on class preparations, class attendance and participation, examination scores, and personal and professional conduct.

- 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
- F — Unsatisfactory (numerical range 64 and below) 0 (Graduate)
- F! — Academic Dishonesty
- SR — Satisfactory Research
- UR — Unsatisfactory Research
- 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

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. Because transfer students do not take the same 1st and 2nd year curriculum as the rest of their class, they are not ranked.

### **Dean's List**

Students in the first and second years of medical school who rank in the top 20% of the class are named to the Dean's List. This award is based on the class ranking for the semester and is notated on the transcript.

**Remediation Services** is designed to assist students in meeting the academic and professional requirements for satisfactory progress in the standard curriculum. See the Student Handbook for more information.

### **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-USA Level 1. A student cannot graduate from the D.O. program without passing COMLEX-USA Level 2 CE and Level 2 PE. Testing for both levels is done several times each year at computer testing sites and the national testing center in Conshohocken, PA or Chicago, IL; 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 Senior Associate Dean for Academic Affairs when the student's progress will be closely monitored by the Academic Standards Committee and the Senior Associate Dean for Academic Affairs. 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. No un-remediated "D" or "U" grades and no grades of "I";
2. Satisfactorily completed all clinical rotations;
3. Complied with all legal and financial requirements of the College;
4. Exhibited the ethical, professional, behavioral, and personal characteristics necessary for the practice of osteopathic medicine;
5. Demonstrated acceptable competence in the knowledge, skills, and attitudes required of an osteopathic physician;
6. Passed COMLEX-USA Level 2, both cognitive (CE) and performance (PE);
7. Been recommended for graduation by the faculty and appropriate College bodies;
8. Attended the commencement ceremony (only in unusual circumstances, and with prior approval of the Senior Associate Dean for Academic Affairs, will a degree be awarded in absentia);
9. Met the graduation requirements listed in the catalog.

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.

Medical students who expect to graduate in May but have not yet completed all the requirements for the D.O. degree are expected to do so in a timely manner after the graduation date. These requirements include passage of COMLEX-USA Level 2CE and COMLEX-USA Level 2PE exams, submission of all clinical rotation evaluations and meeting any conditions to be removed from academic probation (if applicable). Students who have not completed all rotations, submitted all required evaluations, met all conditions for probation removal, or passed the required COMLEX-USA exams by September 1st following the May graduation date will be awarded their degree on the date that requirements are met. It is the responsibility of students who are completing make-up rotations, working with preceptors to obtain outstanding rotation evaluations, or studying for the COMLEX-USA exam to maintain communication with the Office of Clinical Education and the Registrar in the Office of Student Affairs regarding their progress toward completion of degree requirements. Students on academic probation should be in contact with Academic Affairs to be sure all conditions for removal of probation have been met. Students that are expected to complete all graduation requirements by October 31 may walk with their class in May. Students that are expected to finish all graduation requirements after October 31 will walk with the next graduating class the following May. At any time a student may be asked to meet with an administrator or the Academic Standards Committee if there is concern regarding the student's progression towards completing graduation requirements in a timely manner.

### **Withdrawal**

Application for voluntary withdrawal from the College must be made in writing to the Senior Associate Dean for Academic Affairs. Except in rare circumstances, the application will be accompanied by a personal interview. Students should refer to the academic calendar when planning to withdraw from the College. The Registrar's Office can assist with determining what, if any, fees will be charged and grades assigned according to the academic calendar. If withdrawal is requested after the last day to drop a course with an automatic "W", the appropriate faculty member will assign a grade of "WP" or "WU" for each course in which the student is currently enrolled. Retroactive withdrawals and leaves of absences may be granted under certain circumstances at the discretion of the Dean and Provost of the College.

### **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 Senior Associate Dean for Academic Affairs in

writing. After consultation with the student, the Senior Associate Dean for Academic Affairs 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 Senior Associate Dean for Academic Affairs 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.

### **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 and OSU Center for Health Sciences.

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 Academic Standards Handbook for the policy and procedure regarding academic dishonesty, which applies to all students at the Center for Health Sciences.

Students with complaints can refer to the Student Complaints section of this catalog for additional information.

### **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. Have a hearing if the outcome of a challenge is unsatisfactory.
3. Submit an explanatory statement for inclusion in the educational record, if the outcome of the hearing is unsatisfactory.
4. Secure a copy of the institutional policy, which includes the location of all educational records.
5. 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.

Definition: "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.; gender; educational institutions previously attended; degree(s) held, date(s) granted, and institution(s) granting such degree(s); dissertation or thesis title; advisor or the thesis advisor; participation in officially recognized organizations and activities.

### **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.
- “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 is 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. For more information, please visit <https://health.okstate.edu/com/student-life/disability-services.html>.

#### Housing, Transportation, Employment

The college does not provide student housing. It is the responsibility of each student to obtain his or her own housing. 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 (ACOEP)
- American College of Osteopathic Family Physicians (ACOFP)
- American College of Osteopathic Pediatricians (ACOP)
- American Medical Student Association (AMSA)
- American Medical Women’s Association (AMWA)
- American Osteopathic College of Physical Medicine & Rehabilitation (AOCPMR)
- Anesthesiology Student Interest Group (ASIG)
- Association of Military Osteopathic Physicians & Surgeons (AMOPS)
- Association of Native American Medical Students (ANAMS)
- Atlas Fraternity – social
- Biomedical Science Graduate Student Association (BSGSA)
- Business & Leadership in Medical Practice (BLiMP)
- Christian Medical Association (CMA)
- Club S.P.I.N.E - fundraising for Eugene Field Elementary
- Forensic Science Organization (FSO)
- Gay & Lesbian Advocacy in Medicine (GLAM)
- Health Care Administration Student Association (HCASA)
- Health Innovation, Technology, and Entrepreneurship Club (HITEC)
- International Federation of Medical Students’ Associations (IFMSA) – blended with AMSA
- Oklahoma Osteopathic Obstetrics and Gynecology Student Association (OOOGSA)
- Pathology & Laboratory Medicine (PLM)
- Pros For Africa (PFA)
- Sigma Sigma Phi (SSP) – honor society
- Society for Career Opportunities and Professional Exploration (SCOPE)
- Student American Academy of Osteopathy (SAAO)
- Student American Osteopathic Academy of Orthopedics (SAOAO)
- Student Association Auxiliary (SAA)
- Student Government Association (SGA)
- Student Interest Group in Neurology (SIGN)
- Student National Medical Association (SNMA)
- Student Osteopathic Association for Sports Medicine (SOASM)

- Student Osteopathic Association of Radiology (SOAR)
- Student Osteopathic Internal Medicine Association (SOIMA)
- Student Osteopathic Medical Association (SOMA)
- Student Osteopathic Physical Medicine and Rehabilitation Association
- Student Osteopathic Psychiatry Association (SOPA)
- Student Osteopathic Research Association (SORA)
- Student Osteopathic Rural Medicine Club (STORM)
- Student Osteopathic Surgical Association (SOSA)
- Student Political Action Committee (sPAC)
- Wilderness Medical Society (WMS)

### **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 names of speakers, program topic, and the date, time, and place of the presentation for consideration at least three weeks before the proposed date of the program. (See the Student Handbook for more information.)

### N. Student Doctor and Accepted Applicant Drug Screening Policy

#### *Purpose*

This policy outlines the Drug Screening requirements for Accepted Applicants and Student Doctors in the Oklahoma State University-College of Osteopathic Medicine (OSU-COM).

#### *Definitions*

For the purpose of this policy:

1. "Accepted Applicant" is defined as an individual that has been accepted to OSU-COM, but has not yet started the first year of the program.
2. "Clerkship Program" is defined as the time in which Student Doctors complete clinical rotations during years three and four of the OSU-COM program.
3. "Controlled Substance" is defined as a drug or substance that is listed in Schedules I through V of the Federal Controlled Substances Act (21 U.S.C. §812).
4. "Diluted Specimen" is defined as a sample that cannot be accurately tested based on the standards of the Vendor's laboratory and the conclusions of the Medical Review Officer.
5. "Drug Screen" is defined as a laboratory test administered for the purpose of determining the presence or absence of a Controlled Substance or its metabolites.
6. "Medical Review Officer (MRO)" is defined as the licensed physician, an employee of the Vendor, who is responsible for receiving, reviewing, and certifying the results of Drug Screens.
7. "Positive Drug Screen" is defined as any result, which has been reviewed and certified by the Medical Review Officer, that indicates the presence of a Controlled Substance in the submitted specimen.
8. "Pre-Clerkship" is defined as the time between completing all second year requirements and the beginning of the Clerkship Program in year three.
9. "Random" is defined as the unannounced and indiscriminate selection of student(s) by a process designed to ensure that selections are made in a nondiscriminatory manner without conscious decision of which student(s) are selected.
10. "Reasonable Suspicion" is defined as suspicion of use or possession of a Controlled Substance by a Student Doctor or Accepted Applicant based upon specific and objective grounds, as a justification to conduct a Drug Screen on a Student Doctor or Accepted Applicant.
11. "Student Doctor" is defined as all students currently enrolled in years one through four of the OSU-COM program.
12. "Vendor" is defined as the company that has been contracted by OSU-COM to provide Drug Screening services.

#### *Rationale*

- The mental and physical health and well-being of students is vital to the success of the OSU-COM, and is necessary to maintain the high standards of healthcare provided to the general public. OSU-COM has the right and obligation to provide students with a safe, healthy, efficient, and effective learning environment free from outside influences, which includes the illegal use and/or distribution of Controlled Substances.



- Although under the supervision of qualified faculty and/or adjunct faculty, Student Doctors are responsible for the health, safety, and welfare of patients. Student Doctors regularly have access to confidential and sensitive information, which requires the exercise of ethical behavior. Required and Random Drug Screenings of students and Accepted Applicants is an important component in assessing their suitability to function in a clinical setting.
- Increasingly, clinical facilities are implementing Drug Screening policies and procedures as required by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Furthermore, clinical facilities are increasingly requiring that OSU-COM review and certify each student's Drug Screening results prior to the beginning of each rotation through specific and explicit clauses within affiliation agreements.

#### *Voluntary Requests for Treatment*

OSU-COM strongly encourages Student Doctors who illegally use Controlled Substances to seek help from the College's Student Assistance Program by contacting the Office of Student Affairs or following the directions established in the OSU-COM Student Handbook. Any Student Doctor that voluntarily seeks treatment will receive confidential assistance; provided, however, that a Student Doctor seeking treatment after the Student Doctor's selection for a Drug Screen, either based upon a Random Drug Screen or Reasonable Suspicion, does not constitute voluntarily seeking treatment and will result in corrective action should a Positive Drug Screen Result

#### *Vendor and Drug Screening Information*

OSU-COM will select a qualified third party Vendor to provide the Drug Screening service, as well as the Medical Review Officer for this policy. Results from any company or government entity other than those designated by OSU-COM will not be accepted; provided, however, exceptions may be made in very limited instances in which circumstances would reasonably prevent Accepted Applicant from utilizing OSU-COM's Vendor. Exceptions must be requested by Accepted Applicant prior to the Drug Screening, and OSU-COM reserves sole discretion regarding whether to approve such request. Any Drug Screening of an Accepted Applicant that is not completed by OSU-COM's Vendor must be performed by a licensed physician performing medical review officer services who is trained and certified by the American Association of Medical Review Officers (AAMRO) and The Medical Review Officer Certification Council (MROCC) to complete their Drug Screening. Accepted Applicants who are granted an exception to using OSU-COM's Vendor will be solely responsible for payment for any Drug Screening not conducted by OSU-COM's Vendor. Any Drug Screening conducted by a Medical Review Officer other than OSU-COM's Vendor must be an 8-panel Drug Screen identical to the one conducted by OSU-COM Vendor and the Drug Screening must comply with all provisions of this Policy.

Any appeal right of a Positive Drug Screen rests solely between the Student Doctor or Accepted Applicant, the Medical Review Officer and the qualified third party Vendor.

OSU-COM will require that all Accepted Applicants and Student Doctors complete an 8-panel Drug Screen, which tests for:

1. Amphetamines/Methamphetamines
2. Barbiturates
3. Benzodiazepines
4. Marijuana
5. Cocaine
6. Opioids (including opiates)
7. Phencyclidine
8. Methadone

#### *Drug Screening Timing and Procedures*

An Accepted Applicant's or Student Doctor's written and/or oral consent is not required to put the terms of this policy into effect, as consent is an implicit condition of enrollment in the OSU-COM program.

#### *Accepted Applicants*

The OSU-COM Office of Admissions will provide all Accepted Applicants with the procedural requirements for completing their pre-matriculation Drug Screen. Each student must complete the required Drug Screen at least fourteen (14) days prior to matriculation to allow sufficient time for the following steps to be completed before the first day of classes:

- Vendor to complete the laboratory specimen test
- The Medical Review Officer (MRO) to review and certify the Drug Screen results
- Review of the MRO's report by the Office of Admissions

Any Accepted Applicant that fails to complete the required Drug Screen prior to the first day of class will not be

allowed to begin the program until this requirement has been met, and may jeopardize their admission status at OSU-COM. Accepted Applicants who receive notice of acceptance to OSU-COM within fourteen (14) days of the start of class will have fourteen (14) days from the date of acceptance to complete the required Drug Screen.

#### *Student Doctors*

All Student Doctors are required to complete a Drug Screen prior to beginning the Clerkship Program in year three. The OSU-COM Office of Clinical Education will provide all Student Doctors with the procedural requirements for completing their Pre-Clerkship Drug Screen. Student Doctors must complete this required Drug Screen during Transition Week to allow sufficient time for the following steps to be completed before the first day of classes:

- Vendor to complete the laboratory specimen test
- The Medical Review Officer (MRO) to review and certify the Drug Screen results
- Review of the MRO's report by the Office of Clinical Education

Any Student Doctor that fails to complete the required Drug Screen prior to the first day of the third year will not be allowed to begin the Clerkship Program until this requirement has been met.

#### *Random Testing*

OSU-COM reserves the right to conduct Random, unannounced Drug Screenings of all Student Doctors currently enrolled at OSU-COM. The Senior Associate Dean of Academic Affairs or his or her designee may, prior to each semester, determine the dates of the Random Drug Screen(s) and the total number of Student Doctors, up to and including all Student Doctors at OSU-COM, which OSU-COM will Randomly Drug Screen. The dates selected and number of Student Doctors selected to complete Random Drug Screens (if any) will be recorded prior to each semester and will be confidentially maintained in the Senior Associate Dean of Academic Affairs' office. A Student Doctor who is selected for a Random Drug Screen will immediately report to the designated testing laboratory after receiving notice of being selected for a Random Drug Screen, for collection of a urine and/or blood sample to conduct a Drug Screen. The Student Doctor may request that a blood sample be collected in addition to a urine sample. Testing cost for Random Drug Screenings will be borne by OSU-COM and testing will be done in accordance with the standard testing procedure outlined in this policy.

Any Student Doctor who refuses to consent to a Random Drug Screening, fails to immediately report to the designated testing laboratory within a reasonable time after receiving notice of being selected for a Random Drug Screen, or fails to provide an adequate specimen (as determined by the MRO) may be subject to corrective actions pursuant to this policy up to and including dismissal.

#### *Testing for Reasonable Suspicion*

OSU-COM may require a Student Doctor to submit to a Drug Screen based upon a Reasonable Suspicion of the unauthorized use or possession of a Controlled Substance. Reasonable Suspicion may be based upon, but is not limited to, the following:

- Direct observation of unauthorized use or possession of a Controlled Substance ;
- A pattern of abnormal or erratic behavior consistent with unauthorized use of a Controlled Substance;
- Observation of physical symptoms indicative of the unauthorized use of a Controlled Substance;
- Arrest or conviction for a drug related offense;
- Report(s) of unauthorized use or possession of a Controlled Substance that has been corroborated by additional evidence.

All persons reporting activity or behavior that causes Reasonable Suspicion of unauthorized use or possession of a Controlled Substance under this policy shall document the exact reason(s) for these suspicions, including relevant details such as date, location, witnesses present, and the symptoms or actions of the Student Doctor. All such reports shall be made to the Senior Associate Dean of Academic Affairs or his/her designee, who will conduct an investigation of the reported activities or behavior, including obtaining corroborating statements from other administrators, faculty, employees, Student Doctors or witnesses where reasonably possible. The Senior Associate Dean for Academic Affairs, or his/her designee shall determine, based on his or her investigation, whether cause exists to request a Drug Screening.

Upon a Drug Screen for Reasonable Suspicion, all results of any such test shall be provided by OSU-COM's Vendor MRO to the Senior Associate Dean of Academic Affairs or his/her designee. Until the results of the Drug Screening are received, the Student Doctor may be suspended from all training or activities involving clinical work, laboratory work or patient contact. The student may be permitted to continue participating in lectures; however, the Senior Associate Dean for Academic Affairs or his/her designee retains sole discretion to suspend the student from all activities if the continued participation of the Student Doctor in such activities presents a danger to the personal safety or threatens the health and welfare of the individual, patients/clients, students, faculty and/or staff of OSU-COM.

When a determination to test for Reasonable Suspicion has been made, the Student Doctor will be asked to submit to a Drug Screening. The Student Doctor will report immediately to the designated testing laboratory after receiving notice of a Drug Screen for Reasonable Suspicion for collection of a urine and/or blood sample to test for a Controlled Substance. The Student Doctor may request that a blood sample be collected in addition to a urine sample. Testing cost will be borne by OSU-COM and testing will be done in accordance with the Drug Screen procedure.

Any Student Doctor who refuses to consent to a Drug Screening for Reasonable Suspicion, fails to immediately report to the designated testing laboratory within a reasonable time after receiving notice submitting to a Drug Screen for Reasonable Suspicion, or fails to provide an adequate specimen (as determined by the MRO) will be deemed to have submitted a positive Drug Screen result and may be subject to corrective action pursuant to this policy up to an including dismissal from OSU-COM.

#### *OSU-COM Drug Screen Review Committee Structure, Meetings and Membership*

##### OSU-COM Drug Screen Review Committee Structure

In order to facilitate a formal and efficient process, the Drug Screening policy outlined in this document will be administered by the Drug Screen Review Committee (here after "Committee"). Upon implementation of the OSU-COM required Student Drug Screening policy, it is the responsibility of the Committee to insure that all OSU-COM materials are updated to include necessary information regarding Drug Screening, including, but not limited to:

- Handbook(s)
- Website(s)
- Admissions Documents
- Other print and/or electronic items as determined by the Committee

##### OSU-COM Drug Screen Review Committee Meetings

The Committee is required to convene two regular meetings per academic year to discuss the current policy, as well as discuss and propose any changes to policy that are necessary. Policy change proposals must be approved by the Committee, and referred to the Senior Associate Dean for Academic Affairs for review and action.

Beyond the two regular meetings during each academic year, the Committee is required to convene an immediate formal meeting upon receipt of a Positive Drug Screen or Diluted Specimen result that is not cleared by the MRO for Student Doctors only. In the case in which the Committee is in receipt of a Positive Drug Screen or Diluted Specimen result that is not cleared by the MRO, the responsibilities of the Committee and its members are to:

- Insure prompt action by formally removing the Student Doctor from their current course
- Formally contact the Student Doctor and provide a date, time, and location for their meeting with the Committee
- Review the results of the MRO report with the Student Doctor
- Provide an opportunity for the Student Doctor to make a formal presentation and provide information to the Committee
- Discuss, formulate, construct, and deliver the Committee's recommendation(s) for the Student Doctor to the Senior Associate Dean for Academic Affairs.

The recommendations submitted to the Senior Associate Dean for Academic Affairs by the Committee are nonbinding. The final decision for adjudication in these cases lies solely with the Senior Associate Dean for Academic Affairs.

##### OSU-COM Drug Screen Review Committee Membership

The required, voting, members of the Committee are:

- Assistant or Associate Dean for Academic Affairs (Committee Chair)
- Assistant or Associate Dean for Enrollment Management
- Director for Admissions
- Director for Clinical Education

The Assistant to the Senior Associate Dean for Academic Affairs may serve as an ex-officio, non-voting member of the Committee.

Committee membership and participation is required for the individual employees that serve in the above listed positions. Changes in Committee membership, other than those that occur through normal personnel transitions (i.e., promotion, retirement, resignation, etc.), are at the sole discretion of the Senior Associate Dean for Academic Affairs.

#### *Reporting of Drug Screening Findings*

The Vendor will provide the Office of Enrollment Management and the Office of Clinical Education with a list of students that the MRO has certified as passing the Drug Screen. Each student will receive the results of the Drug Screening report from the Vendor, as well. Student Doctors and Accepted Applicants who provide a Diluted Specimen may be subject to immediate re-testing until an adequate Specimen is received by the Vendor. Adequacy of each specimen shall be determined solely by the Vendor and MRO.

Accepted Applicants and Student Doctors that receive a Positive Drug Screening will have the opportunity to present valid medical explanations directly to the MRO who will decide if the Accepted Applicant/Student Doctor is cleared. If, after review by the Vendor's Medical Review Officer, there is a valid medical explanation for the screening results, the Vendor will notify OSU-COM of a clear test. If, after review by the Medical Review Officer, there is not a valid medical explanation for the Positive Drug Screen, then the Drug Screen results will stand. Any appeal right of a Positive Drug Screen rests solely between the Student Doctor or Accepted Applicant, the Medical Review Officer and the qualified third party Vendor.

#### *Adjudication of Positive Drug Screen and/or Diluted Specimen Results*

##### Accepted Applicants

Accepted Applicants that receive a Positive Drug Screen result or a Diluted Specimen result that has not been cleared by the MRO will not be allowed to begin the first year of medical school at OSU-COM. In the case of Accepted Applicants who received their notice of acceptance less than fourteen (14) days prior to classes beginning, and who have matriculated into OSU-COM prior to OSU-COM receiving the results of their Drug Screen, a positive Drug Screen may result in removal from OSU-COM. OSU-COM reserves the right to allow an Accepted Applicant to begin or resume the first year of classes once the institution is in receipt of a negative Drug Screen result that has been certified by the MRO, defer admission to a future semester, require the Accepted Applicant to reapply for admission, or rescind the offer of admission. Accepted Applicants with a Positive Drug Screening result who eventually enroll at OSU-COM will be considered to have had their first Positive Drug Screen under this policy.

##### Student Doctors

Any Student Doctor with a Positive Drug Screen or Diluted Specimen that are not cleared by the MRO will automatically be referred to the OSU-COM Drug Screen Review Committee, which will submit nonbinding corrective recommendations to the Senior Associate Dean for Academic Affairs. Student Doctors with a first Positive Drug Screen or Diluted Specimen may face corrective action up to and including suspension for the remainder of the semester and administrative withdrawal from all courses and/or suspension for the following semester. Student Doctors who are suspended may not be able to progress to the next semester based on specific program requirements. After a Student Doctor is found to have a Positive Drug Screen, additional scheduled Drug Screenings may be required by OSU-COM for the remainder of the Student Doctor's enrollment at OSU-COM as a condition of continued enrollment. OSU-COM reserves the right to impose additional reasonable sanctions on Student Doctors for a Positive Drug Screening or Diluted Specimen. Student Doctors that receive a Positive Drug Screen or Diluted Specimen result and are not cleared by the MRO will not be allowed to begin the Clerkship Program.

Any Student Doctor who has a second Positive Drug Screen will be dismissed from OSU-COM.

##### Falsification of Information

Falsification of information will result in immediate removal from the Accepted Applicant list or dismissal from OSU-COM.

##### Confidentiality of Records and Retention of Records

Drug Screening reports and all records pertaining to the results are considered confidential with restricted access. The results and records are subject to the Family Educational Rights and Privacy Act (FERPA) regulations. Reports and related records are retained in a secure location and are maintained for the following timeframes, or longer as required by law:

- Current Student Doctors: 5 years after Drug Screening
- Accepted Applicants: 2 years after Drug Screening (provided no legal complaint)

#### O. Student Grievance Procedures

OSU-COM is committed to addressing student complaints and promoting a mechanism by which complaints can be reviewed and resolved. Students with complaints should refer to the specific policies below. If assistance is needed, students can contact the Office of Student Affairs for further information.

In addition to the complaint procedures below, students also have the opportunity to provide anonymous feedback on matters through an OSU-COM Feedback system. Students who would like to utilize the feedback process to express their concerns should refer to the section below on "Student Feedback".

#### **Student Academic Complaint Policy and Procedures**

Students who have an academic complaint can expect to have their complaint addressed through this procedure. Unless other justification is present, the student will ordinarily be expected to seek resolution, beginning with the faculty/staff member in the discipline, prior to advancing administratively through the grievance process. If a student requires assistance, the Office of Student Affairs is available for consultation and guidance. Complaint forms are found in the Office of Student Affairs. All complaints will be monitored and reviewed by the Office of Student Affairs within 24-48 hours of receipt on business days. The Student Academic Complaint Policy governs all academic complaints and is not to be used for grievances related to sexual harassment/sexual misconduct, discrimination, non-compliance with AOA Accreditation Standards, or grade appeals. To register a complaint in these areas, please see the related policies.

*Grade Appeal:* see the Grade Appeal Policy found in the Academic Standards Handbook and at: <http://www.healthsciences.okstate.edu/com/academics/policies.php>.

*Sexual Harassment/sexual misconduct/sex-based discrimination:* see Gender Discrimination /Sexual Harassment Policy and Title IX Grievance Procedure. For information about filing a complaint, see the "reporting section" at <http://1is2manychs.okstate.edu> or contact the Office of Student Conduct, Title IX Coordinator, OSU-CHS, Room 112, 918-561-1950.

*Discrimination:* see Student Grievance Policy and Procedures for Alleged Discrimination, found below and in the Student Handbook at <http://www.healthsciences.okstate.edu/com/handbook.php>.

*Non-compliance with AOA Accreditation Standards:* see Non-compliance with AOA Accreditation Standards Policy, found below and in the Student Handbook at: <http://www.healthsciences.okstate.edu/com/handbook.php>.

#### **Procedure for an Academic Complaint:**

- 1) Prior to filing a complaint, students are expected to seek resolution through informal means. Students should begin the informal process by discussing the matter directly with the instructor or course coordinator for the discipline or staff member who is associated with the complaint. If the attempt to resolve the matter is successful, no further progression through this policy is warranted.
- 2) If an attempt at informal resolution is not successful, the student should register the complaint by submitting the Student Complaint Form found in the Office of Student Affairs; this action will register the complaint both with the Office of Educational Development and the Office of Student Affairs for tracking purposes.
- 3) Once the complaint is received, the Office of Educational Development will forward the complaint to the Year 1-2 Committee or Year 3-4 Committee, based on the nature of the complaint. The reviewing Committee may request a meeting with the student, should additional information be needed in reviewing the complaint. The respective committee will submit a recommendation to the Curriculum Oversight Committee (COC) regarding resolution of the complaint.
- 4) The COC will make the official determination on resolution of the complaint. If the complaint is satisfactorily resolved, the Office of Educational Development will be responsible for notifying the student of the Committee's findings and submitting final documentation of resolution of the complaint to the Office of Student Affairs.
- 5) If the matter is not resolved after review by the COC, the next level of review will be made by the Council of Deans. The decision rendered by the Council of Deans is final and binding.
- 6.) Throughout this process, review at each level will be documented on the Student Complaint Form and notification made to the student regarding outcome at each level of review. The Office of Educational Development will be responsible for notifying all parties. Final documentation on the resolution of the complaint will be maintained by the Office of Student Affairs.

7) A notification report of all complaints will be forwarded on a regular basis by the Office of Student Affairs to the Council of Deans.

#### **Student Non-Academic Complaint Policy**

Students who have a non-academic complaint can expect to have their complaint addressed through this procedure. Unless other justification is present, the student will ordinarily be expected to attempt to resolve the matter through informal means, prior to filing a complaint and advancing administratively through the grievance process. If a student requires assistance, the Office of Student Affairs is available for consultation and to provide guidance regarding whether an exception to the procedure is indicated. All complaints will be monitored and reviewed by the Office of Student Affairs within 24-48 hours of receipt on business days. The Student Non-Academic Complaint Policy governs all non-academic complaints and is not to be used for grievances related to sexual harassment/sexual misconduct, discrimination, non-compliance with AOA Accreditation Standards, or grade appeals. To register a complaint in these areas, please see the related policies.

*Grade Appeal:* see the Grade Appeal Policy found in the Academic Standards Handbook and at: <http://www.healthsciences.okstate.edu/com/academics/policies.php>.

*Sexual Harassment/sexual misconduct/sex-based discrimination:* see Gender Discrimination /Sexual Harassment Policy and Title IX Grievance Procedure. For information about filing a complaint, see the "reporting section" at <http://1is2manychs.okstate.edu> or contact the Office of Student Conduct, Title IX Coordinator, OSU-CHS, Room 112, 918-561-1950.

*Discrimination:* see Student Grievance Policy and Procedures for Alleged Discrimination, found below and in the Student Handbook, at <http://www.healthsciences.okstate.edu/com/handbook.php>.

