

# Medicine

As the first publicly supported medical school west of the Mississippi River, the University of Missouri School of Medicine has improved health, education and research for more than 170 years.

More Missouri physicians received their medical degree from MU than from any other university. The School of Medicine's more than 680 faculty physicians and scientists educate more than 1,000 medical students, residents, fellows and others seeking advanced degrees, as well as more than 1,000 undergraduate students each semester.

Our researchers focus on lifesaving discoveries that address the most prevalent health problems. The school is nationally ranked in such areas as family and community medicine, primary care, pharmacology and physiology, and health management and informatics.

## Undergraduate

While MU does not offer undergraduate degrees specifically in medicine, the University does offer baccalaureate opportunities in a number of related areas. The catalog provides a complete list of these degree options (<https://catalog.missouri.edu/degreesanddegreeprograms/>).

## Graduate

While MU does not offer graduate degrees specifically in medicine, the University does offer post-baccalaureate opportunities in a number of related areas. The catalog provides a complete list of these degree options (<https://catalog.missouri.edu/degreesanddegreeprograms/>).

## Professional

- MD in Medicine (<https://catalog.missouri.edu/schoolofmedicine/mmedicine/md-medicine/>)

The MD degree is achieved after a four-year course of study. Please visit the School of Medicine website for information about the admissions process: <https://medicine.missouri.edu/offices-programs/admissions> (<https://medicine.missouri.edu/offices-programs/admissions/>)

The curriculum at the University of Missouri School of Medicine emphasizes clinical reasoning, self-directed learning, collaborative learning and early clinical experiences. It integrates the basic sciences and clinical reasoning. In years 1 and 2, emphasis is placed on small group learning with some lectures. Courses are not department or discipline based.

During the third year, seven core clerkships are required in family medicine, internal medicine, neurology, obstetrics and gynecology, pediatrics, psychiatry, and surgery. It is during these core clerkships that students learn the fundamentals of good patient care, and faculty assess that students are competent upon completion of the clerkship. These clinical experiences must be under the supervision of Columbia-based School of Medicine faculty or community faculty appointed through the School of Medicine. All students may take up to three core clerkships developed and approved by School of Medicine departments through the University of Missouri School of Medicine Rural Track Clerkship program.

During the fourth year, students must successfully pass a minimum of 30 weeks of elective rotations to meet graduation requirements including two four-week advanced clinical selectives, four four-week general electives, one two-week general elective and one four-week Advanced Biomedical

Sciences course. A minimum of four courses must be taken under the supervision of Columbia-based School of Medicine faculty as follows:

Students must take one of the two required clinical selectives under the supervision of University of Missouri School of Medicine faculty or community faculty appointed through the School of Medicine. One of the required selectives must be a surgical selective, and one must be a medical selective. Certain clinical experiences, such as the Indian Health Service and designated rural community electives/selectives, are considered under the supervision of University of Missouri School of Medicine faculty and meet the requirement for one of the two clinical selectives. Many students will have completed the two-week elective requirement during the third year, coupled with the psychiatry clerkship. Students may have completed one of the four-week general elective requirements if they took the neurology clerkship during the third year.

General electives may be taken at sites approved by the department, the advisor and the Medical Education office. Students wishing to take courses at another medical school must comply with all application policies required by the host school.

All fourth-year medical students may apply to take rural electives (Bryant Scholars are required to complete one rural elective). Students wishing to take rural electives must be accepted through MU AHEC and be in good academic standing as determined by the Medical Education office.

**One School, Two Campuses:** The University of Missouri School of Medicine is comprised of two clinical campuses, Springfield and Columbia. Students will be assigned to either the Springfield clinical campus or the Columbia clinical campus for their third and fourth years. A lottery is held to determine assignments for the Springfield and Columbia clinical campuses. Preferences for location will be taken into consideration. Once the campus assignment is established, all of the clerkships will be completed on that campus. Electives and selectives may be taken on either campus and will be under the direction of University of Missouri School of Medicine faculty. Electives, selectives and advanced biomedical sciences courses at the Springfield campus are considered equal to those in Columbia. Students may participate in the Rural Track program regardless of campus assignment.

**UMSLE:** The United States Medical Licensing Examination (USMLE) (<https://www.usmle.org/>) is a three-step examination for medical licensure in the United States and is sponsored by the National Board of Medical Examiners® (NBME) (<https://www.nbme.org/>) and the Federation of State Medical Boards (FSMB) (<https://www.fsmb.org/>). The USMLE assesses a physician's ability to apply knowledge, concepts, and principles, and to demonstrate fundamental patient-centered skills that are important in health and disease and that constitute the basis of safe and effective patient care.

All medical students are required to take Step 1 at the end of the second year of medical school and must pass it prior to beginning the fourth year.

All medical students are also required to pass Step 2 Clinical Knowledge (CK) and Step 2 Clinical Skills (CS) prior to graduation.

Step 3 is typically taken after the first year of residency.

For more information about the School of Medicine, call (573) 882-9219. <https://medicine.missouri.edu/>

### **ANESTH 6057: Springfield Anesthesiology 4Wk**

The fourth-year anesthesia medical student will work as part of a team providing hands-on clinical services in an inpatient, outpatient, and consultative setting. Students will participate in daily morning conferences and mini- didactic sessions.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of 7 core clerkships, including Surgery clerkship

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**ANESTH 6203: ABS Anesthesiology Research**

ABS Anesthesiology Research

**Credit Hour:** 5-10

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**ANESTH 6205: ABS Anesthesiology Research and Review**

ABS Anesthesiology Research and Review

**Credit Hour:** 5-10

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**ANESTH 6400: Anesthesiology**

Goals/Objectives: The goals are providing students with opportunities to: 1. Understand the anesthetic state (e.g. the inability of a person to protect themselves from the environment; concomitant and common depression of other systems of the body other than the nervous system). 2. Learn how to think and react quickly and correctly in times of stress. 3. Develop knowledge and skill at maintaining artificial ventilation and circulation. 4. Develop technical skills (e.g. insertion of endotracheal tubes, intravenous catheters). 5. Understand the rationale behind the choice of an anesthetic agent or technique. 6. Learn the function of an anesthesiologist as a perioperative physician and pain consultant. 7. Learn about the specialty of anesthesiology as a possible future career. Notes: Curriculum: Direct participation in anesthetic evaluation and administration for surgical procedures is combined with close individual supervision. Attendance at weekly teaching conferences is expected. Each student will follow a patient pre, intra, and post operatively and write a case presentation. Interblock: First consideration given to students interested in anesthesia as a career choice; honors considered only with documentation of participation and completion of a research project related to anesthesia. Evaluations: Evaluations are compiled from daily encounter cards completed by anesthesia providers, a written paper that discusses one patient's anesthetic, and a 50 question written examination at the end of the rotation.

**Credit Hours:** 5

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**ANESTH 6927: Anesthesiology Two-Week**

Through daily participation, students will gain insight into the specialty of anesthesiology and will develop an appreciation for the integration of basic science knowledge (especially anatomy, physiology, and pharmacology) in the clinical care of patients.

**Credit Hours:** 2

**Prerequisites:** successful completion of the first two years of medical school

**CH\_HTH 6000: Child Health Clerkship**

Students have the opportunity to learn about common illnesses and abnormalities in children. Emphasis also is placed on the importance of preventive and developmental aspects of child care. Lectures and case presentations correlate with the clinical experiences.

**Credit Hours:** 8

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**CH\_HTH 6010: Rural Child Health Clerkship**

Rural Child Health Clerkship

**Credit Hours:** 8

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**CH\_HTH 6020: Springfield Child Health Clerkship**

Students have the opportunity to learn about common illnesses and abnormalities in children. Emphasis also is placed on the importance of preventive and developmental aspects of child care. Lectures and case presentations correlate with the clinical experiences.

**Credit Hours:** 8

**Prerequisites:** Successful completion of the first two years of medical school

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**CH\_HTH 6037: SCC Pediatric Intensive Care**

Student will learn the initial approach and daily management of children requiring care in the Pediatric Intensive Care Unit. Students will learn the evaluation of and the management of critically ill or injured children focusing on airway and pulmonary physiology, cardiac physiology, neurological diseases, traumatic injuries, acute overdoses, endocrine emergencies, basic fluid management, and the medically complex child. Pharmacologic and nutritional management of the critically ill or injured child will also be reviewed.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of the 7 core clerkships. One of the 5 must be the Child Health clerkship. CH\_HTH 6000, CH\_HTH 6010, CH\_HTH 6020, or CH\_HTH 6100

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**CH\_HTH 6043: SCC Pediatric Allergy and Immunology**

This subspecialty elective emphasizes experience in the evaluation and management of common clinical problems in allergy and immunology. The learner will assist in the diagnosis and management of asthma, rhinitis/conjunctivitis/rhinosinusitis, atopic dermatitis, contact dermatitis, urticaria, angioedema, anaphylaxis and adverse reactions to foods, drugs and stinging insects. Additional experience in immunodeficiency disorders, as well as experience in allergy skin testing, administration of allergen immunotherapy, performance and interpretation of pulmonary function tests, and performance of food challenges and/or drug challenges/desensitizations may also be provided. Outpatients will be evaluated by the student under supervision of the faculty physician. In addition, it is expected that the learner will complete recommended readings, participate in selected on-line learning activities and complete both pre-test and post-test assessments.

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**Credit Hours:** 5**Recommended:** Successful completion of the Child Health clerkship

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**CH\_HTH 6045: SCC Neonatal Intensive Care Unit Selective**

Students will gain experience in the evaluation, diagnosis, and management of sick newborns, and in the performance of specialized procedures necessary for ICU care.

**Credit Hours:** 5**Prerequisites:** Successful completion of 5 of the 7 core clerkships. One of the 5 must be Child Health clerkship

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**CH\_HTH 6055: Springfield Pediatric Endocrinology**

This rotation is primarily an outpatient experience, though the student may be asked to do inpatient consultations with the attending physician. This elective will present an in-depth experience of diabetes/endocrinology as a subspecialty, including but not limited to exposure to disorders in growth and puberty, obesity, abnormalities in thyroid function, and managing blood glucose levels in patients with type 1 diabetes. Additional teaching methods used may include mini-lectures and readings relevant to this subspecialty.

**Credit Hours:** 5**Prerequisites:** Successful completion of the first two years of medical school. Completion of M3 CH clerkship suggested but not required

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**CH\_HTH 6060: LINC Child Health Clerkship**

A Longitudinal Integrated Clerkship (LINC) includes medical students in patient care over time, allowing enduring learning relationships to develop with patients and physician-teachers. Students will meet required core clinical competencies in multiple disciplines through interleaved, longitudinal experiences over the course of the clinical training year. In contrast to a block curriculum, students meet and follow their patients across multiple settings of care and different disciplines.

**Credit Hours:** 8

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**CH\_HTH 6100: Remediation Child Health Clerkship**

Enrolled students are those who received an unsatisfactory grade in a Child Health Clerkship at any Mizzou Med location or site. This course gives them the opportunity to rectify a deficiency.

**Credit Hours:** 8**Prerequisites:** CH\_HTH 6000 Child Health Clerkship, received unsatisfactory grade

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**CH\_HTH 6109: Re-Remediation of Child Health Clerkship**

Re-Remediation of Child Health Clerkship.

**Credit Hours:** 8**Prerequisites:** First two years of medical school

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**CH\_HTH 6120: Remediation of Springfield Child Health Clerkship**

Students have the opportunity to learn about common illnesses and abnormalities in children. Emphasis also is placed on the importance of preventive and developmental aspects of child care. Lectures and case presentations correlate with the clinical experiences.

**Credit Hours:** 8**Prerequisites:** Successful completion of the first two years of medical school

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**CH\_HTH 6160: LINC Remediation Child Health Clerkship**

Remediation of the LINC Child Health Clerkship.

