BIOMEDICAL COURSES

The biomedical sciences are presented as an integrated curriculum of thirteen courses over the first 19 months of medical school. Traditional discipline-based content such as biochemistry, physiology, pharmacology, and pathology are presented in a unified approach that emphasizes clinical relevance. Courses are designed around functions and organ-based systems, and guide you through normal processes as well as the pathophysiology of disease and therapeutic interventions. All course content is anchored to relevant clinical applications that include team-based learning exercises.

Biomedical science faculty include a core of dedicated full-time educators, as well as extensive experience teaching the undergraduate medical curriculum. These basic science faculty work closely with clinical faculty in the design and delivery of curriculum content. This collaboration ensures that you are exposed to the most current and relevant material that prepares you to be successful in clinical rotations and throughout your career.

Team-Based Learning (TBL)

Each TBL starts with an individual readiness assurance test (iRAT) based on weekly coursework and assigned pre-reading. Following the iRAT and working in groups of approximately six, student teams work through the same questions in a group readiness assurance test (gRAT). The team responses are reviewed with faculty to ensure that everyone understands the concepts and clinical applications. Faculty lead the groups through application exercises, integrating basic science and clinical perspectives. TBLs engage students throughout the learning process, increasing understanding and retention. You participate in 1-2 TBL sessions each week.

Didactic Sessions

There are 6-7 hours of traditional lectures each week with both basic science and clinical faculty delivering information. Video recordings of lectures are provided.

Guided Independent Learning

We use interactive eBooks to provide independent learning resources, which allows you flexibility to choose when you study, and also provides opportunities for review of the material. The eBooks include videos, diagrams, links to journal articles and electronic resources, and quizzes to check your learning progress. Each week has several independent learning resources.

Explorations

Explorations helps you to build the basic skills for continuous self-improvement and independent lifelong learning. You identify learning topics related to curricular content, develop learning objectives, search the literature for credible resources, synthesize and evaluate information, and create a learning product that responds to your objectives. There is protected time in the curriculum for you to perform directed tasks, such as participating in research or serving as a mentor to students. You identify learning topics related to curricular content, develop learning objectives, search the literature for credible resources, synthesize and evaluate information, and create a learning product that responds to your objectives. There is protected time in the curriculum for you to perform directed tasks, such as participating in research or serving as a mentor to students.

Labs

Anatomy, histology, and pathology labs are held approximately weekly for one-half day and integrate gross anatomy, microscopic anatomy, and specimen work. These labs provide a hands-on experience of the current course. Gross anatomy is taught longitudinally as you progress through the organ systems utilizing cadavers, dissection anatomy tables, student dissection, plastinated specimens, and models.

INTRODUCTORY CLINICAL EXPERIENCES (ICE)

ICE provides early and regular experiences to understand the breadth of medicine. You begin your professional identity formation as you gain comfort in clinical settings. ICE brings relevancy to the knowledge you acquire in the basic science curriculum as you integrate these experiences. You will spend one-half day every 1-2 weeks rotating through the ICE components, each of which is designed to provide exposure to medicine and the healthcare system.

ICE experiences include following a panel of patients across several months of care and interprofessional learning with a variety of medical and allied healthcare providers.

Medical First Responder (MFR)

As part of ICE, you begin MFR—a fast-paced, hands-on course where you obtain the skills and knowledge to perform basic patient assessments, manage simple medical emergencies, and provide basic cardiac life support. On the final day of the course, you and your colleagues are challenged to respond to a wide variety of simulated emergency conditions. You apply your new skills under very realistic conditions requiring effective teamwork to be successful.

PROFESSION OF MEDICINE (POM)

Principles of Medicine

Principles of Medicine covers health systems science and additional topics related to the practice of medicine. Themes include professionalism, leadership, ethics, advocacy, patient safety, health policy, healthcare law, research design, epidemiology, and more. It is a longitudinal curriculum spanning all four years of medical school.

Clinical Skills

Clinical Skills gives you the opportunity to learn and practice skills physicians use every day including communication and interpersonal skills, medical teamwork, history taking, physical examination, and simple procedures. You begin applying these skills in our virtual clinic with standardized patients and in our virtual hospital with high-fidelity patient simulators. You work closely with the coaching of Scholar-Advisors in a low-stress environment to prepare you to succeed in the real clinical environment. During the second year, you rotate in a hospital inpatient unit to hone your skills in history taking and physical examinations with actual patients. Clinical Skills is scheduled for four hours each week.