*Non-compliance with AOA Accreditation Standards:* see Non-compliance with AOA Accreditation Standards Policy, found below and in the Student Handbook at: <http://www.healthsciences.okstate.edu/com/handbook.php>

#### **Procedure for a Non-Academic Complaint:**

1. Prior to filing a complaint, students are expected to seek resolution through informal means. Students should begin the informal process by discussing the matter directly with the staff or faculty member in the designated administrative unit. If the attempt to resolve the matter is successful, no further progression through this policy is warranted.
2. If an attempt at informal resolution is not successful, the student should register the complaint by completing the Student Non-Academic Complaint Form found in the Office of Student Affairs. Complaints should be filed within 30 calendar days of the incident prompting the complaint.
3. Upon receipt of the complaint, the Director of Student Affairs will pursue resolution of the complaint, bringing the matter to the attention of the relevant administrative unit head, as needed.
4. If a satisfactory resolution is not obtained, the matter will be routed to the next highest level of authority. If a satisfactory outcome is achieved, the Office of Student Affairs will notify the student, document the resolution on the Student Complaint form, and close the matter.
5. If a satisfactory resolution is not obtained, the matter will be routed to the next highest level of authority and continue in this manner, as required. If a satisfactory resolution is not obtained after exhausting the appropriate levels of authority, the Executive Leadership Team will serve as the final reviewing authority on the matter. The decision of the Executive Leadership Team will be final and binding.
6. Throughout this process, review at each level will be documented on the Student Complaint Form and notification made to the student regarding outcome at each level of review. The Office of Student Affairs will be responsible for notifying all parties. Final documentation on the resolution of the complaint will be maintained by the Office of Student Affairs.
7. A notification report of all complaints will be forwarded on a regular basis by the Office of Student Affairs to the Council of Deans.

#### **Student Grievance Policy and Procedures for Alleged Discrimination**

Students with grievances related to alleged discrimination may seek redress. Complaints may be handled through the formal grievance procedure described here or through the Office of Student Conduct/Title IX Coordinator, as appropriate. 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 the designated 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. The procedure is as follows:

1. 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 Associate Dean for Enrollment Management.
2. 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.
3. 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.
4. If a settlement cannot be reached, the complainant may submit to the chairman a request for a formal hearing before the entire committee.
5. Within ten (10) days after receiving the written request, the Affirmative Action Compliance Committee will convene and review the grievance.
6. Within five (5) days after the review, the committee will issue an opinion regarding the grievance.
7. The complainant will have ten (10) days to appeal to the College Dean the committee's decision.
8. 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. The Dean's 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 is 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 at the following address:

Secretary, Commission on Osteopathic College Accreditation  
American Osteopathic Association  
142 East Ontario Street  
Chicago, IL 60611-2864  
Phone (312) 202-8000  
[predoc@osteopathic.org](mailto:predoc@osteopathic.org)

#### **Student Feedback**

In instances in which students would like to share feedback about the curriculum and any other general matters-- in the absence of filing a formal complaint-- students can utilize the OSU-COM Feedback system. Students can submit feedback anonymously in regards to any concerns they may have. The OSU-COM Feedback form is

located on the website at <http://centernet.okstate.edu/students/feedback.php>. Feedback will be addressed according to the policies and procedures described.

## P. Educational Program

### **Academic Programs**

The curriculum at the OSU College of Osteopathic Medicine places significant focus on primary care. The four-year program emphasizes the integration of biomedical sciences with clinical systems. The curriculum includes early hands-on clinical experiences with patients, patient models, and simulations. Instructional methods are student-centered and include traditional lecture, small group, and team-based learning. Problem-solving and information retrieval skills are emphasized to produce and develop skills that support lifelong learning as well as traditional lecture. Both a traditional track and a rural medical track (RMT) are offered.

The culture of OSU College of Osteopathic Medicine encourages students to establish an academic relationship with faculty members and community-based physicians. The curriculum emphasizes integration of biomedical, clinical, and behavioral sciences to permit the full comprehension of the clinician's work and promotes a holistic approach to the care of patients and their families. Students receive training in all areas of medicine with emphasis on osteopathic principles and practices. The first semester of the first year focuses on the foundations of biomedical and clinical sciences along with an introduction to patient care and community resources. Starting in the second semester of the first year and continuing through the end of the second year, students are introduced to a total of 11 clinical systems that systematically prepares students for addressing conditions typically seen in the primary care environment. Throughout the first and second years, students also participate in short focus courses that are targeted at a variety of healthcare topics such as evidence-based medicine, geriatrics, and health behavior change, etc. The third and fourth years are comprised of clinical rotations, which are community based, consisting of clerkship experiences in hospitals and clinics where students observe patient care and participate in the evaluation and treatment of patients under physician faculty supervision. Required rotations include osteopathic manipulative medicine, surgery, obstetrics-gynecology, pediatrics, psychiatry, internal medicine, family medicine and emergency medicine. Many rotations are completed at OSU Medical Center in Tulsa, one of the country's largest osteopathic hospital, as well as various other rural and metropolitan hospitals across the state. The balance of the supervised clinical clerkships are in communities throughout Oklahoma in which students spend two months on a Community Hospital rotation and one month on both a Community and Rural Clinic rotation. Students may also fulfill elective requirements at various medical institutions across the country.

Students in both the traditional track and rural medical track graduate from the four-year program with the Doctor of Osteopathic Medicine (DO) degree. Although a majority of graduates enter primary care, graduates are prepared to enter residencies in all medical specialty fields. This training period lasts a minimum of three years, with several specialties requiring up to five years of postgraduate education. To see a full list of residency programs our recent graduates have entered and residency acceptance data, along with OSU-COM's pass rate on the COMLEX-USA, please visit: <http://www.healthsciences.okstate.edu/com/admissions/graduates.php>.

**Rural Medical Track:** In addition to the traditional program, OSU COM offers a rural medical track (RMT) that stresses the unique nature and characteristics of a rural practice. The RMT at the Oklahoma State University Center for Health Sciences prepares medical students for a rural primary care residency and a successful practice in rural or underserved Oklahoma. The RMT offers unique learning opportunities for motivated students to fully develop their skills, knowledge and abilities to succeed in a challenging practice environment.

A key facet of the RMT is rural-based clinical education. Students in the RMT complete the traditional curriculum during the first and second years of medical school and also have additional experiences that emphasize rural medical training, including a two-week summer externship and completion of a research project. Beginning with the two-week rural physician shadowing experience following the first year of medical school, students in the RMT have the opportunity to complete most of their required clinical education in a rural setting (see Section P). Students work side-by-side with rural physicians learning the skills and performing the tasks necessary for a successful rural practice. The RMT also incorporates a guided research component that each student must complete. Aside from gaining exposure to contemporary rural health research topics, RMT students are expected to produce scholarly works that are suitable for publication or presentation. Beyond the classroom and the clinic, students in the RMT hone their leadership skills through membership in the Student Osteopathic Rural Medical Club (StORM). The club also provides students with service opportunities and an advocacy platform.



### **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, in the following ways:

- Providing information about residency programs;
- Providing personal and career assessments;
- Providing instruction on using the Careers in Medicine program;
- Locating specialty information;
- Assisting with the preparation of documents required for residency application, such as a curriculum vitae, personal statements, medical student performance evaluation; and
- Helping students navigate the ERAS system and the osteopathic and allopathic match processes.

You may access additional information on Career Development at <https://health.okstate.edu/com/student-life/career-development.html>.

### **Standardized Patient Program**

The standardized patient experiences currently occur as part of the Primary Care Clinic Rotation and the Osteopathic Manipulative Medicine Rotation during a student's third year of medical school. There are currently three standardized patient encounters during the Primary Care Clinic Rotation. 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. An additional Clinical Practical Exam is taken during the Osteopathic Manipulative Medicine Rotation. Students are also required to participate in a mock COMLEX-USA Level 2 PE prior to taking the actual NBOME exam. Students must pass this activity before taking the national exam. The Office of Clinical Education is in the process of incorporating additional standardized patient encounters into the medical school curriculum.

## Q. OSU-College of Osteopathic Medicine Curriculum

### **Goals for the Oklahoma State University College of Osteopathic Medicine Curriculum**

1. Professional, trustworthy osteopathic practitioners using patient centered approach to analyze clinical problems, informed by current literature and to consider issues across the biological- psychological-social continuum.
2. Lifelong learners.
3. Reflective practitioners with the habit of assessing the impact of the medical practice on the lives of patients and vitality of the community.
4. Civic leaders.
5. Compassionate, committed, and caring physicians who embrace the osteopathic philosophy.

### **Objectives of Oklahoma State University College of Osteopathic Medicine Curriculum**

1. Identify, critically analyze and solve problems that consider issues across multiple contexts as osteopathic practitioners related to patient care.
2. Demonstrate knowledge of evidence-based practice in the treatment of patients and the application of relevant research.
3. Perform appropriate diagnostic and treatment skills that encompass the understanding and application of new scientific knowledge of patient care.
4. Effectively lead and communicate with peers and healthcare team members.
5. Demonstrate effective physician-patient interactions.
6. Initiate and sustain life-long learning in order to remain well-informed of relevant scientific evidence related to patient care and medical research.
7. Effectively provide premier quality of care driven by compassion, integrity, honesty, cultural awareness, and ethical principles.
8. Demonstrate the osteopathic philosophy in medical practice while upholding the Osteopathic Oath in professional conduct.

9. Apply medical knowledge and skills to provide exemplary patient care to underserved and rural Oklahoma communities.
10. Incorporate osteopathic manipulative medicine as a diagnostic and treatment modality in patient care.

**AOA Core Competencies\*\***

1. Osteopathic Philosophy and Osteopathic Manipulative Medicine
2. Medical Knowledge
3. Patient Care
4. Interpersonal and Communication Skills
5. Professionalism
6. Practice-Based Learning and Improvement
7. Systems-Based Practice

Tables 1 and 2 indicate the relationship between assessment type, OSU-COM's curricular objectives and the AOA Core Competencies. Students who are successful on all of the assessments outlined in Tables 1 and 2 are considered prepared for graduate medical education.

**Table 12: Years 1 and 2 Assessment**

On Campus Assessments	Years 1 and 2		
Type of Assessment	Description	Curricular Objectives*	AOA Competencies**
Course Assessments	Multiple - choice exams, lab exams, case studies, professional communications, team projects, and reflective writing	1, 2	1, 2, 4, 7
	Small Group Activities - problem based learning sessions, laboratory exercises, team-based learning activities, oral presentations, etc.	1, 2, 3, 4	1, 2, 4
	Standardized Patient Encounters – Graded experiences with review by faculty; focus on interviewing basic physical exam skills, interpersonal skills, medical knowledge (basic and clinical sciences), professionalism, and patient - centered care	1, 2, 3, 4, 5	1, 2, 3, 4, 5
	Human Patient Simulator Exercises – Graded experiences with review by faculty; focus on physical exam, medical knowledge (basic and clinical sciences), professionalism, and patient- centered care	1, 2, 3, 4, 5	2, 3, 4, 5
	Practical Examinations - Hands on, one-on-one observation of general approach and verification of safety, efficacy, and accuracy of diagnostics and treatment	1, 2, 3, 4, 5	1, 2, 3, 4, 5
	Clinical Exams using standardized patients for focused encounters as well as comprehensive history and physical exam assessing specific competency skills	1, 2, 3, 4, 5	1, 2, 3, 4, 5
	Clinical Osteopathic Experiences - Hands on diagnosis and treatment (including writing a SOAP note) of volunteer patients by students under direct supervision of OMM faculty and residents	1, 2, 3, 4, 5, 10	1, 2, 3, 4, 5
COMSAE TrueLearn Combank Exam	COMLEX-USA -style self-evaluation instrument.	1, 2, 3, 4 Prior to COMLEX-USA Level 1	1, 2, 3, 6, 7
COMLEX-USA Level 1	Computerized one-day exam covering basic sciences and osteopathic principles in clinical contexts	Before entry into Third year	1, 2, 3, 6, 7

**Table 2: Years 3 and 4 Assessment**

Clinical Rotation Assessments	Years 3 and 4		
Please refer to the online Clinical Rotations Student Manual for details			
Type of Assessment	Description	Curricular Objectives*	AOA Competencies**
Clerkship Specific Assessments	End of Clerkship Examinations	1-10	1, 2, 3, 6, 7
Clinical Evaluations	Completed by preceptors at the end of each clinical rotation. Covers clinical knowledge, skills, professionalism, and Osteopathic skills. All students must pass all rotations including: required and elective to graduate.	1-10	1, 2, 3, 4, 5, 6, 7
Case Presentation	Report based on a clinical case encounter. An evaluation of the Case Presentation is conducted by a Physician and the Regional Coordinator.	1, 2, 3, 4, 5	1, 2, 3, 4, 5, 6, 7
Case Logs (Skills Card)	Completed by students and approved by preceptors at the end of each of the following rotations: Community Clinic, Rural Clinic, Community Hospital, and Emergency Medicine.	1-10	1, 2
Phase II COMSAE Exam	Standardized exam from NBOME	1-10	1, 2, 3, 5, 6, 7
Additional Assessments	Book club, Personal Statement Workshop, Telehealth Workshop, & Video Lecture Evaluations	1-10	1, 2, 7
NBOME COMAT Exams	Standardized exam from NBOME taken by all students	1-10	1, 2, 3, 6, 7
COMLEX-USA Level 2 - CE	One-day computerized exam	1-10	1, 2, 3, 6, 7
COMLEX-USA Level 2 - PE	Standardized patient (CPX) exams	1-10	1, 2, 3, 4, 5
Didactic Weeks	Didactic weeks include observed simulations	1-10	1, 2, 3, 4, 5
Transition Week	Transition week helps prepare students for 3rd Year rotations. Activities include BLS, ACLS training as well as EPIC, Team Steps and HIPAA training. There is also a session on library services and a discussion on professionalism. Students are introduced to Course Coordinators and get a brief overview of the required rotations.	Week before Third year rotations start	1, 2, 3, 4, 5
CPX Exams	Using Standardized patients a CPX exam is given during OMM and FM clinical rotations. A mock PE is given prior to the NBOME Level 2 PE.	1-10	1, 2, 3, 4, 5
Observed SP encounters	Students practice advanced interviewing skills with a standardized patient on their behavioral health/psychiatry rotation. Instruction & peer feedback given.	1-10	1, 2, 3, 4, 5

## Four-Year Professional Curriculum for Academic Year 2017-18

### **First Year – MS I –Traditional and Rural Medical Track (RMT)**

*Class of 2021 – Class of 2020 see below. Prior matriculants refer to previous catalogs.*

#### **Fall Semester Hours**

CLME 8312	Osteopathic Manual Medicine I (2)
PCME 8115	Clinical Anatomy (5)
PCME 8743	Foundations in Medical Genetics, Molecular Biology and Development (3)
PCME 8752	Foundations in Medical Cell Tissue Biology (2)
PCME 8762	Foundations in Medical Biochemistry (2)
PCME 8771	Foundations in Medical Pharmacology (1)
PCME 8914	Medical Science Foundations (4)

#### **Spring Semester Hours**

CLME 8322	Osteopathic Manual Medicine II (2)
CLME 8914	Clinical Care Foundations I (4)
CLME 8941	Service Learning/ & Community Engagement I (1)
CLME 8801	Focus Course in Lab Medicine (1)
CLME 8821	Focus Course in Geriatrics (1)
PCME 8814	Cardiovascular System (4)
PCME 8833	Hematology System (3)
PCME 8853	Genitourinary System (3)
PCME 8873	Respiratory System (3)
PCME 8781	Foundations in Medical Immunology (1)
PCME 8793	Foundations in Medical Microbiology (3)

### **Second Year – MS II --Traditional and Rural Medical Track (RMT)**

*Class of 2021 – Class of 2020 see below. Prior matriculants refer to previous catalogs.*

#### **Fall Semester Hours**

CLME 8924	Clinical Care Foundations II (4)
CLME 8981	Culture and Medicine (1)
CLME 8332	Osteopathic Manual Medicine III (2)
CLME 8951	Service Learning & Community Engagement II (1)
CLME 8831	Focus Course in Health Behavior Change (1)
CLME 8861	Focus Course in Rural Health (1)
CLME 8871	Focus Course in Pediatrics (1)
PCME 8823	Gastrointestinal/Hepatic System (3)
PCME 8916	Nervous System (6)
PCME 8883	Psychiatry System (3)

#### **Spring Semester Hours**

CLME 8934	Clinical Care Foundations III (4)
CLME 8981	Culture and Medicine (1)
CLME 8342	Osteopathic Manual Medicine IV (2)
CLME 8841	Focus Course in Addiction Medicine (1)
CLME 8961	Service Learning & Community Engagement III (1)
CLME 8891	Focus Course in Obesity Medicine (1)
PCME 8903	Endocrine System (3)
PCME 8843	Musculoskeletal/Skin/Connective System (3)
PCME 8863	Reproductive System (3)
PCME 8982	Integrative Systems Review (2)

**First Year – MS I –Traditional and Rural Medical Track (RMT)**  
***Class of 2020 - Prior matriculants refer to previous catalogs.***  
***This reflects updates to the curriculum for the Class of 2020***

**Fall Semester Hours**

CLME 8312	Osteopathic Manual Medicine I (2)
CLME 8944	Developing the Physician I (4)
PCME 8116	Clinical Anatomy (6)
PCME 8743	Foundations in Medical Genetics, Molecular Biology and Development (3)
PCME 8752	Foundations in Medical Cell Tissue Biology (2)
PCME 8762	Foundations in Medical Biochemistry (2)
PCME 8771	Foundations in Medical Pharmacology (1)
PCME 8781	Foundations in Medical Immunology (1)
PCME 8791	Foundations in Medical Microbiology (1)

**Spring Semester Hours**

CLME 8322	Osteopathic Manual Medicine II (2)
CLME 8913	Clinical Skills I (3)
CLME 8954	Developing the Physician II (4)
CLME 8801	Focus Course in Lab Medicine (1)
CLME 8821	Focus Course in Geriatrics (1)
PCME 8814	Cardiovascular System (4)
PCME8833	Hematology System (3)
PCME8853	Genitourinary System (3)
PCME8873	Respiratory System (3)

**Second Year – MS II --Traditional and Rural Medical Track (RMT)**  
***Class of 2020 - Prior matriculants refer to previous catalogs.***  
***This reflects updates to the curriculum for the Class of 2020***

**Fall Semester Hours**

CLME 8923	Clinical Care Foundations (3)
CLME 8964	Developing the Physician III (4)*
CLME 8332	Osteopathic Manual Medicine III (2)
CLME 8861	Focus Course in Rural Health (1)
CLME 8871	Focus Course in Pediatrics (1)
PCME 8823	Gastrointestinal/Hepatic System (3)
PCME8916	Nervous System (6)
PCME8883	Psychiatry System (3)

**Spring Semester Hours**

CLME 8934	Clinical Care Foundations III (4)
CLME 8342	Osteopathic Manual Medicine IV (2)
CLME 8841	Focus Course in Addiction Medicine (1)
CLME 8891	Focus Course in Obesity Medicine (1)
PCME 8903	Endocrine System (3)
PCME 8843	Musculoskeletal/Skin/Connective System (3)
PCME 8863	Reproductive System (3)
PCME 8982	Integrative Systems Review (2)

\*See 2016-17 Catalog for Course Description  
 +Courses removed from Class of 2020 curriculum

**Optional MS I & MS II Electives**

CLME 8111(001)	Medical Spanish I (1)
CLME 8111(002)	Medical Spanish II (1)
CLME 8112	Summer Rural Externship (2) <b>(Required for RMT)</b>
CLME 8122	Early Rural Experience (2)
CLME 8243	Human Nutrition (3)
CLME 8311	iM3ED I

CLME 8321	iM3ED II
CLME 8331	iM3ED III
CLME 8341	iM3ED IV

**Four-Year Professional Curriculum for Academic Year 2017-18 – Class of 2018-2021**

**Third and Fourth Year – MS III & MS IV – Traditional Track**

**Required Courses**

CLME 9115	Medicine I
CLME 9125	Medicine II
CLME 9175	OB/GYN
CLME 9195	Surgery
CLME 9155	Pediatrics
CLME 9165	OMM
CLME 9145	Rural Clinic
CLME 9185	Psychiatry
CLME 9235	Health Care Clinic
CLME 9215	Community Hospital I
CLME 9225	Community Hospital II
CLME 9255	Emergency Medicine

**Required Elective Courses**

CLME 9815	Elective I - Primary Care
CLME 9825	Elective II - Primary Care
CLME 9855	Elective I
CLME 9865	Elective II
CLME 9875	Elective III
CLME 9885	Elective IV
CLME 9265	Elective V
CLME 9275	Elective VI (May be used as optional 2 <sup>nd</sup> vacation)
CLME 9375	Elective VII

**Optional Elective Courses**

CLME 9355	Pros for Africa Selective
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**Required Didactic Week Courses**

CLME 9211	Didactic Week I-Transition Week
CLME 9221	Didactic Week II
CLME 9231	Didactic Week III
CLME 9241	Didactic Week IV

**Required Vacations**

- 2 Week Vacation – Mandatory vacation at end of calendar year during third year
- 4 Week Vacation – Scheduled during an open 4-week block

**Third and Fourth Year – MS III & MS IV – Rural Medical Track Curriculum**

**Rural Medical Track Required Courses**

CLME 9115	Medicine I
CLME 9125	Medicine II
CLME 9175	OB/GYN
CLME 9195	Surgery
CLME 9155	Pediatrics
CLME 9165	OMM
CLME 9145	Rural Clinic
CLME 9245	Community Clinic
CLME 9185	Psychiatry
CLME 9235	Health Care Center
CLME 9215	Community Hospital I
CLME 9225	Community Hospital II
CLME 9255	Emergency Medicine

CLME 9285	Sub Internship I
CLME 9295	Sub Internship II
CLME 9805	Selective I
CLME 9325	Selective II
CLME 9335	Selective III

**RMT Required Didactic Week Courses**

CLME 9211	Didactic Week I-Transition Week
CLME 9221	Didactic Week II
CLME 9231	Didactic Week III
CLME 9241	Didactic Week IV

**RMT - 12 Weeks Required from the Following (Choose 3)**

CLME 9855	4 Week Elective I
CLME 9865	4 Week Elective II
CLME 9875	4 Week Elective III (May be used as optional 2 <sup>nd</sup> vacation)
CLME 9835	4 Week Selective IV
CLME 9315	4 Week Sub Internship III

**RMT Required Vacations**

- 2 Week Vacation – Mandatory vacation at end of calendar year during third year
- 4 week Vacation- Scheduled during an open four-week block

Prior matriculants refer to previous catalogs.

R. Course Descriptions

**First Year – MS I**

**PCME 8115 Clinical Anatomy**

This course presents gross structure of the human body using a regional approach. Topics include topographic and functional anatomy, clinical correlations, and an introduction to radiology. The course provides the descriptive basis for understanding human structure and function encountered in succeeding courses and medical practice.

**PCME 8914 Medical Sciences Foundation**

Medical Sciences Foundation (MSF) provides a descriptive and quantitative study involving the integration of structure and function of the human body with a functional analysis of the organ systems. Emphasis is on comprehension of the physiologic principles and control mechanisms that maintain homeostasis. Problem-solving techniques are utilized to develop and examine student understanding. This introduction into physiology establishes the fundamental basis from which students can expand their knowledge into pathophysiology, pharmacology, pathology, microbiology, and clinical medicine

**PCME 8762 Foundations in Medical Biochemistry**

Biochemistry in human health and disease, including protein structure and function, bioenergetics, metabolism, nutrition, and membrane structure and function.

**PCME 8752 Foundations in Medical Cell and Tissue Biology**

Structure and function of cells within tissues as it relates to human health and disease, including cell transport, cell-to-cell communication and organ system control.

**PCME 8743 Foundations in Medical Genetics, Molecular Biology and Development**

Human genetics and development, including structure and function of nucleic acids, gene regulation, basis of inheritance, and development of the human embryo.

**PCME 8781 Foundations in Medical Immunology**

The immune system in human health and disease, including antibody and cell-mediated immune responses, inflammation, immune responses to infectious agents and allergens, immunodeficiencies and malignancies of the immune system.

**PCME 8793 Foundations in Medical Microbiology**

Infectious agents, including viruses, bacteria, fungi and parasites, their structure, genetics and mechanisms of pathogenesis in human disease.

**PCME 8771 Foundations in Medical Pharmacology**

General principles of pharmacokinetics and pharmacodynamics of drugs used to treat human disease.

**CLME 8312 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 practicum. 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.

**CLME 8914 Clinical Care Foundations I**

This course 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.

**CLME 8821 Focus Course in Geriatrics**

The Geriatric Focus course provides the basic foundation for students to be able to provide competent, compassionate care for the growing population of older adults. In this course students will be introduced to a variety of topics to meet this goal including: 1) the epidemiology and demography of aging, 2) stereotypes and myths of aging, 3) psychosocial and functional aspects of aging, 4) normal aging vs disease, 5) anatomic and histological changes associated with aging, 6) atypical presentation of disease, 7) various geriatric syndromes, i.e., incontinence, falls, osteoporosis, and 8) palliative care.

**CLME 8801 Focus Course in Lab Medicine**

The Laboratory Medicine Focus Course will introduce students to the application and interpretation of laboratory tests in clinical medicine. The course is intended to provide a basic foundation for mastering the complex physiologic, pathologic, clinical, diagnostic, and therapeutic concepts taught in subsequent Systems courses. The course will focus on the practical relevance of laboratory medicine concepts and will introduce the aspects of laboratory medicine used most commonly in a broad range of clinical settings with the understanding that students will generalize and apply these concepts in the subsequent Systems courses.

**CLME 8941 Service Learning/Community Engagement I**

Being a good steward of your community is a fundamental part of becoming a successful, compassionate, and competent physician. In this course students use knowledge gained in the classroom to engage with community partners and senior mentors in reciprocal learning activities. Reflection after these activities will enrich the learning experience.

**CLME 8322 Osteopathic Manipulative Medicine II**

This course 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 practicum. Hands-on sessions develop student evaluation and treatment skills using muscle energy and counter-strain techniques for examining and treating the musculoskeletal system.

**PCME 8814 Cardiovascular System**

The Cardiovascular System module will be integrating biomedical and clinical curriculum providing the student with the medical knowledge to address the health of the normal cardiovascular system and includes the most common medical and surgical conditions that present to the primary care and emergency settings. This module will also include prevention strategies to maintain the health of the system, the treatments to restore normal function, surgical procedures required to correct abnormalities and pharmacologic treatment where required to treat the most common medical conditions. In addition students will work to solve case-based clinical problems in a small group discussion format to further the skills of history data gathering, differential diagnosis process and formulating treatment plans.



### **PCME 8853 Genitourinary System**

The Genitourinary (GU) System Course is designed to integrate biomedical and clinical knowledge providing the student with the medical background to address the health of the GU system and includes the most common medical and surgical conditions that present to the primary care and emergency settings. The course will also include prevention strategies to maintain the health of the GU system, treatments to restore normal function, surgical procedures required to correct abnormalities, and pharmacologic treatment for the most common medical conditions. In addition students will work to solve case-based clinical problems in a small group discussion format to further the skills of history data gathering, differential diagnosis process, and formulating treatment plans.

### **PCME 8873 Respiratory System**

The Respiratory System module will be integrating biomedical and clinical curriculum providing the student with the medical knowledge to address the health of the normal respiratory system and includes the most common medical and surgical conditions that present to the primary care and emergency settings. This module will also include prevention strategies to maintain the health of the system, the treatments to restore normal function, surgical procedures required to correct abnormalities and pharmacologic treatment where required to treat the most common medical conditions. In addition students will work to solve case-based clinical problems in a small group discussion format to further the skills of history data gathering, differential diagnosis process and formulating treatment plans.

### **PCME 8833 Hematology System**

The Hematology System module will be integrating biomedical and clinical curriculum providing the student with the medical knowledge to address the health of the normal hematology system and includes the most common medical and surgical conditions that present to the primary care and emergency settings. This module will also include prevention strategies to maintain the health of the system, the treatments to restore normal function, surgical procedures required to correct abnormalities and pharmacologic treatment where required to treat the most common medical conditions. In addition students will work to solve case-based clinical problems in a small group discussion format to further the skills of history data gathering, differential diagnosis process and formulating treatment plans.

## **Second Year – MS II**

### **CLME 8922 Clinical Care Foundations II**

This course continues training in 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.

### **CLME 8951 Service Learning/Community Engagement II**

Being a good steward of your community is a fundamental part of becoming a successful, compassionate, and competent physician. In this course students continue to use knowledge gained in the classroom to engage with community partners and senior mentors in reciprocal learning activities. Reflection after these activities will enrich the learning experience.