**Credit Hours:** 8

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**CH\_HTH 6221: Advanced Biomedical Science Medicine Problem Premature Infant**

Advanced Biomedical Science Medicine Problem Premature Infant

**Credit Hours:** 5

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**CH\_HTH 6223: ABS Child Health Research**

ABS Child Health Research

**Credit Hour:** 5-10

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**CH\_HTH 6225: ABS Child Health Research and Review**

ABS Child Health Research and Review

**Credit Hour:** 5-10

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**CH\_HTH 6425: Child Health Genetics**

**Goals/Objectives:** To develop an understanding of medical genetics, including genetic diagnosis, cytogenetics, metabolic genetic diseases, teratology, and the genetics literature, and computer databases. **CURRICULUM:** During the block, each student will see patients in consultation and in the genetics clinics (general genetics, metabolic, PKU, autism, Down Syndrome, outreach) where they will work up the patients and prepare a report and discussion of the diagnosis or diagnostic differential. Each student will also prepare a literature review around a specific patient or problem. For interested students, cytogenetics or metabolic problems are available.

**Credit Hours:** 5**Prerequisites:** Child Health clerkship

**CH\_HTH 6426: Child Health Infectious Disease**  
Child Health Infectious Disease

**Credit Hours:** 5

**CH\_HTH 6427: Pediatric Hematology/Oncology**  
Pediatric Hematology/Oncology

**Credit Hours:** 5

**CH\_HTH 6428: Pediatric Diabetes and Endocrinology**

Goals/Objectives: 1) To understand the pathophysiology of endocrine and metabolic diseases in childhood. 2) To understand the fundamentals of growth processes in infancy, childhood, and adolescence. CURRICULUM: The Department of Child Health has a large patient care and research program for children with diabetes mellitus. In addition, the Department has a busy general endocrinology program. Thus, students on the elective can participate in the care of patients with a wide spectrum of endocrine and metabolic diseases. Students can carry out specific clinical or laboratory projects relating to specific aspects of either diabetes or endocrine disease, deepen their understanding of pathophysiology of disease and gain a better understanding of the impact of a chronic disorder on the child and his/her family.

**Credit Hours:** 5

**Prerequisites:** Child Health Clerkship

**CH\_HTH 6429: Developmental Pediatrics**  
Developmental Pediatrics

**Credit Hours:** 5

**CH\_HTH 6430: Pediatric Cardiology**

Goals/Objectives: Clinical and laboratory material is available to achieve the following objectives: 1) Develop skills in auscultation, resuscitation, treatment of congestive heart failure, and recognition of congenital heart disease in infants. 2) Adequate exposure to pediatric electrocardiography, echocardiography, cineangiography, and interpretation of cardiac catheterization data. 3) Proficiency in the management of postoperative cardio-vascular patients.

**Credit Hours:** 5

**Prerequisites:** Child Health Clerkship

**CH\_HTH 6431: Pediatric Pulmonology**

Goals/Objectives: To gain experience in the treatment of asthma, bronchopulmonary dysplasia, cystic fibrosis, sleep disorders, and other respiratory diseases and to learn about pulmonary function testing in children.

**Credit Hours:** 5

**Prerequisites:** Child Health Clerkship

**CH\_HTH 6432: Pediatric Gastroenterology**

Goals/Objectives: 1) Gain experience in GI diseases of children noting the difference and similarities with adult diseases. 2) To introduce the student to some of the most commonly encountered diagnoses in pediatrics and to its management. 3) To learn to focus on physical diagnosis skills. CURRICULUM: Preceptorship with a pediatric subspecialist for four weeks will include inpatient and outpatient service activities.

**Credit Hours:** 5

**Prerequisites:** Child Health Clerkship

**CH\_HTH 6434: Child Adolescent Medicine**

Goals/Objectives: To teach 4th year students the intricacies of care of the adolescent patient. Specifically, the rotation will address the adolescent interview, important considerations in the adolescent "check-up", and managing the varied problems in adolescents, from attention deficit disorder to eating disorders and gynecological issues. The student will leave the rotation with a better understanding of the care of adolescents. CURRICULUM: These objectives will be met in the following manner: 1) Student will actively participate in adolescent medicine clinic with both clinical attendings. He/she will be responsible for the initial evaluation of the patients in the clinic, will actively participate in clinical decision-making, and will be responsible for helping with patient write-ups and referral letters (at the discretion of the attending). The student will be expected to function on an extern level, following up on laboratory evaluations and checking in with patients seen, when needed. 2) The student will participate in the adolescent interview practice sessions with the interact teen theatre with the residents on the rotation. This process will help to improve interviewing skills with adolescents. 3) The student will be responsible for helping with any inpatient care, including consultations and/or admissions. 4) The student will be asked to identify particular areas of interest to be used as topics for interactive discussion with one of the attendings or for a short paper.

**Credit Hours:** 5

**Prerequisites:** Child Health Clerkship

**CH\_HTH 6435: Ped Renal and Rheumatology**

4th year elective for renal/rheumatology rotation, four weeks.

**Credit Hours:** 5

**Prerequisites:** 3rd year Pediatrics/Child Health or Internal Medicine rotation

**CH\_HTH 6726: Child Health Rural Elective**

Students will enhance their knowledge about patient-centered care of children through active participation in a primarily outpatient clinical experience. Limited inpatient experience may be offered as well.

**Credit Hours:** 5

**Prerequisites:** CH\_HTH 6000; restricted to medical students only

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**CH\_HTH 6825: General Child Health - Inpatient**

Goals/Objectives: To provide additional experience in general pediatrics in inpatient care. CURRICULUM: The student will function as a member of the house staff team assuming many of the roles of the first year resident in patient care. This includes working up of patient's management plans, rounding, staffing, conferences, etc. Night coverage with supervision is included.

**Credit Hours:** 5

**Prerequisites:** Child Health Clerkship

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**CH\_HTH 6826: General Child Health - Outpatient**

Goals/Objectives: To provide additional experience in general pediatrics in outpatient care. CURRICULUM: The student will function as a member of the healthcare team. This includes taking histories, performing physical exams, and working up patient management plans. This may require working evening clinic and Saturday clinic in addition to regular daytime clinics.

**Credit Hours:** 5

**Prerequisites:** Child Health Clerkship

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**CH\_HTH 6827: Neonatology/Neonatal Intensive Care Unit**

Goals/Objectives: To gain experience: 1) in the evaluation, diagnosis, and management of sick newborns, and 2) in the performance of specialized procedures necessary for ICU care. CURRICULUM: The student will function as a first-year house officer, with his/her own neonatal ICU patients for initial work-up and management, under the supervision of the PL-2 or PL-3 and attending staff. (rotation at Columbia Regional Hospital)

**Credit Hours:** 5

**Prerequisites:** Child Health Clerkship

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**CH\_HTH 6828: Pediatric Intensive Care Unit**

Goals/Objectives: 1) To provide the student with the initial approach and management of children requiring care in the Pediatric Intensive Care Unit. 2) To provide the student with the basics of airway management in children. 3) To provide the student with an understanding of the preoperative assessment with preparation of pediatric patients. 4) To provide the student with an introduction to the perioperative management of common pediatric surgical problems. CURRICULUM: Students in this elective will spend time in both the Pediatric ICU and the operating rooms. They will be required to participate in daily rounds in the PICU and follow the medical/surgical patients admitted to the PICU.

**Credit Hours:** 5

**Prerequisites:** Child Health Clerkship

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**CH\_HTH 6829: Pediatric Neurology**

Pediatric Neurology

**Credit Hours:** 5

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**CH\_HTH 6830: Springfield Pediatric Neurology**

Management of common pediatric neurology issues such as: episodic/paroxysmal disorders, seizures, headaches, developmental delay, cerebral palsy, muscle disorders, etc.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of the 7 core clerkships. Three of the 5 must be Child Health clerkship, Psychiatry clerkship and Neurology clerkships

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**CH\_HTH 6912: Introduction to Adolescent Medicine**

The rotation is primarily an outpatient experience, though the student may be asked to do inpatient consultations with the attending physician on service. In addition to learning and practicing primary care of adolescent patients the elective will present an in-depth experience of adolescent medicine as a subspecialty, including, but not limited to, conditions such as eating disorders, disorders of puberty and menstruation, obesity, ADHD, and substance abuse. Additional teaching methods used include a pre-post test, lectures, and readings relevant to adolescent medicine. Completion of the Child Health Clerkship: CH\_HTH 6000 and CH\_HTH 6010.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**CH\_HTH 6913: Introduction to Pediatric Endocrinology**

The rotation is primarily an outpatient experience, though the student may be asked to do inpatient consultations with the attending physician on service. The elective will present an in-depth experience of diabetes/endocrinology as a subspecialty, including, but not limited to, exposure to disorders in growth and puberty, obesity, abnormalities in thyroid function and managing blood glucose levels in patients with type 1 diabetes. Additional teaching methods used may include lectures and readings relevant to this subspecialty.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

**Recommended:** Completion of the Child Health Clerkship (CH\_HTH 6000 or CH\_HTH 6010) is suggested but not required

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**CH\_HTH 6951: SCC Pediatric Allergy and Immunology 2 week**

This subspecialty elective emphasizes an introductory experience in the evaluation and management of common clinical problems in allergy and immunology. The learner will assist in the diagnosis and management of asthma, rhinitis/conjunctivitis/rhinosinusitis, atopic dermatitis, contact dermatitis, urticaria, angioedema, anaphylaxis and adverse

reactions to foods, drugs and stinging insects. Additional experience in immunodeficiency disorders, as well as experience in allergy skin testing, administration of allergen immunotherapy, performance and interpretation of pulmonary function tests, and performance of food challenges and/or drug challenges/desensitizations may also be provided. Outpatients will be evaluated by the student under supervision of the faculty physician. In addition, it is expected that the learner will complete recommended readings, participate in selected on-line learning activities and complete both pre-test and post-test assessments.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**CH\_HTH 6953: Springfield Neonatal Intensive Care Unit 2-Week**

The course goals are for the student to gain knowledge and experience in the evaluation, diagnosis, and management of sick newborns, and in the performance of specialized procedures necessary for ICU care. The student will demonstrate an introductory-level working understanding of these areas.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school and a core rotation in family medicine or pediatrics

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**CH\_HTH 6965: Springfield Intro to Pediatric Endocrinology**

This rotation is primarily an outpatient experience, though the student may be asked to do inpatient consultations with the attending physician. This elective will present an in-depth experience of diabetes/endocrinology as a subspecialty, including but not limited to exposure to disorders in growth and puberty, obesity, abnormalities in thyroid function, and managing blood glucose levels in patients with type 1 diabetes. Additional teaching methods used may include mini-lectures and readings relevant to this subspecialty.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school. Completion of M3 CH clerkship suggested but not required

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**DERM 6047: SCC Dermatology Elective**

The Dermatology rotation is designed to provide the medical student with a broad general base in clinical dermatology. Dermatology Clinic is an integral part of the student's experience on this rotation. Students participate in the evaluation of patients with skin disease at a community based clinic. Students may participate in the evaluation and management of patients with complex, often serious, dermatologic conditions under the supervision of the attending physician. Students may also participate in Dermatologic inpatient consultations. Students may also assist in Dermatologic procedures.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the first two years of medical school. Successful completion of the Medicine Clerkship

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**DERM 6233: ABS Dermatology Research**

ABS Dermatology Research

**Credit Hours:** 5

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**DERM 6450: Dermatology I**

The Dermatology rotation is designed to provide the medical student with a broad general base in clinical dermatology for the non-dermatologist. During the rotation the student should: Enhance the visual diagnostic skills and related reasoning used in dermatology; Become familiar with a select list of dermatologic conditions commonly seen and best treated by the non-dermatologist; Gain familiarity with certain dermatologic conditions which require a high index of suspicion by all physicians because of their danger to life or risks to public health; Become familiar with dermatologic treatment regimens for the non-dermatologist and guidelines for appropriate referral of cases; Learn appropriate use of both systemic and topical dermatologic medications; Learn basic punch, shave, and excisional biopsy techniques; Become proficient in skin surveillance, especially early detection of skin cancer. Students are evaluated using a standard evaluation. The student's knowledge of subject matter is evaluated in the following settings: informal discussion during clinics, ward rounds, inpatient consultation rounds and scheduled conferences.

**Credit Hours:** 5

**Prerequisites:** Internal Medicine Clerkship

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**DERM 6451: Dermatology Virtual Elective**

The 4th year dermatology virtual elective student will work as part of a team providing virtual clinical services by way of telehealth visits with both pediatric and general dermatology faculty in an outpatient setting. Students will participate in twice weekly virtual dermatopathology sign out with our dermatopathologists.

