The college was founded in 1972 in response to a physician shortage in the small towns and rural areas of Oklahoma. The college opened its doors in 1974 and graduated its first class in 1977. In 1988, the college was merged with Oklahoma State University and confirmed its mission to prepare students to be primary care physicians with emphasis in rural medicine. In 2001, the Oklahoma legislature added another designation by creating the OSU Center for Health Sciences—the umbrella organization for the College of Osteopathic Medicine; and graduate programs in biomedical and forensic sciences, health care administration, athletic training and physician assistant program.

The OSU Center for Health Sciences is located on 16 acres along the west bank of the Arkansas River with an impressive view of downtown Tulsa. Modern buildings house conference facilities, a hospital simulation center, expanded classroom space, a medical bookstore and a forensic sciences and biomedical research facility. The OSU Medical Center, located a half-mile north of campus, is the primary teaching hospital for the college. The medical center serves Tulsa and the surrounding communities, and serves as both a teaching clinic for medical students, interns and residents, and a health care resource for residents of Tulsa and the surrounding area. The medical center is a state entity operated by the Oklahoma State University Medical Authority, with management by Saint Francis Health System. The hospital provides comprehensive and specialized health care and is staffed by licensed physicians and other health care professionals who supervise students in the care of patients. The OSU combined clinic system covers a wide variety of specialties. The clinics provide essential health care to the community.

The OSU College of Osteopathic Medicine at the Cherokee Nation is an additional teaching site located in Tahlequah, Oklahoma. The 84,000-square-foot facility includes an anatomy laboratory, clinical skills and OMM labs, standardized patient labs and a simulation center that features state-of-the-art computer programmable manikins. There are also lecture halls, classrooms, a gym, faculty offices and study carrels.

Promoting a patient-centered approach to health care, osteopathic physicians are concerned with the entire patient. The doctor of osteopathic medicine is a fully-trained and licensed physician who selectively utilizes all accepted scientific modalities to maintain and restore health. Osteopathic physicians and surgeons are licensed in every state to practice all phases of medicine, and offer their patients the added dimension of health care through osteopathic manipulation, a hands-on technique that uses palpation and manipulative procedures of the musculoskeletal system to diagnose and treat illness.

**Minimum Academic Requirements**

Prior to matriculation, the applicant must have an overall grade-point average of at least 3.00 (on a 4.00 scale), a pre-professional science GPA of at least 2.75, and a minimum score of 492 on the Medical College Admissions Test (MCAT). All applicants must take the MCAT within three years of the deadline for submitting the AACOMAS application for the application cycle. The last MCAT test date accepted for each application cycle is January in the year of matriculation. Under special circumstances, the College may use discretion to admit students who do not meet these minimum requirements.

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

- Completion of at least three years (90 semester hours) and not less than 75 percent of the courses required for a baccalaureate degree at a regionally accredited college or university.
• Satisfactory completion of the following courses with no grade below "C" (2.0 on a 4.0 scale):
  • English, 2 semesters
  • Biology, 2 semesters (including laboratory)
  • Physics, 2 semesters
  • General Chemistry, 2 semesters
  • Organic Chemistry, 2 semesters
• At least one upper-division (3000-4000) level science course, including but not limited to:
  • Human Anatomy or Comparative Anatomy
  • Biochemistry
  • Microbiology
  • Molecular Biology
  • Histology
  • Cellular Biology
  • Embryology
  • Physiology

The annual AACOMAS application deadline is February 28. The deadline for supplemental application materials is March 30.

An on-campus interview with the Applicant Interview Committee is by invitation only. Interviews are conducted by clinical and adjunct faculty members, as well as alumni. Applicants must participate in the interview to qualify for further consideration. Interview results and other data submitted will be considered when determining which applicants have demonstrated appropriate levels of scholarship, aptitude and motivation for admission to the program. Class size is approved for 165 students (in 2022).