Simulation-Based Learning

Simulation-based learning begins in the very first week at WMEd. Simulation activities range from learning to perform a wide range of medical procedures, to full immersion in complex team-based clinical scenarios using high-fidelity patient simulators, to one-on-one interaction with standardized patients. This level of training is continued throughout your training at WMEd prepares you for clinical rotations and your future career.

Active Citizenship

You are part of a team working directly with an affiliated community organization whose mission is related to health, well-being, and service for residents of Kalamazoo County. This service learning fosters your understanding of social determinants of health as well as advocacy, team-based care, and population health and health literacy.

Your group may design a community project that will benefit the organization and the clients they serve. Active Citizenship is scheduled for 4-8 hours each month.

EARLY ELECTIVES

Throughout your first two years, you are able to select four one-week electives to explore your individual areas of interest. These electives range from anesthesiology to research, anatomic prosection, massage therapy, pediatrics, forensic pathology, and everything in between.

UNSCHEDULED TIME

There is time each week that is unscheduled and allows for independent and group study. Additionally, all students have free access to our onsite fitness center. A wide variety of student interest groups are also available for exploring your interests.

ADVANCES AND PERSPECTIVES IN MEDICINE

During each year of medical school, you choose events of interest to attend from a large number of events that include a diverse mix of basic science seminars, clinical seminars, humanities lectures, ethics discussions, workshops, plays, demonstrations, simulations, and conferences. You submit a brief reflection for selected events.

EXAMINATIONS

- Weekly formative exams provide individual feedback on your learning progress. Faculty are available to address questions about material, which provides an opportunity for you to better understand the concepts throughout the course.
- At the end of each course a summative exam is administered. Capstone review sessions with faculty prior to the exam assist with your preparation.
- Objective Structured Clinical Examinations (OSCEs) are held in POM. Clinical Skills to prepare you for clinical rotations and also for USMLE Step 2 CS.
- During the first two years, you have four opportunities to take the NBME Comprehensive Basic Science Examination (CBSE). You must meet the competency requirement to advance to the Year 3 curriculum. These exams help you assess your learning needs and provide guidance to prepare for successfully passing USMLE Step 1.

DECOMPRESSED CURRICULUM

Foundations of Medicine is decompressed, with a total of 14 weeks of vacation over 20 months. The decompressed curriculum is designed to provide time for vacation, electives, or remediation between courses.

TRANSITION TO MEDICAL SCHOOL

This course is a bridge between Foundations of Medicine and your core clerkships and prepares you to succeed in the clinical setting. You gain more experience using electronic health records and learn more about expectations in the clinical setting, clinical assessments, and common procedures.
# Curriculum Overview

## Year 1

<table>
<thead>
<tr>
<th>Month</th>
<th>Progress</th>
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<tbody>
<tr>
<td>August</td>
<td>Transition to Medical School</td>
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<tr>
<td>September</td>
<td>Molecular Foundations of Health and Disease</td>
</tr>
<tr>
<td>October</td>
<td>Genetic and Metabolic Disorders</td>
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<tr>
<td>November</td>
<td>Vaccination</td>
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<tr>
<td>December</td>
<td>Transition to Medical School</td>
</tr>
<tr>
<td>January</td>
<td>Hematology and Oncology</td>
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<tr>
<td>February</td>
<td>Musculoskeletal System</td>
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<tr>
<td>March</td>
<td>Nervous System</td>
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<td>April</td>
<td>Cardiovascular System</td>
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## Year 2

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<tbody>
<tr>
<td>June</td>
<td>Pulmonary System</td>
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<tr>
<td>July</td>
<td>Renal and Genitourinary Systems</td>
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<tr>
<td>August</td>
<td>Gastrointestinal System</td>
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<tr>
<td>September</td>
<td>Endocrine and Reproductive Systems</td>
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<td>October</td>
<td>Vaccination</td>
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<tr>
<td>November</td>
<td>Behavioral Medicine</td>
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<td>December</td>
<td>Transition to Clinical Applications</td>
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## Year 3