**Credit Hours:** 2

**Prerequisites:** successful completion of 5 of 7 core clerkships; and faculty approval prior to enrollment

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**DERM 6750: Dermatology I - Rural**

The Dermatology rotation is designed to provide the medical student with a broad general base in clinical dermatology for the non-dermatologist. During the rotation the student should: Enhance the visual diagnostic skills and related reasoning used in dermatology. Become familiar with a select list of dermatologic conditions commonly seen and best treated by the non-dermatologist. Gain familiarity with certain dermatologic conditions which require a high index of suspicion by all physicians because of their danger to life or risks to public health. Become familiar with dermatologic treatment regimens for the non-dermatologist and guidelines for appropriate referral of cases. Learn appropriate use of both systemic and topical dermatologic medications. Learn basic punch, shave, and excisional biopsy techniques. Become proficient in skin surveillance, especially early detection of skin cancer.

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**Credit Hours: 5**

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**DERM 6856: Dermatology II**

This elective rotation is an expansion of the objective goals outlined for Dermatology I. The student is expected to expand the depth and breadth of his/her dermatology experiences and knowledge. Enhance the visual diagnostic skills and related reasoning used in dermatology. Become familiar with a select list of dermatologic conditions commonly seen and best treated by the non-dermatologist. Gain familiarity with certain dermatologic conditions which require a high index of suspicion by all physicians because of their danger to life or risks to public health. Become familiar with dermatologic treatment regimens for the non-dermatologist and guidelines for appropriate referral of cases. Learn appropriate use of both systemic and topical dermatologic medications. Learn basic punch, shave, and excisional biopsy techniques. Become proficient in skin surveillance, especially early detection of skin cancer. As Dermatology II is an extension of the Dermatology I curriculum, Dermatology II students are expected to master the above objectives. In addition, they are expected to expand their clinical skills related to the diagnosis and treatment of dermatologic diseases and they will have increased responsibilities for patient education. It is expected that they will further their surgical skills including biopsies, simple excisions, and basic cryotherapy. They will also become proficient in basic laboratory procedures including KOH and scabies prep.

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**Credit Hours: 5**

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**DERM 6901: SCC Dermatology 2-week**

The two-week elective in Dermatology will allow students to participate in a wide breadth of general, pediatric, and surgical dermatology. Students will also complete the American Academy of Dermatology online student modules and the self-evaluation that is provided.

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**Credit Hours: 2**

**Prerequisites:** Successful completion of the first two years of medical school

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**DERM 6910: Clinical Dermatology Elective**

The 2 week elective in Dermatology will allow students to participate in a wide breadth of general, pediatric, and surgical dermatology. Students will participate in clinics and in weekly didactic sessions. Students will also complete the American Academy of Dermatology online student modules and the self-evaluation that is provided.

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**Credit Hours: 2**

**Prerequisites:** Successful completion of the first two years of medical school. Must have completed at least 1 core clinical rotation

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**EMR\_ME 6034: SCC Emergency Medicine Selective**

This selective is designed to offer an introductory experience in Emergency Medicine, including all levels of acuity and pre-hospital emergency care. The student will work 15-16 (~140 hours) rotating shifts in the Emergency Department. During that time, the student will

have free access to all patient care activities. The student will assist with patient evaluations and procedures under the close supervision of the Emergency attending physicians, residents, or physician assistants. Specific time will be devoted to learning basic skills needed in emergency medicine. An orientation skills lab will be provided early in the rotation to cover suturing, splinting, etc. Teaching will be primarily a one-on-one exchange with the residents and PA's/Attendings. There are night shifts in this rotation.

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**Credit Hours: 5**

**Prerequisites:** Successful completion of the first two years of medical school. Successful completion of 5 of the 7 core clerkships. Three of the 5 must be the Surgery Clerkship, Internal Medicine Clerkship, and either the Pediatrics or Family Medicine Clerkship

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**EMR\_ME 6069: LINC Emergency Medicine**

A Longitudinal Integrated Clerkship (LINC) includes medical students in patient care over time, allowing enduring learning relationships to develop with patients and physician-teachers. Students will meet required clinical competencies in multiple disciplines through interleaved, longitudinal experiences over the course of the clinical training year. In the LINC, students will participate in the care of children and adults in the outpatient clinic, hospital, operating room, emergency department, and even at home. Students will be exposed to rural medicine and the unique challenges and benefits of providing care for these populations. Students will experience the breadth and scope of practice of the core clerkship specialties and emergency medicine through the provision of care for continuity patients and immersion in team-based care in a variety of healthcare settings.

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**Credit Hours: 5**

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**EMR\_ME 6167: LINC Remediation of EM Course**

LINC Remediation of EM Course.

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**Credit Hours: 8**

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**EMR\_ME 6245: ABS Emergency Medicine Research and Review**

ABS Emergency Medicine Research and Review

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**Credit Hour: 5-10**

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**EMR\_ME 6461: Emergency Medicine-Ultrasound**

The purpose of this rotation is to provide M4 students the opportunity to understand the indications for and the physics behind Point of Care Ultrasound (POCUS) in the Emergency Department (ED). Additionally students will develop the mechanical skills necessary to obtain adequate images through real-time bedside image acquisition, as well as learn how to interpret the images and apply them to patients clinically. POCUS applications that will be of particular focus include some or all of the following: FAST, Early pregnancy, Abdominal aorta, Focused cardiac, Biliary, Renal/bladder, DVT evaluation, Lung, Soft tissue/musculoskeletal, Procedures.

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**Credit Hours: 5**

**Prerequisites:** Successful completion of Emergency Medicine course 6860 (or equivalent) and faculty approval prior to enrollment

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**EMR\_ME 6760: Emergency Medicine - Rural**

Emergency Medicine - Rural

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**Credit Hours: 5**

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**EMR\_ME 6860: EMERGENCY MEDICINE**

Emergency Medicine

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**Credit Hours: 5**

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**EMR\_ME 6861: Pediatric Emergency Medicine**

The student will work rotating shifts in the Pediatric Emergency Medicine Department of University Hospital. During that time, the student will have access to all patient-care activities. The student will assist with pediatric patient evaluations and select procedures under the close supervision of the Pediatric Emergency Medicine attending physicians and/or residents. Specific time will be devoted to learning basic skills needed in Pediatric Emergency Medicine. Teaching will be primarily a one-on-one exchange with the Pediatric Emergency Medicine attending as well as residents and PAs.

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**Credit Hours: 5**

**Prerequisites:** Successful completion of the first two years of medical school, successful completion of five of seven core clerkships (including the child health rotation), and faculty approval prior to enrollment. Add/Drop enrollment

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**EMR\_ME 6919: Introduction to Emergency Medicine**

This elective is designed to offer an introductory experience in Emergency Medicine, including all levels of acuity and pre-hospital emergency care.

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**Credit Hours: 2**

**Prerequisites:** Successful completion of the first two years of medical school

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**EMR\_ME 6920: Introduction to Pediatric Emergency Medicine**

This elective is designed to offer an introductory experience in Pediatric Emergency Medicine (PEM) including all levels of acuity and pre-hospital emergency care.

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**Credit Hours: 2**

**Prerequisites:** successful completion of the first two years of medical school

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**EMR\_ME 6943: SCC Emergency Medicine 2-week**

This elective is designed to offer an introductory experience in Emergency Medicine, including all levels of acuity and pre-hospital emergency care. The student will work rotating shifts of 10 hours each in the Emergency Department at Cox South or Mercy Hospital. During that time, the student will have access to all patient care activities. The student will assist with patient evaluations and select procedures under the close supervision of the Emergency Medicine attending physician. Specific time will be devoted to learning basic skills needed in Emergency Medicine. Teaching will be primarily a one-on-one exchange with the attending physicians.

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**Credit Hours: 2**

**Prerequisites:** Successful completion of the first two years of medical school

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**EMR\_ME 6968: Introduction to Wilderness Medicine**

The Introduction to Wilderness Medicine course will expose students to a foundation of wilderness medicine. They will learn basic principles on caring for patients in resource-limited and austere settings. Students will also gain a foundation of core wilderness medicine topics and environmental disease. Finally, they will practically apply their skills through scenarios in a simulated low-resource setting in a typical wilderness setting.

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**Credit Hours: 2**

**Prerequisites:** Successful completion of the first two years of medical school

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**F\_C\_MD 6001: Family Medicine Clerkship**

Core learning experiences take place in ambulatory clinic settings. Students work with experienced clinicians and senior residents, spending time in University teaching practices and in community-based practices. Students also may spend time seeing patients in emergency room, hospital, nursing home settings and taking call with residents and practicing physicians. A high volume of patients of all ages with a wide range of problems is encountered. Many patients will have undifferentiated problems.

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**Credit Hours: 8**

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**F\_C\_MD 6011: Rural Family Medicine Clerkship**

Rural Family Medicine Clerkship

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**Credit Hours: 8**

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**F\_C\_MD 6021: Springfield Family Medicine Clerkship**

Core learning experiences take place in ambulatory clinic settings. Students work with experienced clinicians and senior residents, spending time in University teaching practices and in community-based practices. Students also may spend time seeing patients in emergency

room, hospital, nursing home settings and taking call with residents and practicing physicians. A high volume of patients of all ages with a wide range of problems is encountered. Many patients will have undifferentiated problems.

**Credit Hours:** 8

**Prerequisites:** successful completion of the first two years of medical school

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**F\_C\_MD 6036: SCC Palliative Care Elective**

Students will learn a multidisciplinary approach to the care of the palliative care patient while working in a variety of clinical settings. This is an inpatient and outpatient experience in a variety of settings that represent different levels and types of care available to people with a terminal condition. Each week students will work with palliative care physicians at either Cox or Mercy Palliative Care Service and/or a Hospice agency. Students will have the opportunity to see patients undergoing palliative care assessment and observe nursing staff and professional therapy staff in their work with patients and families. Students will participate in various palliative care- related conferences. Students will participate in inpatient palliative care services as well as outpatient palliative care clinics. The student will work with faculty in the Departments of Family and Community Medicine as well as Internal Medicine.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of 7 core clerkships, one of which must be either Family Medicine or Internal Medicine. IN\_MED 6002, IN\_MED 6012, IN\_MED 6022, or IN\_MED 6102. F\_C\_MD 6001, F\_C\_MD 6011, F\_C\_MD 6021, or F\_C\_MD 6101

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**F\_C\_MD 6048: SCC Rural Family Medicine Selective**

The selective is designed for self-motivated students interested in rural primary care, who are willing to explore a variety of outpatient clinical and community experiences. During this block, students will primarily be working with a faculty member in an outpatient Mercy or Cox Family Medicine Clinic in Southwest Missouri. Up to a 50 mile commute from Springfield may be required. There may be opportunities to participate in the care of patients in a variety of settings including nursing home visits, home visits, and urgent care. There will be the opportunity to participate in the care of patients in all life stages (pregnancy, pediatrics, geriatrics) as well as participate in office based procedures. To gain a better understanding of community resources and needs, students will visit local agencies such as the County Health Department, WIC, Parents as Teachers, the public school system, the Chamber of Commerce, or other community resources as identified by the student and faculty. Students will also spend time with the front office, nursing, and laboratory staff to learn about practice management. During this month, students will work on a scholarly project to improve patient care and present this educational topic to the faculty and staff at the clinic.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the first two years of medical school. Successful completion of five of the seven core clerkships. One of the five must be the Family Medicine Clerkship

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**F\_C\_MD 6049: SCC Palliative Care Selective**

This is an inpatient and outpatient experience in a variety of settings that represent different levels and types of care available to people with a terminal condition. The student will be expected to function at a sub-intern level and will be expected to document advance care planning and lead discussions with patients and their families. Each week students will work with palliative care physicians at either Cox or Mercy Palliative Care Service and/or a Hospice agency. Students will have the opportunity to see patients undergoing palliative care assessment and observe nursing staff and professional therapy staff in their work with patients and families. Students will participate in various palliative care- related conferences. Students will participate in inpatient palliative care services as well as outpatient palliative care clinics. The student will work with faculty in the Departments of Family and Community Medicine as well as Internal Medicine.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the first two years of medical school as well as five of the seven core clerkship. Two of the five must be the Medicine Clerkship and Family Medicine Clerkship

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**F\_C\_MD 6051: SCC Primary Care Dermatology 4WK Elective**

Students participate in the evaluation of patients with skin disease Primary Care Outpatient clinic. Students will also complete the American Academy of Dermatology online student modules designed for a 4 week curriculum and the self-evaluation that is provided. Students will gain knowledge and demonstrate comprehension of a breadth of basic general dermatologic diseases. They will care for adults and pediatric patients as well as review supplied photographs for supplementation to develop their clinical diagnostic skills. The rotation is designed to provide the medical student with a broad general base in clinical dermatology for the non-dermatologist.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the Family Medicine clerkship. Faculty approval is required of all Springfield electives

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**F\_C\_MD 6058: FM Federally Qualified Health Center(FQHC) Clinical Experience**

This course is designed for self-motivated students interested in working in underserved (rural or urban) settings. Students will work with physicians at a Federally Qualified Health Center (FQHC) in Missouri. The primary mission of FQHCs is to enhance primary care services in underserved urban and rural communities. Coordinating with the FQHC's medical director (or designee), the student will develop a schedule of activities including items from the educational opportunities listed below. At least 50% of the student's time should be in patient care-related activities.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the first two years of medical school and the family medicine clerkship

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**F\_C\_MD 6061: LINC Family Medicine Clerkship**

A Longitudinal Integrated Clerkship (LINC) includes medical students in patient care over time, allowing enduring learning relationships to develop with patients and physician-teachers. Students will meet required core clinical competencies in multiple disciplines through interleaved, longitudinal experiences over the course of the clinical training year. In contrast to a block curriculum, students meet and follow their patients across multiple settings of care and different disciplines.