### **CLME 8831 Focus Course: Health Behavior Change**

The Health Behavior Change focus course will introduce students to concepts and skills that assist patients in making and maintaining health-related behavioral changes. The course will focus on 1) factors which promote/impede treatment adherence, 2) evidence-based theories on health-behavior change, 3) motivational interviewing techniques, 4) behavioral counseling skills for health behavior change, and 5) relapse prevention skills. Strategies for addressing tobacco cessation, substance use, medication and treatment adherence, dietary changes, and physical activity will be presented; students will engage in case discussions and have an opportunity to develop health behavior change interventions for use in the primary care setting.

### **CLME 8871 Focus Course in Pediatrics**

The Pediatrics Focus Course will help students acquire the medical knowledge necessary to provide pediatric health care. Students will learn to distinguish between normal and abnormal patterns of growth and development in children from newborn to adolescents. They will build an understanding of disease prevention models regarding common pediatric conditions; common pediatric diseases and conditions; childhood immunization, pediatric sports medicine and physical fitness; pediatric critical care and emergency care; disorders of cognition, language, and learning; and psychosocial issues and ethics within pediatric health care. The course will use a case-based approach to learning.

**PCME 8861 Focus Course in Rural Health**

Rural Health Focus Week provides the opportunity for medical students to explore a variety of healthcare topics through a rural perspective. This course seeks to identify rural health concerns, dispel some of the myths that surround medical care in a rural setting, and discuss topics that are unique to rural medical care.

**CLME 8961 Service Learning/Community Engagement III**

Being a good steward of your community is a fundamental part of becoming a successful, compassionate, and competent physician. In this course students continue to use knowledge gained in the classroom to engage with community partners and senior mentors in reciprocal learning activities. Reflection after these activities will enrich the learning experience.

**CLME 8332 Osteopathic Manipulative Medicine III**

This course 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 practicum. Hands-on sessions develop student evaluation and treatment skills using muscle energy and counter-strain techniques for examining and treating the musculoskeletal system.

**PCME 8916 Nervous System**

The Nervous System module will be integrating biomedical and clinical curriculum providing the student with the medical knowledge to address the health of the normal nervous system and includes the most common medical and surgical conditions that present to the primary care and emergency settings. This module will also include prevention strategies to maintain the health of the system, the treatments to restore normal function, surgical procedures required to correct abnormalities and pharmacologic treatment where required to treat the most common medical conditions. In addition students will work to solve case-based clinical problems in a small group discussion format to further the skills of history data gathering, differential diagnosis process and formulating treatment plans.

**PCME 8883 Psychiatry System**

The Psychiatry System module will be integrating biomedical and clinical curriculum providing the student with the medical knowledge to address the mental health of the patient and includes the most common psychiatric conditions that present to the primary care and emergency settings. This module will also include prevention strategies to maintain mental health, the treatments to maximize function, and pharmacologic treatment where required to treat the most common psychiatric conditions. In addition students will work to solve case-based clinical problems in a small group discussion format to further the skills of history data gathering, differential diagnosis process and formulating treatment plans.

**PCME 8903 Endocrine System**

The Endocrine System module will be integrating biomedical and clinical curriculum providing the student with the medical knowledge to address the health of the normal endocrine system and includes the most common medical and surgical conditions that present to the primary care and emergency settings. This module will also include prevention strategies to maintain the health of the system, the treatments to restore normal function, surgical procedures required to correct abnormalities and pharmacologic treatment where required to treat the most common medical conditions. In addition students will work to solve case-based clinical problems in a small group discussion format to further the skills of history data gathering, differential diagnosis process and formulating treatment plans.

**PCME 8823 Gastrointestinal/Hepatic System**

The GI/Hepatic System module will be integrating biomedical and clinical curriculum providing the student with the medical knowledge to address the health of the normal GI/Hepatic system and includes the most common medical and surgical conditions that present to the primary care and emergency settings. This module will also include prevention strategies to maintain the health of the system, the treatments to restore normal function, surgical procedures required to correct abnormalities and pharmacologic treatment where required to treat the most common medical conditions. In addition students will work to solve case-based clinical problems in a small group discussion format to further the skills of history data gathering, differential diagnosis process and formulating treatment plans.

**CLME 8934 Clinical Care Foundations III**

This course continues training in 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.

**CLME 8961 Service Learning/Community Engagement III**

Being a good steward of your community is a fundamental part of becoming a successful, compassionate, and competent physician. In this course students continue to use knowledge gained in the classroom to engage with community partners and senior mentors in reciprocal learning activities. Reflection after these activities will enrich the learning experience.

**CLME 8981 Culture and Medicine**

This course introduces students to issues related to practicing medicine in an increasingly diverse society. Students will learn about the influence of culture, in the broadest sense, on health, health behavior, the health care encounter, and the health care system. Students will learn skills and strategies that are useful for providing culturally competent care.

**CLME 8891 Focus Course in Obesity Medicine**

The main objective of the Obesity Medicine Focus Course is to help students to establish a baseline understanding of the basic concepts in obesity medicine including the causes, physiology, pathophysiology, and epidemiology of obesity. Emphasis will be placed on acquiring the knowledge necessary to prevent, assess, treat, and monitor overweight and obesity in children and adults using evidence based practices. Additionally, students will be introduced to important topics in obesity medicine including disease prevention models, multidisciplinary care, intrapersonal factors, and environmental influences.

**CLME 8841 Focus Course in Addiction Medicine**

Alcohol and illicit drug abuse are the top 10 contributors of morbidity and mortality in the world, nation, and Oklahoma. Primary care physicians must be aware of the risk, incidence, prevention, and treatment of substance use disorders. The Addiction Medicine Focus Course aims to enhance the student's awareness of addiction-related risks and the outcomes associated with abuse, particularly focusing on the epidemiologic findings for Oklahoma. The Course will also concentrate on practical skill development by reinforcing prior classroom learnings and extending previously learned as well as newly acquired skills to clinical settings. In addition, the Course will familiarize the student with trends in public policymaking which impact prevention and treatment.

**CLME 8342 Osteopathic Manipulative Medicine IV**

This course 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 practicum. Hands-on sessions develop student evaluation and treatment skills using muscle energy and counter-strain techniques for examining and treating the musculoskeletal system.

**PCME 8982 Integrative Systems Review**

This course is designed to assist the MSII student in strengthening their knowledge base over the various physiologic systems and to integrate this knowledge to provide the best possible foundation to continue on in patient care/

**PCME 8843 Musculoskeletal System**

The Musculoskeletal System module will be integrating biomedical and clinical curriculum providing the student with the medical knowledge to address the health of the normal musculoskeletal system and includes the most common medical and surgical conditions that present to the primary care and emergency settings. This module will also include prevention strategies to maintain the health of the system, the treatments to restore normal function, surgical procedures required to correct abnormalities and pharmacologic treatment where required to treat the most common medical conditions. In addition students will work to solve case-based clinical problems in a small group discussion format to further the skills of history data gathering, differential diagnosis process and formulating treatment plans.

**PCME 8663 Reproductive System**

The Reproductive System module will be integrating biomedical and clinical curriculum providing the student with the medical knowledge to address the health of the normal reproductive system and includes the most common medical and surgical conditions that present to the primary care and emergency settings. This module will also include prevention strategies to maintain the health of the system, the treatments to restore normal function, surgical procedures required to correct abnormalities and pharmacologic treatment where required to treat the most common medical conditions. In addition students will work to solve case-based clinical problems in a small group discussion format to further the skills of history data gathering, differential diagnosis process and formulating treatment plans.

## **Electives – MS I and MS II (See course schedules for specific semesters offered)**

### **Medical Spanish I and II**

Medical Spanish I introduces students to fundamentals of Medical Spanish. Medical Spanish II is a continuation of Medical Spanish I, with an emphasis on interacting/dialoguing with the instructor and fellow students.

### **Summer Rural Externship**

The Summer Rural Externship is a 2 credit hour course. The 2-week rotation is designed to reinforce a student's interest in a rural practice and to prepare the student for their rural clerkships. This clerkship is comprised of a clinical office experience in a small rural community and includes community service and interdisciplinary shadowing.

Rural Medical Track students are highly encouraged to enroll in the Summer Rural Externship

### **Early Rural Experience**

The Early Rural Experience (ERE) is a 2 credit hour course designed to reinforce student interests in rural practice and to prepare the student for their rural clerkships. This 64-80 hour rotation is comprised of clinical office experiences in rural communities and includes community service and interdisciplinary shadowing. The clinical hours can be at different locations, with different physicians and can be spread out over the course of 1 year. Scheduling can include up to 2 different sites/preceptors/or start times. This course requires special permission to enroll and is designed to replace the Summer Rural Externship with a more flexible version when necessary.

### **Summer International Medical Externship**

This rotation is designed to provide students with an opportunity to explore issues in the delivery of health services in other countries. Students will learn about and understand the cultural customs prior to the international experience. Experiences, during this rotation, are designed to deepen the awareness of all participants regarding the determinants of health and illness and diverse methods of approaching health problems in settings with varied cultural, socio-economic and political characteristics. These experiences help students develop sensitivity to health disparities and their causes, including health, social, economic, and environmental factors.

### **Human Nutrition**

This course explores the 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. It also examines the role of drugs in inducing cancer and increasing nutrient requirements.

### **iM3ED I**

Students in iM3ED I will be introduced to multiple concepts that do not fit the typical medical curriculum. This will begin with a brainstorming technique called design thinking popularized by the Stanford School of Design and IDEO. Students will apply this method throughout the semester to solve multiple issues in healthcare. Concepts in architecture, 3D printing, and healthcare app development will be introduced by experts in the field and applied by students in lab. Various brainstorming activities will be assigned during the semester to help students expand their problem-solving skills.

### **iM3ED II**

Students in iM3ED II will be exposed to the concepts and theories of Needfinding. They will apply these observational skills in the clinical arenas of Emergency Medicine, Intensive Care Medicine and others before entering a brainstorming phase of design thinking. This will allow them to apply the lessons learned in iM3ED I prior to being introduced to rapid prototyping concepts. iM3ED will partner with FabLab during an 8-week program to learn basic skills in engineering and design to prototype a solution to problems they encountered during their observation (needfinding) experience. They will complete the semester by being introduced to the "art of the pitch" by experienced entrepreneurs and have an opportunity to pitch to real investors.

### **iM3ED III**

Students in iM3ED III will focus on the business of healthcare in multiple facets. Guest lecturers from the OSU Spears School of Business as well as local experts will provide lecture, small group sessions and lab to help students better understand business concepts in healthcare. There will be a focus on innovation and entrepreneurship in these lessons as well as how to fund a healthcare start-up. Time outside of class will be minimal in order to allow students to prepare for COMLEX Step I.

### **iM3ED IV**

Students in iM3ED IV have completed I-III and are in clinical rotations. There will be meetings when students are already expected to be on campus but no other organized events. Students will work on a Capstone project of their choosing during these two years with an expected completion prior to graduation. They will direct the

content but it should be based on skills and concepts learned during courses I-III. Students must complete all courses and Capstone to receive certificate of completion on graduation.

### **Third and Fourth Year - MS III and MS IV**

#### **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 (RMT students only)**

This clerkship gives third-year students continued preparation for clerkship training in rural and community-based 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 rounds, 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 a 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**

The clerkships takes place in community-based hospitals which is designed to involve the fourth-year 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.

### **Didactic Weeks**

Didactic Weeks provide the opportunity for OSU-COM to reinforce biomedical and clinical concepts away from the clinical setting. The required courses will review past rotations and may provide feedback from the COMAT test results. Small group interaction, simulations, online modules and standardized patients may be utilized to prepare students for their next group of rotations. Time specific information will be covered each Didactic Week based on the student's scheduled rotations.

### **Sub-Internships (RMT only)**

Required rotations that give Rural Medical Track students training at a primary care residency site to participate in hands-on training alongside residents and attending a at a residency site in Oklahoma. Allows RMT students to gain a more in-depth understanding of the relationship between the residency program, the hospital and the community and gain insight into medical knowledge and skill level needed for residency.

### **RMT Selectives (RMT only)**

Required rotations that give RMT students training in select specialties to gain more in-depth understanding of the relationship between the rural primary care physician and the specialist. The rotation provides an opportunity to gain experience in identified, specific areas of need or interest that could assist a rural physician to better serve the rural population.

## S. Information about Graduate Medical Education, Match Programs, and COMLEX Performance

### **The Match**

#### **National Matching Service – D.O. Match**

[The AOA Intern/Resident Registration Program](#) is a matching program that places students into osteopathic graduate medical education positions in the United States. The Intern/Resident Registration Program (the "Match") is sponsored and supervised by the [American Osteopathic Association](#) (AOA). The Match is administered on behalf of the AOA by [National Matching Services Inc.](#)

To obtain an AOA-approved OGME-1 position in an osteopathic internship or residency, or to obtain an OGME-2 residency position in Dermatology or Preventive Medicine-Public Health, students and trainees must register for and participate in the [AOA Match](#).

### **The Main Residency Match – M.D. Match**

The purpose of the **Main Residency Match** is to provide a uniform time for both applicants and programs to make their training selections without pressure. Through the **Main Residency Match**, applicants may be “matched” to programs using the certified rank order lists (ROL) of the applicants and program directors, or they may obtain one of the available unfilled positions during the Match Week Supplemental Offer and Acceptance Program®. The **Main Residency Match** is managed through the [NRMP](#)’s Registration, Ranking, and Results® (R3®) system.

#### **Programs that participate in the Main Residency Match include:**

- Categorical-C: programs that begin in the PGY-1 year and provide the full training required for specialty board certification.
- Primary-M: categorical programs in primary care medicine and primary care pediatrics that begin in the PGY-1 year and provide the full training required for specialty board certification.
- Advanced-A: programs that begin in the PGY-2 year after a year of prerequisite training.
- Preliminary-P: or one-year programs that begin in the PGY-1 year and provide prerequisite training for advanced programs.
- Physician-R: programs that are reserved for physicians who have had prior graduate medical education. Reserved programs offer PGY-2 positions that begin in the year of the Match and thus are not available to senior medical students.
- Some specialties may offer both categorical and advanced type positions. Examples are Dermatology, Anesthesiology, Neurology, Physical Medicine and Rehabilitation, and Diagnostic Radiology.

The [NRMP](#) seeks to maintain the highest professional standards in the conduct of the **Main Residency Match** and in its interactions with all participants: applicants, program directors, institutional officials, and medical school staff. All participants in the **Main Residency Match** must conduct their affairs in an ethical and professionally responsible manner and respect the right of applicants to freely investigate program options prior to submission of their rank order lists.

The NRMP also offers [couples matching](#).

#### **Additional Matches**

- [San Francisco Match](#) (Neurology, Ophthalmology, Plastic Surgery)
- [Urology Match](#)
- [Army and Navy GME](#)

#### **Match Rates**

The Match rates for the past four years are shown below (all Matches and Scrambles Included):

- In 2017, OSU-COM had a graduating class of 102 with a 100% match rate.
- In 2016, OSU-COM had a graduating class of 105 with a 100% match rate.
- In 2015, OSU-COM had a graduating class of 91 with a 99% match rate.
- In 2014, OSU-COM had a graduating class of 86 with a 100% match rate.

#### **COMLEX-USA First-time Pass Rate Information**

The COMLEX-USA first-time pass rate information is as follows:

##### **COMLEX-USA Level 1 School Pass Rate**

- 2016 – 2017: 82.57%
- 2015 – 2016: 77.06%
- 2014 – 2015: 89.19%
- 2013 – 2014: 93.62%

##### **COMLEX-USA Level 2 CE School Pass Rate**

- 2016 – 2017: 95.05%
- 2015 – 2016: 92.45%
- 2014 – 2015: 96.77%
- 2013 – 2014: 95.35%

#### **COMLEX-USA Level 2 PE School Pass Rate**

- 2016 – 2017: 90.20%
- 2015 – 2016: 97.17%
- 2014 – 2015: 93.54%
- 2013 – 2014: 97.67%

#### **COMLEX-USA Level 3 School Pass Rate**

- 2016 – 2017: 97.27%
- 2015 – 2016: 100.00%
- 2014 – 2015: 95.40%
- 2013 – 2014: 95.88%

For more information about match rate, COMLEX-USA performance, and residency placements,, see: <http://www.healthsciences.okstate.edu/com/admissions/graduates.php>

#### **VI. D.O./M.B.A. PROGRAM**

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

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 Spears School of Business 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.

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.

The faculty, having varied academic, governmental, corporate and consulting backgrounds, bring real-world experience to the classroom. Students receive the necessary theoretical background but 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.

#### A. Admission Information

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

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, and remain in good standing per OSU M.B.A. standards (as outlined in the OSU M.B.A. Handbook), in order to retain deferred admission into the D.O. program.

##### **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 Management Admissions 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 indicate so on the secondary application. 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 Letters of Recommendation
- Graduate College Application (with \$40 application fee)
- Official transcripts from all schools attended
- 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 & Fees

Tuition and fees are approved by both the Board of Regents for the Oklahoma Agricultural and Mechanical Colleges and the State Regents for Higher Education and are subject to change only after consideration in public meetings of those bodies.

#### **Tuition**

- Oklahoma Resident Tuition \$196.00 per credit hour
- Non-Resident Tuition \$785.75 per credit hour

#### **Fees**

Multiplied by the number of credit hours in which a student is enrolled

- Academic Facility Fee \$17.25
- Academic Records and Maintenance Fee \$4.35
- Advising/Assessment fee \$8.90
- *Daily O'Collegian* fee \$0.30
- Student Facility Fee, General \$4.70
- Student Facility Fee, Campus Rec \$3.00
- Health Services Fee \$5.00
- Library Automation and Technology Fee \$15.00
- Life Safety and Security Fee \$3.50
- Student Activity Fee \$2.50
- Student Activity Fee – Athletic Fee \$5.50
- Student Development Fee \$2.00
- Transit/Parking Services Fee \$2.30
- University Technology and Infrastructure Maintenance Fee \$10.15
- Academic Excellence Fee \$17.50
- Student Union Renovation Fee \$4.35

#### **Other Fees**

- Application \$50.00

For more information regarding fees specific to the Spears School of Business, refunds, etc, please visit <http://bursar.okstate.edu/tuition-and-fees> .

**Tuition and Fees are subject to change .**

### D. Financial Aid

#### **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. Scholarships will be awarded to a student in the D.O./M.B.A. program, with good academic

standing and demonstrated financial need. Recipient will be required to attend Benefactor's Luncheon and any additional activities as appropriate.

#### **The Office of Financial Aid**

The Office of Scholarships & Financial Aid is responsible for the administration of student financial aid and financial counseling to students applying for aid while the student is pursuing the MBA degree. Students who are interested in loans, scholarships, or work-study employment should apply to this office. The **Free Application for Federal Student Aid (FAFSA)** and other required applications may be obtained by contacting:

Office of Scholarships & Financial Aid  
Oklahoma State University.  
119 Student Union  
Stillwater, OK 74078-5061

#### E. Curriculum & Course Descriptions

##### **ACCT 5183 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.

**Elective choice or (LSB 5163, MKTG 5633 or MGMT 5073)**

**Second Semester – Spring** (15 credit hours)

##### **ACCT 5283 Managerial Accounting**

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

**Finance or Analytics option: Fin 5053 or any other 5000 level FIN class; Analytics-MKTG 5733 Intro to Mktg Analytics**

**Elective choice or (LSB 5163, MKTG 5633 or MGMT 5073)**

##### **MGMT 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** (6 credit hours)

To be determined.

## **VII. D.O./M.P.H. PROGRAM**

The Oklahoma State University Center for Health Sciences (OSU-CHS) offers a joint Doctor of Osteopathy and Master of Public Health degree with emphasis on Rural and Underserved Populations with the Oklahoma State University Graduate College. Classes are held at the OSU Main Campus in Stillwater, OK, with some courses at OSU-Tulsa, and a growing number of courses available via distance learning.

Today's successful physicians must have explicit understanding of cultural determinants of health and population health to be able excel on multiple levels. At Oklahoma State University, the M.P.H. program emphasizes the determinants of health for rural and underserved populations. The program is designed to integrate the knowledge, skills, and experiences necessary to help you achieve your career goals. The D.O./M.P.H. is an accelerated program that allows D.O. students to gain their M.P.H. in one calendar year, by allowing D.O. coursework to serve as elective coursework for the M.P.H. degree. This 42-hour program captures 27 hours of the M.P.H.'s core coursework in the fall and spring semesters with an additional six required hours taken in the summer. All students are required to complete a practicum (3 credit hours) or a thesis (6 credit hours) as part of the MPH program; these activities typically occur during MSII and later.

The M.P.H. curriculum is a blend of behavioral and public health skill building coursework, often with real-world applications, designed to reflect today's emphasis on population medicine. The curriculum will be continuously updated based on feedback from students, the advisory committee, local health departments, and alumni; however, the underlying philosophy of public health and content areas required by our accrediting body will remain constant.

### A. Admission Information

#### **Types of Admission**

Students may pursue the D.O./M.P.H. 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.P.H. degree requirements, and remain in good standing per OSU M.P.H. standards (as outlined in the OSU M.P.H. Student Handbook), in order to retain deferred admission into the D.O. program.

#### **Entrance Requirements**

The D.O./M.P.H. 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.P.H. Program.

### B. Application Procedure

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.P.H. application process. Prospective students who wish to pursue application to the D.O./M.P.H. program on the 1-4 track must indicate so on the secondary application. Prior to beginning the M.P.H. 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.P.H. Application
- Statement of Purpose
- 3 Letters of Recommendation
- Graduate College Application (with \$40 application fee)
- Official transcripts from all schools attended
- 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.P.H. application is valid for one year from date of submission.

### C. Tuition & Fees

Tuition and fees are approved by both the Board of Regents for the Oklahoma Agricultural and Mechanical Colleges and the State Regents for Higher Education and are subject to change only after consideration in public meetings of those bodies.

#### **Tuition**

- Oklahoma Resident Tuition \$196.00 per credit hour
- Non-Resident Tuition \$785.75 per credit hour

#### **Fees**

Multiplied by the number of credit hours in which a student is enrolled

- Academic Facility Fee \$14.50
- Academic Records and Maintenance Fee \$4.35
- Advising/Assessment fee \$7.90
- *Daily O'Collegian* fee \$0.30
- Student Facility Fee, General \$4.70
- Student Facility Fee, Campus Rec \$3.00
- Health Services Fee \$5.00
- Library Automation and Technology Fee \$13.75
- Life Safety and Security Fee \$3.50
- Student Activity Fee \$2.50
- Student Activity Fee – Athletic Fee \$4.75
- Student Development Fee \$2.00
- Transit/Parking Services Fee \$2.30
- University Technology and Infrastructure Maintenance Fee \$10.15
- Academic Excellence Fee \$17.50
- Student Union Renovation Fee \$4.35

#### **Other Fees**

- Application \$50.00

For more information regarding fees specific to the Spears School of Business, refunds, etc, please visit <http://bursar.okstate.edu/tuition-and-fees>.

**Tuition and Fees are subject to change.**

### D. Financial Aid

#### **The Office of Financial Aid**

The Office of Scholarships & Financial Aid is responsible for the administration of student financial aid and financial counseling to students applying for aid while the student is pursuing the MBA degree. Students who are interested in loans, scholarships, or work-study employment should apply to this office. The **Free Application for Federal Student Aid (FAFSA)** and other required applications may be obtained by contacting:

Office of Scholarships & Financial Aid  
Oklahoma State University  
119 Student Union  
Stillwater, OK 74078-5061

### E. Curriculum & Course Descriptions

#### **First Semester – Fall (15 credit hours)**

##### **MPH/HLTH 5653 Foundations of Public Health Education & Promotion**

Exploration of key concepts, philosophies, ethical principles, historical events, theories/models, and responsibilities and competencies of public health promotion.

##### **MPH/HLTH 5683 Health Behavior Theory & Practice for Public Health**

Theories and concepts of health behavior change and exploration of the application of theories to public health programs.

**REMS 5953 Statistical Methods in Education.**

Statistical methods needed by conductors and consumers of research in education and the behavioral sciences. Introduction to interpretation and application of descriptive and inferential statistics.

**HCA 5013 Survey of Health Care Administration.**

Overview of current issues in health care administration that relate to planning, legal, ethical and other related topics.

**HCA 5093 Leadership Methods and Styles in Health Care****Second Semester – Spring (12 credit hours)****MPH/HLTH 5973 Designing Public Health Programs**

Application of program design principles, including needs assessment, theoretical application, program planning and marketing.

**MPH/HLTH 5983 Implementation and Evaluation of Public Health Programs**

Application of program implementation and evaluation, including evaluation design.

**MPH/HLTH 5453 Cultural Issues in Health**

Examination of ways in which culture affects health and health care including perceptions of health, disease, treatments, and the values associated with these factors. The need for cultural sensitivity in health care is emphasized.

**MC 5953 Strategic Health Communications Campaigns**

The course will focus on theoretical approaches to health message design and the most effective and strategic use of traditional and new media outlets. Students also will review and discuss examples of past and current health communication campaigns in the United States and around the world. Integrating theory and practice, students will apply these concepts to design strategic communication campaigns for area health agencies and organizations.

**Summer (6 credit hours)****MPH/HLTH 5133 Environmental Health**

Examination of health issues, etiology of disease, and control and prevention of major environmental health problems in industrialized and developing countries.

**MPH/HLTH 5323 General Epidemiology**

Examination of epidemiological theory and its methodological application to public health.

**MS-II, MS-III, or MS-IV (3 credit hours)****MPH 5030 Practicum in Public Health**

The Council on education for Public Health (CePH) requires that all students engage in a culminating experience that combines public health knowledge and skills. This 200-hour experience allows direct application of course content in an applied setting under guidance and supervision from faculty and community supervisors. The goals of this experience is to enrich classroom activity with practical understanding. Placement sites require prior approval from a committee comprised of one core and two affiliate public health faculty. Placement sites may include governmental or non-governmental organizations, community-based organizations, applied public health field research, health service settings (including those in universities and schools), or worksite wellness programs. This 200-hour experience can be conducted as part of the MS-III or MS-IV clinical practicum, as approved by the Committee.

**VIII. GRADUATE PROGRAMS IN BIOMEDICAL SCIENCES****Program Description**

The Biomedical Sciences Graduate Program at Oklahoma State University, Center for Health Sciences (OSU-CHS) provides students with a foundation in biomedical sciences that is broadly applicable to many disciplines including anatomy, biochemistry, cell biology, microbiology, pathology, pharmacology, and physiology. M.S.,

Ph.D., D.O./M.S. and D.O./Ph.D. degree programs in Biomedical Sciences are offered and each degree program has specific requirements as described below. Students pursuing a graduate degree in Biomedical Sciences will develop a plan of study that includes both required courses and courses pertinent to their area of interest (e.g., anatomy, histology, pathology, pharmacology, etc.). Additionally, students will conduct research under the guidance of a graduate faculty mentor.

#### A. Admission Information and Application Procedure

##### **Minimum admission requirements**

Listed below are the minimum admission requirements for the M.S., Ph.D., D.O./M.S. and D.O./Ph.D. degree programs. Under certain circumstances, a student may be accepted into the program without meeting all of the requirements written below.

- **All degree programs** – Prospective students must have earned a baccalaureate degree and completed coursework in general biology, upper division chemistry, and physics. Applicants are also expected to have an undergraduate grade point average (GPA) of at least 3.0 on a 4.0 scale. Non-U.S. citizens must have a permanent resident visa (“green card”).
- **Additional requirements for M.S. and Ph.D. degree programs** – Applicants to either the M.S. or Ph.D. program are expected to have earned a score of at least 150 for verbal and at least 150 for quantitative on the Graduate Record Examination (GRE), with a writing score of at least 4. Applicants to the Anatomy and Vertebrate Paleontology Track are expected to have completed coursework in Sedimentology and Stratigraphy, or to have field experience that provides familiarity with these subjects.
- **Additional requirements for D.O./M.S. degree program** – Applicants to the D.O./M.S. program are expected to have earned a minimum score of 492 on the Medical College Admissions Test (MCAT). Taking the GRE is not required, but is desirable.
- **Additional requirements for D.O./Ph.D. degree program** – Applicants to the D.O./Ph.D. program are not required to submit a GRE score if they have earned a score of 512 or greater on the MCAT. Applicants with a GRE score of at least 160 for verbal, at least 160 for quantitative and an MCAT score less than 512 will also be considered.

##### **International student admission**

International students for whom English is a second language are required to have earned a Test of English as a Foreign Language (TOEFL) score of at least 550 (213 computer based or 79 internet based).

##### **Application procedure**

Initial inquiries and correspondence may be sent directly to the Coordinator of Graduate Admissions. Applicants to the Biomedical Program should apply online at [the OSU Graduate College](#).