Selection Factors
The College considers applications for admission from all qualified candidates. The Oklahoma State University Center for Health Sciences provides equal employment and/or educational opportunity on the basis of merit and without discrimination because of age, race, ethnicity, color, religion, sex, sexual orientation, genetic information, gender, gender identity or expression, national origin, disability, protected veteran status, or other protected status in any of its policies, practices, or procedures. Preference is given to Oklahoma residents. Applicants must be U.S. citizens or permanent residents of the U.S. Non-U.S. citizens must have a permanent resident visa ("green card") at the time of application in order to be considered for admission.

College Curriculum
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, and small group and team-based learning. Problem-solving and information retrieval skills are emphasized to produce and develop skills that support lifelong learning.

The culture of the 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 with clinical and behavioral sciences to permit the full comprehension of the clinician's work and promote a holistic approach to the care of patients and their families. Students receive training in all areas of medicine, with additional emphasis on osteopathic manipulative medicine.

Incorporated within the OSU-COM curriculum is a Rural Medical Track, a Tribal Medicine Track and a Global Health Track. Each of these stresses the unique nature and characteristics of a rural practice, provides a pathway for student matriculation into a rural primary care residency, and supports residency graduates in the establishment of a practice in a rural or underserved Oklahoma location.

The first semester focuses on the foundations of biomedical and clinical sciences along with an introduction to patient care. Starting in the second semester and continuing through the end of the second year, students are introduced to a total of 11 clinical systems that systematically prepare students for addressing conditions typically seen in the primary care environment. 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.

In the Clerkship Program, students are required to complete 22, four-week rotations in the core areas of family medicine, osteopathic manipulative medicine, pediatrics, internal medicine, surgery, obstetrics-gynecology, psychiatry and emergency medicine. In addition to the core rotations, students are also required to complete three rotations at affiliated teaching sites in rural communities, two of which are focused on gaining experience in a rural hospital setting. Students must also complete two primary care electives, seven general electives and one required vacation. Many rotations are completed at the OSU Medical Center in Tulsa, one of the largest osteopathic hospitals in the United States.

Furthermore, students enrolled in the Rural Medical Track Program take our mission to serve rural Oklahoma to new heights. The Rural Medical Track Program is designed to allow students to complete, whenever possible, the core rotations in rural communities. In addition to the core rotations, the Rural Medical Track students must also complete at least two sub-internships with rural residency programs, as well as two specialty electives.

Students graduate from the four-year program with the Doctor of Osteopathic Medicine (DO) degree. Although more than half 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: https://medicine.okstate.edu/com/admissions/graduates.html (https://health.okstate.edu/com/admissions/graduates.html).

Accreditation
The college is accredited by the Commission on Osteopathic College Accreditation (COCA) of the American Osteopathic Association, the recognized accrediting agency for institutions that educate osteopathic physicians. The Oklahoma State Regents for Higher Education are empowered by the Oklahoma Constitution to prescribe standards for higher education applicable to each institution in the Oklahoma State System of Higher Education.
Financial Aid

Financing a medical education should be seriously considered. The primary responsibility for meeting your educational costs rests with the student and his or her family; however, the Office of Student Financial Aid makes every attempt to assist prospective students as they navigate this process.

The Office of Student Financial Aid supports the mission of the University by enabling students and families to reduce or eliminate financial barriers that might prohibit their participation in the programs offered by OSU Center for Health Sciences. The office administers need-based financial aid programs funded by federal, state, University and private sources in the form of Federal Stafford loan (Unsubsidized), Graduate PLUS loan, employment, as well as need- and merit-based scholarships. The office also administers the Federal non-need based loan programs (Unsubsidized) and provides information and support to students interested in the alternative loan options available to them.

Tuition and fees at the College of Osteopathic Medicine (for the 2021-2022 school year) totals $28,883.82 per year for Oklahoma residents and $56,385.76 per year for out-of-state residents. Fees vary by year for medical students and average $3,000.

Most financial aid is renewable on an annual basis, provided there is adequate funding and the student remains eligible (enrolled in a matriculated program, in good academic standing and with continued need for need-based aid). To qualify, each student should file the Free Application for Federal Student Aid (FAFSA) by Feb. 15. Students are encouraged to continue to file after this date; however, consideration for funds will be given on a first-come basis.