**Credit Hours:** 8

**F\_C\_MD 6101: Remediation Family Medicine Clerkship**

Enrolled students are those who received an unsatisfactory grade in a Family Medicine Clerkship at any Mizzou Med location or site. This course allows them the opportunity to rectify a deficiency.

**Credit Hours:** 8

**Prerequisites:** F\_C\_MD 6001 Family Medicine Clerkship, received unsatisfactory grade

**F\_C\_MD 6121: Remediation of Springfield Family Medicine Clerkship**

Students rotate on the obstetric service, the gynecology service and the gynecologic oncology service, seeing a broad range of patients in both inpatient and outpatient settings. In addition, they attend lectures and interactive case presentations.

**Credit Hours:** 8

**Prerequisites:** successful completion of the first two years of medical school

**F\_C\_MD 6161: LINC Remediation Family Medicine Clerkship**

Remediation of LINC Family Medicine clerkship.

**Credit Hours:** 8

**F\_C\_MD 6253: ABS Family and Community Medicine Research**

ABS Family and Community Medicine Research

**Credit Hours:** 5

**F\_C\_MD 6475: Family Medicine Elective (FP Orientation)**

This elective is for Integrated Residents in the Department of Family and Community Medicine only. Two core clinical rotations are required, including Family Medicine Clerkship. During this one year longitudinal experience, Integrated Residents will work closely with senior residents and faculty members to enhance the knowledge and skills needed to care for patients in a comprehensive family medicine continuity clinic. Integrated Residents are required to attend orientation activities during 15A. Regular attendance to Wednesday departmental Grand Rounds and Tuesday afternoon Resident Seminars is also expected.

**Credit Hours:** 5

**F\_C\_MD 6477: Family Medicine Elective Preceptorship**

May be available as a rural offsite elective: contact the MU-AHEC Coordinator. Goals/Objectives: During this elective the student works closely with a family physician in private practice. Students both observe the preceptor's patient encounters and take primary responsibility for several patients each day, discussing diagnosis and formulating management plans with supervision by the preceptor. The Preceptorship also provides opportunities not available elsewhere in the medical school curriculum, including seeing the patient's illness in its context, assessing a community's health care system, and learning about practice management. Evaluations: Evaluation of the student is based on the preceptor's evaluation and comments. Notes: Site must be pre-approved by the Course Director.

**Credit Hours:** 5

**Prerequisites:** Students should have completed at least two clinical blocks, plus the Family Practice Clerkship

**F\_C\_MD 6483: Preventive/Community Medicine**

Preventive/Community Medicine

**Credit Hours:** 5

**F\_C\_MD 6485: Geriatrics-Family and Community Medicine Elective**

Goals/Objectives: This is an outpatient experience in a variety of settings. Each week students will: 1. Work with Dr. David Cravens and other health care providers at Lenoir Village, Lenoir Manor, Lenoir Health Care and Maplewood Apartments. These all represent different levels and types of care available to elders. a. Students will develop an understanding of the available care and residential options that elders utilize. 2. Work with several geriatricians in the SAGE Clinic and/or Geriatrics Clinic at Green Meadows. a. Students will improve their understanding of care of elders in the outpatient setting. b. Students will also see patients undergoing geriatric assessment and thus develop a better understanding of the multidisciplinary approach to geriatric assessment. 3. Additional experiences may be arranged depending on the student's interests. 4. Participate in the various conferences related to geriatrics. Evaluations: Final evaluation will be determined by the attending physicians supervising the student during the block.

**Credit Hours:** 5

**Prerequisites:** Must have completed all core clerkships

**F\_C\_MD 6486: Evidence Based Medical Writing in Family Medicine**

Student will co-author a draft of an evidence-based article under the supervision of FCM faculty with evidence-based writing experience. Before writing begins, students complete an evidence-based medicine curriculum using online modules. FCM integrated residents will also participate in a departmental editorial review session.

**Credit Hours:** 5

**Prerequisites:** restricted to 4th year medical students

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**F\_C\_MD 6487: Family and Community Medicine Palliative Care Elective**

This is an inpatient and outpatient experience in a variety of settings that represent different levels and types of care available to people with terminal condition.

**Credit Hours:** 5

**Prerequisites:** F\_C\_MD 6001; restricted to 4th year medical students

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**F\_C\_MD 6488: Family Medicine Outpatient Elective**

Students will have the opportunity to work with two to four Family Medicine physicians at one of our UMHC Family Medicine clinics (South Providence Medical Building, Keene Family Medicine clinic, Smiley Family Medicine clinic, Ashland Family Medicine clinic, Callaway physicians, Fulton Family Health, or Fayette Medical clinic). Students will be paired with two to four faculty members or senior FM residents and will be responsible for seeing patients in the outpatient setting. Duties include obtaining appropriate history and performing a physical exam, medical decision making, patient education, documenting a clinic encounter, patient follow up after the visit, and reading about common acute and chronic illnesses seen in Family Medicine). If the preceptor participates in patient care in the hospital or nursing home, the student will have the opportunity to participate in hospital rounds or nursing home/hospice care.

**Credit Hours:** 5

**Prerequisites:** Successful completion of three of the seven core clerkships including Family Medicine

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**F\_C\_MD 6681: Bothwell Rural Training Track Family Medicine Selective**

During this family medicine selective, the student functions as a member of the Bothwell Family Medicine Department, responsible for providing care to Family Medicine patients in the hospital, clinic, labor and delivery, as well as the nursing home if scheduling allows. The team student will be assigned to an attending and a resident, and duties will depend on patient census and clinic volumes. A typical day will include rounding daily and the student will assume responsibility, under supervision, for the care of some patients. Rounding will include adult inpatients including ICU, obstetric, and newborn care. Anticipate having afternoon clinic many of the days. Each student will have 6-7 nights of call including weekend days. Each will be responsible for providing care, with supervision, to patients admitted while they are on call. Students may also follow their patients after discharge, seeing them in follow-up at the clinic as indicated. Students will also have exposure to ambulatory family medicine. Each student will work closely with one of the third-year residents at the Bothwell Family Medicine Clinic.

**Credit Hours:** 5

**Prerequisites:** Successful completion of five of the seven core clerkships. One of the five must be the family medicine clerkship. Approval from offsite faculty

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**F\_C\_MD 6775: Family Medicine Preceptorship - Rural**

Family Medicine Preceptorship - Rural

**Credit Hours:** 5

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**F\_C\_MD 6777: Rural Health Policy and Legislative Advocacy**

Elective content will focus on the intersection of rural medicine, health policy, and legislative advocacy. Course Goals: 1) To inform and educate students about rural health policy issues at the local, state, and national levels. 2) To train medical students to be informed advocates of rural health policy issues at the local, state, and national levels. To apply, medical students must complete the Rural Track Elective Application posted on the MU AHEC website <http://medicine.missouri.edu/ahec/rural-track-elective.html>. In the notes section of the application, the student must document a rationale for applying for this course. (Maximum length - 1 paragraph).

**Credit Hours:** 5

**Prerequisites:** M4 status. Applicants must complete either the Rural Track Summer Community Program or the Rural Track Clerkship Program prior to enrollment. Students will share first-hand experiences from rural track placement(s) with legislators to advocate for the MU Rural Track Pipeline Program and to influence rural health policy in Missouri

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**F\_C\_MD 6875: Family Medicine Onsite Externship**

Goals/Objectives: The student who is on the onsite track of the externship will be a member of the Family Practice Inpatient Team that is responsible for providing care to Family Practice patients in the hospital. The team consists of an attending, physician, two third-year residents, and two or three first-year residents. The student will be expected to function as a member of the team, attending rounds on a daily basis and assuming responsibility, under supervision, for the care of some of the patients. Each student will have 4-5 nights of call including weekend days. Students will be responsible for providing care, with supervision, to those patients admitted while they are on call. Students will also be expected to follow their patients after discharge, making home visits or nursing home visits and seeing them in follow-up at the clinic as indicated. Students will also have exposure to ambulatory family medicine. Each student will work closely in the clinic with one of the third-year residents assigned to the inpatient team. The student will attend each of the resident's clinics whether they are at Green Meadows, Fulton, or Fayette.

**Credit Hours:** 5

**Prerequisites:** Students should have completed at least two clinical blocks, plus the Family Practice Clerkship

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**F\_C\_MD 6876: Family Medicine Offsite Externship**

Several different types of experiences are available for the offsite track of the externship. Students have the opportunity to work at selected Indian Health Service sites that provide the appropriate mix of inpatient

and outpatient experiences. A list of these IHS sites and the students' evaluations are available in the course office. These offer high volume and high levels of responsibility. Planning needs to begin early in the third year. Offsite externship experiences are also available in certain community-based family practices and in certain family practice residency programs. A list of pre-approved sites is available in the course office. All of the sites available for the offsite experience have been carefully selected by the faculty based on previous experiences of fourth-year students. These sites offer an appropriate level of patient care responsibility with supervision. Offsite practices need to be approved in advance by the course director and often require planning 6 to 12 months in advance. Students considering offsite rotations will be expected to have a clear idea of how these experiences will offer unique advantages to their personal and professional development, and how they will meet the course criteria. Many offsite locations used in the past for the Family Medicine Clerkship will not satisfy the externship requirement. They still offer excellent experiences and could be taken as electives. Students on the offsite track will be evaluated with respect to their ability to collect, process, and analyze information, engage in clinical reasoning, and formulate appropriate diagnoses and treatment plans. Sites must be pre-approved by the Course director.

**Credit Hours:** 5

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**F\_C\_MD 6877: Rural Family Medicine Elective**

Rural Family Medicine Elective

**Credit Hours:** 5

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**F\_C\_MD 6878: Family Medicine Maternity Care-Advanced Selective**

Family Medicine Maternity Care-Advanced Selective

**Credit Hours:** 5

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**F\_C\_MD 6879: Palliative Care Selective**

This is an inpatient and outpatient experience in a variety of settings that represent different levels and types of care available to people with a terminal condition. Each day the student will work directly with palliative care physicians, as well as the rest of the multidisciplinary team, as part of the University Hospital Supportive and Palliative Care Service. They will also have the opportunity to work with a medical director of a local Hospice agency, who is a faculty member of the University of Missouri. Students will be expected to function as a member of the Palliative Care Team. Students will have the opportunity to actively participate in the assessment and care of patients under the direction of the Palliative Care Interdisciplinary team. Students will work alongside palliative care attending physicians, nursing staff, social workers, and pastoral care team members in their work with patients and families. Students will participate in various palliative care-related conferences including Interdisciplinary Team Meetings, didactics, patient remembrance and memorial services, self-care rounds, monthly team business meetings and the monthly Palliative Care hospital committee meeting. Additional experiences will include outpatient palliative care clinics at Ellis Fischel, bi-weekly community Hospice Interdisciplinary team meetings, patient home assessments and nursing visits with hospice staff, and completion

of an oral presentation to the Palliative Care Team as part of their assessment and evidence of mastery of course objectives.