The following application materials are required as part of the application procedure for the Biomedical Sciences Graduate Program:

- **All Degree Programs:**
  - An OSU Biomedical Sciences Graduate Program application. This application is available online at [the OSU Graduate College](#).
  - An official transcript from each college and university attended.
  - Application fee.
  - Test scores for the GRE, MCAT and Test of English as a Foreign Language (TOEFL) examinations, as appropriate.
  - 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.
  - A “Personal Statement” that addresses the applicant’s research interests and the importance of a graduate degree to the applicant’s future. Applicants are also encouraged to identify Biomedical Sciences graduate faculty with whom they are interested in working.
- **D.O./M.S. Degree Program:**

Students wishing to receive deferred admission to the medical school and complete their M.S. coursework prior to the first year of medical school should indicate their interest in the D.O./M.S. degree on the OSU secondary application for medical school. Only students who successfully complete an on-campus interview for the D.O. program will be considered for this track.

  - Application Materials for the M.S. portion of the D.O./M.S. program

- Applicants submit their application online. The application is found on the web at [the OSU Graduate College](#).
- Three letters of recommendation from individuals familiar with the educational background of the applicant. At least one letter should contain comments regarding the applicant's research experience and expected motivation and productivity in research. Letters of recommendation submitted to the DO program can be forwarded to the School of Biomedical Sciences, if requested.
- Submit a Personal Statement that addresses (a) the applicant's research interests and (b) why the applicant desires to pursue a dual degree and (c) Account of applicant's research experience, including topics, techniques, presentations and publications, if any. Identifying graduate faculty as potential advisor is encouraged.

In addition to submitting the graduate application materials listed above, dual degree students must apply separately to the D.O. program. Consult the [D.O. admissions page](#) for a complete list of application materials and procedures. The deadline for submitting all secondary application materials is March 1.

- **D.O./Ph.D. Degree Program:**

Students wishing to receive admission to the medical school and the Ph.D. program should indicate their interest in the D.O./Ph.D. degree on the OSU secondary application for medical school. Only students who successfully complete an on-campus interview for the D.O. program will be considered for this track.

- Application Materials for the Ph.D. portion of the D.O./Ph.D. program
  - Applicants submit their application online. The application is found on the web at [the OSU Graduate College](#).
  - Three letters of recommendation from individuals familiar with the educational background of the applicant. At least one letter should contain comments regarding the applicant's research experience and expected motivation and productivity in research. Letters of recommendation submitted to the DO program can be forwarded to the School of Biomedical Sciences, if requested.
  - Submit a Personal Statement that addresses (a) the applicant's research interests and (b) why the applicant desires to pursue a dual degree and (c) Account of applicant's research experience, including topics, techniques, presentations and publications, if any. Identifying graduate faculty as potential advisor is encouraged.

In addition to submitting the graduate application materials listed above, dual degree students must apply separately to the D.O. program. Consult the [D.O. admissions page](#) for a complete list of application materials and procedures. The deadline for submitting all secondary application materials is March 1.

### B. Tuition, Fees and Financial Aid

Tuition and fees are approved by both the Board of Regents for the Oklahoma Agricultural and Mechanical Colleges and the State Regents for Higher Education and are subject to change only after consideration in public meetings of those bodies.

#### **Tuition**

- Oklahoma Resident Tuition \$196.00 per credit hour  
Supplemental Off-Campus Fee (Web courses) \$25.00 per credit hour  
(Total Resident Tuition for Web-based course \$212.00 per credit hour)
- Non-Resident Tuition \$785.75 per credit hour  
Supplemental Off-Campus Fee (Web course) \$25.00 per credit hour  
(Total Non-Resident Tuition for Web-based courses \$790.00 per credit hour)

#### **Fees**

Multiplied by the number of credit hours in which a student is enrolled

- Laboratory Materials Fee (on courses marked with\*) \$125.00 per course
- Student Activity Fee (on-campus courses only) \$7.72 per credit hour
- Library Automation Fee (all courses) \$5.00 per credit hour
- Technology Services Fee (all courses) \$9.68 per credit hour
- Health Fee (on-campus students only) \$54.00 per semester  
(enrolled in 6 or fewer on-campus credit hours) \$7.00
- Wellness Center Fee (on campus courses only) \$7.29 per credit hour

- Printing materials fee (on campus only) \$1.53 per credit hour

#### Other Fees

- Application \$50.00 (\$75 for International Students)
- Graduation (graduating semester) \$40.00

**Tuition and Fees are subject to change.**

#### Stipends

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

#### The Office of Financial Aid

The Office of Scholarships & Financial Aid 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. The **Free Application for Federal Student Aid (FAFSA)** and other required applications may be obtained by contacting:

Office of Scholarships & Financial Aid  
Oklahoma State University  
119 Student Union  
Stillwater, OK 74078-5061

### C. Student Information & Academic Regulations (All Biomedical Sciences Degree Programs)

#### Academic Probation and Dismissal

Courses are graded A, B, C, D or U on a 4.0 scale, unless specified as pass/fail. Graduate students are expected to make a "B" or better in all courses on the Plan of Study and to maintain a cumulative GPA of 3.0 or higher. Students must also meet the minimum requirements of the Graduate College as specified in the University Catalog. For *Thesis (5000) and Dissertation (6000)*: A grade of "SR," indicating satisfactory research progress, or "UR," indicating unsatisfactory progress will be assigned to thesis (5000) and dissertation (6000) courses at the end of the semester in which the hours are taken. These grades are permanent and have no impact on a student's grade point average. Graduate students are expected to make a grade of "SR" for all thesis or dissertation hours; only hours for which "SR" is earned may be used toward minimum degree requirements on the Plan of Study.

One of the following actions may be taken for students failing to meet the academic criteria detailed above:

- **Written Notice** – The Coordinator/Director of the Biomedical Sciences graduate program will notify, in writing, the advisor of students who earn a "C" grade or lower and will counsel students on the consequences of continued substandard performance.
- **Academic Probation** – Students will be placed on academic probation if their cumulative GPA drops below 3.0, if one or more "C" grades are earned two semesters in a row, or if a UR grade is given. Once placed on academic probation, students are expected to raise their cumulative GPA to 3.0 or higher by the end of next semester.
- **No Further Enrollment Without Department Consent (NFEWDC)** – Students may be placed on NFEWDC if they do not raise their cumulative GPA to a 3.0 or higher while on academic probation, or if 2 consecutive "UR" grades are earned. Once placed on NFEWDC, an enrollment hold is placed on the student. To be reinstated into the program, the student must petition the Coordinator/Director of the Biomedical Sciences graduate program by submitting a plan for improvement and a guarantee of minimal performance. This plan must be submitted within one semester of being placed on NFEWDC and the Coordinator/Director of the Biomedical Sciences graduate program and BSGC must approve the plan. Failure to submit this plan or receive approval from the BSGC and the Coordinator/Director of the Biomedical Sciences graduate program will result in dismissal.
- **Dismissal/No Further Enrollment (NFE)** – Students may be dismissed from the Biomedical Sciences Graduate Program if they do not meet the goals agreed upon in their improvement plan (see NFEWDC). The student's advisory committee will recommend dismissal to the BSGC as soon as it learns that the student has not met the goals of their improvement plan. The BSGC will then review the student's entire academic record, consult with student's advisory committee, and then conduct a personal interview with the student. The BSGC will then consider the information collected and make a recommendation as to



whether the student should be dismissed to the Coordinator/Director of the Biomedical Sciences Graduate Program. If the BSGC recommends dismissal, the Coordinator/Director of the Biomedical Sciences Graduate Program will forward the recommendation to the Vice Provost of Graduate Programs. If any members of the advisory committee or BSGC disagree with the majority decision to recommend dismissal, they may submit their concerns in writing to the Vice Provost of Graduate Programs. The Vice Provost of Graduate Programs will use the recommendation, and any submitted concerns, in making the final decision. If the Vice Provost of Graduate Programs decides to dismiss the student, the student can appeal the decision through the OSU Graduate College.

### **Major Advisor, Advisory Committee and Plan of Study**

Students must select a major advisor before beginning their second semester. The principal role of the advisor is to guide graduate students as they progress through the program and to direct research and the selection of graduate coursework. A designated faculty member will provide guidance to graduate students until students select a major advisor. The major advisor may serve as the chair of the advisory committee. The chair of the advisory committee must be a member of the Biomedical Sciences Graduate Faculty.

The advisory committee is chosen by the student in consultation with the major advisor. The committee must be selected prior to beginning the second year. Members of the advisory committee must be graduate faculty and be approved by the Biomedical Sciences Graduate Committee (BSGC). Advisory committees are required to meet once a year.

M.S. degree advisory committees shall consist of at least three members of the Biomedical Sciences Graduate Faculty, whereas Ph.D. degree advisory committees shall consist of at least three members of the Biomedical Sciences Graduate Faculty and one outside member. The outside member must be from outside the Biomedical Sciences Graduate Program and a member of the OSU Graduate Faculty with an OSU appointment. The outside member represents the OSU Graduate College and evaluates the advisory committee in the overall handling of the student. Outside members may participate in the evaluation of the student (e.g., qualifying exam, research proposal, writing of the dissertation, oral defense), though they are not required to do so. Additional faculty may be added.

The plan of study, which lists course work and research, is developed by the student in consultation with the major advisor and advisory committee. The Plan of Study must be submitted to and approved by the BSGC prior the end of the 2<sup>nd</sup> semester (excluding summer sessions) of enrollment for the M.S. degree and prior the end of the 3<sup>rd</sup> semester (excluding summer sessions) of enrollment for the Ph.D. degree.

### **Annual Graduate Student Review**

The BSGC conducts a formal review of each graduate student at the end of the spring semester each year. The goals of this review are:

1. To assess the progress of students through the Biomedical Sciences Graduate Program;
2. To give graduate students an opportunity to evaluate whether personal goals are being met; and
3. To give graduate students an opportunity to plan for the next academic year.

### **Enrollment Status**

After acceptance into the Biomedical Sciences Graduate Program, students matriculate with their first enrollment. Continuous enrollment is required thereafter until all degree requirements are completed. If the degree requirements are not completed (to include completing course requirements, sitting for comprehensive exams, research leading to a thesis or dissertation, writing and defending a thesis or dissertation, revising a thesis or dissertation, etc.) by the end of the second year of the M.S. program, the fourth year of the Ph.D. program, or the seventh year of the D.O./Ph.D. program, the student must enroll in Research and Thesis or Research and Dissertation for two hours per semester until the degree requirements are completed.

Full time status – To be considered full time in a fall or spring semester, domestic graduate students must enroll in at least nine graduate credit hours; full time enrollment during the summer semester requires at least two graduate credit hours. Domestic graduate students holding a 0.5 FTE (full time employee) or greater assistantship must enroll in at least six graduate credit hours in a fall or spring semester to be considered full time. Generally, a domestic graduate student must enroll in a minimum of four graduate credit hours to qualify for federal student loans and must enroll in at least nine graduate credit hours to qualify for the full amount of federal financial aid (students should contact the Scholarship and Financial Aid office for complete details). M.S. students must spend at least one semester and Ph.D. students must spend at least one year as a full-time student.

Part-time status – M.S. or Ph.D. students may enroll in the programs on a part-time basis (i.e., 1-9 graduate credit hours for fall or spring semester; 1 graduate credit hour for the summer semester) for coursework but not for research.

In addition to the above requirements for domestic students, international students on an F-1 or J-1 nonimmigrant visa are required to be enrolled full time in each fall and spring semester to maintain their immigration status, as recorded on the SEVIS system. International students need not to be considered full-time in their final semester. Students should verify final semester status by completing the “Final Semester Verification” form. Note that this form, which requires approval of the advisor, Coordinator/Director of the Biomedical Sciences Graduate Program, and Vice Provost of Graduate Programs, must be completed before the end of the second week of the final semester; otherwise the full-time requirement will apply.

### **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.

### **Research Thesis and Dissertation**

A research thesis is required for students pursuing a thesis option M.S. degree and a research dissertation is required for students pursuing a 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 thesis or dissertation is a requirement for students in the M.S. degree and the Ph.D. degree programs, respectively. A notice indicating the date, location and time of the thesis or dissertation defense must be posted at least 10 days prior to the defense. Additionally, a final draft copy of the thesis or dissertation must be available on the day that the advertisement for the defense is posted. The format of the defense is up to the major advisor but must include an opportunity for the audience to ask questions.

The student must submit two abstracts, printed on OSU thesis bond paper and signed by the thesis/dissertation advisor, to the Graduate College. Electronic submission of the thesis must follow the rules of the College of Graduate Studies. The student must submit two copies to the Center for Health Sciences, one copy to be kept in the Medical Library and one in the Office of Biomedical Sciences.

## D. Master of Science (M.S.) in Biomedical Sciences

### **Degree Requirements**

Students in the M.S. degree program take required courses, as well as elective courses in a specific area of interest. Additionally, M.S. students conduct original research under the guidance of a Biomedical Sciences graduate faculty advisor. The M.S. degree program in Biomedical Sciences has a *thesis* option and a *non-thesis* option. Each option has different course work and research requirements that total 32 semester credit hours. Admission requirements are described in Admission Requirements, Application Procedure and Application Materials.

Thesis option – minimum of 24 hours of course work and eight hours of research and thesis. Students pursuing this option will conduct original research, culminating in a written thesis that is presented as a seminar and publicly defended.

Non-thesis option – a minimum of 30 hours of course work and two hours of research. Students pursuing this option will conduct original research and present a written report based on the research project to their advisory committee. However, the non-thesis option does not require a public presentation or defense of the research project.

In addition, there is an Anatomy and Vertebrate Paleontology track M.S. degree program. Students pursuing this track are trained to teach human anatomy at the university, college or professional level, and will gain experience in vertebrate paleontology research under the guidance of a Biomedical Sciences graduate faculty mentor. ***This track has no non-thesis option.***

### **Credit for Course Work**

Students in the M.S. degree program will take both required (see Table 1) and elective (see Course Descriptions) courses to fulfill the degree requirements. All required courses must be taken at OSU-CHS. Note that course work

requirements differ depending on the track (i.e., Biomedical Sciences or Anatomy and Vertebrate Paleontology) as indicated in Table 1, 2, and 3. M.S. students may take up to three hours of Special Topics courses. M.S. students in the Anatomy and Vertebrate Paleontology track are encouraged to take at least one of the courses listed in Table 3.

Table 1. Required Courses: Biomedical Sciences Track

<u>Course #</u>	<u>Course Title</u>	<u>Semester Credit Hours</u>
BIOM 6762	Foundations in Medical Biochemistry	2
BIOM 6743	Foundations in Medical Genetics, Molecular Biology & Developmental Anatomy	3
BIOM 6752	Foundations in Medical Cell & Tissue Biology	2
BIOM 6781	Foundations in Medical Immunology	1
BIOM 6791	Foundations in Medical Microbiology	1
BIOM 6771	Foundations in Medical Pharmacology	1
BIOM 6933	Cornerstones of Graduate Biomedical Sciences	3
BIOM 6922	Scientific Communication in the Biomedical Sciences	2
BIOM 6662	Research Ethics and Survival Skills for the Biomedical Sciences	2
Statistics	Statistics for Experimenters I (or equivalent)	3

Table 2. Required Courses: Anatomy and Vertebrate Paleontology Track

<u>Course #</u>	<u>Course Title</u>	<u>Semester Credit Hours</u>
BIOM 5116	Clinical Gross Anatomy	6
BIOM 6662	Research Ethics & Survival Skills for the Biomedical Sciences	2
Statistics	Statistics for Experimenters I (or equivalent)	3
BIOM 6752	Foundations in Medical Cell and Tissue Biology	2
BIOM 6743	Foundations in Medical Genetics, Molecular Biology & Developmental Anatomy	3
BIOM 5641	Cornerstones in Vertebrate Paleontology	1

Additional Expectations for the Anatomy and Vertebrate Paleontology Track: Students in the Anatomy and Vertebrate Paleontology track are expected to:

- Enroll in Clinical Gross Anatomy in the first semester.
- Write grant proposals, starting in the first semester, with the help of the researcher.
- Enroll in four credits of BIOM 6723, Geology and Vertebrate Paleontological Field Methods, in the first summer.
- Attend paleontological lab meetings every week during the Fall and Spring semesters.
- Act as a teaching assistant in Gross and Developmental Anatomy lab in the third semester.

### **Credit for Research**

Students pursuing the thesis option are required to take a minimum of eight semester credit hours of research and thesis, whereas students pursuing the non-thesis option are required to take a minimum of two semester credit hours of research.

### **Research Project**

Students pursuing the thesis option must conduct a research project under the guidance of their advisor. In addition, these students must write a thesis that describes their research, present a seminar based on the thesis research, and publically defend the thesis (see Research Thesis and Dissertation). The advisory committee must approve the thesis and defense.

Students pursuing the non-thesis option are required to complete a research project under the guidance of their advisor and advisory committee. This research typically will culminate in a written report that is presented to and must be approved by the advisory committee; however, a presentation given at a state, national, or international meeting based on the project also may be approved by the committee.

### **Transfer Hours**

Students in the M.S. degree program may transfer a maximum of 9 hours of graduate credit from an accredited graduate program provided.

- Transfer credit is recommended by the major advisor and advisory committee through submission and approval of the Plan of Study;
- Transfer credit is approved by the BSGC and the Coordinator/Director of the Biomedical Sciences Graduate Program;
- Students transferring graduate credit must have been enrolled in a graduate program at another institution and the course or courses transferred must be recognized as graduate courses by that institution;
- Students must have earned a grade of “B” or better in all graduate courses transferred.

### **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, full-time students typically complete the M.S. degree program in two years. Students in the M.S. program are expected to enroll as full-time students (see [Additional Requirements and Information \(All Degree Programs, Enrollment Status\)](#)) in at least one semester and to complete the degree requirements within seven years.

### **Additional Requirements and Program Information**

Additional requirements and information pertinent to the M.S. degree program are described in [Additional Requirements and Information \(All Degree Programs\)](#).

## E. Doctor of Osteopathic Medicine and Master of Science (D.O./M.S.) Degree Program

### **Degree Requirements**

Students in the D.O./M.S. program must complete requirements for both the D.O. medical and M.S. graduate degrees. The requirements for the M.S. degree component of the D.O./M.S. degree are similar to those described in [Master of Science \(M.S.\) in Biomedical Sciences](#). However, as described below, some aspects are unique to the D.O./M.S. degree program.

Students in the D.O./M.S. degree program may do either the *thesis* or *non-thesis* option for the M.S. degree. As shown in Table 4, students pursuing a D.O./M.S. degree with a *thesis* option typically will take 20 semester credit hours of course work in the first year of the program along with 6-8 research credit hours, whereas students pursuing the *non-thesis* option typically will take 20 semester credit hours of course work in the first year of the program along with 2 research credit hours.

At the end of their first year, students in good academic standing, defined as maintaining a GPA of 3.0 or greater, (see [Additional Requirements and Information – All Degree Programs – Grades](#)), will matriculate into the D.O. program as a first year student (MS I) for the following year. If good academic standing is not maintained, matriculation into the D.O. program may be delayed.

Overview of D.O./M.S. Degree Program:

- Year 1: enroll in graduate courses (see Table 1, Required Courses) and research to fulfill requirements for degree program
- Year 2: enter first year of medical school as MS I and work toward completing all M.S. degree requirements (including coursework and research)
- Years 3 – 5: complete requirements for the D.O. degree.

### **Credit for Course Work**

In the first year of the D.O./M.S. program, all students are required to take a minimum of 12 hours in the Fall semester and 8 hours in the Spring semester, with up to 6 credit hours in the Summer semester (see Table 4). D.O./M.S. students may take up to three hours of special topics.

The student’s major advisor and advisory committee (see [Major Advisor, Advisory Committee and Plan of Study](#)) will provide guidance for selecting elective course work, and ensuring that the course work fits each student’s educational needs.

### Credit for Research

As described in Master of Science (M.S.) in Biomedical Sciences, students pursuing the *thesis* option are required to take a minimum of eight semester credit hours of research and thesis, whereas students pursuing the *non-thesis* option are required to take a minimum of two semester credit hours of research.

### Research Project

As described in Master of Science (M.S.) in Biomedical Sciences, students pursuing the *thesis* option must conduct a research project under the guidance of their advisor and advisory committee, and write, present, and publicly defend a thesis. As described in Master of Science (M.S.) in Biomedical Sciences, students pursuing the *non-thesis* option are required to complete a research project under the guidance of their advisor and advisory committee, and submit a written report to their advisory committee.

### Transfer Hours

All required courses must be taken at OSU-CHS. Up to 9 semester credit hours may be transferred from the course work taken as an MS I student (i.e., year 2 of the D.O./M.S. degree program) and applied toward the M.S. degree, provided that students have earned a grade of "B" or better in transferred course work credits. Since up to 9 hours may be transferred from the medical school courses, D.O./M.S. students are typically not allowed to transfer graduate credit from other institutions.

### Time of Study and Residence Requirements

D.O./M.S. students are encouraged to complete the M.S. portion of the degree in two years (i.e., by the summer between MS I and MS II) and must complete the entire program within seven years. The M.S. degree is conferred when the graduate degree requirements are complete.

## F. Doctor of Philosophy (Ph.D.) in Biomedical Sciences

### Degree Requirements

Students in the Ph.D. program take required courses, as well as elective courses in a specific area of interest. Additionally, Ph.D. students take a comprehensive qualifying examination, conduct original research under the guidance of a Biomedical Sciences graduate faculty advisor, present a research seminar, and write and publicly defend a dissertation. Admission requirements and materials for the Ph.D. degree program are described in Admission Requirements, Application Procedure and Application Materials.

An Anatomy and Vertebrate Paleontology track is also offered in the Ph.D. degree program. Students pursuing this track are trained to teach human anatomy at the university, college or professional level, and conduct original research in vertebrate paleontology under the guidance of a Biomedical Sciences graduate faculty advisor.

### Credit for Course Work

Students in the Ph.D. degree program are required to take a minimum of 30 semester hours of course work and will take both required courses (see Table 5) and elective courses (see Course Descriptions) to fulfill the degree requirements. All required courses must be taken at OSU-CHS. Student's major advisor and advisory committee (see Major Advisor, Advisory Committee and Plan of Study) will provide guidance for selecting elective course work to ensure that the Ph.D. program fits the student's educational needs and career goals. Note that course work requirements differ depending on the track (i.e., Biomedical Sciences or Anatomy and Vertebrate Paleontology) as indicated in Tables 5, 6, and 7. Ph.D. students in the Anatomy and Vertebrate Paleontology Track are encouraged to take at least one of the additional courses listed in Table 7.

Table 5. Required Courses: Biomedical Sciences

<u>Course #</u>	<u>Course Title</u>	<u>Semester Credit Hours</u>
BIOM 6762	Foundations in Medical Biochemistry	2
BIOM 6743	Foundations in Medical Genetics, Molecular Biology & Developmental Anatomy	3
BIOM 6752	Foundations in Medical Cell & Tissue Biology	2
BIOM 6781	Foundations in Medical Immunology	1
BIOM 6791	Foundations in Medical Microbiology	1
BIOM 6771	Foundations in Medical Pharmacology	1
BIOM 6933	Cornerstones of Graduate Biomedical Sciences	3

BIOM 6922	Scientific Communication in the Biomedical Sciences	2
BIOM 6662	Research Ethics and Survival Skills for the Biomedical Sciences	2
Statistics	Statistics for Experimenters II (or equivalent)	3

Table 6. Required Courses: Anatomy and Vertebrate Paleontology Track

<u>Course #</u>	<u>Course Title</u>	<u>Semester Credit Hours</u>
BIOM 5116	Clinical Gross Anatomy	6
BIOM 6662	Research Ethics & Survival Skills for the Biomedical Sciences	2
Statistics	Statistics for Experimenters II (or equivalent)	3
BIOM 6752	Foundations in Medical Cell and Tissue Biology	2
BIOM 743	Foundations in Medical Genetics, Molecular Biology & Developmental Anatomy	3
BIOM 5641	Cornerstones in Vertebrate Paleontology	1
BIOM 6943	Advanced Vertebrate Paleontology	3

Additional Expectations for the Anatomy and Vertebrate Paleontology Track:

Ph.D. students in the Anatomy and Vertebrate Paleontology track will be expected to:

- Enroll in Clinical Gross Anatomy in the first semester.
- Write grant proposals, starting in the first semester, with the help of a researcher.
- Enroll in four credits of BIOM 6723, Geology and Vertebrate Paleontological Field Methods, in the first summer.
- Pass a course in phylogenetic systematics with an acceptable grade (i.e., B or better), or transfer credit if the student has passed such a course previously.
- Attend paleontological lab meetings every week during the Fall and Spring semesters.
- Act as a teaching assistant in Gross and Developmental Anatomy course in the third semester.

**Credit for Research and Dissertation**

Ph.D. students are expected to conduct original research and must take a minimum of 30 hours of research and dissertation. In addition, these students must write a dissertation that describes their research, present a seminar based on the dissertation research, and publically defend the dissertation (see Research Thesis and Dissertation). The advisory committee must approve the dissertation and defense.

**Transfer Hours**

Ph.D. students possessing a Master's degree may transfer up to 30 hours of graduate credit from an accredited graduate program. Ph.D. students possessing a Bachelor's degree may transfer up to nine hours of graduate credit from an accredited institution if the graduate courses were taken in a program offering a M.S. degree, and may transfer more than nine hours if the graduate courses were taken in a graduate program offering a Ph.D. degree.

Graduate credit hours may be transferred providing:

1. Transfer credit is recommended by the major advisor and advisory committee through submission and approval of the Plan of Study;
2. Transfer credit is approved by the BSGC and the Coordinator/Director of the Biomedical Sciences Graduate Program;
3. Students transferring graduate credit must have been enrolled in a graduate program at another institution and the course or courses transferred must be recognized as graduate courses by that institution;
4. Students must have earned a grade of "B" or better in all graduate courses transferred.

**Doctoral Candidacy**

Admission to doctoral candidacy marks the transition into the research phase of a doctoral degree and documents that students have made satisfactory progress towards completing the program. To obtain candidacy, students must:

1. Have an approved Plan of Study (see Major Advisor, Advisory Committee and Plan of Study)
2. Have an approved research proposal (see below); and
3. Pass their qualifying exam (see below)

Admission to candidacy should occur prior to completing one-third of the required research and dissertation (BIOM 6000) hours and must occur at least one full semester prior to the date the degree is conferred. Additionally, students must complete at least 10 hours of BIOM 6000 after admission to doctoral candidacy. The "Admission to Doctoral Candidacy" form must be completed and submitted to the Coordinator/Director of the Biomedical Sciences Graduate Program. This form can be obtained from the OSU Graduate College website at [http://gradcollege.okstate.edu/download/pdf/Doc\\_candidacy\\_form.pdf](http://gradcollege.okstate.edu/download/pdf/Doc_candidacy_form.pdf).

Since admission to candidacy may occur at various times during the academic calendar, the following guidelines shall apply to determine hours of dissertation research taken as a doctoral candidate:

- If the student is admitted to candidacy prior to the first day of a given semester, all dissertation hours taken that semester and thereafter may be included in the hours of dissertation research required as a doctoral candidate
- If a student is admitted to candidacy during a semester, but before the end of the 8<sup>th</sup> week for a fall or spring semester or the 4<sup>th</sup> week for a summer semester, one-half of the dissertation hours taken during that semester may be included in the hours of dissertation research required as a doctoral candidate

### **Research Proposal**

Students are required to write a research proposal detailing the research project that they are pursuing with their advisor which must be submitted to and approved by the advisory committee at least 12 months prior to graduation.

### **Qualifying Examination**

A qualifying examination, consisting of both an oral and a written component, will be administered by the student's advisory committee. Students will typically take the exam after completing the second year of their doctoral program and must pass both components of the exam. The exam is comprehensive and consists of questions that cover all completed course work and research.

For each component of the exam, each member of the advisory committee will cast either a passing or unsatisfactory vote. In order for a student to pass the exam, no more than one member of the advisory committee may vote unsatisfactory on the written and oral component. If the major advisor votes unsatisfactory on either the oral or written component, or if the student earns two or more unsatisfactory votes from committee members, the student earns an unsatisfactory grade on the examination. If the results are unsatisfactory, a second examination may be administered by the committee no earlier than four months after the date of the first exam. Students are dismissed from the Ph.D. degree program if an unsatisfactory result is obtained on the second exam.

### **Minimum Number of Hours**

The total number of graduate hours shall not be less than 90 beyond a Bachelor's degree and 60 hours beyond a Master's degree (see Transfer Hours, above).

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

Full-time Ph.D. students may complete the requirements for a Ph.D. degree in four years. However, students must complete all Ph.D. degree requirements within nine years. Additionally, students must be enrolled as a full-time student in one of the last two years of their program of study (see Additional Requirements and Information (All Degree Programs), Enrollment Status).

### **Teaching Experience**

Ph.D. students interested in a career in academia are encouraged to seek opportunities to teach lectures at the undergraduate and graduate level. There may be teaching opportunities available at OSU-CHS or at Tulsa Community College (or a similar regional institution).

### **Additional Requirements and Program Information**

Additional requirements and information pertinent to the Ph.D. degree program are described in Additional Requirements and Information (All Degree Programs).