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<tr>
<td>June</td>
<td>CLERKSHIP ROTATION 2</td>
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<tr>
<td>July</td>
<td>Family and Community Medicine</td>
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<tr>
<td>August</td>
<td>CLERKSHIP ROTATION 3</td>
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<tr>
<td>September</td>
<td>Surgery</td>
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<td>CLERKSHIP ROTATION 4</td>
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<td>December</td>
<td>Pediatric and Adolescent Medicine</td>
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<td>January</td>
<td>Vaccination</td>
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<td>February</td>
<td>CLERKSHIP ROTATION 5</td>
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<td>Psychiatry and Neurology</td>
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<td>April</td>
<td>Vaccination</td>
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<td>May</td>
<td>CLERKSHIP ROTATION 6</td>
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<td>June</td>
<td>Women's Health</td>
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## Year 4

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<tbody>
<tr>
<td>May</td>
<td>Advanced Hospital-Centered Medicine</td>
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<td>June</td>
<td>Advanced Critical Care Medicine</td>
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<td>July</td>
<td>Electives</td>
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<tr>
<td>August</td>
<td>15 weeks of flexible time</td>
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<td>September</td>
<td>4 weeks of vacation</td>
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<td>October</td>
<td>20 weeks of Elective Clerkships</td>
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<td>November</td>
<td>Profession of Medicine 7</td>
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<tr>
<td>December</td>
<td>Electives</td>
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<tr>
<td>January</td>
<td>Transition to Residency</td>
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Learn more at med.wmich.edu/MD-curriculum
Clinical Applications

CORE CLINICAL
Core clerkships are traditionally considered to be one of the most clinically transformative periods in a physician’s career. Core clerkships begin in April and are organized into six 7-week blocks. Rotations occur in southwest Michigan. You have several weeks of dedicated time to study and take USMLE Step 1 after your fourth clerkship.

ADVANCED CLINICAL
Advanced clerkships continue to build your clinical skills and allow you to explore and finalize your desired area of practice. Your transition into advanced clerkships begins with ACLS certification and preparation for USMLE Step 2CS.

4-week Required Advanced Clerkships
- Advanced Emergency Medicine
- Advanced Critical Care Medicine
- Advanced Hospital Medicine

You have the opportunity during advanced clerkships to explore your specialty options with 20 weeks of electives, 14 weeks of flexible time to accommodate residency interviews, and 4 weeks of vacation. All students are in Kalamazoo in March for Match Week and a Profession of Medicine capstone focused on biomedical ethics.

TRANSITION TO RESIDENCY polishes your skills and prepares you to immediately excel as a new resident, with special emphasis in areas that directly relate to your chosen residency program.

Clinical Affiliates
You train at sites of our major affiliates, Ascension Borgess and Bronson Healthcare, with exposure to a wide range of pathology at over 190 training sites in southwest Michigan and beyond. You learn in two large hospital settings that are nationally recognized for exceptional quality of care. In past years, Ascension Borgess and Bronson Healthcare have received no less than 100 awards and recognition for quality initiatives, including the Malcolm Baldrige National Quality Award, American Stroke Association Primary Stroke Center designation, and the American Hospital Association McKesson Quest for Quality Prize. The proven commitment to quality standards translates into a level of training experience that rivals major university medical centers while providing the advantage of a community-based, diverse patient population.

Ascension Borgess consists of more than 120 sites of care as well as three hospitals in west Michigan including Ascension Borgess Hospital in Kalamazoo, Ascension Borgess Lee Hospital in Dowagiac, and Ascension Borgess-Pipp Hospital in Plainwell. In Michigan, Ascension operates 15 hospitals and hundreds of related healthcare facilities that together employ approximately 26,000 associates. As the largest non-profit health system in the U.S. and the world’s largest Catholic health system, Ascension is committed to delivering compassionate, personalized care to all, with special attention to persons living in poverty and those most vulnerable. Nationally, Ascension includes approximately 165,000 associates and 34,000 aligned providers.