The FAFSA and other required applications may be obtained by contacting:

Office of Financial Aid - OSU College of Osteopathic Medicine
1111 West 17th Street
Tulsa, OK 74107-1898;

Students may apply online at www.fafsa.ed.gov/ (http://www.fafsa.gov/) (School code is G11282).

subject to change

Graduate Education

The Center for Health Sciences offers graduate degree programs in Biomedical Sciences, Forensic Sciences, Health Care Administration, Athletic Training and Physician Assistant studies.

The Biomedical Sciences Graduate Program offers PhD, MS, DO/MS and DO/PhD degree programs. These programs provide students with a foundation in biomedical sciences that is broadly applicable to many disciplines, including anatomy, biochemistry, cell biology, microbiology, pathology, pharmacology and physiology.

The Master of Science in Biomedical Sciences offers a thesis and non-thesis option, with both programs designed to be completed in two years with a minimum of 30 credit hours (thesis) and 32 credit hours (non-thesis). The PhD program is designed to be completed in four years with a minimum of 60 credit hours. The DO/PhD program is designed to be completed in a minimum of seven years. The first two years are the basic science years of the program. The middle three years are graduate study, research and dissertation of the PhD program. The final two years are the clinical sciences years of the DO program. The DO/MS program is designed to be completed in a minimum of five years. The first year is primarily the graduate portion of the program. The last four years consist of the medical portion of the degree, with any remaining graduate work completed during the first year of medical school and subsequent summers.

The Master of Science in Forensic Sciences requires a minimum of 30 credit hours for a thesis track and 32 credit hours for a non-thesis track. For full-time students, the M.S. in Forensic Sciences may be completed in two years. Specializations designed for students from a variety of backgrounds include the areas of Forensic Biology/DNA, Forensic Chemistry/Toxicology, Forensic Investigative Sciences and Forensic Psychology. Specializations designed for practitioners with related professional experience include Arson, Explosives, Firearms and Toolmarks Investigations, and Forensic Science Administration. Working professionals may complete the M.S. degree online, usually over three to four years while maintaining full-time careers. The Master of Science in Forensic Sciences degree is designed for individuals pursuing many professional avenues, including careers in federal agencies, crime labs, investigative agencies, or research institutions.

The Master of Science in Health Care Administration consists of 32 total hours with a creative component or thesis including six hours of general graduate level electives. The program has 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 OSU-Tulsa as well as distance learning opportunities. This degree can be completed in-class or fully online. The DO/MS program is designed to be completed in five years. The first year is the graduate portion of the program and the last four years consist of the medical portion of the degree.

The Doctorate in Health Care Administration (DHA) consists of 62 total credit hours. This is a doctoral program, and as such, no thesis or research is required. 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, health care experience is not required. This degree is offered entirely online, and the majority of courses are asynchronous. Those who have completed the MHA at OSU or a similar degree may be eligible to count up to 30 of their credit hours towards the program. Transcripts are evaluated after admission and on a case-by-case basis.

The DO/MBA is an accelerated program that allows DO students to gain their MBA through the Spears School of Business in a single year. Six hours of elective credit can be shared from the DO coursework or business electives of the student’s choice. The DO/MPH is an accelerated program that allows DO students to gain their M.P.H. in one calendar year, by allowing DO coursework to serve as elective coursework for the MPH degree. This 42-hour program captures 27 hours of the MPH’s core coursework in the fall and spring semesters with six elective hours taken in the summer.

The Master of Athletic Training Program is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). Once accepted
into the program, students are assigned to a Board of Certification (BOC) Certified Athletic Trainer (AT) where they are responsible to provide for the overall health care of patients over the course of their respective seasons or occupation. Clinical instruction of students is achieved through direct supervision by health care providers. The curriculum is based in the human sciences with anatomy, physiology, biomechanics, pathology, pharmacology, nutrition and psychology providing the theoretical foundation of student inquiry. Students learn how to apply these theoretical concepts while in the clinical setting learning under licensed physicians, athletic trainers, physical therapists and other allied health care professionals. This balance of theory and practical application prepares students to sit for the Board of Certification examination where upon successful completion, may earn the credentials ATC. Additional information about these programs can be found at: https://medicine.okstate.edu/athletic-training/index.html.