**Credit Hours:** 5

**Prerequisites:** Fourth year medical student. Must have completed 6 of the 7 core clerkships

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**F\_C\_MD 6905: SCC Primary Care Dermatology 2-week Elective**

This curriculum is designed to introduce the student to common dermatologic issues that are encountered in a primary care practice location. Students will also complete the American Academy of Dermatology online student modules designed for a 2 week curriculum and the self-evaluation that is provided. Students will gain knowledge and demonstrate comprehension of a breadth of basic general dermatologic diseases. They will care for adults and pediatric patients as well as review supplied photographs for supplementation to develop their clinical diagnostic skills.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**F\_C\_MD 6906: Breastfeeding and Lactation Family Medicine Elective 2WK**

Students will work with breastfeeding medicine physicians, NP/IBCLCs, and RN/IBCLCs in a variety of outpatient settings, as well as complete self-study activities from a provided list of required reading.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**F\_C\_MD 6928: Primary Care Sports Medicine Elective**

Students will work with a multi-disciplinary sports medicine team, providing hands on clinical services in an outpatient setting. Participants will gain experience working with primary care sports medicine physicians, orthopedic surgeons, physical therapists and cast technicians.

**Credit Hours:** 2

**Prerequisites:** successful completion of the first two years of medical school

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**F\_C\_MD 6967: Springfield Elective FM Maternity Care 2Wk**

To increase students' knowledge and awareness of family medicine practice with a specific emphasis on continuity of care in obstetrical care. Students will integrate previously acquired knowledge and concepts and apply them to management of the family medicine patient on the family medicine obstetrics and inpatient services, and in family medicine outpatient clinic settings.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**F\_C\_MD 7310: The Health Care System**

Overview of health care system and relationship between its components. Focuses on changing nature of the system and issues confronting the future health care system.

**Credit Hours:** 3

**Prerequisites:** instructor's consent

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**F\_C\_MD 7350: Special Readings in Community Health**

Extensive reading and critical analysis of classical and current studies in selected areas of community health.

**Credit Hour:** 1-3

**Prerequisites:** instructor's consent

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**F\_C\_MD 7400: Problems in Community Health**

Intensive study of an area of community health.

**Credit Hour:** 1-3

**Prerequisites:** instructor's consent

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**F\_C\_MD 8410: Principles and Practices in Medical Education**

An examination of the past and present influences on the education of physicians, the application of adult education principles and the future approaches to medical education.

**Credit Hours:** 3

**Prerequisites:** instructor's consent

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**F\_C\_MD 8411: Learning Strategies in Preclinical & Clinical Educ. of Physicians**

Examination of curricular strategies in preclinical and clinical education of medical students and graduate medical education. Emphasis will be placed on different types of instructional strategies.

**Credit Hours:** 3

**Prerequisites:** instructor's consent

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**F\_C\_MD 8420: Principles of Epidemiology**

Examines methods of study of disease frequency and distribution in populations. Utilizes small group discussions for understanding of current medical literature.

**Credit Hours:** 3

**Prerequisites:** instructor's consent

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**F\_C\_MD 8422: Clinical Research Methods I**

Principles of designing, implementing and reviewing research in the health sciences.

**Credit Hours:** 3

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**F\_C\_MD 8423: Clinical Research Methods II**

This is a continuation of the Clinical Research Methods I (CRM\_I) introductory course on the multi-method approach to clinical research. Similar to the previous course, it covers both quantitative and qualitative research methods, but includes advanced applications.

**Credit Hours:** 3

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**F\_C\_MD 8424: Comparative Effectiveness Research**

Advanced research class that presents a framework for analyzing observational studies and randomized trials for comparative effectiveness. Graded on A-F basis only.

**Credit Hours:** 3

**Prerequisites:** Two recent semester-length courses in statistics such as NURSE 8020 or STAT 2500 or above; Working knowledge of managing and analyzing data in SPSS or SAS; Research methods; or consent of instructor

**Recommended:** One semester of epidemiology is strongly recommended

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**F\_C\_MD 8425: Participatory Approaches for Health and Health Systems**

(same as NURSE 8425). Focuses on the use of participatory approaches for the design of health and health-system interventions. Graded on A-F basis only.

**Credit Hours:** 3

**Prerequisites:** NURSE 8100 or F\_C\_MD 8420 or instructor consent

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**F\_C\_MD 8430: Applications of Evidence-Based Medicine I**

Students will participate in editing, presentation and publication of evidence-based reviews of current medical literature.

**Credit Hours:** 3

**Prerequisites:** instructor's consent

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**F\_C\_MD 8431: Applications of Evidence-Based Medicine II**

Students will participate in editing, presentation and publication of evidence-based reviews of current medical literature.

**Credit Hours:** 3

**Prerequisites:** instructor's consent

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**F\_C\_MD 8450: Research in Community Health**

Original research in community health not leading to a thesis but requiring a formal research report.

**Credit Hour:** 1-99

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**F\_C\_MD 8491: Field Experience in Family and Community Medicine**

Supervised teaching experience in the preclinical, clinical, and residency programs.

**Credit Hour:** 1-6

**Prerequisites:** instructor's consent

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**IN\_MED 6002: Medicine Clerkship**

Students spend eight weeks on the medicine inpatient service at University Hospital and Harry S. Truman Veterans Hospital where they learn to care for adult patients with acute and chronic illnesses. Teaching emphasizes the principles of differential diagnosis and problem solving as well as the integration of basic science information into the art of patient care. Students also gain clinical experience in medical interviewing and physical examination.

**Credit Hours:** 8

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**IN\_MED 6012: Rural Medicine Clerkship**

Rural Medicine Clerkship

**Credit Hours:** 8

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**IN\_MED 6022: Springfield Medicine Clerkship**

Students learn to care for adult patients with acute and chronic illnesses. Teaching emphasizes the principles of differential diagnosis and problem solving as well as the integration of basic science information into the art of patient care. Students also gain clinical experience in medical interviewing and physical examination.

**Credit Hours:** 8

**Prerequisites:** successful completion of the first two years of medical school

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**IN\_MED 6035: SCC Medical Intensive Care**

Internists and medical sub-specialists frequently encounter patients with critical conditions that require unique skills. During this rotation medicine students will: 1. Provide assessment, management and follow-up of critically ill patients under the supervision of the medical critical care attending. 2. Be intimately involved in this multidisciplinary approach to patient care. 3. Work collaborative with medical attending physicians, nurses, pharmacists, respiratory therapists and nutritional support staff.

4. Work in a coordinated fashion with consulting physicians and services, social services, physical therapy workers, and the radiology, pathology laboratory departments and chaplain services.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of 7 core clerkships, one of which must be IN\_MED 6002 or IN\_MED 6012 or IN\_MED 6022 or IN\_MED 6102

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**IN\_MED 6052: Springfield Medical Consultation**

The student will work with the Medical Consultation attending faculty. The student will be expected to participate in an interdisciplinary manner with the Rehabilitation physicians as well as the therapy services and other ancillary services caring for the patients. Internists and medical subspecialists frequently encounter patients with critical conditions that require unique skills. During this rotation medicine students will: 1. Provide assessment, management and follow-up of the medical illnesses of patients in a Rehabilitation facility under the supervision of the medical consult attending. 2. Be intimately involved in this multidisciplinary approach to patient care. 3. Work collaborative with rehabilitation attending physicians, nurses, pharmacists, therapists and other ancillary support staff.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the Medicine Clerkship and M-4 Status. M3 students can be considered on an individual basis. Springfield faculty approval needed before registration

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**IN\_MED 6056: Springfield Infectious Diseases**

The fourth-year medicine student will work as part of the infectious diseases team providing hands-on clinical services in inpatient and/or consultative settings. Students will participate in daily inpatient rounds, mini-lectures, and clinical case conferences. Students will utilize a variety of evidence-based resources and on-line modules. Infectious diseases faculty are readily available for one-on-one discussion.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of the 7 core clerkships, one of which must be Internal Medicine

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**IN\_MED 6062: LINC Internal Medicine Clerkship**

A Longitudinal Integrated Clerkship (LINC) includes medical students in patient care over time, allowing enduring learning relationships to develop with patients and physician-teachers. Students will meet required core clinical competencies in multiple disciplines through interleaved, longitudinal experiences over the course of the clinical training year. In contrast to a block curriculum, students meet and follow their patients across multiple settings of care and different disciplines.

**Credit Hours:** 8

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**IN\_MED 6102: Remediation Medicine Clerkship**

Enrolled students are those who received an unsatisfactory grade in a Medicine Clerkship at any Mizzou Med location or site. This course allows them the opportunity to rectify a deficiency.

**Credit Hours:** 8

**Prerequisites:** IN\_MED 6002 Medicine Clerkship, received unsatisfactory grade

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**IN\_MED 6122: Remediation of Springfield Internal Medicine Clerkship**

Students learn to care for adult patients with acute and chronic illnesses. Teaching emphasizes the principles of differential diagnosis and problem solving as well as the integration of basic science information into the art of patient care. Students also gain clinical experience in medical interviewing and physical examination.

**Credit Hours:** 8

**Prerequisites:** successful completion of the first two years of medical school

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**IN\_MED 6162: LINC Remediation Internal Medicine Clerkship**

Remediation of LINC Medicine Clerkship.

**Credit Hours:** 8

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**IN\_MED 6263: ABS Internal Medicine Research**

ABS Internal Medicine Research

**Credit Hour:** 5-10

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**IN\_MED 6265: ABS IN MED RSCH/REVIEW**

ABS in Medicine Research Review

**Credit Hours:** 5

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**IN\_MED 6500: Cardiology Consultation Service**

On the inpatient cardiology consultation block, the senior student gains experience in cardiology consultation at either the University Hospital or the Harry S Truman VA Hospital. Through active participation in the consult service the student is provided the opportunity to acquire knowledge of cardiovascular anatomy, physiology, cardiovascular pharmacology, prevention of cardiovascular disease, risk factors for cardiac disease, lipid disorders, chronic coronary artery disease management and its complications, cardiac arrhythmias and conduction abnormalities, hypertension, valvular heart disease, cardiomyopathy, pericardial disease, pulmonary heart disease, peripheral vascular disease, cerebral vascular disease, adult congenital heart disease, and pre- and post-operative assessment of patients with or without cardiac problems. Students will be evaluated using the standard department student elective evaluation form submitted to the Internal Medicine

Education Office. Each faculty working with the student will have the opportunity to contribute to the final grade. The final evaluation will be based on student performance on the cardiology consultation service and active participation in the cardiology conferences. Students' skills in performing a history and physical exam, the quality of their presentation, the quality of their knowledge base, the quality of their interactions will constitute the basis of grade assignment.

**Credit Hours:** 5

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**IN\_MED 6507: Endocrinology/Metabolism**

The Endocrinology rotation is designed to enable the student to deal with clinical problems in Diabetes endocrinology and metabolism with particular emphasis on the more common problems in an ambulatory setting. During the rotation the student will have the opportunity to see patients with a wide range of endocrine disorders. These patients will be used as the focus for teaching with the emphasis placed on differential diagnosis, pathophysiology, management, and how the disorder affects the patient as a whole. By the end of the rotation the student should be able to evaluate and manage (with supervision) patients with: 1. Diabetes Mellitus 2. Hypoglycemia 3. Thyroid disorders including goiters, thyroid nodules, hyperthyroidism and hypothyroidism 4. Adrenal disorders including adrenal incidentalomas, Cushing and Hyperaldosteronism 5. Pituitary problems including hypopituitarism, conditions due to pituitary hormone excess that including Cushing's disease, acromegaly and prolactinoma. 6. Calcium abnormalities including hyperparathyroidism, hypoparathyroidism, hypercalcemia, hypocalcaemia and osteoporosis. 7. Polycystic ovarian syndrome. Evaluations: The course grade will be based on students' skill in performing a history and physical exam, the quality of the presentation, the quality of their knowledge base and the quality of their interactions.

**Credit Hours:** 5

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**IN\_MED 6508: General Internal Medicine Outpatient**

General Internal Medicine Outpatient

**Credit Hours:** 5

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**IN\_MED 6513: Infectious Diseases**

The goals of the Infectious Diseases elective will be to: 1. Teach the student how to be an effective consultant. 2. Assist the student in his/her knowledge of disease processes. 3. Help the student improve his/her history taking and physical examination skills. 4. Enhance the student's knowledge regarding the use of antimicrobial agents. 5. Improve the student's understanding of the diagnosis and management of commonly-encountered infectious diseases with attention to the use of the history and readily available laboratory tests..