## G. Doctor of Osteopathic Medicine and Doctor of Philosophy (D.O./Ph.D.) Degree Program

### **Degree Requirements**

In general, students in the D.O./Ph.D. degree program begin by completing the first two years of the medical school curriculum. Students then pursue the requirements for a Ph.D. degree and, after completing these

requirements, will continue on to the third and fourth years of the medical school curriculum. The requirements for the Ph.D. degree component of the D.O./Ph.D. degree are similar to those described in Doctor of Philosophy (Ph.D.) in Biomedical Sciences. However, some requirements are unique to the D.O./Ph.D. degree program and are described below.

#### **Credit for Course Work**

D.O./Ph.D. students are required to complete all of the medical school courses offered in the first and second year of the medical school curriculum; these courses account for 30 semester hours of credit toward the Ph.D. degree. During the first year of the Ph.D. degree component, D.O./Ph.D. students must take remaining required graduate courses (see Table 5), as well as elective graduate courses (see Course Descriptions) appropriate to the student's educational needs.

An advisory committee (see Major Advisor, Advisory Committee and Plan of Study) will provide guidance for selecting elective course work.

#### **Credit for Research and Dissertation**

As described in Ph.D. degree requirements, D.O./Ph.D. students are expected to conduct original research and must take a minimum of 30 hours of research and dissertation. The research conducted will culminate in a written dissertation that must be approved by the advisory committee and publicly defended. Admission to Doctoral Candidacy, Research Proposal, and Qualifying Examination also will follow guidelines as described in Ph.D. degree requirements. In addition, D.O./Ph.D. students must prepare a draft of their dissertation and submit it to the advisory committee before entering the third year of medical school.

#### **Transfer Hours**

D.O./Ph.D. students receive 30 hours of graduate credit for the medical school courses taken in the first two years of the medical school curriculum. Therefore, D.O./Ph.D. students are typically not allowed to transfer graduate credit from other institutions. However, under specific circumstances, additional transfer credit may be endorsed by the advisory committee. Under these rare circumstances, the transfer credit must comply with the transfer guidelines as stated for the Ph.D. program, be endorsed by the student's advisory committee, and then approved by the Biomedical Sciences Graduate Committee as part of the student's Plan of Study, and by the Coordinator/Director of the Biomedical Sciences Graduate Program.

#### **Minimum Number of Hours**

The total number of graduate hours shall not be less than 90.

#### **Time of Study**

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 three years. Thus, the time for completion of the D.O./Ph.D. degree program is approximately seven years. All D.O./Ph.D. program requirements must be completed within nine years.

#### H. 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.

#### I. Biomedical Course Descriptions

##### **BIOM 5000\***

**Research and Thesis.** 1-6 credits, max 8, Lab 1-6. Prerequisite(s): Consent of major adviser. Research in biomedical sciences for MS degree.



**BIOM 5003\***

**Statistics for Medical Residents.** Prerequisite(s): Employed as a medical resident or permission of instructor. Survey of statistical methodology relevant to health care professionals. Basic understanding of statistics presented in recent medical literature. Hypothesis testing, ANOVA techniques, regression, categorical techniques. (Same course as STAT 5003).

**BIOM 5010**

**Special Topics in Biomedical Sciences.** Provides an overview of current issues in biomedical sciences.

**BIOM 5013\***

**Biomedical Statistics.** Prerequisite(s): Graduate standing. Fundamentals of biostatistics, including parametric and non-parametric statistical methods with applications to biomedical research, clinical epidemiology and clinical medicine.

**BIOM 5020\***

**Biomedical Sciences Seminar.** 1-4 credits, max 4. Prerequisite(s): Graduate standing. Literature and research problems in biomedical sciences.

**BIOM 5116\***

**Clinical Anatomy.** Lab 3. Prerequisite(s): Graduate standing in the biomedical sciences program. Presents gross structure of the human body using a regional approach. Topics include topographical and functional anatomy, clinical correlations, and introduction to radiology. The course provides the descriptive basis for understanding human structure and function encountered in succeeding courses and medical practice. Same course as PCME 8116.

**BIOM 5621\***

**Introduction to Translational Research.** Focuses on biomedical and clinical research from bench to bedside and back. Provides examples of how basic science and clinical observations lead to translational research.

**BIOM 5122**

**Clinical Anatomy for Allied Healthcare.** Gross structure of the human body using a regional approach including topographic and functional anatomy, and clinical correlations as appropriate for athletic trainers and allied healthcare professionals. Descriptive basis for understanding human structure and function encountered in professional practice.

**BIOM 5631\***

**Disease Research in Medicine.** Prerequisite(s): Biomedical Foundations or equivalent. Permission of instructor. Introduction to selected diseases of priority in medicine and to funding agencies. Includes discussing current clinical and research challenges.

**BIOM 5641\***

**Cornerstones of Vertebrate Paleontology.** In-depth discussion of topics in Vertebrate Pathology, emphasizing critical thinking skills. Based on evaluation of the primary literature, and covering diverse methodological approaches to interdisciplinary research questions.

**BIOM 5653**

**Evolutionary Physiology.** Survey course that covers the basic physiology of, primarily, mammalian species. Uses an evolutionary approach that integrates form with function by outlining the evolutionary sequences thought to have resulted in modern organ structures.

**BIOM 5663**

**Graduate Pharmacology.** Provides an enriched understanding of the mechanism of actions of pharmacological agents used to treat human diseases.

**BIOM 5672**

**Scientific Outreach Training for Graduate Students.** Provides interactive opportunities with elementary school-aged children with a particular emphasis on developing an understanding of the scientific method as a strategy for real-life problem-solving.

**BIOM 5683**

**Chronic Inflammation and Cancer Development.** Provides insight that describes the issues of chronic inflammation, auto immune and cancer development.

**BIOM 5693**

**Principle Concepts of Cellular and Molecular Immunology.** Introduces and explores basic concepts of immunology with cellular and molecular components that play a role in normal and disease states.

**BIOM 5963\***

**Case Studies in Medical Smart.** Prerequisite(s): BIOM 4893 or DHM/IEM 4893 or consent of instructor. Designed to activate critical thinking skills needed for problem solving in wearable sensing system development. (Same course as DHM 5963).

**BIOM 5984\***

**Capstone in Medical Smart Garment Engineering.** Prerequisite(s): BIOM or DHM 5963 and three credits of chosen emphasis area. Project-based where interdisciplinary teams identify a wearable sensing application and collaborate to engineer a prototype that addresses a defined need. Industry collaboration encouraged. (Same course as DHM 5984.)

**BIOM 6000\***

**Research and Dissertation.** 1-15 credits, max 45, Lab 1-15. Prerequisite(s): Consent of major adviser. Research in biomedical sciences for PhD degree.

**BIOM 6010\***

**Topics in Biomedical Sciences.** 1-3 credits, max 9. Prerequisite(s): Consent of instructor. Tutorials in areas of biomedical sciences not addressed in other courses.

**BIOM 6183\***

**Cellular and Molecular Biology of Pain.** Prerequisite(s): 5133 or 5616. An understanding of the cellular and molecular events that occur in the initiation and transmission of nociceptive (painful) sensory signaling.

**BIOM 6214\***

**Advanced Topics in Medical Biochemistry.** Prerequisite(s): 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.

**BIOM 6233\***

**Enzyme Analysis.** Lab 2. Prerequisite(s): 6214. Characteristics, separation, detection, assays, kinetics, mechanisms of catalysis, inhibition or inactivation, and clinical applications of enzyme analysis.

**BIOM 6243\***

**Human Nutrition.** Lab 2. Prerequisite(s): 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.

**BIOM 6263\***

**Techniques in Molecular Biology.** Lab 4. Prerequisite(s): 5215, 5316, consent of instructor. 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.

**BIOM 6333\***

**Immunology.** Prerequisite(s): 5215, 5316. The experimental basis of immunology and immunopathology.

**BIOM 6343\***

**Microbial Physiology.** Lab 2. Prerequisite(s): 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.

**BIOM 6353\***

**Molecular Virology.** Lab 2. Prerequisite(s): 5215, 5316, consent of instructor. 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.

**BIOM 6363\***

**Immunobiology of Infectious Disease.** Prerequisite(s): Biochemistry, Medical Microbiology and Immunology. Graduate course to provide an understanding of cellular and molecular events that occur during the initiation of immune response to main causes of human pathogens.

**BIOM 6523\***

**Cardiovascular Physiology and Pharmacology.** Prerequisite(s): 5513, 5523. Physiologic and pharmacologic mechanisms of cardiac and vascular smooth muscle function and control at the molecular, cellular, tissue and organ system levels.

**BIOM 6543**

**Environmental Toxins and the Brain.** Introduces the fundamental aspects of neurotoxicology using both cellular and molecular approaches in neurochemistry and toxicology.

**BIOM 6583\***

**Neuroinflammation.** Prerequisite(s): Graduate standing. Provides an understanding of inflammation in the central nervous system through discussion of current and experimental pharmacologic strategies designed to modulate neuroinflammation.

**BIOM 6613\***

**Environmental Physiology.** Prerequisite(s): 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.

**BIOM 6662\***

**Research Ethics and Survival Skills for the Biomedical Sciences.** Prerequisite(s): Graduate standing. Provides a basic framework for scientific conduct and practice and the skills needed for a career in the biomedical sciences.

**BIOM 6663\***

**Neuroethology.** Prerequisite(s): Permission of instructor. This course is designed to provide an analysis of the neuroendocrine basis of behavior. Lectures will serve as the format of presentation to provide a sound understanding of the neuroethological concepts discussed.

**BIOM 6673\***

**Genomics.** Prerequisite(s): 6175. The course begins with a review of molecular biology and then proceeds to the structure and organization of eukaryotic, prokaryotic, and organelle genomes. Techniques in dividing, sequencing, annotating, and mapping genomes are studied as well as those of global gene expression profiling. The course finishes with a look at the many applications of genomics in biomedical science and disease.

**BIOM 6713\***

**Applications of GIS in Evolutionary Biology.** This course introduces students to the applications of Geographic Information Systems (GIS) in Evolutionary Biology. The course will emphasize applications of GIS in methods associated with vertebrate paleontology (e.g. tooth morphology and mapping). The lecture portion will introduce students to the appropriate literature and provide discussions on evolutionary theories and uses of GIS to test such theories, while the laboratory portion will provide hands-on exercises with GIS software.

**BIOM 6723\***

**Field Techniques in Vertebrate Paleontology.** This course introduces students to techniques and tools necessary to conduct field work in vertebrate paleontology. The primary techniques will include mapping, prospecting and collecting both micro- and macrofossil vertebrate remains. Processing of rock matrix with microvertebrates will be emphasized, but preparation of macrofossil remains for transportation to the research lab will be taught.

**BIOM 6733\***

**Microbial Pathogenesis.** Prerequisite(s): BIOM 6791/PCME 8791, consent of instructor. An in-depth introduction to the fundamental principles and molecular mechanisms by which microbes cause disease in humans. Focuses on current research and provides a comprehensive overview of the molecular basis of pathogenesis with a focus

on prokaryotic and eukaryotic model microbial systems to illustrate mechanisms of disease pathogenesis. Discusses the role of the microbiome in health and disease.

**BIOM 6743\***

**Foundations in Medical Genetics, Molecular Biology and Development.** Human genetics and development, including structure and function of nucleic acids, gene regulation, basis of inheritance, and development of the human embryo. Same course as PCME 8743.

**BIOM 6752\***

**Foundations in Medical Cell and Tissue Biology.** Structure and function of cells within tissues as it relates to human health and disease, including cell transport, cell-to-cell communication and organ system control. Same course as PCME 8752.

**BIOM 6762\***

**Foundations in Medical Biochemistry.** Biochemistry in human health and disease, including protein structure and function, bioenergetics, metabolism, nutrition, and membrane structure and function. Same course as PCME 8762.

**BIOM 6771\***

**Foundations in Medical Pharmacology.** General principles of pharmacokinetics and pharmacodynamics of drugs used to treat human disease. Same course as PCME 8771.

**BIOM 6781\***

**Foundations in Medical Immunology.** The immune system in human health and disease, including antibody and cell-mediated immune responses, inflammation, immune responses to infectious agents and allergens, immunodeficiencies and malignancies of the immune system. Same course as PCME 8781.

**BIOM 6791\***

**Foundations in Medical Microbiology.** Infectious agents, including viruses, bacteria, fungi and parasites, their structure, genetics and mechanisms of pathogenesis in human disease. Same course as PCME 8791.

**BIOM 6802\***

**Critical Readings in Biomedical Sciences.** 1-3 credits, max. 3. Provides experience with the primary literature in biomedical sciences, with training in evaluation methodologies, experimental design, data presentation, and statistical designs.

**BIOM 6810\***

**Structure and Function of the Human Cardiovascular System.** Prerequisite(s): Permission of Instructor. Provides integrated biomedical study of the human cardiovascular system.

**BIOM 6820\***

**Structure and Function of the Human Gastrointestinal/Hepatic System.** Prerequisite(s): Permission of Instructor. Provides integrated biomedical study of the human gastrointestinal and hepatic systems.

**BIOM 6830\***

**Biomedical Perspectives on Human Hematology.** Prerequisite(s): Permission of Instructor. Provides integrated biomedical study of the human blood and lymphatics, and associated disorders.

**BIOM 6840\***

**Structure and Function of the Human Musculoskeletal System.** Prerequisite(s): Permission of Instructor. Provides integrated biomedical study of the human musculoskeletal system and associated disorders.

**BIOM 6850\***

**Structure and Function of the Human Renal System.** Prerequisite(s): Permission of Instructor. Provides integrated biomedical study of the human renal system.

**BIOM 6860\***

**Structure and Function of the Human Reproductive Systems and Reproductive Biology.** Prerequisite(s): Permission of Instructor. Provides integrated biomedical study of the male and female human reproductive systems and reproductive biology.

**BIOM 6870\***

**Structure and Function of the Human Respiratory System.** Prerequisite(s): Permission of Instructor. Provides integrated biomedical study of the human respiratory system.

**BIOM 6880\***

**Biomedical Perspectives on Psychiatry.** Prerequisite(s): Permission of Instructor. Provides clinical presentation, differential diagnosis, etiology (including pathophysiological etiologies), basic pharmacology of medications used to treat the disorder, clinical pharmacology, and psychosocial treatments.

**BIOM 6893\***

**Fundamentals of Medical Smart Garment Engineering.** Prerequisite(s): 90+ hours or Graduate standing. Students will gain elementary knowledge in focus areas of health science, biomedical sensing and analysis, and apparel design necessary to undertake the development of wearable electronic sensing systems. Lecture and laboratory based instruction. May not be used for degree credit with DHM 4893 or IEM 4893 or 5893.

**BIOM 6910\***

**Structure and Function of the Human Nervous System.** Provides integrated biomedical study of the human nervous system.

**BIOM 6900\***

**Structure and Function of the Human Endocrine System.** Provides integrated biomedical study of the human endocrine system, and associated disorders.

**BIOM 6922\***

**Scientific Communication in Biomedical Sciences.** Provides experience in scientific writing and oral presentations.

**BIOM 6933\***

**Cornerstones of Graduate Biomedical Sciences.** Discussion of topics in the foundational courses of biomedical sciences, emphasizing critical thinking skills and diverse methodological approaches in understanding interdisciplinary research questions and in evaluations of the primary literature. Intended to be taken concurrently with foundation courses.

**BIOM 6943\***

**Advanced Vertebrate Paleontology.** Prerequisite(s): Comparative anatomy or human anatomy, and assumes an undergraduate level understanding of vertebrate paleontology, biology, and evolution. Explores vertebrate evolution in a phylogenetic, ontogenetic, and stratigraphic framework using selected peer reviewed articles. Students will lead discussions and practice critical thinking skills to address topics presented. Students will apply what they have learned to lead dissections of specimens belonging to a specific extant phylogenetic bracket.

**BIOM 6952\***

**Paleohistology Techniques.** Prerequisite(s): Undergraduate level understanding of biology, evolution, and histology. Recognize and interpret modern and fossil bone tissue microstructures. The contributions of paleohistology to understanding extinct vertebrate physiology will be explored through discussions of peer reviewed articles. Students will receive hands-on training in paleohistology techniques.

**BIOM 6962\***

**Evolutionary Biomechanics.** Prerequisite(s): BIOM 5116\* or HHP 2654 or ZOOL 3114\*. Evaluation of topics covering the application of engineering principles to biological systems in an evolutionary framework. Topics will examine the material properties of anatomical tissues, how forces act internally and externally on organisms and their structures, kinematics, and biomechanical model systems. Primary literature and experimental designs will also be explored.

\* Denotes lab fee

**IX. FORENSIC SCIENCES**A. Admissions Information

### **Types of Admission**

Students in the Forensic Sciences program develop skills for research, practice, and management in support of crime investigation. Coursework is interdisciplinary, with theory classes available online and laboratory classes and research experience hosted on campus. Admission is available for:

- Master of Science in Forensic Sciences (Thesis or Non-thesis options)
- Graduate Certificate in Forensic Arson and Explosives Investigation
- Non-Degree-Seeking Graduate Student Enrollment (bachelor's degree required)

### **Admission Requirements**

The applicant must have a bachelor's degree from an accredited college or university to be considered for admission. A grade point average of 3.0 (on a 4.0 scale) is recommended.

Admission to the M.S./Thesis program requires an undergraduate degree in the behavioral, biological, medical, or physical sciences or in a forensics-related discipline. The college major or equivalent coursework should support the chosen field of study. The GRE Revised General Test is required for admission. The recommended minimum scores are 150 each for the Quantitative and Verbal sections. The Analytical Writing score, as well as percentile rankings for all sections, is also considered. See [www.gre.com](http://www.gre.com) for test information.

Admission to the M.S. options also requires an undergraduate degree, but no specific major is required. Options include Arson and Explosives Investigation, Forensic Document Examination, and Forensic Science Administration. Applicants pursuing the Forensic Science Administration option must be employed in a field related to the forensic sciences. Applicants to the options in Arson and Explosives Investigation and Forensic Document Examination must have associated training or experience. Taking either the GRE or the Miller Analogy Test (MAT) is required. The recommended score for the MAT is above the 50th percentile; for the GRE, the recommended score is the same as for the thesis program. For information on the MAT, see [www.pearsonassessments.com](http://www.pearsonassessments.com).

Admission to the Graduate Certificate (GCRT) in Arson and Explosives Investigation also requires an undergraduate degree, but no specific major is required. Applicants must have associated training or experience. Taking either the GRE or the Miller Analogy Test (MAT) is required. The recommended score for the MAT is above the 50<sup>th</sup> percentile; for the GRE, the recommended score is the same as for the thesis program. For information on the MAT, see [www.pearsonassessments.com](http://www.pearsonassessments.com).

Individuals already holding advanced degrees may request permission from the Program Director to substitute passing scores on the following tests in place of the GRE: Medical College Admission Test (MCAT); Dental College Admission Test (DAT); passing scores on the national board examination in dentistry, nursing, medicine, psychology, or accounting; or passing scores on the state bar exam. Completion of other advanced degrees, such as a master's or doctoral degree, or evidence of success at the post-baccalaureate level may also be considered in lieu of the GRE or MAT examination.

### **International Student Admission**

International students must take the Test of English as a Foreign Language (TOEFL) and achieve a minimum score of 100 on the iBT version with at least 20 on the written portion; or for the paper version of the TOEFL, a minimum score of 600 with at least 5 required on the Test of Written English (TWE). An IELTS score of 7.0 will be accepted in place of the TOEFL/TWE. These exceed the minimum requirements for OSU international admission. International applicants must have transcripts evaluated by World Education Service (WES). See <http://www.wes.org> for details.

### **Forensic Employment Background Checks**

Anyone considering a career in the forensic sciences should be aware that 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 for such positions well in advance, as the approval process may take several months.

Although 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 social media sites such as Facebook or Twitter, may be subject to review. Employers also may require work samples and medical examinations 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.

## B. Application Procedure

Applications are online through the OSU Graduate College at <http://gradcollege.okstate.edu/apply>.

Application deadlines differ, depending on the program.

### **M.S. and GCRT applications and all related materials are due as follows:**

- October 1 for the following spring semester
- February 1 for the following fall semester
- July 1 for the following fall semester for
  - Options in Arson and Explosives Investigation, Forensic Science Administration, and Forensic Document Examination and the GCRT; and
  - Any available openings in the thesis program tracks.

### **All M.S. and GCRT applicants are required to provide these documents:**

1. Online Application for Graduate Admission
2. Personal Statement (within the application) that provides:
  - Personal career goals or reasons related to the choice of the program, with the area of interest or specialty identified for M.S. applicants;
  - A brief description of experience or qualifications reflected in supporting information (recommendations, transcripts, or employment/experience); and
  - Any other pertinent information that the applicant wants the Forensic Sciences Graduate Committee to consider.
3. Test Scores and Reporting: Applicants should self-report test scores in the Graduate Application and have official scores sent to the OSU Graduate College
  - For GRE and TOEFL/TWE tests, applicants should use 6546 as the Institutional Code for Oklahoma State University; and
  - For the MAT test, applicants should use 2172 as the Recipient Code.
4. For options in Arson and Explosives Investigation, Forensic Science Administration, and Forensic Document Examination only: a completed Verification of Forensics-Related Employment form sent directly by the employer to the Director of Forensic Sciences, as specified on the form.
5. For Arson and Explosives Investigation, a CV or resume.
6. Three letters of recommendation uploaded directly into the Graduate Application by the recommenders.
7. Transcripts from all college or university work completed after high school uploaded by the applicant into the Graduate Application; official transcripts of same must be sent directly to the OSU Graduate College.
8. Application fee of \$50.00 or \$75.00 (USD) for international applicants. This fee is paid by credit card at the time the online application is submitted.

Applicants are chosen on the basis of academic background, examination scores, recommendations, experience, 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 provided within six weeks of the application deadline. Offers of admission are mailed, along with an Agreement to Enroll, which the applicant must return along with a \$100 deposit to reserve a place in the Program. Applicants to the M.S./Thesis program usually must respond within two weeks of receiving the offer to secure a place in the program. Those unable to accept an offer may be allowed to be put on a wait list until ready to accept. Applicants for M.S. options in Forensic Science Administration and Forensic Document Examination have 30 days to respond, except for summer applicants, who must respond within two weeks of the offer. Applicants to the M.S./AEI option and GCRT receive electronic offers of admission accompanied by the Agreement to Enroll and other relevant program forms which must be signed and returned electronically within two weeks.

## C. Tuition & Fees

For current information, see <http://www.healthsciences.okstate.edu/forensic/costs.php> or <https://bursar.okstate.edu/tuition-and-fees>.

### **Tuition**

- Oklahoma Resident Tuition \$209.70 per credit hour

- Non-Resident Tuition \$825.05 per credit hour

### **Fees**

Multiplied by the number of credit hours in which a student is enrolled unless otherwise noted

- Supplemental Off-Campus Fee (online courses only) \$25.00 per credit hour
- Laboratory Materials Fee (on-campus laboratory courses) \$125.00 per course
- Student Activity Fee \$7.72 per credit hour (on-campus courses only)
- Library Automation Fee \$5.00 per credit hour
- Technology Services Fee \$9.68 per credit hour
- Health Fee (all courses) \$4.50 per credit hour
- Wellness Center Fee \$7.29 per credit hour (on-campus students only)
- Printing materials fee \$1.53 per credit hour (on-campus students only)

### **Other Fees**

- Master's application: \$50.00 (\$75 for international students)
- Application for non-degree-seeking graduate student enrollment: \$25.00

**Tuition and Fees are subject to change.**

### **Student Fee Refund Policy**

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

## D. Financial Aid

### **Graduate Assistantships and Grant-Funded Positions**

Graduate assistantships and grant-funded positions may be available to students in the research phase of the M.S./Thesis program. Students should contact the track lead or advisor about potential financial support through the department.

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

M.S. students pursuing options in Forensic Science Administration and Forensic Document Examination and residing in the following states may qualify for reduced tuition under provisions of the Academic Common Market and the Southern Regional Education Board: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, South Carolina, Tennessee, Texas, Virginia, and West Virginia. Contact the Program Coordinator at 918-561-1108 or 800-677-1972, Ext. 11108, for details. This waiver is not available to students in the Thesis program. M.S. and non-degree-seeking graduate students pursuing the Arson and Explosives Investigation option also receive waivers of non-resident tuition.

### **The Office of Financial Aid**

The Office of Scholarships & Financial Aid is responsible for the administration of student financial aid and financial counseling to students applying for loans. The first step is to apply for **Free Application for Federal Student Aid (FAFSA)** at <https://fafsa.ed.gov>. Afterward, or for help in the process, contact a financial aid counselor at the Office of Scholarships and Financial Aid Office on the main OSU campus in Stillwater at 405-744-6604 or [finaid@okstate.edu](mailto:finaid@okstate.edu)

## E. Academic Regulations

### **Non-Degree-Seeking and Transfer Credits**

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 OSU graduate program or within the School of Forensic Sciences under Non-Degree-Seeking Graduate Student status. Courses taken more than 10 years before the graduation date will not count toward the degree.

With the approval of the advisory committee and the Program Director, the applicant may receive up to nine hours of transfer credit for graduate level courses completed at another accredited college or university. Transfer courses taken more than 10 years before the graduation date will not count toward the degree.



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

All requirements must be completed within seven years after admission to the M.S. or GCRT programs. Students in the M.S./Thesis program should plan to spend a minimum of two semesters conducting research on campus. Students in the Non-Thesis options may complete the program without relocating to the Tulsa area. Approved graduate courses taken in other programs or via non-degree enrollment in the School of Forensic Sciences may count toward the degree only if satisfactorily completed within 10 years prior to the graduation date.

### **Minimum Grades, Probation, and Dismissal**

The student must maintain a grade point average of 3.0 or better throughout the degree program. In addition, no grade lower than a "C" may count toward graduation. If the GPA falls below 3.0, the student will be placed on academic probation and may also lose stipend support if involved in funded research. The Forensic Sciences Graduate Faculty Committee may also 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 student's 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.

### **Grading System**

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. In compliance with Oklahoma State University Graduate College standards, students enrolled in FRNS 5000 Research and Thesis receive a grade of "SR" for satisfactory research or "UR" for unsatisfactory research, with no credit assigned for grades of "UR."

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

Students must file a Graduation Clearance and Graduation Application for the semester of graduation, even if a previous Graduation Application was submitted. Degree candidates are requested to attend commencement for the awarding of degrees. Diplomas will not be released until all degree requirements have been satisfied, including submission of final approved thesis.

## F. Student Information

### **Records and Transcripts**

All permanent records are stored in the Office of the Registrar at the main campus in Stillwater. Requests for grades, transcripts, and diplomas should be made to that office by fax to 405-744-8426. If you have questions, call 405-744-6876 or send an e-mail to [registrar@okstate.edu](mailto:registrar@okstate.edu).

### **Enrollment by M.S. and GCRT Students**

Admitted students will receive directions for enrollment along with a list of available classes from the School of Forensic Sciences. For more information, contact the Program office at 1-800-677-1972, Extension 11145 or 918-561-1145.

### **Enrollment by Non-Degree-Seeking Graduate Students**

Special enrollment for non-degree-seeking graduate students is available for courses not filled by M.S. students, with prior approval by the School of Forensic Sciences. Applicants must submit the online Application for Non-Degree-Seeking Graduate Student Admission along with the \$25 application fee and must also upload into the application the transcript that confirms an undergraduate degree has been conferred. In addition, an official transcript of the same must be sent by the college or university conferring the undergraduate degree to the OSU Graduate College. Course openings are assigned on a first-come, first-served basis according to the date the application is received. (Please contact the School of Forensic Sciences when the application is complete.)

### **Internet Courses**

The M.S. program features online courses, which require basic computer skills and self-direction. 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. Internet courses are generally offered entirely online and require no on-campus attendance. An additional "off-campus" fee is charged for all online courses. Some online courses in the Arson and Explosives Investigation option also include on-site components, which carry an additional associated fee.

## Contact Information

For more information about the Master of Forensic Science in Forensic Sciences programs, contact:

Program Assistant  
School of Forensic Sciences  
1111 W. 17th St., Tulsa, OK 74107  
918-561-1145 OR 800-677-1972, Ext. 11145  
[forensic@okstate.edu](mailto:forensic@okstate.edu)

For information regarding the GCRT and MSFS Option in Arson and Explosives Investigation (AEI) for law enforcement, military investigators, and fire investigators, contact the AEI academic coordinator at [MSFS-AEI@okstate.edu](mailto:MSFS-AEI@okstate.edu) or at 918-561-8424.

### G. Master of Science in Forensic Sciences (M.S.) and Graduate Certificate (GCRT)

The Master of Science in Forensic Sciences includes a thesis research program with four areas of specialization, and non-thesis options in arson and explosives investigation (AEI), forensic science administration (FSA), and forensic document examination (FDE). All Master's students must satisfactorily complete a research project and a comprehensive examination to achieve the degree. Both programs feature online courses, but the thesis program requires at least three semesters on campus while the non-thesis options may be achieved through online classes. The AEI option requires on-site participation within some online courses.