The on-campus Physician Assistant Program recruits, educates and mentors a diverse group of students to increase competent and compassionate health care with an emphasis on increasing access to healthcare in rural and medically underserved Oklahoma. The Program places an importance on fostering collegial relationships among students within the Physician Assistant, Osteopathic Medicine and Athletic Training disciplines to provide professional, flexible, team-based, health care. The Master of Science in Physician Assistant Studies is designed for students to be eligible for certification as a Physician Assistant. The PA program has a directed curriculum of 124 hours. All students are required to be enrolled full-time. Students will spend 13 months in the didactic phase of education where they will receive traditional lectures as well as many hands-on experiences in laboratory and simulation settings. The second phase of training includes 15 months of clinical rotations. Students are required to have experiences in family medicine, internal medicine, emergency medicine, OB/GYN, pediatrics, psychiatry, and surgery. Students will also have a minimum of two (2) rotations in a rural location. For additional information regarding admissions requirements please visit https://medicine.okstate.edu/pa/index.html.

Honor and Service Organizations
The College emphasizes community service, and many students volunteer their time in giving school and athletic physicals, visiting nursing homes, working with school children and working at College-sponsored health fairs or the annual Osteopathic Scrub Run. Listed below are official student organizations.

American College of Osteopathic Emergency Physicians (ACOEP)
American College of Osteopathic Pediatricians (ACOP)
American College of Osteopathic Surgeons-Medical Student Section (ACOS-MSS)
American Medical Student Association (AMSA)
American Medical Women's Association (AMWA)
American Osteopathic College of Physical Medicine and Rehabilitation (AOCPRM)
Anesthesiology Student Interest Group (ASIG)
Asian Pacific American Medical Student Association (APMSA)
Association of Native American Medical Students (ANAMS)
Biomedical Science Graduate Student Association (BSGSA)
Business & Leadership in Medical Practice (BLiMP)
Christian Medical Association (CMA)
Dermatology Interest Group (DIGA)
Forensic Student Organization (FSO)
Gay & Lesbian Advocacy in Medicine (GLAM)
Global Medicine Club (GMC)
Latino Medical Student Association (LMSA)
Medical Interdisciplinary Specialty Club (MISC)
Medical Students for Choice (MSC)
Native American Students in Osteopathic Medicine (NASOM)
Oklahoma Osteopathic Obstetrics and Gynecology Student Association (OOOGSA)
Physician Assistant Student Association
Sigma Sigma Phi (SSP)—honor society
Student American Academy of Osteopathy (SAAO)
Student American Osteopathic Academy of Orthopedics (SAOAO)
Student Association of Military Osteopathic Physicians & Surgeons (SAMOPS)
Student Association of the American College of Osteopathic Family Physicians (SAACOPF)
Student American Osteopathic Academy of Sports Medicine (SAOASM)
Student Government Association (SGA)
Student Interest Group in Neurology (SIGN)
Student National Medical Association (SNMA)
Student Osteopathic Association of Radiology (SOAR)
Student Osteopathic Internal Medicine Association (SOIMA)
Student Osteopathic Medical Association (SOMA)
Student Osteopathic Psychiatry Association (SOPA)
Student Osteopathic Rural Medicine Club (STORM)
Student Political Action Committee
Wilderness Medical Society (WMS)

Faculty
Center for Health Sciences
Interim President of the Center for Health Sciences: Johnny Stephens, Pharm.D.
Interim Dean of the College of Osteopathic Medicine: Dennis Blankenship, DO
Provost of the Center for Health Sciences and Senior Associate Dean of Operations: Jeffrey S. Stroup, PharmD

Biomedical Sciences and Graduate Studies
Randall Davis, PhD—Interim Associate Dean, Biomedical Sciences
James Hess, Ed.D.—Vice Provost, Graduate Studies