**Credit Hours:** 5

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**IN\_MED 6515: Problems in Medical Ethics**

Problems in Medical Ethics

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**Credit Hours:** 5

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**IN\_MED 6518: Springfield Cardiovascular Medicine Service**

The cardiovascular medicine service is designed to allow students to have exposure to an overview in the diagnosis and management of hospitalized patients with cardiac disease processes, encompassing coronary artery disease, structural heart disease, and electrophysiology.

**Credit Hours:** 5**Prerequisites:** Successful completion of IM clerkship

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**IN\_MED 6800: Coronary Care Unit**

During the Coronary Intensive Care Unit rotation, the medical student is provided the opportunity to acquire knowledge in the evaluation and management of acute and chronic coronary artery disease, life threatening cardiac arrhythmia's, acute severe congestive heart failure, acute valvular disease, acute infective endocarditis, hypertensive emergencies, cardiac tamponade, aortic dissection, aortic pulmonary embolism, life threatening complications of cardiac therapy, hypotension, and shock. The Coronary Intensive Care rotation allows the student to evaluate and treat these patients in close conjunction with medical residents, cardiology fellows and cardiology faculty. Students will be evaluated using the standard Department student elective evaluation form submitted to the Internal Medicine Education Office. Each faculty working with the student will have the opportunity to contribute to the final grade. The final evaluation will be based on student performance on the cardiology consultation service and active participation in the cardiology conferences. Students' skills in performing a history and physical exam, the quality of their presentation, the quality of their knowledge base, the quality of their interactions will constitute the basis of grade assignment.

**Credit Hours:** 5

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**IN\_MED 6801: Diabetes Mellitus Externship**

Diabetes Mellitus Externship

**Credit Hours:** 5

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**IN\_MED 6802: Gastroenterology**

Medical students will be assigned to the inpatient GI consultation service, where they will see and evaluate patients, read about their problems, and present them to the GI fellow and/or teaching attending. They should attend all endoscopic procedures on the patients they follow on the inpatient service. They should also attend a sampling of outpatient procedures each week in the Endoscopy Center. As time permits, they may be assigned to one or more GI clinics during the rotation as well. Medical students will be expected to attend all GI conferences during the rotation. Students are also encouraged to attend Internal Medicine Grand Rounds and Internal Medicine Morning Report. They may also be assigned to give one formal presentation during their rotation. It is recommended that they read the entire GI-Liver section of the Internal Medicine textbook that they used on their third-year Internal Medicine

Clerkship. Ongoing feedback is provided to the student during the rotation. At the end of the rotation, a formal written evaluation will be prepared by the inpatient attending, in conjunction with the GI fellow with whom the resident/medical student worked with. Conference participation is factored in.

**Credit Hours:** 5

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**IN\_MED 6803: Subinternship in Internal Medicine**

The internal medicine subinternship builds on the skills begun during the internal medicine clerkship and prepares the student for the internship year. 1. Students will refine and further develop skills in: a. Physical exam, history taking, chart review, and written notes; b. Problem list development and management plan; data interpretation and synthesis; c. Oral presentation; d. Interpersonal relations with patients, families, staff and peers ; e. Time management i. Self-directed learning ii. Evidence-based medicine 2. Expand knowledge base in general internal medicine 3. Assume primary responsibility for inpatient care 4. Further develop in the role of primary care giver Patient management skills, medical record keeping, presentation skills, knowledge base, and ability to handle responsibility will be carefully observed by both the senior ward resident and the attending physician. Students will receive constructive feedback/suggestions for improvement throughout the rotation from both the attending and the senior ward resident. The attending, with input from the senior ward resident and the third year students, will report the final scores using the Department of Internal Medicine standard electives evaluation form. Students will meet with the attending physician at the end of the block to discuss their performance. Students will not receive elective credit for three weeks rotations.

**Credit Hours:** 5

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**IN\_MED 6805: Hematology and Medical Oncology Chronic Care**

The specific objective of the course is to assist the student in developing a greater understanding for the care of chronically ill patients with hematologic and neoplastic diseases. The student's evaluation is based predominantly on his/her performance in presentation and in written chart notes of patients under the student's care. This evaluation will be by the attending physician with whom the student has worked. The standard department student elective evaluation form will be used to document student performance.

**Credit Hours:** 5

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**IN\_MED 6806: Immunology/Rheumatology**

The overall curricular objectives of this elective include: 1. Basic Information. The student should be able to: a. Perform a medical history and screening physical examination with attention to symptoms and signs of rheumatic disease. Understand the basic pathophysiology and clinical diagnosis of common arthritic and musculoskeletal diseases in adults. b. Understand the natural history of rheumatic diseases, particularly rheumatoid arthritis, soft tissue rheumatism, degenerative joint disease, systemic lupus erythematosus and spondyloarthropathies. c. Understand the short and long term management of rheumatic conditions and apply these principles together with overall clinical judgment in the

management of individual patients. These therapeutic measures include: 1. drug therapy, 2. physical rehabilitative measures, and 3. surgical intervention. d. Learn the uses and pitfalls of laboratory tests in practice. e. Formulate ways to approach the emotional problems of patients with chronic disease. f. Understand the value of the comprehensive approach in arthritis treatment including patient education, the role of the allied health professional and community resources.

**Credit Hours:** 5

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**IN\_MED 6807: Medical Intensive Care**

Under the supervision of the medical critical care attending, the medical students are part of a team providing assessment, management, and follow-up of critically ill patients. Students will be intimately involved in this multidisciplinary approach to patient care. As a member of the ICU patient management team, the student will work collaboratively with residents, fellows, medical attendings, nurses, pharmacists, respiratory therapists and the nutritional support staff. The team will work in a coordinated fashion with consulting physicians and services, social services, physical therapy workers, and the radiology and pathology laboratory departments, and chaplain services.

**Credit Hours:** 5

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**IN\_MED 6808: Nephrology Advanced Elective**

This elective builds on the knowledge and skills students have acquired in the third year course in Internal Medicine. Students will have the opportunity to perform histories and physicals, participate in the decision-making process of patient management, and be responsible for daily follow-up in patients with fluid and electrolyte problems, acid-base disturbances, acute and chronic renal failure and a variety of renal diseases. The focus in these areas will be at a much higher level of responsibility and management than in the third-year course.

**Credit Hours:** 5

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**IN\_MED 6809: Pulmonary Medicine Diagnostic Services**

The Pulmonary Medicine Service is designed to allow students to participate in the diagnosis and care of hospitalized patients with an acute pulmonary problem as well as continuity follow up of existing known disease processes. This service evaluates and assists in management of adult patients at the University or VA Medical Centers. Either rotation includes intensive care unit patients with primary surgical or cardiac diagnoses, the rotation at the VA Medical Center also includes intensive care unit patients with primary medical diagnoses. The rotation will introduce the student to major clinical entities including the diagnosis and management of infectious lung disorders, neoplasms of the lungs, chronic obstructive pulmonary disease, asthma, acute respiratory failure, occupational pulmonary disease and interstitial lung disorders. The student will be introduced to the variety of diagnostic tests including radiographic studies, fiberoptic bronchoscopy, pulmonary function testing, cardiopulmonary exercise testing, surgical lung biopsy, thoracentesis and pleural biopsy, and arterial blood sampling. Students also participate in consultation on patients requiring outpatient pulmonary clinic evaluation. Each student is encouraged to spend extra time in the pulmonary

function lab, and have pulmonary function tests and cardiopulmonary exercise tests done on themselves, depending on available time. Each student rotating through the pulmonary service will be expected to evaluate and present patients fully on a daily basis to the pulmonary consult team, including the attending physician. The student will have an opportunity to assist fellows and faculty with procedures such as bronchoscopy and thoracentesis. Students will have the opportunity to interpret pulmonary function tests, chest radiographs and other radiographic studies such as computed tomography and nuclear medicine studies of the thorax.

**Credit Hours:** 5

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**IN\_MED 6812: Springfield General Internal Medicine Outpatient**

The fourth-year student on general medicine outpatient rotation will work with a general medicine attending seeing patients in a general medicine outpatient clinic. Students will see patients in clinic, perform the H&P, and develop an assessment and plan for these patients on their own. They will then discuss with the general internal medicine physician and see the patient together. The student will develop quality improvement tools during the block as well, through mini QI discussions with faculty. The student will be expected to write one to two clinic notes per session to improve their documentation skills.

**Credit Hours:** 5

**Prerequisites:** Successful completion of Medicine clerkship. M4 status

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**IN\_MED 6813: Springfield Cardiology Consult Service 4-week**

Students will be provided the opportunity to enhance their knowledge of CV anatomy, CV physiology, and CV pharmacology. In addition, students will gain knowledge and experience in the evaluation and management of CV disease including acute and chronic coronary artery disease, cardiomyopathies, valvular heart disease, pericardial disease, adult congenital heart disease, hypertension and hypertensive cardiovascular disease, cardiac arrhythmias and conduction disturbances, pulmonary heart disease, peripheral vascular disease, heart failure, hypotension, and shock. Students will develop skills to evaluate patients with a variety of CV symptoms including chest pain, dyspnea, palpitations, syncope and pre-syncope, edema, and palpitations. Students will also learn how to provide pre-operative CV consultation and perioperative CV management. These skills will enhance their ability to evaluate and manage patients with CV disease regardless of their eventual clinical specialty.

**Credit Hours:** 5

**Prerequisites:** Successful completion of IM clerkship

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**IN\_MED 6902: SCC Cardiac Electrophysiology Two Week**

The student will work as part of a team providing hands-on clinical services in both the inpatient and outpatient settings in a consultative manner. Students will learn using a variety of evidence-based resources, didactic teaching, demonstration, and observation. This is intended as an introductory experience in the specialty of Cardiac Electrophysiology.

**Credit Hours:** 2**Prerequisites:** Completion of the first two years of medical school

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**IN\_MED 6904: SCC Hematology/Oncology Two Week**

This is intended as an introductory experience in the specialty of Hematology/Oncology. Students will learn how to integrate previously acquired knowledge and concepts as well as develop a greater understanding for the care of patients with hematologic and neoplastic disease. The student will work as part of a team providing hands-on clinical services in an inpatient, clinic, and consultative setting. Students will learn using a variety of evidence-based resources, didactic teaching, demonstration and observation.

**Credit Hours:** 2**Prerequisites:** Successful completion of the first two years of medical school

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**IN\_MED 6911: Cardiology Procedure Service**

The Cardiology Procedure Service is designed to allow students to participate in the cardiology procedures involved in the diagnosis and care of hospitalized patients with an acute cardiac problem as well as continuity follow up of existing known disease processes. Sterile technique will be taught by the attending and students will demonstrate competence with sterile technique.

**Credit Hours:** 2**Prerequisites:** Successful completion of the first two years of medical school

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**IN\_MED 6914: Pulmonary Medicine Procedure Service**

The Pulmonary Medicine Procedure Service is designed to allow students to participate in the pulmonary procedures involved in the diagnosis and care of hospitalized patients with an acute pulmonary problem as well as continuity follow up of existing known disease processes. Sterile technique will be taught by the attending and students will demonstrate competence with sterile technique.

**Credit Hours:** 2**Prerequisites:** Successful completion of the first two years of medical school

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**MED\_ID 5041: Structure and Function of the Human Body I**

Biochemical principles, cell biology, human development, histology and gross anatomy with clinical correlates utilizing patient examples and non-invasive techniques.

**Credit Hours:** 6

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**MED\_ID 5042: Interviewing**

Development of skills needed to obtain a history of the patient's present illness, past medical history and other pertinent background information.

Vitally important to medical practice, these skills are role modeled, practiced and evaluate with detailed feedback. Additional emphasis is placed on the doctor-patient relationship, ethics and the role of the physician as a therapeutic agent.

**Credit Hours:** 3

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**MED\_ID 5043: Structure and Function of the Human Body II**

Study of the structure and function of the body's metabolic, nervous and muscular systems.

**Credit Hours:** 6

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**MED\_ID 5044: Physical Examination**

Introduction to the doctor-patient relationship and systematic physical examination of the patient. Certification in basic life support is also included.