The maximum time to complete the degree is 7 years. Throughout the program, the student must maintain a grade point average of 3.0 or better.

Full-time students taking 9 credits per semester may graduate in 2 to 3 years. Part-time students enrolling in 6 credits per semester may complete the program in 3 ½ to 4 years. With at least 21 of the required graduate hours available online, full-time students in the Thesis program should plan to relocate to the Tulsa area after the second semester.

### **M.S. Thesis/Specialization**

The Master's degree offers specialization for individuals pursuing careers in crime laboratories, investigative agencies, or teaching and research in the forensic sciences. Available fields of study are:

- Forensic Biology/DNA;
- Forensic Chemistry;
- Forensic Investigative Sciences--Death Scene Investigation; and
- Forensic Psychology.\*

\*NOTE: The forensic psychology track is not designed to create clinical or counseling psychologists. If interested in related licensure or a Ph.D., check on prerequisites with the respective licensing authority or doctoral program before applying.

The applicant should have a college major or equivalent coursework as a foundation for graduate studies in the chosen area. The letter of application should reflect how the applicant would use the degree to achieve career goals.

The degree requires satisfactory completion of 39 graduate credit hours, a research project, and a comprehensive examination. Specialization students dedicate six of the required credit hours to research, for which they publish, present, and defend a Master's thesis in the final semester. At least two or three semesters on campus are required for thesis research.

The Forensic Science Education Programs Accreditation Commission (FEPAC) of the American Academy of Forensic Sciences has accredited the OSU graduate program in forensic biology and in forensic toxicology. For more information, see [www.AAFS.org](http://www.AAFS.org) →Resources.

See **Degree Requirements** for complete information on course requirements by specialization.

### **M.S. Options**

Options in the Master's program are for individuals already engaged in careers related to the forensic sciences. These options allow professionals to complete an online Master's degree while remaining active in their careers.

Participants typically attend part time, taking 6 credits per semester to complete the program in 3 ½ to 4 years. Three options are available:

- Arson and Explosives Investigation (AEI);
- Forensic Document Examination (FDE); and
- Forensic Science Administration (FSA).

The applicant must have a bachelor's degree and demonstrate proof of employment in a forensic science related area. No particular college major is required, but the professional experience must provide a foundation in support of the option.

**The option in Arson and Explosives Investigation (AEI)** offers graduate-level education for law enforcement, military investigators, and fire investigators in support of their professional mission. Admission requires a related professional background, appropriate clearance, and prior approval of the lead instructor for this option. This option consists mainly of online classes but some "hybrid courses" consisting of a combination of online sessions and on-site activities are also offered.

**The option in Forensic Document Examination (FDE)** provides academic studies for individuals pursuing apprenticeship or journeyman programs that prepare document examiners, trainees, and laboratory interns for certification. Because FDE certification involves two years of training under the mentorship of a qualified document examiner, applicants must either have training in or professional experience with FDE. This degree does not result in professional certification. This option consists entirely of online courses.

**The option in Forensic Science Administration (FSA)** helps professionals improve job performance, build toward management positions, and expand knowledge of the forensic sciences. This degree works only in conjunction with appropriate experience in the acquisition of skills and knowledge necessary for successful management within a forensic agency, laboratory, or organization. This option consists entirely of online courses.

Each degree option requires satisfactory completion of 39 graduate credit hours, a research project, and a comprehensive examination. Students in these options complete a research project for 1 to 3 course credits, depending on the weight of the project. During the final semester, the student will present information on the project in a public forum (typically via videoconference or other electronic means), and will field questions from the audience. Afterward, the student will meet privately to discuss the project with the Graduate Advisory Committee.

**The Graduate Certificate (AEI)** offers graduate-level education for law enforcement, military investigators, and fire investigators in support of their professional mission. Admission requires a related professional background, appropriate clearance, and prior approval of the lead instructor. The GCRT consists mainly of online classes, but some "hybrid courses" consisting of a combination of online sessions and on-site activities are also offered.

See **Degree Requirements** for complete information on course requirements by option.

## Degree Requirements

### Master of Science in Forensic Sciences (M.S.)

The M.S. degree requires 39 graduate credit hours, a research project, participation in continuing education or on-campus graduate seminars, and a comprehensive examination. Full-time students taking 9 credits per semester may graduate in 2 to 3 years. Part-time students enrolling in 6 credits per semester may complete the program in 3 ½ to 4 years. The maximum time allowed to complete the degree is 7 years. The Forensic Biology and Forensic Toxicology areas of specialization are accredited by the Forensic Science Education Programs Accreditation Commission (FEPAC) of the American Academy of Forensic Sciences.

#### **Core Courses for all M.S. students (15 credit hours):**

- FRNS 5013 Survey of Forensic Sciences (3)\*<sup>1</sup>
- FRNS 5063 Ethical Research and Scientific Writing (3)\*
- FRNS 5073 Quality Assurance in Forensic Science<sup>2</sup> (3)\*
- FRNS 5613 Criminalistics and Evidence Analysis (3)\*
- FRNS 5653 The Law and Expert Evidence (3)\*

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\* The number in parenthesis (3) reflects the number of credit hours. The asterisk (\*) indicates an online course.

<sup>1</sup> Students in death scene investigation do not take the Survey course and therefore have 12 hours of core courses and 27 hours of other requirements and directed electives.

<sup>2</sup> An approved elective may substitute for this course in the forensic psychology track.

**Other Requirements:**

- **GPA of 3.0** or higher to be maintained throughout the program
- **Comprehensive Examination** satisfactorily completed<sup>3</sup>
- **Research Thesis or Capstone Research Project** supported by enrollment in FRNS 5000 or FRNS 5980 and presented in a public forum (in person or via Web teleconference)
- **Training in the Responsible Conduct of Research (RCR)** satisfactorily completed and documented during first semester
- **Plan of Study filed with the Graduate College** before completion of the second semester and kept current thereafter

**Non-Thesis Options: Additional requirements by option**

**Option in Arson and Explosives Investigation** (24 additional credit hours from list below, with two courses **required**—as noted below):

- FRNS 5013 The Chemistry of Pyrotechnics (3)\*
- FRNS 5113 The Chemistry of Explosives (3)\*
- FRNS 5123 Fire Dynamics in Forensic Investigations (3)\*
- FRNS 5133 Ordnance Identification & Recognition (3)\*
- FRNS 5143 Methods in Fire & Explosion Investigation NFPA 921/1033 (3)\*
- FRNS 5153 Explosives Research, Testing and Evaluation Methods (3)\*
- FRNS 5163 Advanced Fire Dynamics (3)\*
- FRNS 5173 Advanced Explosion Investigation (3)\*
- FRNS 5183 Basic Computer Fire Modeling (3)\*
- FRNS 5193 Advanced Computer Fire Modeling (3)\*
- FRNS 5423 Blast Injuries and Effects (3)\*
- FRNS 5663 Explosives/Arson Laws and Regulations (3)\*
- FRNS 5833 Basic ID of Destructive Device Circuit Exploitation (3)\*
- FRNS 5843 Advanced Destructive Device Circuit Exploitation (3)\*
- FRNS 5853 Basic Electrical Theory and Failure Analysis in Forensic Fire Investigations
- FRNS 5863 Advanced Electrical Theory and Failure Analysis in Forensic Fire Investigations
- FRNS 5963 Forensic Statistics (3)\* - **Required**
- FRNS 5980 Non-thesis Creative Component in Forensic Sciences (1-3)\* - **Required**

**Option in Forensic Document Examination** (24 additional credit hours):

- 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 Forensic Document Examination (3)\*
- FRNS 5980 Non-thesis Creative Component in Forensic Sciences (1-3)\*
- FRNS 5943 Forensic Management & Organizational Development (3)\*
- Elective courses as directed or approved by the advisor (6-8 credits)

**Option in Forensic Science Administration** (24 additional credit hours):

- FRNS 5083 Ethics in Forensic Leadership (3)\*
- FRNS 5213 Molecular Biology for the Forensic Scientist (3)\* **OR** FRNS 5523 Forensic Toxicology (3)\*
- FRNS 5413 Forensic Pathology and Medicine (3)\*
- FRNS 5980 Non-thesis Creative Component in Forensic Sciences (1-3)\*
- FRNS 5943 Forensic Management and Organizational Development (3)\*

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<sup>3</sup> Includes a two-part written examination over content and concepts from courses taken, proof of satisfactory courtroom testimony experience (as defined by the School of Forensic Sciences), and advisory committee review of research and of Part II of the written examination.

HCA 5023 Human Resources in Health Care and Public Administration (3)\*  
Elective courses as directed or approved by the advisor (6 to 8 credits)

**Graduate Certificate in Arson and Explosives Investigation** (12 credit hours, including two core classes and two elective/advanced classes. See above Core and AEI elective lists.)

**Thesis Tracks: Additional requirements by specialization**

**Forensic Biology/DNA** (24 additional credits)

FRNS 5000 Research and Thesis (6)  
FRNS 5213 Molecular Biology (3)\*  
FRNS 5242 Population Genetics (2)  
FRNS 5282 Methods in Forensic Sciences (2)  
FRNS 5513 Forensic Bioscience (3)\*  
FRNS 5622 Advanced Criminalistics (2)  
FRNS 5963 Forensic Statistics (3)\*  
Additional elective(s) as approved by advisor (3)

**Forensic Chemistry**-(24 additional credits)

FRNS 5000 Research and Thesis (6)  
FRNS 5282 Methods in Forensic Sciences (2)  
FRNS 5413 Forensic Pathology and Medicine (3)\*  
FRNS 5523 Forensic Toxicology (3)\*  
FRNS 5543 Advanced Forensic Toxicology (3)\*  
FRNS 5622 Advanced Criminalistics (2)  
FRNS 5963 Forensic Statistics (3)\*  
Additional elective(s) as approved by advisor (2)

**Forensic Investigative Sciences – Death Scene Investigation** (27 additional credits, with FRNS 5013 dropped from core requirements)

FRNS 5000 Research and Thesis (6)  
FRNS 5090 Forensic Science Internship (2)  
FRNS 5413 Forensic Pathology and Medicine (3)\*  
FRNS 5422 Forensic Osteology and Anthropology (2)  
FRNS 5513 Forensic Bioscience (3)\*  
FRNS 5523 Forensic Toxicology (3)\*  
FRNS 5622 Advanced Criminalistics (2)  
FRNS 5733 Forensic Victimology (3)\*  
FRNS 5963 Forensic Statistics (3)\*

**Forensic Psychology** (24 additional credits)

FRNS 5000 Research and Thesis (6)  
FRNS 5622 Advanced Criminalistics (2)  
FRNS 5713 Forensic Psychology (3)\*  
FRNS 5963 Forensic Statistics (3)\*  
Additional electives according to subspecialty (10)

Elective options (advisor approval required)

FRNS 5023 Forensic Examination of Questioned Documents (3)\*  
FRNS 5053 Historical Aspects of Forensic Document Examination (3)\*  
FRNS 5083 Ethics in Forensic Leadership (3)\*  
FRNS 5090 Internship in Forensic Sciences (1-3)  
FRNS 5213 Molecular Biology (3)\*  
FRNS 5242 Population Genetics (2)  
FRNS 5282 Methods in Forensic Sciences (2)  
FRNS 5323 Forensic Microbiology (3)\*  
FRNS 5413 Forensic Pathology and Medicine (3)\*  
FRNS 5422 Forensic Osteology and Anthropology (2)  
FRNS 5513 Forensic Bioscience (3)\*  
FRNS 5523 Forensic Toxicology (3)\*  
FRNS 5533 Drug Toxicity (3)\*  
FRNS 5543 Advanced Forensic Toxicology (3)\*

FRNS 5622 Advanced Criminalistics (2)  
FRNS 5713 Forensic Psychology (3)\*  
FRNS 5723 Advanced Forensic Psychology (3)\*  
FRNS 5733 Forensic Victimology (3)\*  
FRNS 5743 Seminar in Forensic Psychology (3)  
FRNS 5753 Criminal Profiling (3)  
FRNS 5943 Forensic Management and Organizational Development (3)\*  
FRNS 5970 Directed Readings in Forensic Sciences (1-3)\*  
FRNS 5990 Special Topics in Forensic Sciences (1-3)\*  
BIOM 6543 Neurochemical Toxicology (3)  
HCA 5023 Human Resources in Health Care and Public Administration (3)\*  
PLP 5343 Principles of Plant Pathology<sup>4</sup> (3)  
FEMP courses in OSU's Fire and Emergency Management Program at <http://femp.okstate.edu>  
may qualify as electives.

## H. Academic Advisement

### **Thesis Students**

With the assistance of the track lead in the chosen specialty track, M.S./Thesis students will select a major advisor to direct their graduate program before the end of the first year. Before beginning the thesis research, 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 Dean of the Graduate College. The major advisor, who usually chairs the advisory committee, has ultimate responsibility for monitoring the integrity and progress of the student's program.

### **Non-Thesis Students**

For those pursuing options in Arson and Explosives Investigation, Forensic Science Administration, and Forensic Document Examination, the Program Director will designate the advisor and the advisory committee chair. The advisory committee will also consist of two graduate faculty members and may include an adjunct faculty member from the Forensic Sciences Department. The advisor will consult with the student on enrollment and the Plan of Study. The main purpose of the advisory committee will be to review and assess the student's performance on the Comprehensive Exam and to review and approve the research project.

## I. Course Descriptions<sup>5</sup>

### **FRNS 5000 Supervised Forensic Research Project and Thesis**

*Prerequisite(s):* Consent of major advisor, 5063 *Ethical Research and Scientific Writing* (or equivalent course), and BIOM 5013 *Medical Biostatistics* OR STAT 5013 *Statistics for Experimenters I*. Research in forensic sciences for M.S.F.S. degree. [Independent study, laboratory course]

### **FRNS 5013 Survey of Forensic Sciences**

Provides overview of various forensic disciplines 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. [Internet course]

### **FRNS 5023 Forensic Examination of Questioned Documents<sup>6</sup>**

*Prerequisite(s):* FRNS 5013 *Survey of Forensic Sciences* 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.) [Internet course]

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<sup>4</sup> This course meets on the main OSU campus in Stillwater.

<sup>5</sup> Other courses authorized or pending approval by OSU or the Oklahoma State Regents for Higher Education since this printing may be available. Contact the School of Forensic Sciences for more information.

<sup>6</sup> This course may be taken concurrently with prerequisite course.

### **FRNS 5033 Forensic Handwriting Examination: Theory and Practice**

*Prerequisite(s): FRNS 5023 Forensic Examination of Questioned Documents and approval of lead instructor in forensic document examination.* 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. [Internet course]

### **FRNS 5043 Technical Aspects of Forensic Document Examination**

*Prerequisite(s): FRNS 5023 Forensic Examination of Questioned Documents and approval of lead instructor in forensic document examination.* 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). [Internet course]

### **FRNS 5053 Historical Aspects of Forensic Document Examination**

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. [Internet course]

### **FRNS 5063 Ethical Research and Scientific Writing**

*Prerequisite(s): Permission from Research Advisor.* Develops knowledge and skills for ethical scientific research, writing, and presentation. Covers responsible conduct, organization and design of research around a scientific question, and writing problems specific to science and the individual. Advisor guidance on some assignments required. [Internet course]

### **FRNS 5073 Quality Assurance in Forensic Science**

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. [Internet course]

### **FRNS 5083 Ethics in Forensic Leadership**

Focuses on leadership development for managers of forensic organizations, including examination of leadership and ethics theories, application of theories to problems in forensic settings, and tasks and relational skills for developing effective teams and groups within an ethical framework. [Internet course]

### **FRNS 5090 Internship in Forensic Sciences**

*Prerequisite(s): FRNS 5073 Quality Assurance, initial course in chosen specialty, permission of Advisor and Program Director, and letter of agreement or contract with designated facility or laboratory.* Provides practical training and experience within a work or laboratory setting under the guidance of a designated supervisor. This experience should complement graduate studies in the forensic sciences and support related career goals.

### **FRNS 5103 The Chemistry of Pyrotechnics**

This is a 3 credit graduate level course designed to give the student a fundamental knowledge of the chemistry of pyrotechnics/low explosives that are intended to function as propellants, or generate pyrotechnic effects such as light, heat, sound, smoke and color. The emphasis will be on the chemical and thermodynamic principles required to formulate these compositions and which determine their performance. The topics include: Introduction to Energetic/Explosive Materials, Introduction to Thermodynamics, Heat, Light and color, Smoke, etc. Additionally, the analytical techniques that measure the sensitivity and the qualitative/quantitative composition of pyrotechnics will be discussed.

### **FRNS 5113 The Chemistry of Explosives**

This is a 3 credit graduate level course designed to give the student a fundamental knowledge of the chemistry of energetic materials. Included will be low explosives that are intended to function as propellants, or generate pyrotechnic effects such as light, heat, sound and color. The emphasis will be on the chemical and thermodynamic principles required to formulate these compositions and which determine their performance. Additionally, the chemistry of high explosives and high explosive formulations, and their effects will be examined. The topics include: Introduction to Energetic/Explosive Materials, Low Explosives and Pyrotechnics, High Explosives, Explosive Effects, Field Screening/Laboratory Analysis of Explosives, Assessing Energetic Materials, Initiation Systems, Fuel/Air Explosions.

### **FRNS 5123 Fire Dynamics for Forensic Investigations**

Fire Dynamics will teach the fundamentals of how chemistry, fire science, fluid mechanics and heat transfer interact to influence fire behavior. The course uses basic level math, chemistry and physics to teach introductory level fire dynamics with an emphasis on how it can be applied to fire and explosion investigations. Topics covered include combustion and fire chemistry, products of combustion, heat transfer, ignition, flame spread, burning rates, fire plumes, fuel/air explosions, compartment fire dynamics, ventilation limited fires, fire toxicity, introduction to computer fire models and the use of fire dynamics within the framework of the scientific method when applied to fire scene investigations.

### **FRNS 5133 Forensic Ordnance Identification and Recognition**

This course provides the fundamentals of a practical deductive process used to identify unknown military ordnance, as well as the safety precautions that should be applied in order to minimize associated hazards. In order to address this topic in a concise manner, the course focuses on the identifiable construction features associated with how a munition is designed to function. Though far from absolute, these features offer a measure of constants often found on ordnance. Proper identification and adherence to appropriate safety precautions ensure the safety of everyone involved while minimizing the threat and economic impact to the community.

### **FRNS 5143 Methods in Fire and Explosion Investigation NFPA 921/1033**

This course satisfies the basic requirements as described in National Fire Protection Association (NFPA) 1033, Standard for Professional Qualifications for Fire Investigator. Topics include: Investigative Methodology & Planning the Investigation, Legal Considerations, Safety, Fire Science, Fire Patterns, Building Construction & Systems, Origin Determination, Interviewing, Documentation of the Investigation, Physical Evidence Collection, Fire- Related Human Behavior Explosions, Fire and Explosion Deaths and Injuries, Electricity, Accidental Fires Incendiary Fires, Vehicle Fires, Wildfire Investigation, Management of Major Investigations, Practical Exercises, Qualifications for Fire Investigation, Recent Cases Resolved by Science Testing/Case Studies, Emerging Trends in Scientific Testing and Research.

### **FRNS 5153 Explosives Research, Testing and Evaluation Methods**

Covers explosives characterization methods (friction test, impact test, etc.) and explosives range testing methods to include how to develop and document a test plan, test methods and instrumentation (VOD, high speed pressure measurement, high speed video, UN test methods), documenting the test results, writing a scientific or academic paper on the test (suitable for publishing). The purpose is to provide the student with exposure to test methods, the range instrumentation options and their purposes, and report writing, so that the student will be able to competently assist with range testing and be able to create a written test plan, and paper suitable for publishing. This may require students to conduct a hands-on lab at either the CENFEX range or other certified government laboratory to work with the equipment. The rest of the class would be distance, supported by PowerPoint and text to be determined.

### **FRNS 5163 Advanced Fire Dynamics**

*Prerequisite(s): FRNS 5123 Fire Dynamics for Forensics Investigations and permission of instructor and faculty advisor.* Advanced Fire Dynamics will reinforce and expand upon the fundamentals of fire dynamics learned in the prerequisite class. This course will cover advanced concepts in Fire Dynamics, including ventilation effects and application of fire dynamics principles to real-world fire investigations.

### **FRNS 5173 Advanced Explosives Investigation**

This advanced course is designed to teach a systematic method of investigating an explosion scene. The course provides instruction in explosives identification, identification of precursors, applications, explosives effects, fragmentation analysis, IED component recognition and evidence collection including DNA collection and trace evidence collection and processing as well as the preservation of evidence. The course is comprised of classroom participation, an explosives demonstration and actual investigation of a post blast scene. The course will cover different types of explosions (explosives, fuel/air, dust, intentional and accidental) to examine scientific and investigative concepts to provide the student with the framework to competently conduct an origin and cause investigation of an explosion.

### **FRNS 5183 Basic Computer Fire Modeling**

This course will teach the fundamentals of computational fluid dynamics (CFD) computer fire modeling, using Fire Dynamics Simulator (FDS). Instruction will be introductory level, non-calculus based, and will teach both how to create and run basic fire models as well as their appropriate uses and limitations, with an emphasis on forensic applications. The course will cover topics such as basic conservation equations; Cartesian coordinate systems; use of spreadsheets to facilitate the creation of fire models; how to install and run FDS; how to write the code required to create an FDS model; techniques for modeling fire scenes and verification/validation of fire modeling use. The course will teach how to code fire models by hand, but third-party graphical user interfaces will be



permitted to be used for assignments if desired. Students will require a computer (Windows or Mac) that allows them to install and execute programs.

#### **FRNS 5193 Advanced Computer Fire Modeling**

*Prerequisite(s): Basic Computer Fire Modeling and permission of instructor and faculty advisor.* This course will expand upon the basic computer fire modeling class, and focus specifically on how to create and use fire models to assist with fire investigations. The class will use Fire Dynamics Simulator (FDS). Topics will include advanced meshing techniques; modeling of wind and other ventilation sources; using model output to diagnose problem areas; how to conduct sensitivity analysis of computer fire model results and discussion of use of fire models in the support of investigations and trials. Students will require a computer (Windows or Mac) that allows them to install and execute programs. A Prerequisite will be completion of the basic computer fire modeling course, or for experienced FDS users, demonstration of advanced capability.

#### **FRNS 5213 Molecular Biology for the Forensic Scientist**

*Prerequisite(s): College-level biology.* Develops a solid foundation of knowledge in molecular biology for understanding the concepts of genetic marker analysis, especially DNA typing. [Internet course]

#### **FRNS 5242 Population Genetics**

*Prerequisite(s): FRNS 5513 Forensic Bioscience.* This course presents study of population genetics relevant to DNA analysis technologies designed to identify the perpetrators of crime. Topics include a 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 Sciences**

*Prerequisite(s): Permission of instructor.* Advanced-level laboratory course in which students apply knowledge from earlier coursework in a hands-on laboratory setting and employ fundamental techniques and methods related to forensic biology, forensic toxicology and pattern evidence. [Laboratory course]

#### **FRNS 5323 Forensic Microbiology**

*Prerequisite(s): Permission of instructor; basic microbiology recommended.* Basic microbiologic techniques applied to actual forensic situations. Includes rules of evidence applied to investigations with suspected use of microorganisms as bioterrorism agents. Stresses recognition of biological agents, site sampling, and laboratory identification. [Internet course]

#### **FRNS 5413 Forensic Pathology and Medicine**

*Prerequisite(s): Permission of instructor.* 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. [Internet course]

#### **FRNS 5422 Forensic Osteology and Anthropology**

*Prerequisites: Current graduate student status; graduate student in Death Scene Investigation, FRNS 5013, FRNS 5653, and FRNS 5413; or permission from course coordinator.* Osteology portion introduces anatomical features of bones that comprise the axial and appendicular components of the human skeleton and also considers histological structure and types of bone formation. Anthropology portion offers overview of methods for skeletal identification and trauma analysis. Laboratory sessions include work with skeletal material and participation in an excavation. [Hybrid course]

#### **FRNS 5423 Blast Injuries and Effects**

This course will take a comprehensive view into the nuances of explosive effects on the human body. Specifically scrutinized will be primary, secondary, tertiary, and quaternary blasts effects on lungs, the cardiovascular system, neurological functions, integumentary systems, long bone extremities, otic, and ophthalmic. Also discussed will be appropriate triage measures and means to quickly treat the most serious life threatening conditions for bystanders that bear witness to on-scene mass casualty explosive events. Medical case studies will be evaluated that will provide added insight into effects and care for victims of explosive events. Additionally, the program of study will provide students the opportunity to research a focus area of interest related to casualties of explosive events.

#### **FRNS 5513 Forensic Bioscience**

*Prerequisite(s): FRNS 5213 Molecular Biology or permission of instructor, college-level biology and chemistry.* Teaches concepts of identity testing, relating history, theory, application, and quality assurance concepts to the

material presented. Covers technical concepts of identity testing in the laboratory. Presents basic concepts in genetics and their application in tracing origin of biological samples. [Internet course]

#### **FRNS 5523 Forensic Toxicology**

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. [Internet course]

#### **FRNS 5533 Drug Toxicity**

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. [Internet course]

#### **FRNS 5543 Advanced Forensic Toxicology**

*Prerequisite(s): FRNS 5523 Forensic Toxicology.* Familiarizes the student with advanced aspects of forensic toxicology in view of current forensic toxicological trends. Covers risk assessment principles, factors in pharmacokinetics, weapons of mass destruction, and integrating concepts with current applications. [Internet course]

#### **FRNS 5613 Criminalistics and Evidence Analysis**

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. [Internet course]

#### **FRNS 5622 Advanced Criminalistics**

*Prerequisite(s): FRNS 5073 Quality Assurance in Forensic Sciences, FRNS 5616 Criminalistics and Evidence Analysis, FRNS 5653 The Law and Expert Evidence, and basic coursework in the speciality area.* Examines practical aspects of criminalistics, duties of crime scene investigator, and techniques/procedures of crime scene processing. Also covers law-enforcement/crime-lab relationships, evidence recovery, and investigation types. One meeting is moot court session. [Laboratory course with collaboration, assigned times]

#### **FRNS 5653 The Law and Expert Evidence**

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. [Internet course]

#### **FRNS 5663 Explosives/Arson Laws and Regulations**

Crimes involving explosives and arson often represent two of the most violent and potentially catastrophic crimes imaginable. The Federal arson statute demands a thorough analysis of interstate commerce issues, invites great scrutiny of expert witnesses, and requires extensive knowledge of Fourth Amendment protections. Federal controls over explosives involve not only these and other criminal issues, but include comprehensive regulations governing those individuals who may possess explosive materials as well as licensing, marking, safe storage, and classification of explosives. The successful investigation of crimes involving explosives and/or arson requires knowledge of this information. This course is intended to provide criminal investigators with the knowledge required to investigate and solve these crimes.

#### **FRNS 5713 Forensic Psychology**

*Prerequisite(s): Permission of instructor.* 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. [Internet course]

#### **FRNS 5723 Advanced Forensic Psychology**

*Prerequisite(s): 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, and laws pertinent to mental health professionals. [Internet course]

#### **FRNS 5733 Forensic Victimology**

*Prerequisite(s): FRNS 5013 Survey of Forensic Sciences or permission of instructor.* Introduction to victimology, emphasizing victims' issues within the justice system and in medico-legal investigations. Explores impact of crime on victim; correlations between types of victims; crime and offender categories; risk factors; victim-offender and victim-society relationships; the role of victimologist as a researcher and consultant; influences of media, law enforcement, advocacy groups, businesses, and social movements.

#### **FRNS 5743 Seminar in Forensic Psychology**

*Prerequisite(s): Permission of instructor.* Capstone seminar course for all subspecialty tracks in forensic psychology. Builds upon prior coursework to prepare student for comprehensive final examination in area of specialization and provide a theoretical background suitable for research leading to publication, presentation, or a thesis or dissertation.

#### **FRNS 5753 Criminal Profiling**

*Prerequisite(s): Current graduate status or approval of instructor.* Combines various academic disciplines toward a behavioral examination of the violent criminal offender. By examining the crime scene from a behavioral perspective, the psychodynamics of the offender, the sociological environmental forces, and the social psychological dimensions of the victim-offender, interactions are combined for a more holistic understanding of the violent offender.

#### **FRNS 5833 Basic ID of Destructive Device Fuzing Systems**

The Destructive Device Fuzing Systems is an elective course only open to Masters of Forensic Science, Arson and Explosives Investigation (AEI) program students. The purpose of this course is to expand students' knowledge of destructive device fuzing systems and forensic exams of these systems. The course material focuses on the mechanical, chemical, and electrical fuzing systems of the destructive devices. The on-site instruction portion, which is a mixture of lecture and hands-on circuit builds, focuses specifically on the electronics of electrical fuzing systems.