Anatomy and Cell Biology
Nedra Wilson, PhD—Associate Professor and Interim Chair
Professors: Kenneth Miller, PhD; Kent S. Smith, PhD
Clinical Assistant Professor: Ian D. Browne
Associate Professors: Holly Ballard, PhD; Paul Gignac, PhD; Eric Snively, PhD; Anne Weil, PhD
Assistant Professors: Daniel Barta, PhD; Haley O'Brien, PhD; Dolores Vazquez Sanroman, PhD

Athletic Training
Jennifer L. Volberding, PhD—Associate Professor and Chair
Professor: Aric Warren, PhD
Associate Professors: Matthew S. O'Brien, PhD

Biochemistry and Microbiology
Charles G. Sanny, PhD—Professor and Chair
Clinical Associate Professor and Director: Earl L. Blewett, DO

Clinical Professor and Director: Susan Steele, DO

Clinical Assistant Professors: Subhas Das, PhD; Ratnakar Deole, PhD; Ihsiu Huang, PhD; Jacob Manjarrez, PhD; Joshua Muia, PhD

Emergency Medicine

Aaron Lane, DO—Chair

James Herrington, DO—Clinical Assistant Professor and Vice Chair

Clinical Associate Professors: Gavin Gardner, DO; David Gearhart, DO; Michael R. Schiesel, DO

Clinical Assistant Professors: Bobby Abemathy, DO; Kenneth Argo, DO; Yakiij Bailey, DO; David Behm, DO; William H. Bickell, MD; Tyson Bryant, DO; Michael Cannon, DO; Cass Cherry, DO; Linden Cowley, DO; Cathryn Crittenden-Byers, MD; Kent Denmark, DO; Tyler G. Evilsizer, DO; Anastasia Fisher, DO; Steven Gearhart, DO; Charles Harris, DO; Mary K. Moore, DO; Kelly A. Murray, PharmD; James Pritchett, DO; Jonathan D. Robins, DO; Brianne Roepke, DO; Zackary Spradlin, DO; Matthew E. Stiger, DO

Family Medicine

Lora D. Cotton, DO—Professor, Director and Chair

Clinical Professor: Regina Lewis, DO

Associate Professors: Sarah Hall, DO; Erin Kratz, DO; Susan Steele, DO

Clinical Assistant Professors: Kristin Browning, DO; Steffen Carey, DO; Amanda Carey, DO; Crystal David, PharmD; Matt Fowler, DO; Chelsey D. Griffin, DO; Tara B. Hasenflug, DO; John Miller, DO; Lana Myers, DO; Marinn Rank, DO; Glenna Tiller, DO; Krystal Vonfeldt, DO

Forensic Sciences

James Hess, EdD—Interim Chair

Professor: Ronald R. Thrasher, PhD

Professor and Director: Robert W. Allen, PhD; Jarrad Wagner, PhD

Assistant Professor and Director: John J. Frucci, EdD

Assistant Director: Jun Fu

Health Care Administration

James Hess, EdD—Professor and Chair

Clinical Professors: Anil K. Kaul, MD, DDS, MPH; Zack Varughese, PhD

Assistant Professor: Bavette B. Miller, PhD

Internal Medicine

Damon L. Baker, DO—Professor, Chair and Chief Medical Officer for OSUMC

Professor: Mousumi Som, DO

Associate Professor: Katherine Cook, DO

Clinical Associate Professors: Jay. Johnson, DO; David Wilkett, DO

Clinical Assistant Professors: John Carabello, DO; Justin Chronister, DO; Stacy Chronister, DO; Micah Derby, DO; Alessandra Gearhart, DO; Steve Kim, DO; Madhuri Lad, DO; Daniel Wildes, Jr., DO; William Woods, DO; Shane S. Yamane, DO

Medical Education

Susan Steele, DO—Clinical Professor and Chair

Professor: Shawna Segraves Duncan, DO; Nancy Van Winkle, PhD

Clinical Professor and Director: Laurie Clark, DO

Clinical Associate Professor and Director: Carrie Gilstrap, DO

Clinical Associate Professor: Jana Baker, DO; Randall S. Reust, DO

Clinical Assistant Professors: Leah Bailey, DO; Angela Farrar, DO; Janel Johnson, DO