Bronson Healthcare is a not-for-profit, community-governed healthcare system based in Kalamazoo. Bronson offers clinical services throughout southwest Michigan and northern Indiana. The flagship hospital, Bronson Methodist Hospital, is a 415-bed tertiary care hospital that received the Malcolm Baldrige National Quality Award in 2005 and has Magnet designation for nursing excellence. In addition to its Kalamazoo location, Bronson has three other hospital locations: Bronson Battle Creek, Bronson LakeView, and Bronson South Haven. Bronson also has many physician practices, outpatient and lifestyle improvement and research centers, home healthcare services, the Bronson Health Foundation, and Bronson Athletic Center. Bronson is one of the area’s largest employers, with a workforce of more than 9,000.

WMed clinical practices are located on the Oakland Drive Campus and on Mall Drive in Portage. There are five primary care practices and more than 20 specialty practices. WMed offers a full range of ancillary services and care for a broad range of patients, serving as the medical home for a historically underserved and underinsured patient population. WMed practices are accredited by The Joint Commission, and also certified by The Joint Commission as a Primary Care Medical Home. The primary care practices—family medicine, internal medicine, medicine-pediatrics, and pediatrics—have designations as a Patient-Centered Medical Home from both the National Committee for Quality Assurance and Blue Cross Blue Shield of Michigan.

You will also see patients as part of the Kalamazoo Family Health Center and Grace Health in Battle Creek; both are federally qualified health centers that serve historically underserved patient populations. Clinical rotations are also available at the Battle Creek VA Medical Center that serves more than 42,000 veterans in 22 counties of southwest Michigan, Oakland Hospital in Marshall, and the Kalamazoo Psychiatric Hospital.
Things You Should Know About WMed

✦ Some practice until they get it right. We use simulation training until our learners can’t get it wrong. Beginning your first week on campus and regularly throughout your four years, you will train and practice in our state-of-the-art Simulation Center that is accredited by the Society for Simulation in Healthcare, which translates into success in real clinical settings.

✦ Our curriculum is decompressed, which means that we took the long summer break between years one and two and broke it into one-week intervals that are spread throughout the first two years of medical school. These one-week breaks can be used for vacation, electives, or to catch up on required material. The early electives are designed to let you explore and include options ranging from research to pathophysiology to orthopaedic surgery to medical ethics.

✦ You will take the USMLE Step 1 in Year 3. USMLE Step 1 has changed and includes much more clinical content. We based this decision on the experience of other new medical schools and their documented success. We’ve built in preparation time in the third year to ensure that you’re ready and will succeed.

✦ There’s a group or a club for every interest you may have. You’re able to join national organizations such as the American Medical Student Association (AMSA) and Student National Medical Association (SNMA), as well as student interest groups for the area of medicine you’re passionate about—Family Medicine, Orthopaedic Surgery, Neurology, Internal Medicine—we’ve got it all! And you can join clubs to fulfill your interests outside of medicine—the arts, wellness, faith-based groups, and more. Clubs and organizations are a great way to get involved, give back, and gain valuable leadership skills.

✦ WMed is a newer school, built on a long legacy of medical education in Kalamazoo. We have more than 200 residents and fellows in ten residency programs and three fellowships—some dating back over 70 years. Kalamazoo is also home to innovative leaders in the pharmaceutical and medical device industries.

✦ You’ve got to play to win. You’ve got to be present to learn. However, we do recognize all students learn differently and that you’re an adult learner. Attendance is required for most curriculum events such as TBLs and clinical experiences. Our curriculum uses a variety of teaching methods and newer instructional technologies to enhance your learning.

✦ You’ll spend the majority of your first two years on the W.E. Upjohn M.D. Campus in our state-of-the-art facility. In 2014, we completed a $68 million renovation of five of the eight floors in our 350,000 square-foot building. In 2016, a $10 million renovation was completed of two additional floors for clinical and laboratory research. We’ve designed the building to facilitate collaboration and enrich your educational experience.

✦ Learning can happen anywhere. At WMed, we use a digital textbook platform along with iBooks to replace the traditional paper-based textbooks. After four years of medical school, you leave with annotated texts that you can take with you and access digitally wherever your career takes you.

✦ When you become a WMed student, you join the WMed Community. Our medical school class size is small, but our faculty community is large and supportive. We’re all focused on your success!