#### **FRNS 5843 Advanced Destructive Device Circuit Exploitation**

Improvised Electronic Devices, or IEDs, have been designated as a Weapon of Mass Destruction (WMD) by the U.S. Department of Homeland Security. The U.S. DoD and various members of the U.S. Intelligence Community have acknowledged the asymmetric weaponry as having strategic impact. This course will examine electro-mechanical IED designs that are found on the open-source Internet. This course will examine electro-mechanical initiator circuitry from the perspective of forensics. This course will examine initiator circuit families such as: Timers, Pressure Sensitive, Radio Controlled, etc. This class will not reference classified material.

#### **FRNS 5853 Basic Electrical Theory and Failure Analysis in Forensic Fire Investigations**

Basic Electrical Theory and Failure Analysis in Forensic Fire Investigations will teach basic electricity and basic electrical failure analysis to familiarize the student with how electricity, electrical appliances, and electrical devices can be potential ignition sources in a fire. Topics will include electrical theory, electrical wiring techniques, circuit protection, appliance protection, identification of electrical melting on conductors, scene investigation methodology, current research topics, and NFPA 921 considerations. This is a self-paced (3) three credit course.

#### **FRNS 5863 Advanced Electrical Theory and Failure Analysis in Forensic Fire Investigations**

Advanced Electrical Theory and Failure Analysis in Forensic Fire Investigations will provide the student with a more advanced understanding of electricity, energy, and power. By mastering this class, the student will have a greater ability to comprehend electrical failures and explain them to a jury. Topics include: Electrical Charge, Coulomb's Law, Electric Potential, Electric and Magnetic Fields, Electrostatic Discharge, Electromagnetic Induction, Faraday's Law and Lenz's Law. Transformers, Three-Phase Systems, Motors, Power Systems, and Thermal Degradation of Insulation. This is a self-paced (3) three credit course.

#### **FRNS 5943 Forensic Management and Organizational Development**

*Prerequisite(s): 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. [Internet Course]

#### **FRNS 5960 Forensic Problem Solving through Applied Research.**

*Prerequisite(s): Permission from instructor and faculty advisor.* This course examines mixed research methodologies and designs within the field of forensic sciences including the use of theory, ethical issues and writing strategies. The course culminates with writing a thesis or dissertation style introduction, literature review, purpose statement and developing a research question and/or hypothesis. [Internet course]

**FRNS 5963 Forensic Statistics**

Survey of statistical methodology relevant to forensic scientists. Basic understanding of statistics presented in recent forensic literature. Hypothesis testing, ANOVA techniques, regression, categorical techniques.

**FRNS 5970 Directed Readings in Forensic Sciences**

*Prerequisite(s):* Permission of instructor and faculty advisor. Provides guided reading under direction and supervision of the instructor; in-depth, independent study on an identified topic relative to the forensic sciences. [Internet course]

**FRNS 5980 Non-Thesis Creative Component in Forensic Sciences**

*Prerequisite(s):* Permission of instructor and faculty advisor; FRNS 5063 *Ethical Research and Scientific Writing* (concurrent enrollment allowed). Provides final-semester capstone experience for the non-thesis graduate student through independent research or project management. Culminates with presentation of results in writing and in a public forum, which may be via electronic delivery or in person.

**FRNS 5990 Special Topics in Forensic Sciences**

*Prerequisite(s):* Permission of instructor and faculty advisor. Provides for exploration on special topics in the forensic sciences. Students gain an understanding at an advanced level of the particular topic presented.

**Required, Alternative, and Potential Elective Courses from Other Programs****HCA 5023 Human Resources in Health Care and Public Administration**

Review, discuss, and analyze current issues, rules, practices, and governance of human resources in health care and public administration. [Internet course available through the OSU-Tulsa campus]

**BIOM 5003 Statistics for Medical Residents**

*Prerequisite(s):* 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 spring semester]

**BIOM 6543 Neurochemical Toxicology**

*Prerequisite(s):* BIOM 5215 *Medical Biochemistry* and BIOM 5616 *Medical Microbiology and Immunology* [or equivalent courses, if approved by instructor]. 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. [Offered on campus at OSU Center for Health Sciences]

**GRAD 5992 Succeeding in the Professoriate**

*Prerequisite(s):* Graduate standing and permission of Director of College Teaching Certificate program. Preparation for doctoral students who wish to pursue careers in academia. Focuses on university-level teaching and scholarship. Prepares a foundation course for doctoral students in the University Faculty Preparation Certificate program. [Available at the OSU main campus in Stillwater]

**PLP 5343 Principles of Plant Pathology Lab 2**

*Prerequisite(s):* BOT 1404 or BOT 3463 or MICR 2125 or PLNT 2013. Introduction to basic principles and concepts of plant pathology, including the nature, cause, and control of biotic and environmentally induced plant diseases. Offered in combination with PLP 3343. No credit for both 3343 and 5343. Graduate students will be expected to complete extra assignments. [Available at the OSU main campus in Stillwater]

**REMS 5953 Statistical Methods in Education**

Statistical methods needed by conductors and consumers of research in education and the behavioral sciences. Introduction to interpretation and application of descriptive and inferential statistics. [Internet course through the main campus in Stillwater; also available on campus at OSU-Tulsa or in Stillwater]

**FEMP courses from OSU's Fire and Emergency Management program** may also qualify as electives.

Options include one-week summer and intercession classes available on campus, usually for three credit hours. See <http://femp.okstate.edu/> for course listings and registration information. Advance approval from the advisor is required.

## X. GRADUATE PROGRAMS IN HEALTH CARE ADMINISTRATION

The Health Care Administration (HCA) Program is a Master of Science degree in Health Care Administration with an option in healthcare leadership and entrepreneurship or an option in administration. The curriculum provides exposure to management concepts, processes and techniques associated with administration and entrepreneurship functions in a variety of health care organizations. This degree is ideal for those individuals working in health care who wish to move into management or executive positions however healthcare experience is not required. This degree offers on-site courses at OSU-Stillwater and the OSU Center for Health Sciences in Tulsa as well as distance learning opportunities. This degree can be completed in-class or fully online. A **D.O./M.S. in HCA** degree is also offered through the School of Health Care Administration (see Section G below).

The **M.S in HCA** consists of 32 total hours with a creative component or thesis including six hours of general graduate level electives.

### A. Admission Information & Application Procedure

#### **Admission Requirements**

1. A 3.0 or better grade point average in last 60 credit hours of coursework.
2. A baccalaureate degree

#### **Required Application Elements**

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 \$50.00. International application fee is \$75.00. Payment can be made online.
3. **Official Transcripts**—Please submit an official transcript from each college or university you have attended or are currently attending, including OSU. Applicants are responsible for contacting these schools and requesting official transcripts. Students should have earned a minimum of a 3.0 GPA in the last 60 hours of undergraduate or graduate coursework.
4. **Health Care Experience**— Please outline your health care experience, if any, 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:
  - a. Description of your current job.
  - b. Description of current and past health care experience, if any.
  - c. What are your career goals?
  - d. How will the HCA program help you in achieving these goals?
  - e. Why are you applying to OSU's HCA program?
  - f. What personal strengths will help you attain your goals?
  - g. What personal challenges do you face to attain your goals?

Applicants to the HCA Program should apply online at [the OSU Graduate College](#).

#### **Application Deadlines:**

Fall admission	July 1
Spring admission	Dec. 1
Summer admission	May 1

### B. M.S. in Health Care Administration (HCA) Program Requirements and Restrictions

**Credit for Course Work:** The M.S. student must successfully complete at least 32 semester hours of course work, including the creative component or thesis.

#### **Curriculum**

##### **Master of Science in Health Care Administration (M.S. in HCA)**

The Master of Science in Health Care Administration degree requires 32 graduate credit hours which includes a thesis or creative component project.

**For all M.S. in HCA students: 14 core credits and other degree requirements**

HCA 5013 Survey of Healthcare Administration (3)<sup>1\*</sup>  
HCA 5093 Leadership Methods in Healthcare (3)\*  
HCA 5123 Research and Evaluation Methods in Healthcare (3)\*  
HCA 5033 Legal Issues in Healthcare (3)\*  
HCA 5050 Directed Readings in Healthcare

**Other requirements by option or track: 18 credits**

**Option in Healthcare Leadership and Entrepreneurship (creative component)**

HCA 5163 Healthcare Accounting and Auditing (3)<sup>2\*</sup>  
HCA 5113 Entrepreneurship and the Health Sciences (3)<sup>2\*\*</sup>  
HCA 5043 Organizational Leadership in Healthcare (3)<sup>2\*</sup>  
HCA 5023 Human Resources in Healthcare and Public Administration (3)<sup>2\*\*</sup>  
Elective courses as directed or approved by the advisor (8 credits)

**Option in Administration (creative component)**

HCA 5103 Intro to Global Health (3)<sup>2\*</sup>  
HCA 5063 Healthcare Compliance (3)<sup>2\*\*</sup>  
HCA 5083 Healthcare Finance (3)<sup>2\*</sup>  
HCA 5023 Human Resources in Healthcare and Public Administration (3)<sup>2\*\*</sup>  
Elective courses as directed or approved by the advisor (8 credits)

**Option in Healthcare Leadership and Entrepreneurship (thesis)**

HCA 5163 Healthcare Accounting and Auditing (3)<sup>2\*</sup>  
HCA 5113 Entrepreneurship and the Health Sciences (3)<sup>2\*\*</sup>  
HCA 5023 Human Resources in Healthcare and Public Administration (3)<sup>2\*\*</sup>  
HCA 5000 Research and Thesis (6)  
Elective courses as directed or approved by the advisor (5 credits)

**Option in Administration (thesis)**

HCA 5103 Intro to Global Health (3)<sup>2\*</sup>  
HCA 5063 Healthcare Compliance (3)<sup>2\*\*</sup>  
HCA 5023 Human Resources in Healthcare and Public Administration (3)<sup>2\*\*</sup>  
HCA 5000 Research and Thesis (6)  
Elective courses as directed or approved by the advisor (5 credits)

• **Elective options (advisor approval required)**

- HCA 5133 Healthcare Informatics (3)<sup>\*\*</sup>
- HCA 5010 Special Topics in Healthcare (3)<sup>1, 4\*\*</sup>
- HCA 5063 Healthcare Compliance (3)<sup>\*</sup>
- HCA 5083 Healthcare Finance (3)<sup>\*\*</sup>
- HCA 5113 Entrepreneurship and the Health Sciences (3)<sup>\*\*</sup>

Other Management, MBA, Operations or Marketing courses may be utilized with advisor approval. The thesis option is 32 hours which includes 26 hours of core courses with 6 hours of thesis. The creative component option is 32 hours with the creative component embedded in qualified courses.

1 The number in parenthesis (3) reflects the number of credit hours.

2 An approved elective may be substituted for this course.

3 This course may be used for a creative component project. This project will be an extra assignment in addition to the regular course requirements. However, the creative component project may be required for class completion.

4 This course number is used for any special topic area including internships.

The asterisk (\*) indicates an online course. The double-asterisk (\*\*) indicates a course with an online and in-class section.

### C. D.O./M.S. in Health Care Administration Program

The changing healthcare landscape has created a unique professional environment for students at the College of Osteopathic Medicine. In the world we live in today, the great majority of the graduates of residency programs become employed physicians within an integrated health system. Due to the complexities of these large health systems, the initial employment experience can be extremely challenging. New physicians are expected to practice medicine while simultaneously being exposed to the business intricacies of the organizations that employ them. With a greater understanding of the issues facing the integrated healthcare delivery organizations, physicians will view themselves as more effective and better able to make a greater contribution to the success of the entity.

Many of our physician graduates will have the opportunity to serve in management positions within small, medium and large healthcare delivery entities. These management and leadership opportunities will depend largely upon the ability of the physician to comprehend the challenges of the healthcare organization, as well as the preparation to make significant leadership contributions. The addition of another advanced degree in healthcare administration will enable OSU medical school graduates to prepare themselves for managerial and leadership positions in the future. The completion of the Master's in Healthcare Administration (HCA) not only makes our graduates more marketable to health systems, it creates a logical path for those physicians to prepare themselves for the leadership opportunities of the future.

The success of this program is that the curriculum is both accessible and pertinent during the initial phase of the medical school experience. Medical students pursuing the D.O./M.S. in HCA take healthcare administration coursework during the semesters prior to the beginning of the medical school experience. The coursework for the HCA program is completed over a one-year period of time. Under this delivery model, students have two summer semesters, one fall semester and one spring semester to complete the HCA coursework. Additionally, students are granted nine (9) credit hours of graduate credit for their medical school courses. The remaining 24 credit hours or eight courses are completed over the one-year period of time. Under this delivery model, medical students would graduate at the end of the fourth year with a Doctor of Osteopathic Medicine degree and an additional degree of Master of Science in Healthcare Administration.

- **D.O./M.S. in HCA Degree Program**

Students wishing to receive deferred admission to the medical school and complete their H.C.A. coursework prior to the first year of medical school should indicate their interest in the D.O./M.S. in HCA degree on the OSU secondary application for medical school. Only students who successfully complete an on-campus interview for the D.O. program will be considered for this track.

- Application Materials for the HCA portion of the D.O./M.S. in HCA program
  - Applicants submit their application online. The application is found on the web at [the OSU Graduate College](#).
  - Three letters of recommendation from individuals familiar with the educational background of the applicant. Letters of recommendation submitted to the D.O. program can be forwarded to the School of Healthcare Administration, if requested.
  - Submit a Personal Statement that addresses that addresses the applicant's desire to pursue the D.O./M.S. in HCA degree program.

In addition to submitting the graduate application materials listed above, dual degree students must apply separately to the D.O. program. Consult the [D.O. admissions page](#) for a complete list of application materials and procedures. Dual degree students may substitute the MCAT for the GRE exam. The deadline for submitting all secondary application materials is March 1.

### D. Transfer Hours

Upon approval by the student's advisory committee, the student may transfer a maximum of nine hours of graduate credit toward the M.S. degree.

### E. Tuition & Fees

Tuition and fees are approved by both the Board of Regents for the Oklahoma Agricultural and Mechanical Colleges and the State Regents for Higher Education and are subject to change only after consideration in public meetings of those bodies.

### **Tuition**

- Oklahoma Resident Tuition \$196.00 per credit hour  
Supplemental Off-Campus Fee (Web courses) \$25.00 per credit hour  
(Total Resident Tuition for Web-based course \$212.00 per credit hour)
- Non-Resident Tuition \$785.75 per credit hour  
Supplemental Off-Campus Fee (Web course) \$25.00 per credit hour  
(Total Non-Resident Tuition for Web-based courses \$790.00 per credit hour)

### **Fees**

Multiplied by the number of credit hours in which a student is enrolled

- Student Activity Fee (on-campus courses only) \$7.72 per credit hour
- Library Automation Fee (all courses) \$5.00 per credit hour
- Technology Services Fee (all courses) \$9.68 per credit hour
- Health Fee (on-campus students only) \$54.00 per semester  
(enrolled in 6 or fewer on-campus credit hours) \$7.00
- Wellness Center Fee (on campus courses only) \$7.29 per credit hour
- Printing materials fee (on campus only) \$1.53 per credit hour

**Tuition and Fees are subject to change.**

### F. Financial Aid

Students needing assistance with loans should contact the Financial Aid Coordinator at OSU-Stillwater.

- OSU-Stillwater Office of Financial Aid and Scholarships: (405) 744-6604

### G. 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 Benn**, HCA Program Manager  
Graduate Program in Health Care Administration  
OSU Center for Health Sciences  
1111 West 17th Street  
Tulsa, OK 74107  
(918)561-1402 Fax: (918) 561-1416 email: [amanda.benn@okstate.edu](mailto:amanda.benn@okstate.edu).

### H. Health Care Administration (HCA) Course Descriptions

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An asterisk (\*) following the four-digit number indicates the course is approved for graduate credit.

#### **HCA 5000**

**Research and Thesis.** 1-3 credits, max 9. Serves as the independent research and preparation of the thesis for the MS degree in Health Care Administration. Course includes the study of existing research and methodologies directly related to the individual discipline via computer, literature review, classroom and applied training.

#### **HCA 5010**

**Special Topics in Health Care Administration.** 1-9 credits, max 9 Provides an overview of current issues in health care administration that relate to planning, leadership, legal, ethical, and other related topics.

#### **HCA 5013**

**Survey of Health Care Administration.** Overview of current issues in health care administration that relate to planning, legal, ethical and other related topics.

#### **HCA 5023**

**Human Resources in Health Care and Public Administration.** Review, discuss and analyze current issues, rules, practices and governance of human resources in health care and public administration.

#### **HCA 5033**

**Legal Issues in Health Care Administration.** Explore, discuss and analyze current legal issues and topics that relate to all aspects of the health care profession.



**HCA 5043**

**Organizational Leadership and Development in Health Care.** Teaches leadership development theories, perspectives and skills found within health care organizations. Provides insight on leadership styles, team development, coaching and fostering growth. Prepares leaders for embracing change including globalization, knowledge management and sustainability.

**HCA 5050**

**Directed Readings in Health Care Administration.** 2 credits, max 2. Focuses on specific topics of interest and emphasis in health care administration. Topics will be chosen or assigned for focused literature review.

**HCA 5063**

**Health Care Compliance.** Introduces general concepts as they relate to health care compliance issues including legal issues, risk assessment, informed consent, credentialing, compliance and ethics.

**HCA 5073**

**The Social Structure of Health Care Organizations.** Sociology of health care with an understanding of the interconnectedness of financial incentives, social relationships, and health system performance. Examine the role physicians play in the social structure of health care institutions and the changing role of physicians in the health system.

**HCA 5083**

**The Financial Structure of Health Care Organizations.** Overview of the financial structure of the U.S. health care system in health organizations. Provide the non-financial health administrators tools to work effectively with financial professions to achieve organizational goals.

**HCA 5093**

**Leadership Methods and Styles in Healthcare.** Introduces leadership methods, styles and situations that are unique in the health care field. Interprets those styles through specific case studies. Discusses the importance of strategic leadership planning.

**HCA 5103**

**Intro to Global Health.** Highlights the chronic, emerging and re-emerging global health issues and examines possible measures to address them.

**HCA 5113**

**Entrepreneurship and the Health Sciences.** Introduces entrepreneurship as it relates to the health care industry. Includes concepts within the for- and non-profit sectors. Focuses on entrepreneurial competencies of creativity and innovation.

**HCA 5123**

**Survey of Research and Evaluation in Health Care.** Introduces a basic understanding of statistics used in healthcare and biomedical research and developing research from the biomedical bench to the final stages of clinical trials. Analyzes healthcare program outcomes.

**HCA 5133**

**Health Care Informatics.** Focuses on healthcare informatics for the entire spectrum within the medical community. Covers local and community applications to broad global initiatives.

**HCA 5143**

**Relief and Development in Global Health.** Explores the roles and interaction of intergovernmental and governmental agencies and NGOs involved in global health.

**HCA 5153**

**International Health Systems.** Provides an overview of the differences in global health care systems using a historical and socio-political context making extensive use of country case studies.

**HCA 5163**

**Healthcare Accounting and Auditing.** Introduces the unique aspects of healthcare accounting and auditing. Presents and discusses various accounting and auditing topics as they relate to healthcare administration.

**HCA 5173**

**Emerging Global Infectious Diseases.** Develops a realistic approach to addressing emerging global infectious diseases, emphasizing global health implications in the areas of prevention, surveillance, and control.

**HCA 5183**

**Global Environmental and Occupational Health.** Examines environmental health concerns in the context of public health, and the social, economic and other factors that mitigate the effects of environmental hazards or otherwise influence the population.

**HCA 5193**

**Health Aspects of Disasters.** Addresses important thematic areas such as types, phases and effects of disasters on health, public health and medical responses of infectious diseases and pandemics.

**HCA 5203**

**Health Impact Assessment.** Evaluates the connection between community design and public health by applying evidence to inform decision-making for new policies and plans.

**HCA 5213**

**Advanced Cases in Healthcare Finance.** Evaluates specific in-depth case studies in the financing and operations of different healthcare enterprises. Covers advanced concepts in health care finance that present analysis and judgement scenarios which require appropriate solutions.

**HCA 5203**

**Ethics in Healthcare.** Evaluates specific in-depth case studies in ethical issues found within the healthcare setting. Presents scenarios for analysis which require appropriate solutions.

**HCA 5203**

**Advanced Leadership Methods and Styles in Healthcare.** Evaluates specific in-depth leadership styles and methods of different healthcare enterprises. Covers advanced concepts in health care leadership that present analysis and judgement scenarios which require appropriate solutions.

**HCA 5990**

**Internship in Health Care Administration.** 2-9 credits, max 3. Provides practical training and experience within a health care setting under the guidance of a designed supervisor. This experience should complement graduate studies in health care and support related career goals. Note: requires two hours per week for 16 weeks at internship site for each credit hour of enrollment; four hours per credit for eight-week session.

## **XI. GRADUATE PROGRAM IN ATHLETIC TRAINING**

The Athletic Training program is a Master of Athletic Training (MAT) degree. The **MAT** graduate program in the School of Allied Health at OSU Center for Health Sciences prepares individuals to become competent and independent clinicians who will enhance the quality of patient health care and advance the profession of athletic training through practice and research. The master of athletic training program instills critical thinking, problem solving, ethical reasoning abilities and interpersonal skills promoting lifelong learning and an enrichment in the quality of lives for individuals in diverse settings. Our curriculum provides a comprehensive, multifaceted education coupled with a clinical foundation to prepare future health care professionals for a career in athletic training.

The **MAT** consists of 53 (non-thesis) or 56 (thesis) credit hours.

### ATHLETIC TRAINING MISSION STATEMENT

Prepare individuals to become competent and independent clinicians who will enhance the quality of patient health care and advance the profession of athletic training through the application of evidence-based practice and translational research. Our MAT program instills critical thinking, problem solving, ethical reasoning abilities and interpersonal skills promoting lifelong learning and an enrichment in the quality of lives for individuals in diverse settings.

### ATHLETIC TRAINING PROGRAM GOALS

The charge of the Oklahoma State athletic training curriculum is to provide a comprehensive, multifaceted education coupled with a clinical foundation to prepare future health care professionals for a career in athletic training. The program emphasizes evidence-based practice and the application of best practices that can transform health care. Graduates of the program possess an understanding of the research process and

recognize the importance of applying evidence-based research to clinical practice.

Our goals are to prepare graduates to apply a wide variety of specific health care skills and knowledge within each of the following domains: Injury/Illness Prevention and Wellness Protection; Clinical Evaluation and Diagnosis; Immediate and Emergency Care; Treatment and Rehabilitation; Organizational and Professional Health and Well-being.

#### ATHLETIC TRAINING PROGRAM LEARNING OBJECTIVES

1. Apply the common values of the athletic training profession including:
  - a. privacy of patients
  - b. teamed approach to practice
  - c. legal practice
  - d. ethical practice
  - e. advancing knowledge
  - f. cultural competence
  - g. professionalism
2. Demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess an understanding of the following in relation to the practice of Athletic Training:
  - a. evidence-based practice
  - b. prevention and health promotion
  - c. clinical examination and diagnosis
  - d. acute care of injuries/illnesses
  - e. therapeutic interventions
  - f. psychosocial strategies
  - g. healthcare administration
  - h. professional development
3. Demonstrate mastery of all clinical proficiencies outlined in the most current edition of the Athletic Training Education Competencies
4. Be proficient in all domains, tasks, knowledge and skills statements outlined in the most current Board of Certification Role Delineation Study
  - a. Injury/Illness Prevention and Wellness Protection
  - b. Clinical Evaluation and Diagnosis
  - c. Immediate and Emergency Care
  - d. Treatment and Rehabilitation
  - e. Organizational and Professional Health and Well-being

**Injury/Illness Prevention and Wellness Protection** – Students will learn to identify injury, illness, and risk factors associated with participation in sport/physical activity and implement all components of a comprehensive wellness protection plan and injury prevention program.

**Clinical Evaluation and Diagnosis** - Students will be able to conduct a thorough initial clinical evaluation of injuries and illnesses commonly sustained by the athlete/physically active individual and formulate an initial diagnosis of the injury and or illness for the primary purposes of administering care or making appropriate referrals to physicians for further diagnosis and medical treatment.

**Immediate and Emergency Care** - Students will learn to provide appropriate first aid and emergency care for acute injuries according to accepted standards and procedures, including effective communication for appropriate and efficient referral, evaluation, diagnosis, and follow up care.

**Treatment and Rehabilitation** – Students will be able to plan and implement a comprehensive treatment, rehabilitation and/or reconditioning program for injuries and illnesses, including long and short-term goals, for optimal performance and function.

**Organizational and Professional Health and Well-being** - Students will be able to plan, coordinate and supervise the administrative components of an athletic training program, comply with the most current BOC practice standards and state/federal regulations, and develop a commitment to life-long learning and evidence-based clinical practice.

## A. Admission Information

### **Admission Requirements**

The applicant must have a bachelor's degree from an accredited college or university or have been accepted into and completed 120 credit hours of the 3/2 Health Education and Promotion degree through Oklahoma State University to be considered for admission. A grade point average of 3.0 (on a 4.0) scale is required; students must attain a "B" in required coursework and complete a minimum of 50 hours of observation under a Certified Athletic Trainer.

### **Required Prerequisite Coursework**

- Introductory Biology
- Applied Human Anatomy
- Medical Terminology
- Biomechanics
- Human Physiology
- Elementary Statistics
- General Chemistry
- General Physics
- Principles of Nutrition
- Physiology of Exercise

### **International Student Admission**

International students must take the Test of English as a Foreign Language (TOEFL) and achieve a minimum score of 79 on the iBT; or for the paper version of the TOEFL, a minimum score of 550. An IELTS score of 6.5 will be accepted in place of the TOEFL/TWE.

### **Athletic Training Employment Background Checks**

Anyone considering a career in health care should be aware that job and licensure applications typically go beyond normal requirements for transcripts, employment history, references, and interviews. The Athletic Training Program requires that all students complete a criminal-record check prior to the first clinical rotation. Typically this occurs during the apprenticeship licensure process. Although the OSU-CHS application asks about felony convictions only, the prospective student should consider all factors that could influence future employment.

## B. Application Procedure

General applications are online at [the OSU Graduate College](#). Supplemental documents will be submitted directly to the program Director

### **Required Application Elements:**

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

- Please mark '*Degree Candidate*' as the Admission status.
- Please list '*Athletic Training*' as the proposed major.

**2. Application Fee**—online application fee is \$50.00. International application fee is \$75.00. Payment can be made online.

**3. Official Transcripts**—Please submit an official transcript from each college or university you have attended or are currently attending, including OSU. Applicants are responsible for contacting these schools and requesting official transcripts. Students should have earned a minimum of a 3.0 GPA.

### **Supplemental Documentation:**

- [Consent for Possession of Medical Records](#)
- [Criminal Background Check](#)
- [OSU ATP Health History](#)
- [Technical Standards and Assumption of Risk](#)
- [Observation Hours Report](#)

Supplemental documents can be found at <http://www.healthsciences.okstate.edu/at/admission.php>

Mail documents to:

**Dr. Jennifer Volberding**  
**OSU Center for Health Sciences**  
**1111 W 17th St.**  
**Tulsa, OK 74107**

**Application Deadline and Process:**

**Priority application deadline:** Dec. 15

**Final application deadline:** Feb. 1

Athletic Training is a rigorous and intense program that places specific requirements and demands on the students enrolled. An objective of this program is to prepare graduates to enter a variety of employment settings and render care to a wide spectrum of individuals engaged in physical activity. Any individual wishing to pursue formal admission into the program must submit a formal application to the program by the Priority Application deadline on Dec. 15. Final Application deadline is Feb. 1. All qualified individuals will participate in a formal interview with members of the Athletic Training faculty and staff either in person or via video conference. Final selection for admission into the formal Athletic Training Program is determined by objective evaluation of all documentation. Students are notified of their acceptance/ rejection by March 15. Acceptance is contingent upon the student being in compliance with the curriculum's policies and procedures, receiving a satisfactory background check, meeting the technical standards, successfully completing the physical assessment and obtaining all immunizations required of health care professionals.

C. Master of Athletic Training (MAT) Program Requirements

The MAT program is a cohort based curriculum with students entering in June and completing 24 months of coursework. A minimum of a "B" must be achieved in all coursework and an 80% on all practicals for graduation.