**Credit Hours:** 3

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**MED\_ID 5045: Structure and Function of the Human Body III**

Study of the structure and function of the body's cardiovascular, gastrointestinal, and urinary systems.

**Credit Hours:** 6

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**MED\_ID 5046: Psychosocial Aspects of Medicine**

A brief study of the history of medicine and the impact of key events on current medical practice. Study of the biopsychosocial model, biomedical ethics and specific psychosocial problems encountered by physicians such as compliance, problems based in human sexuality, substance abuse and death and dying.

**Credit Hours:** 3

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**MED\_ID 5047: Structure and Functions of the Human Body IV**

Study of the structure and function of the endocrine, reproductive, vascular systems. The classification of pathogenic and non-pathogenic organisms, mechanisms of infection, the immune response and the interaction between pharmacologic agents and exogenous organisms.

**Credit Hours:** 6

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**MED\_ID 5048: Clinical Epidemiology and Preventive Medicine**

Application of clinical epidemiology to understanding measurement of population characteristics and to the critical analysis of the literature through analysis of study designs and interpretation of the results and causal relationships. Study of prevention, screening and health maintenance as important aspects of health care.

**Credit Hours:** 3

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**MED\_ID 5051: Ambulatory Clinical Experience I**

Ambulatory Clinical Experience I

**Credit Hour:** 1

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**MED\_ID 5052: Ambulatory Clinical Experience II**

Ambulatory Clinical Experience II

**Credit Hour:** 1

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**MED\_ID 5180: FULL-TIME ENROLLMENT FOR POST-SOPHOMORE FELLOWS**

Full-Time enrollment for Post-Sophomore Fellows.

**Credit Hours:** 18

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**MED\_ID 5205: Individualized Study**

Individualized Study

**Credit Hour:** 1-5

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**MED\_ID 5207: Summer Clinical Practicum Internal Medicine**

Summer Clinical Practicum Internal Medicine. 4 week course. Zero credit hours, 4 FA hours.

**Credit Hours:** 0

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**MED\_ID 5213: Leadership Practicum**

Leadership Practicum

**Credit Hours:** 0

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**MED\_ID 5215: Summer Clinical Practicum - Medical Education**

Summer Clinical Practicum - Medical Education- Zero billing hours and 4 FA hours

**Credit Hours:** 0

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**MED\_ID 5217: Summer Clinical Practicum - Rural Track**

This represents non-credit clinical and research experiences that medical students may take during the summer following their first (M1) year of medical school. 8 weeks. Zero Credit.

**Credit Hours:** 0

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**MED\_ID 5341: Structure/Function Human Body I - Remediation**

Structure/Function Human Body I - Remediation

**Credit Hours:** 6

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**MED\_ID 5342: Interviewing - Remediation**

Interviewing - Remediation

**Credit Hours:** 3

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**MED\_ID 5343: Structure/Function Human Body II - Remediation**

Structure/Function Human Body II - Remediation

**Credit Hours:** 6

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**MED\_ID 5344: Physical Exam - Remediation**

Physical Exam - Remediation

**Credit Hours:** 3

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**MED\_ID 5345: Structure/Function Human Body III**

Structure/Function Human Body III

**Credit Hours:** 6

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**MED\_ID 5346: Psychosocial Aspects Med - Remediation**

Psychosocial Aspects Med - Remediation

**Credit Hours:** 3

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**MED\_ID 5347: Structure/Function Human Body IV - Remediation**

Structure/Function Human Body IV - Remediation

**Credit Hours:** 6

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**MED\_ID 5348: Clinical Epidemiology and Preventive Medicine - Remediation**

Clinical Epidemiology and Preventive Medicine - Remediation

**Credit Hours:** 3

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**MED\_ID 5551: Pathophysiology I**

Pathophysiologic mechanisms of cell injury, inflammation and repair, hemodynamic disturbances, genetic disorders, autoimmune response, immune deficiency and hypersensitivity reactions.

**Credit Hours:** 6

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**MED\_ID 5552: Diagnostic Tests and Medical Decisions**

Assessment of the appropriate use and interpretation of common diagnostic tests and their contribution to medical decisions and the care of patients. Includes emphasis on the review of systems, interactive hypothesis testing, differential diagnosis probability, sensitivity and specificity, and cost benefit and cost effectiveness analysis.

**Credit Hours:** 3

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**MED\_ID 5553: Pathophysiology II**

Pathophysiologic mechanisms of cardiovascular disease, diseases of the respiratory system, disorders of the blood, and nutritional diseases.

**Credit Hours:** 6

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**MED\_ID 5554: Psychopathology and Behavioral Medicine**

Presentation and discussion of the U.S. health care system and health care reform, financing and resource allocation, and the impact of change on individuals, communities, employers and the government. Included are analyses of the ethical and legal implications of health care and health care reform.

**Credit Hours:** 3

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**MED\_ID 5555: Pathophysiology III**

Pathophysiologic mechanisms of the digestive, endocrine and urogenital systems.

**Credit Hours:** 6

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**MED\_ID 5556: Clinical Practicum**

A continuation of Block 6 objectives and a clinical practicum and review comprise this block.

**Credit Hours:** 3

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**MED\_ID 5557: Pathophysiology IV**

Pathophysiology of infectious diseases, reproductive disorders, musculoskeletal and soft tissues diseases, diseases affecting the nervous system and skin diseases.

**Credit Hours:** 6

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**MED\_ID 5558: Physician as a Person**

Exploration of the physician as a person, the balance between professional and personal demands, family life, membership in a community, the stresses and rewards of the medical profession, professional ethics and the doctor-patient relationship. A four week clinical review completes this block.

**Credit Hours:** 3

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**MED\_ID 5561: Advanced Physical Diagnosis I**

Advanced Physical Diagnosis I

**Credit Hour:** 1

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**MED\_ID 5570: Advanced Clinical Skill Practicum**

This course is designed for MD/PhD students and other medical students away on research or post-sophomore fellowship leave. Approval to enroll must be obtained from the Director of the MD/PhD program or the Faculty Director of Clinical curriculum. Graded on S/U basis only.

**Credit Hours:** 0

**Prerequisites:** Advanced Physical Diagnosis; must have satisfactorily completed the second year of medical school

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**MED\_ID 5751: Pathophysiology I - Remediation**

Pathophysiology I - Remediation

**Credit Hours:** 6

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**MED\_ID 5752: Diagnosis Test/Med Decision - Remediation**

Diagnosis Test/Med Decision - Remediation

**Credit Hours:** 3

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**MED\_ID 5753: Pathophysiology II - Remediation**

Pathophysiology II - Remediation

**Credit Hours:** 6

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**MED\_ID 5755: Pathophysiology III - Remediation**

Pathophysiology III - Remediation

**Credit Hours:** 6

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**MED\_ID 5756: Clinical Practicum - Remediation**  
Clinical Practicum - Remediation**Credit Hours:** 3

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**MED\_ID 5757: Pathophysiology IV - Remediation**  
Pathophysiology IV - Remediation**Credit Hours:** 6

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**MED\_ID 5758: Physician as a Person - Remediation**  
Physician as a Person - Remediation**Credit Hours:** 3

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**MED\_ID 5850: Contemplating Medicine, Patients, Self and Society**

The purpose of the longitudinal COMPASS course is to foster the development of patient-centered physicians in relation to patients, self and society. This is accomplished through an innovative longitudinal small group experience using a variety of learning methods including group discussion, reflective writing, storytelling, reading and case problem solving. The small group membership includes students from each of the 4 medical school classes and 2 faculty Guides. Curricular themes and small group session titles for the 4 year course recur on a two year cycle. The content and focus of each session is unique. Students in the first, second and third years of medical school will receive a final course grade (satisfactory or unsatisfactory) at the end of their M4 year. The final course grade will reflect the student's performance in the small group sessions and performance on the capstone assignment.

**Credit Hour:** 1-5

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**MED\_ID 5851: Contemplating Medicine, Patients, Self and Society-1**

The purpose of the longitudinal COMPASS course is to foster the development of patient-centered physicians in relation to patients, self and society. This is accomplished through an innovative longitudinal small group experience using a variety of learning methods including group discussion, reflective writing, storytelling, reading and case problem solving. The small group membership includes students from each of the 4 medical school classes and 2 faculty Guides. Curricular themes and small group session titles for the 4 year course recur on a two year cycle. The content and focus of each session is unique. Students in the first, second and third years of medical school will receive a final course grade (satisfactory or unsatisfactory) at the end of their M4 year. The final course grade will reflect the student's performance in the small group sessions and performance on the capstone assignment.

**Credit Hour:** 1

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**MED\_ID 5852: Contemplating Medicine, Patients, Self and Society-II**

The purpose of the longitudinal COMPASS course is to foster the development of patient-centered physicians in relation to patients, self and society. This is accomplished through an innovative longitudinal small group experience using a variety of learning methods including group discussion, reflective writing, storytelling, reading and case problem solving. The small group membership includes students from each of the 4 medical school classes and 2 faculty Guides. Curricular themes and small group session titles for the 4 year course recur on a two year cycle. The content and focus of each session is unique. Students in the first, second and third years of medical school will receive a final course grade (satisfactory or unsatisfactory) at the end of their M4 year. The final course grade will reflect the student's performance in the small group sessions and performance on the capstone assignment.

**Credit Hour:** 1

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**MED\_ID 5950: Remediation of MED\_ID 5850**

Medical Students who receive an unsatisfactory grade in MED\_ID 5850 Contemplating Medicine, Patients, Self and Society will enroll for this course in order to remediate their grade.

**Credit Hour:** 1-5

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**MED\_ID 6030: SCC Advanced Biomedical Sciences Elective**

Students will work under the supervision of an MU faculty member at MU's Springfield Clinical Campus in a pre-approved learning experience. Activities that fulfill this requirement may include, but are not limited to: Anatomy dissection at Missouri State University (MSU), research project at a Springfield based clinical location or lab (Cox, Mercy, MSU), PBL case writing, and cross cultural medicine (global health study abroad). ABS elective content and requirements will be similar to those offered at MU's Columbia Clinical Campus.

**Credit Hours:** 5

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**MED\_ID 6031: SCC Advanced Clinical Selective**

Students will work under the supervision of a faculty preceptor at the Springfield Clinical Campus. Students will see patients in the outpatient clinic and/or inpatient hospital setting, perform a history and exam, and develop a patient-centered assessment and plan. They will then discuss their findings, assessment and plan with the faculty preceptor and go see the patient together. The student will complete oral patient presentations and document patient encounters in the medical record as directed by the faculty preceptor. Students will enhance their knowledge, skills, and attitudes about patient-centered care through active participation in direct patient care activities while under the supervision of a faculty preceptor. Students will integrate previously acquired knowledge and concepts and apply them to the care and management of patients.

**Credit Hours:** 5

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**MED\_ID 6032: SCC General Elective**

Students will work under the supervision of a faculty preceptor at the Springfield Clinical Campus. Students will see patients in the outpatient clinic and/or inpatient hospital setting, perform a history and exam, and develop a patient-centered assessment and plan. They will then discuss their findings, assessment and plan with the faculty preceptor and go see the patient together. The student will complete oral patient presentations and document patient encounters in the medical record as directed by the faculty preceptor. Students will enhance their knowledge, skills, and attitudes about patient-centered care through active participation in direct patient care activities while under the supervision of a faculty preceptor. Students will integrate previously acquired knowledge and concepts and apply them to the care and management of patients.

**Credit Hours:** 5

**MED\_ID 6067: LINC Community Integration**

A Longitudinal Integrated Clerkship (LINC) includes medical students in patient care over time, allowing enduring learning relationships to develop with patients and physician-teachers. Students will meet required core clinical competencies in multiple disciplines through interleaved, longitudinal experiences over the course of the clinical training year. In contrast to a block curriculum, students meet and follow their patients across multiple settings of care and different disciplines.

**Credit Hour:** 1

**MED\_ID 6068: LINC Integrate Clerkship Placeholder Course**

A Longitudinal Integrated Clerkship (LINC) includes medical students in patient care over time, allowing enduring learning relationships to develop with patients and physician-teachers. Students will meet required core clinical competencies in multiple disciplines through interleaved, longitudinal experiences over the course of the clinical training year. In contrast to a block curriculum, students meet and follow their patients across multiple settings of care and different disciplines.