Obstetrics and Gynecology

Erin E. Brown, DO—Clinical Assistant Professor and Interim Chair

Clinical Professor: William Po, MD

Clinical Assistant Professors: Angela Christy, DO; Carlos M. Guevara, DO; Ryan D. Gholson, MD

Osteopathic Manipulative Medicine

Robin Dyer, DO—Professor and Chair, Associate Dean for Academic Affairs

Clinical Associate Professor and Director: Mark Thai, DO

Clinical Assistant Professors: Stephen Barnes, DO; Kim Barron, DO; Julie Dionne, DO; Garren Gebhardt, DO; Janell Largent, DO; Jennifer Wilson, DO

Pathology

Anthony Alfrey, MD—Associate Professor and Chair

Professor: Joseph Price, PhD

Clinical Assistant Professor: Eric Harp, DO

Clinical Assistant Professor: William Zaloga, DO

Pediatrics

Amanda Foster, DO—Clinical Professor and Chair

Professor: Rhonda Casey, DO; Shawna Duncan, DO

Clinical Professor: Colony S. Fugate, DO

Clinical Associate Professors: Travis Campbell, DO; Jeremy Jones, DO; Heather Rector, DO

Clinical Assistant Professors: Laura Bode, DO; Binh Phung, DO

Pharmacology and Physiology

Kathleen S. Curtis, PhD—Interim Chair

Professors: Randall L. Davis, PhD; Craig Stevens, PhD; David R. Wallace, PhD

Associate Professors: Bruce Benjamiin, PhD; J. Thomas Curtis, PhD; Alexander Rouch, PhD; Kyle Simmons, PhD; Randy Wymore, PhD

Clinical Professor: Hugo Aires, PhD

Clinical Associate Professors: Dusti Sloan, PhD

Clinical Assistant Professor: Alexis Jones, PhD

Assistant Professors: Ying He, PhD

Physician Assistant

Amy Harrison, MHS, PA-C—Director, PA Program

Clinical Assistant Professors: Randy Cook, MMSc, PA-C; Jennifer Stauffer, MHS, PA-C; Rebecca Stephen, MHS, PA-C

Psychiatry and Behavioral Sciences

Jason W. Beamam, DO—Clinical Assistant Professor and Chair

Professor and CIRCA Director: Jennifer Hays Grudo, PhD

Regents Professor: Amanda Sheffield Morris, PhD

Professor: Vivian Stevens, PhD

Clinical Associate Professor and Director: Stephen J. Brasseux, MD

Clinical Associate Professor: Tessa L. Chesher, DO; Swapna Deshpande, MD; Aaron Pierce, DO

Clinical Assistant Professors: Sara M. Coffey, DO; Raymond Denny, DO; Kelly J. Dunn, MD; Alicia Ford, PhD; Brian Goetsch, PsyD; Jennifer Hale, PhD; Micah Hartwell, PhD; Tvi Jacob, PhD; Samuel Martin, MD; Anna Shawna Segraves Duncan, DO; Nancy Van Winkle, PhD
Mazur, PhD; Alina Messick, PA-C; Sara Rich, PhD; Lowell Robertson, MD; Matt Vassar, PhD

**Rural Health**
Mark Woodring, DrPH—Adjunct Professor and Assistant Dean of Rural Health
Gary L. Slick, DO—Professor and Medical Director of OMECO
Professor and Interim Associate Dean of Global Health: Rhonda Casey, DO
Professor: Valerie Blue Bird Jernigan, Director, Center for Indigenous Health, Research and Policy
Clinical Associate Professor: Denna Wheeler, PhD
Associate Professor: Randolph D. Hubach, PhD

**Surgery**
Michael Thomas, MD—Clinical Associate Professor and Chair
Brian C. Diener, DO—Professor and Vice Chair
Clinical Professor: Brent Norris, MD
Clinical Associate Professor: Hal H. Robbins, DO
Assistant Professors: Adam Bradley, DO; Nathan Roberts, DO