**Curriculum**

Summer I

MAT 5103 Emergency Management in Athletic Healthcare

MAT Injury Prevention

BIOM 5020 Clinical Anatomy for Allied Health

Fall I

MAT 5223 Therapeutic Modalities

MAT 5233 Clinical Evaluation and Diagnosis of the Lower Extremity

MAT 5243 Therapeutic Exercise of the Lower Extremity

MAT 5201 Practicum I

Spring I

MAT 5333 Clinical Evaluation and Diagnosis of the Upper Extremity

MAT 5343 Therapeutic Exercise of the Upper Extremity

MAT 5313 Clinical Evaluation and Diagnosis of General Medical Conditions

MAT 5412 Radiography Evaluation and Assessment

MAT 5301 Practicum II

Summer II

MAT 5483 Pathology and Pharmacology in Sports Medicine

MAT 5573 Athletic Healthcare Administration

MAT 5401 Practicum III

Fall II

MAT 5553 Research Methods in Athletic Healthcare

MAT 5583 Psychosocial Strategies in Athletic Healthcare

MAT 5443 Clinical Diagnosis, Evaluation and Therapeutic Exercise of the Head and Spine

MAT 5501 Practicum IV

Spring II

MAT 5030 Capstone

MAT 5601 Practicum V

D. Transfer Hours

The MAT program does not allow for the transfer of any credits.

E. Tuition & Fees

Tuition and fees are approved by both the Board of Regents for the Oklahoma Agricultural and Mechanical Colleges and the State Regents for Higher Education and are subject to change only after consideration in public meetings of those bodies.

**Tuition**

- Oklahoma Resident Tuition \$196.00 per credit hour  
Supplemental Off-Campus Fee (Web courses) \$25.00 per credit hour  
(Total Resident Tuition for Web-based course \$212.00 per credit hour)
- Non-Resident Tuition \$785.75 per credit hour  
Supplemental Off-Campus Fee (Web course) \$25.00 per credit hour  
(Total Non-Resident Tuition for Web-based courses \$790.00 per credit hour)

**Fees**

Multiplied by the number of credit hours in which a student is enrolled

- Student Activity Fee (on-campus courses only) \$7.72 per credit hour
- Library Automation Fee (all courses) \$5.00 per credit hour
- Technology Services Fee (all courses) \$9.68 per credit hour
- Health Fee (on-campus students only) \$54.00 per semester (*enrolled in 6 or fewer on-campus credit hours - \$7.00*)
- Wellness Center Fee (on campus courses only) \$7.29 per credit hour
- Printing materials fee (on campus only) \$1.53 per credit hour

**Program Costs for ATS**

**(The following are averages based on previous years)**

Books	\$300.00
Housing [\$250.00 – \$550.00 per month (approximately \$400.00 * 24 months)]	\$9,600.00
Hepatitis B Series (3 shots at \$85 each)	\$255.00
Physical and Immunizations	\$100.00
Yearly TB and Flu Shots	\$50.00
Clothing	\$150.00
American Red Cross Professional Rescuer Certification	\$19.00 - \$27.00
Liability Insurance	\$30.00 - \$80.00 per year
Background Check	\$50.00
Oklahoma Apprentice Athletic Trainer License	\$25 initial, \$10 annual renewal

Travel cost \*

\*Travel is dependent upon the clinical site selections of the student. It is expected that students will be traveling at least once throughout the program.

**Optional Expenses:**

Sports Medicine Club Dues (student organization, membership/participation is voluntary)	\$25.00
Miscellaneous Items (scissors, fanny pack, etc.)	\$10.00 – \$100.00
Student NATA Membership	\$80.00

Tuition and Fees are subject to change.

F. Financial Aid

Students needing assistance with loans should contact the Financial Aid Coordinator at OSU-Stillwater.

- OSU-Stillwater Office of Financial Aid and Scholarships: (405) 744-6604

## G. Program Policies

### **1. Technical Standards**

The Athletic Training Program at Oklahoma State University is a rigorous and intense program that places specific requirements and demands on the students enrolled in the program. An objective of this program is to prepare graduates to enter a variety of employment settings and to render care to a wide spectrum of individuals engaged in physical activity. The technical standards set forth by the Athletic Training Program establish the essential qualities considered necessary for students admitted to the program to achieve the knowledge, skills, and competencies of an entry-level certified athletic trainer, as well as meet the expectations of the programs' accrediting agency. The following abilities and expectations must be met by all students admitted to the Athletic Training Program. In the event a student is unable to fulfill these technical standards, with or without reasonable accommodation, the student will not be admitted into the program. Compliance with the program's technical standards does not guarantee a student's eligibility for the OSU Athletic Training Program or BOC certification exam.

Candidates for selection to the Athletic Training Program must demonstrate:

1. The mental ability to assimilate, analyze, synthesize, integrate concepts and problem solve to formulate assessment and therapeutic judgments and to be able to distinguish deviations from the norm.
2. Sufficient postural and neuromuscular control, sensory function, and coordination to perform appropriate physical examinations using accepted techniques; and accurately, safely and efficiently use equipment and materials during the assessment and treatment of patients.
3. The ability to communicate effectively and sensitively with patients and colleagues, including individuals from different cultural and social backgrounds; this includes, but is not limited to, the ability to establish rapport with patients and communicate judgments and treatment information effectively. Students must be able to understand and speak the English language at a level consistent with competent professional practice.
4. The ability to record the physical examination results and a treatment plan clearly and accurately.
5. The ability to maintain composure and continue to function well during periods of high stress.
6. The perseverance, diligence and commitment to complete the Athletic Training Program as outlined and sequenced.
7. Flexibility and the ability to adjust to changing situation and uncertainty in clinical situations.
8. Affective skills and appropriate demeanor and rapport that relate to professional education and quality patient care.

Copies of the Technical Standard form for review and signature can be found in the Student Forms section of the Handbook and on the OSU Athletic Training Program Website.

\*These Technical Standard are adopted from the NATA Education Council.

### **2. Physical Capabilities Assessment**

Prior to acceptance into the ATP, all Athletic Training Students must complete a health history, physical exam, current immunization, and be determined by a physician that they meet the Technical Standards for Admission. If the physician identifies a student as having actual or potential mental or psychological difficulties in meeting the standards established by the program, the student will have access to a health care providers to determine the implication of such difficulties and completing the program. Additional components of the health evaluation will include immunization, prior injuries and current existing conditions. All records will be kept confidential. The original copy will be kept on file at the students healthcare provider and an electronic verification of health status will be kept in the student's file in the program director's locked office.

NOTE – Physical capability and health history forms will be provided to all students admitted into the formal portion of the Athletic Training Program.

### **3. Communicable Disease Policy**

The purpose of these policies and procedures is to inform and prevent exposure to blood borne pathogens such as, but not limited to, Hepatitis B (HBV), Hepatitis C (HBC), and the human immuno-deficiency virus (HIV).

These policies and procedures are to be followed in adjunct to guidelines set forth by the Occupational Safety and Health Administration (OSHA).

*CFR 29, part 1910.1030, Occupational Exposure to Blood Borne Pathogens issued by the Occupational Safety and Health Administration (OSHA) is intended to protect workers in the United States at risk of occupational exposure to blood borne pathogens, such as the human immuno-deficiency virus and hepatitis B virus.*

- Latex gloves must be worn for touching blood and body fluids, mucus membranes, or non- intact skin of all patients, for handling items or surfaces soiled with blood or body fluids.

- Gloves will be changed after contact with each patient.
- Masks and goggles or face shields should be worn during procedures that are likely to generate droplets of blood/body fluids to prevent exposure of mucous membranes to mouth, nose and eyes.
- Gowns or protective aprons should be worn during procedures that are likely to generate splashes of blood or other body fluids.
- Hands and other skin surfaces will be washed immediately and thoroughly with an anti- microbial soap if contaminated with blood or other body fluids.
- Hands will be washed immediately after gloves are removed.
- All Athletic Training students will take precautions to prevent injuries caused by needles, scalpels and other sharp instruments or devices during procedures.
- To prevent needle-stick injuries, needles will not be recapped, purposely bent or broken by hand, removed from disposable syringes, or otherwise manipulated by hand.
- Used disposable syringes and needles, scalpel blades and sharp items will be placed in puncture resistant containers which should be located as close to the patient care area as possible.
- Although saliva has not been implicated in HIV transmission, disposable mouthpieces, resuscitation bags and other ventilation devices will be used if the need for resuscitation arises.
- Students who have lesions and/or weeping dermatitis will report this to appropriate faculty/staff and may be required to refrain from all direct patient care until the condition resolves.
- All patients' blood or bodily fluids, or tissue specimen spills will be cleaned up promptly with a bleach solution diluted 1:10.
- Any needle stick, blood/body fluid exposure to a student will be reported promptly to the supervisor. In event an investigation is required, follow-up care may be instituted.
- In the event of exposure to blood or other bodily fluids, the exposed individual will ***immediately*** notify Preceptor or another suitable member of the facility's administration of the incident.
- The individual will ***immediately*** be administered first aid consisting of cleansing the affected area including thorough flushing of the area with water followed by washing of the area with antibacterial soap and warm tepid water.
- All necessary measures must be taken to disinfect and prevent disease transmission following the exposure.
- All personal materials contaminated with suspected infectious fluids will be removed and put in marked biohazard containers and properly disposed of following universal precautions.
- The Healthcare staff will provide immediate and follow up incident care (as needed). Instructions on administrative measures including screening for disease transmission will be given to the exposed individual.
- The individual ***must*** complete an incident report provided by the Preceptor and a copy sent to the Safety Office and Occupational Health Nurse.
- The AT Program Director will evaluate incident reports and determine what future actions should be taken in conjunction with the Safety Manager (Matt Sharpe, 918-830-1367).
- The individual can be seen at by the Occupational Health Nurse at the Health Care Clinic.
- All exposures require the source patient to be tested – covered by Student Health Fees. The Health Nurse will coordinate the source testing and must be notified immediately so that the source can directed to a lab for testing. Results will remain confidential and reside with the Health Nurse.
- All students, staff and faculty will be offered immunizations for Hepatitis B and other health care recommended immunizations per CDC guidelines and as required by OSHA.

#### 4. Retention Policy

- Grade Point Average - Students must maintain a cumulative grade point average (GPA) of 3.0 or higher (on a 4.00 scale). Should the cumulative GPA fall below a 3.0 the Athletic Training student will be placed on probation status. The probationary student will be given a verbal and written warning (including cause of probation and disciplinary action if not corrected). Failure to achieve a 3.0 GPA in the subsequent semester will result in dismissal from the Athletic Training Program.
- Didactic Core AT Courses - Athletic Training students must make a grade of 'B' or better in ALL Athletic Training Courses. Students will be placed on Academic Probation and must retake that course at the next course offering. This will require the student to stop all forward progress within the Athletic Training Program, thus they are unable to take any further coursework until the course in question is retaken. Students not earning the minimal grade requirement on the second attempt will result in dismissal from the program. Only one didactic course retake is allowed during the program. Students earning a grade lower than a "B" for the second time in the curriculum will result in dismissal.
- Athletic Training Practicum – If the minimum grade of "B" is not met in a Practicum course, the student must retake that course the following year, and is not allowed to matriculate in the curriculum (take any other AT courses, including core courses) until the satisfactory grade and proficiency in the AT



Practicum skills have been successfully demonstrated. Additionally, in order for students to continue with curriculum progression, a minimum score of 80% must be achieved on the practical exams given in the AT Practicum courses. Second attempts lower than 80% will result in the student retaking that course the following year, and is not allowed to matriculate in the curriculum.

#### **5. Grievances Policy**

A student with an academic grievance must follow the procedures outlined in the current OSU catalog. Whenever a misunderstanding or problem exists, students are expected to address the misunderstanding or issue immediately with the person(s) directly involved. Students with a grievance concerning the Athletic Training Program should address the issue(s) with their faculty instructor or clinical instructor / supervisor first. If the situation is not resolved through direct discussion at this level, the student may discuss clinical matters with the Clinical Education Coordinator. If the discussion with the CEC does not resolve the matter, the complaint may be brought to the Program Director. If conversations with the Program Director do not provide satisfactory solution, the student may address the matter with the Associate dean for clinical education.

#### **APPEAL PROCESS**

Any Athletic Training student in the Athletic Training Program has the right to appeal or petition any decision made by the Program Director.

The appropriate appeal process is as follows:

- The student must submit a written appeal to Athletic Training Program Director.
- The student may then appeal to the Athletic Training department head.
- The student may then appeal to the Associate dean for clinical education.
- The student may then appeal to the Vice President of Academics Affairs.
- The student may then appeal to the Provost or President of the University.

#### **6. Student Withdrawal and Refund Policy**

**\*\*\*Copies of all policies can be found on the program website ([www.healthsciences.okstate.edu/at](http://www.healthsciences.okstate.edu/at)) and in the program handbook.**

#### H. Contact Information

If you have any questions or need additional information please see our website at <http://www.healthsciences.okstate.edu/at> or contact us at:

Jennifer Volberding PhD, ATC  
Athletic Training Program Director  
OSU Center for Health Sciences  
1111 W 17th St.  
Tulsa, OK 74107

## **XII. GOVERNANCE & ADMINISTRATION**

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

Chancellor: Glen D. Johnson  
Chairman Gen. Toney Stricklin, Businessman, Lawton  
Vice Chair John Massey, Banker, Durant  
Secretary Ronald H. White, M.D., Cardiologist, Oklahoma City  
Assistant Secretary Jay Helm, Real Estate, Tulsa  
Ann Holloway, Investments, Ardmore  
James D. "Jimmy" Harrel, Banker, Leedey  
Andrew W. "Andy" Lester, Attorney, Edmond  
Joseph L. Parker Jr., Business Owner, Tulsa  
Mike C. Turpen, Attorney, Oklahoma City

### **Board of Regents for the Oklahoma Agricultural & Mechanical Colleges**

Chairman: Joe D. Hall  
At-Large Appointment: Calvin J. Anthony  
At-Large Appointment: Rick Davis  
First Congressional District: Dr. Trudy Milner  
Second Congressional District: Tucker Link  
Third Congressional District: Lou Watkins  
Fourth Congressional District: Douglas E. Burns  
Fifth Congressional District: Jarold Callahan  
Pres. Of the State Board of Agriculture: Jim Reese

### **Advisory Council**

Chairman: LeRoy E. Young, D.O., Oklahoma City  
Timothy J. Moser, D.O., Midwest City  
John G. Polkinghorne, DDS, Edmond  
Dennis J. Carter, D.O., Poteau  
Gabriel M. Pitman, D.O., Oklahoma City  
George E. Erbacher, D.O., Tulsa  
Executive Director: Lana Ivy, MBA, Oklahoma City

### **Administration**

V. Burns Hargis—President, Oklahoma State University and OSU System  
Kayse M. Shrum, D.O.—President, OSU Center for Health Sciences and Dean, OSU College of Osteopathic Medicine

## **XIII. CENTER PERSONNEL**

### **Administration/Professional Staff**

Kayse M. Shrum, D.O., President, OSU Center for Health Sciences and Dean, College of Osteopathic Medicine  
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Eric J. Polak, M.B.A., Vice President for Administration and Finance and Chief Financial Officer for Medical Practice Plan  
Jeffrey S. Stroup, Pharm.D., R.Ph., Vice President for Strategy, Professor of Medicine

Ashley L Adkins, Director of University Affairs  
Jenny J. Alexopoulos, D.O., Director of Medical Education at OSUMC and Medical Director of OSU Physicians  
Robert W. Allen, Ph.D., Interim Chair, Department of Forensic Sciences and Director of Forensic Sciences Graduate Program  
Angela Bacon, M.S., Director of Student Affairs  
Damon L. Baker, D.O., Chair, Department of Internal Medicine and Chief Medical Officer  
Jason W. Beaman, D.O., Chair, Department of Psychiatry and Behavioral Sciences  
Bruce A. Benjamin, Ph.D., Vice Provost and Associate Dean for Biomedical Sciences

Dennis E. Blankenship, D.O., Medical Director and Chair of Emergency Medicine  
 Rhonda L. Casey, D.O., Chair, Department of Pediatrics  
 Laurie C. Clark, D.O., Director of Simulation  
 Brandy L. Close, Ph.D., Director Curricular Affairs, Instructional Design, and Academic Technologies  
 Lora D. Cotton, D.O., Vice Chair, Department of Family Medicine and OSU CHS Statewide Family Medicine Program Director  
 Brenda Davidson, Associate Designated Institutional Officer ACGME  
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 Robin R. Dyer, D.O., Associate Dean for Academic Affairs and Chair, Department of Osteopathic Manipulative Medicine  
 William S. Eddy, D.O., Director of Continuing Medical Education  
 Jeffrey A. Evans, Director of Facilities Management  
 Amanda G. Foster, D.O., Vice Chair, Department of Pediatrics  
 Johnathan G. Franklin, Ed.D., Director of Student Statistics for Academic Affairs  
 John J. Frucci III, Ed.S., Director, The Center for Improvised Explosives/ IMPEX and MSFS AEI, Program Director  
 Lance Frye, M.D., Chair, Department of Obstetrics and Gynecology  
 Denise Fulbright, M.S., Academic Counselor & Learning Skills Specialist  
 Dean R. Fullingim, D.O., Chair, Department of Radiology  
 Jon Goodell, M.A., AHIP, Director, OSU Medical Library  
 Jeffrey B. Hackler, J.D., Assistant Dean for Enrollment Management, Clinical Assistant Professor of Rural Health  
 James D. Hess, Ed.D., Chair and Director, OSU School of Healthcare Administration  
 Shannon Hillier, D.O., Vice Chair, Department of Psychiatry and Behavioral Sciences  
 Heidi O. Holmes, Director of Health Information Technology and Chief Information Officer for OSUMC  
 Kevin L. Holmes, M.Ed., Assistant Vice President for Budget and Finance  
 Amber N. Hood, M.S., Director of Regulatory Compliance and Research Ethics  
 Joseph R. Johnson, D.O., Associate Dean for Clinical Education  
 Corie Kaiser, M.S., Director of Oklahoma State Office of Rural Health  
 Cynthia D. Lamon, Director of Research Services  
 Regina Lewis, D.O., Medical Director of Women's Center  
 Donald P. Lowther, Director of Fiscal Affairs and Controller  
 Mathew L. Maxey, Director of Health Access Network  
 Andrea E. McEachern, D.O., OSU-CHS Family Medicine Associate Program Director  
 Bavette Miller, M.S., Director of Graduate Studies  
 Kenneth E. Miller, Ph.D., Chair, Department of Anatomy and Cell Biology  
 Ryan N. Miller, M.S., Director of Alumni Affairs  
 Vicky L. Pace, M.Ed., Director of Rural Medical Education  
 Randall M. Popp, Director of Information Technology  
 Jane K. Pritchard, B.S., Director of Quality for Forensic Sciences Program Director--check  
 Paul B. Rock, D.O., Medical Director of CAHM  
 Alexander J. Rouch, Ph.D., Chair, Department of Pharmacology and Physiology  
 Robert K. Sammons, M.A., Director of Clinical Education  
 Charles G. Sanny, Ph.D., Chair, Department of Biochemistry and Microbiology  
 Rhonda Shouse, Assistant to the ADIO ACGME  
 Gary L. Slick, D.O., Medical Director of OMECO, Designated Institutional Officer ACGME  
 Kent S. Smith, Ph.D., Associate Dean for Office for the Advancement of American Indians in Medicine and Science  
 Mousumi Som, D.O., Vice Chair, Department of Medicine  
 Susan K. Steele, D.O., Chair, Department of Medical Education  
 Vivian M. Stevens, Ph.D., Professor, Department of Psychiatry and Behavioral Sciences  
 Ellen L. Stockton, Director of Graphics Arts and Photography  
 Tina Tappana, M.S., Director of Human Resources  
 Bria L. Taylor, Director of Outreach and Special Events  
 Mark H. Thai, D.O., Vice Chair, Department of Osteopathic Manipulative Medicine  
 Michael L. Thomas, M.D., Chair, Department of Surgery, Physician Executive of Health Partners of Oklahoma  
 Tanner Thompson, Special Projects Coordinator, University Outreach  
 Danny C. Threlkeld, Director of HealthCare Marketing  
 Christopher C. Thurman, D.O., Chair, Department of Family Medicine  
 Darin Tyson, Director of Special Events  
 Lesley E. VanVolkinburg, M.S., OMECO Executive Director

JuLee Wells, Director of Recruitment, Office of Student Affairs  
Denna Wheeler, Ph.D., Director of Rural Research and Evaluation  
Jennifer Volberding, Ph.D. PLOSKAM Director of Athletic Training  
Lindsey Yoder, M.S., Director of Admissions

#### **XIV. FACULTY**

##### **ANATOMY AND CELL BIOLOGY**

Holly W. Ballard Ph.D., Assistant Professor of Anatomy and Cell Biology  
Paul M. Gignac, Ph.D., Assistant Professor of Anatomy and Cell Biology  
William D. Meek, Ph.D., Professor of Anatomy  
Kenneth E. Miller, Ph.D., Professor and Chair of Anatomy and Cell Biology  
Kent S. Smith, Ph.D., Professor of Anatomy and Associate Dean for Office for the Advancement of American Indians in Medicine and Science  
Anne I. Weil, Ph.D., Associate Professor of Anatomy and Cell Biology  
Nedra F. Wilson, Ph.D., Associate Professor of Cell Biology

##### **ATHLETIC TRAINING**

Jennifer L. Volberding, Ph.D., Assistant Professor and Program Director for Athletic Training  
Matthew O'Brien, Ph.D., Associate Professor and Clinical Coordinator  
Aric Warren, Ed.D., ATC, LAT, CSCS, CES, Associate Professor

##### **BIOCHEMISTRY AND MICROBIOLOGY**

Robert W. Allen, Ph.D., Professor of Biochemistry, Director of Forensic Sciences Graduate Program and Interim Chair of Forensic Sciences  
Martin W. Banschbach, Ph.D., Professor of Biochemistry  
Earl L. Blewett, Ph.D., Associate Professor of Microbiology  
Franklin R. Champlin, Ph.D., Associate Professor of Microbiology  
Rashmi Kaul, Ph.D., Associate Professor of Microbiology  
Gerwald A. Köehler, Ph.D., Associate Professor of Microbiology  
Charles G. Sanny, Ph.D., Professor of Biochemistry and Chair of Biochemistry and Microbiology

##### **FAMILY MEDICINE**

Jenny J. Alexopoulos, D.O., Professor of Family Medicine and Director of Medical Education at OSUMC and Medical Director of OSU Physicians  
Lora D. Cotton, D.O., Associate Professor, OSU CHS Statewide Family Medicine Program Director and Vice Chair of Family Medicine  
William S. Eddy, D.O., Professor of Family Medicine and Director of Continuing Medical Education  
Amanda Gorden Green, DO., Clinical Assistant Professor of Family Medicine  
Sarah M. Hall, D.O., Assistant Professor of Family Medicine  
Erin R. Kratz, D.O., Clinical Assistant Professor of Family Medicine  
Regina M. Lewis, D.O., Associate Professor of Family Medicine and Medical Director of Women's Center  
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Lana D. Myers, D.O., Clinical Assistant Professor of Family Medicine  
William J. Pettit, D.O., Provost and Senior Associate Dean for Academic Affairs, Associate Dean for Rural Health, Professor of Family Medicine  
Susan K. Steele, D.O., Clinical Associate Professor of Family Medicine and Chair, Department of Medical Education  
Christopher C. Thurman, D.O., Professor of Family Medicine and Department Chair of Family Medicine

##### **EMERGENCY MEDICINE**

Dennis E. Blankenship, D.O., Clinical Associate Professor of Emergency Medicine and Department Chair of Emergency Medicine  
Mark E. Blubaugh, D.O., Clinical Assistant Professor of Emergency Medicine And Director of Ultrasound Program  
Michael T. Cannon, D.O., Clinical Assistant Professor of Emergency Medicine  
Linden S. Cowley, D.O., Clinical Assistant Professor of Emergency Medicine  
Jennifer Eischen Galbraith, D.O., Clinical Associate Professor of Emergency Medicine  
Anastasia C. Fisher, D.O., Clinical Assistant Professor of Emergency Medicine  
Gavin V. Gardner, D.O., Clinical Assistant Professor of Emergency Medicine and Clinical Clerkship Director  
David M. Gearhart, D.O., Clinical Associate Professor of Emergency Medicine and EMS Director

Charles E. Harris, D.O., Clinical Assistant Professor of Emergency Medicine  
Aaron Q. Lane, D.O., Clinical Associate Professor of Emergency Medicine and Director of Residency Program  
Kelly A. Murray, Pharm.D., Clinical Assistant Professor of Emergency Medicine and Research Director  
Michael R. Schiesel, D.O., Clinical Assistant Professor of Emergency Medicine  
William P. Wylie, D.O., Clinical Assistant Professor of Emergency Medicine and Clinical Rotation Director

#### **FORENSIC SCIENCES**

Robert W. Allen, Ph.D., Professor of Biochemistry, Director of Forensic Sciences Graduate Program and Interim  
Chair of Forensic Sciences  
John Frucci III Ed.S.  
Ronald R. Thrasher, Ph.D., Associate Professor of Forensic Sciences  
Jarrad R. Wagner, Ph.D., Associate Professor of Forensic Sciences

#### **HEALTH CARE ADMINISTRATION**

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#### **INTERNAL MEDICINE**

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Jana N. Baker, D.O., Clinical Assistant Professor of Medicine  
John F. Carabello, D.O., Clinical Assistant Professor of Medicine  
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Justin Chronister, D.O., Clinical Assistant Professor of Medicine  
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Madhuri J. Lad, D.O., Clinical Assistant Professor of Medicine  
Paul B. Rock, Ph.D., Professor of Medicine and Medical Director of CAHM  
Gary L. Slick, D.O., Medical Director of OMECO and Professor of Medicine  
Mousumi Som, D.O., Vice Chair, Associate Professor of Medicine  
Johnny R. Stephens, Pharm.D., Senior Vice President, Chief Operating Officer, Professor of Medicine  
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Daniel Wildes D.O., Clinical Assistant Professor of Medicine, Internal Medicine- Division of Cardiology  
D. Matt Wilkett D.O., Clinical Assistant Professor of Medicine, Chief of Cardiology Division OSUMC

#### **MEDICAL EDUCATION**

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Laurie C. Clark, D.O., Clinical Associate Professor of Family Medicine and Director of Simulation  
Susan K. Steele, D.O., Associate Professor and Chair, Department of Medical Education  
Matt Tucker, D.O., Clinical Assistant Professor of Medicine  
Nancy S. Van Winkle, Ph.D., Professor of Psychiatry and Behavioral Sciences

#### **OBSTETRICS AND GYNECOLOGY**

Corey R. Babb, D.O., Clinical Assistant Professor of Obstetrics and Gynecology  
Lance T. Frye, M.D., Chair, Clinical Associate Professor of Obstetrics and Gynecology  
Joseph R. Johnson, D.O., Clinical Associate Professor and Chair of Obstetrics and Gynecology  
William D. Po, M.D., Clinical Professor of Obstetrics and Gynecology

#### **OSTEOPATHIC MANIPULATIVE MEDICINE**

Stephen R. Barnes, D.O., Clinical Assistant Professor of Osteopathic Manipulative Medicine  
Leslie M. Ching, D.O., Clinical Assistant Professor of Osteopathic Manipulative Medicine  
Robin R. Dyer, D.O., Professor and Chair of Osteopathic Manipulative Medicine, Associate Dean for Academic  
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Amelia McConaghy, D.O., Clinical Assistant Professor of Osteopathic Manipulative Medicine  
Mark H. Thai, D.O., Clinical Associate Professor and Vice Chair of Osteopathic Manipulative Medicine  
Jennifer Wilson, D.O., Clinical Assistant Professor of Osteopathic Manipulative Medicine

#### **PATHOLOGY**

Anthony W. Alfrey, M.D., Assistant Professor of Pathology  
Aric Harp, D.O., Assistant Professor of Pathology  
Joseph A. Price, Ph.D., Professor of Pathology

#### **PEDIATRICS**

Laura L. Bode, D.O., Clinical Assistant Professor of Pediatrics

Rhonda L. Casey, D.O., Associate Professor of Pediatrics and Chair of Pediatrics  
Shawna R. Seagraves-Duncan, D.O., Associate Professor of Pediatrics  
M. Hanyfathy Elsayed, M.D., Clinical Professor of Pediatrics/Neonatology  
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Colony S. Fugate, D.O., Clinical Assistant Professor of Pediatrics  
Binh T. Phung, D.O., Clinical Assistant Professor of Pediatrics  
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#### **PHARMACOLOGY AND PHYSIOLOGY**

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Kathleen S. Curtis, Ph.D., Associate Professor of Pharmacology and Physiology  
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Craig W. Stevens, Ph.D., Professor of Pharmacology and Physiology  
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#### **PSYCHIATRY AND BEHAVIORAL SCIENCES**

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#### **RADIOLOGY**

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#### **RURAL HEALTH**

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#### **SURGERY**

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Jaclyn C. Jones, D.O., Clinical Assistant Professor of Surgery  
Hal H. Robbins, D.O., Clinical Assistant Professor of Surgery  
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Rev: 12/15  
Rev: 6/16  
Rev: 7/17  
Rev: 9/17  
Rev: 11/17  
Rev: 12/17