**Credit Hours:** 10

**MED\_ID 6244: ABS Quality Improvement and Patient Safety Elective**

The 4th year student will work with leaders in the Office of Clinical Effectiveness to identify an improvement project to be conducted during the elective. Students will have self-paced readings/didactic expectations, and will be expected to review and report on medical literature relevant to the care process(es) targeted for improvement. To complete their project, the student will present the improvement work to patient safety and quality improvement leaders, as well as stakeholders in the care process(es) identified for improvement efforts.

**Credit Hours:** 5

**MED\_ID 6340: ABS Veteran's Clinic Elective**

This is a longitudinal elective that may be taken either during the fall semester (August through December) or the spring semester (January

through May). The student will partner with named physician faculty and second-year law students under the supervision of law school faculty to work on the cases of military veterans who are appealing their VA medical benefits. Common issues that arise in these appeals are missed diagnoses; new evidence linking a military environmental or combat exposure to one or more disease processes; and late exacerbation of conditions with obvious or probable onset during the veteran's military service. After a review of the medical literature and with guidance from the physician faculty, the student will advise the law students and law school faculty regarding the significance of medical conditions, their linkage to military service, and their anticipated severity, natural history, and impact on quality of life and longevity. Frequently, appeals involve scholarly review of current medical literature. Occasionally, student literature review may result in a successful appeal not only benefiting the veteran, but also influencing the evolution of VA benefits policy and the benefits awarded future veterans. There will be adequate independent study and reflection time and many meetings with medical and law faculty and law students facilitated by Microsoft Teams and Zoom platforms. Students are expected to complete and report a minimum of 20 hours of case work and complete a project or presentation to receive credit for this elective. Approved projects/presentations will be defined at the beginning of the rotation and may include: a presentation for law school students on a medical topic assigned by faculty, a research project identified by faculty, and/or writing a Nexus letter.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of 7 core clerkships. Faculty approval prior to enrollment

**MED\_ID 6390: ABS Individualized Study in Medicine-M1**

**Goals/Objectives:** Participate in PBL as a tutor under the guidance of an experienced faculty tutor. Review the literature appropriate to each case. Update one PBL case that is used in the course of the block OR update a problem solving exam OR write a new problem solving exam. Students must submit the case or exam electronically to the course coordinator. **Evaluation:** Student's performance as tutor will be evaluated by the supervising faculty member and the tutor group members. **Notes:** During a four-week block, the fourth year student will tutor an M-1 PBL group (Monday, Wednesday, & Friday mornings) under the supervision of a senior faculty member. Contact course coordinator for case update details. Submission date for case update is set two weeks after the tutoring session ends. The student will attend all tutor preparation meetings and prepare for PBL through reading, self-directed study and discussions with faculty. Complete student mid-block and end-of-block evaluation as directed.

**Credit Hours:** 5

**Prerequisites:** M4s registering for PBL tutoring must be in good standing and not on probation. M4s must not have come before the CSP for an automatic vote for dismissal

**MED\_ID 6391: ABS Individualized Study in Medicine-M2**

ABS Individualized Study in Medicine-M2

**Credit Hours:** 5

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**MED\_ID 6393: ABS Interdisciplinary Research**

ABS Interdisciplinary Research

**Credit Hour:** 5-10

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**MED\_ID 6394: ABS Cross-Cultural Medicine**

ABS Cross-Cultural Medicine

**Credit Hours:** 5

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**MED\_ID 6396: ABS Medical Practice Organization**

ABS Medical Practice Organization

**Credit Hour:** 5-10

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**MED\_ID 6397: ABS Academic Tutoring for M1/M2 Students**

ABS Academic Tutoring for M1/M2 Students

**Credit Hours:** 5

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**MED\_ID 6398: ABS County Public Health**

ABS County Public Health

**Credit Hours:** 5

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**MED\_ID 6399: ABS Case Writing**

ABS Case Writing

**Credit Hours:** 5

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**MED\_ID 6690: Elective Individual Study in Medicine - M1**

Elective Individual Study in Medicine - M1

**Credit Hours:** 5

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**MED\_ID 6691: Elective Individual Study in Medicine - M2**

Goals/Objectives: Participate in PBL as a tutor under the guidance of an experienced faculty tutor. Evaluations: the student's performance as tutor will be evaluated by the supervising faculty member and the tutor group members. Notes: During the four-week block, the fourth year student will tutor a M-2 PBL group (Tuesday and Thursday afternoons) under the supervision of a senior faculty member.

**Credit Hours:** 5

**Prerequisites:** M4s registering for PBL tutoring must be in good standing and not on probation. M4s must not have come before the CSP for an automatic vote for dismissal

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**MED\_ID 6692: Case/Exam Writing Elective**

The fourth year medical student will work as part of a team in order to develop learning materials for the first and second year students. Students will work closely with faculty advisors and clinical mentors to develop educationally sound learning materials. Under the guidance of faculty preceptors, medical students will author one original PBL case including a comprehensive tutor guide and multiple choice examination questions covering the case objectives, AND one original Clinical Reasoning Exam including an annotated key.

**Credit Hours:** 5**Prerequisites:** fourth year medical student in good standing

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**MED\_ID 6693: Simulation Preparation for Internship**

This course is meant to increase the medical students' knowledge and skillsbase in preparation for the first year of internship. In order to accomplish this, the students will be exposed to a variety of situations common to first year residents through activities created with simulation. Throughout the course, students will demonstrate how to provide effective and efficient patient-centered care, while improving their communication skills and professionalism with patients and other healthcare providers. Students will understand the role of simulation in medical education and develop skills in debriefing of scenarios throughout the course. At the end of the course, students will be expected to complete a simulation capstone project. Prerequisites: Class level: 4th year medical student. Approval by Simulation Director and Completion of all Core Clerkship Requirements.

**Credit Hours:** 5

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**MED\_ID 6694: Nutrition Research Elective**

The Nutrition four-week elective is largely a customizable elective that can be designed to match a student's interest(s) with a wide range of mentored nutrition experiences. The experience will include some fixed elements such as participation in a weekly seminar series and/or weekly journal clubs in which the student will be expected to present research papers. Focused experiences can be designed in areas including, but not limited to, medical nutrition therapy, general dietetics, inpatient TPN/ICU and enteral feeds, research nutrition studies, and bariatric surgery nutrition. A wide variety of clinical environments will be available (pediatric obesity/endocrinology, failure to thrive, gastroenterology, cancer, etc.). Students will learn using a variety of experiences, evidence-based materials, patient simulations, and case studies. Students will produce a final written product of a revised or new PBL case or a paper on a specific nutrition prescription for a given diagnosis.

**Credit Hours:** 5**Prerequisites:** Successful completion of the first two years of medical school

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**MED\_ID 6925: Springfield Clinical Campus Elective**

Students will work under the supervision of a faculty preceptor at the Springfield Clinical Campus. Students will see patients in the outpatient clinic and/or inpatient hospital setting, perform a history and exam, and develop a patient-centered assessment and plan. They will then discuss their findings, assessment and plan with the faculty preceptor and go see the patient together. The student will complete oral patient presentations and document patient encounters in the medical record as directed by the faculty preceptor.

**Credit Hours:** 2

**Prerequisites:** successful completion of the first two years of medical school

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**MED\_ID 6934: Sexual and Gender Minority Health Issues Across the Lifecourse**

The purpose of this course is to increase student's familiarity with sexual and gender minority health issues likely to be seen in practice. Integral to the course structure is improved cultural competency in not only appropriate language and terms used within the community but also a sense of the social-cultural issues each generation has faced growing up in America.

**Credit Hours:** 2

**Prerequisites:** successful completion of the first two years of medical school

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**MPP 3202: Elements of Physiology**

Beginning course for sophomore and above designed to cover the basic functional aspects of major organ systems of the body.

**Credit Hours:** 5

**Prerequisites:** sophomore standing

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**MPP 3202H: Elements of Physiology - Honors**

Beginning course for sophomore and above designed to cover the basic functional aspects of major organ systems of the body.

**Credit Hours:** 5

**Prerequisites:** sophomore standing; honors eligibility required

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**MPP 3290: Undergraduate Research**

Laboratory experience and opportunity to explore research in medical pharmacology and physiology.

**Credit Hour:** 1-3

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**MPP 3500: Sports Performance Physiology**

This is an online course that will introduce students to the basic concepts in sports performance physiology, with a focus on the integrated function

of organ system in homeostasis and human health. Several sections of the course will expose students to important issues in sports performance physiology, specifically the impact of physical activity on cardiovascular and metabolic functions.

**Credit Hours:** 3

**Recommended:** Cell Biology, Biochemistry

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**MPP 3550: Physiology for Engineers**

This is an online course that will introduce students to the basic concepts of physiology, with a focus on the integrated function of organ systems in homeostasis and human health. Several sections of the course will expose students to important issues from engineering perspective with emphasis in the analytical and quantitative engineering skills applicable to different physiological systems.

**Credit Hours:** 3

**Recommended:** Cell Biology, Biochemistry, Basic Mathematics

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**MPP 4085: Undergraduate Problems in Medical Pharmacology and Physiology**

This course is designed to provide well-qualified undergraduate students the opportunity to engage in advanced study in topics in pharmacology or physiology with individual faculty members. Topics will be drawn from recent primary literature. Graded on A-F basis only.

**Credit Hour:** 1-3

**Prerequisites:** instructor's consent

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**MPP 4085W: Undergraduate Problems in Medical Pharmacology and Physiology - Writing Intensive**

This course is designed to provide well-qualified undergraduate students the opportunity to engage in advanced study in topics in pharmacology or physiology with individual faculty members. Topics will be drawn from recent primary literature. Graded on A-F basis only.

**Credit Hour:** 1-3

**Prerequisites:** instructor's consent

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**MPP 4202: Medical Physiology**

(cross-leveled with MPP 7422). Medical Physiology is intended for health scientists. Fat, bone, digestion, nutrition, appetite and brain health will be emphasized for health reform and updates for nervous, muscle, heart, vasculature, liver, renal, lung and endocrine systems with analysis for preventative medicine. May be repeated for credit. Graded on A-F basis only.

**Credit Hours:** 4

**Prerequisites:** Nutrition or Biochemistry

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**MPP 4202H: Medical Physiology - Honors**

(cross-leveled with MPP 7422). Medical Physiology is intended for health scientists. Fat, bone, digestion, nutrition, appetite and brain health will be emphasized for health reform and updates for nervous, muscle, heart, vasculature, liver, renal, lung and endocrine systems with analysis for preventative medicine. May be repeated for credit. Graded on A-F basis only.

**Credit Hours:** 4

**Prerequisites:** Nutrition or Biochemistry. Honors eligibility required

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**MPP 4204: Medical Pharmacology**

(cross-leveled with MPP 7424). Medical pharmacology teaches the science of drug actions in medicine today, and principles of pharmacokinetics/dynamics. Future health professionals will learn prescription judgment and quality/cost improvements for patient safety. An online laboratory will teach drug database information technology.

**Credit Hours:** 4

**Prerequisites or Corequisites:** BIO\_SC 3700 or MPP 3202 or MPP 4202 or equivalent physiology course from other colleges

**Recommended:** nutrition or biochemistry courses are recommended but not required

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**MPP 4204H: Medical Pharmacology-Honors**

Medical pharmacology teaches the science of drug actions in medicine today, and principles of pharmacokinetics/dynamics. Future health professionals will learn prescription judgment and quality/cost improvements for patient safety. An online laboratory will teach drug database information technology.

**Credit Hours:** 4

**Prerequisites or Corequisites:** BIO\_SC 3700 or MPP 3202 or MPP 4202 or equivalent physiology course from other colleges; Honors eligibility required

**Recommended:** nutrition or biochemistry courses are recommended but not required

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**MPP 7422: Medical Physiology**

(cross-leveled with MPP 4202). Medical Physiology is intended for health scientist. Fat, bone, digestion, nutrition, appetite and brain health will be emphasized for health reform and updates for nervous, muscle, heart, vasculature, liver, renal, lung and endocrine systems with analysis for preventive medicine. May be repeated for credit. Graded on A-F basis only.

**Credit Hours:** 4

**Prerequisites:** Nutrition or Biochemistry

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**MPP 7424: Medical Pharmacology**

(cross-leveled with MPP 4204). Pharmacology teaches the science of drug actions in medicine today and principles of pharmacokinetics/dynamics. Future medical researchers will learn molecular probes for

medical research and translational science to improve health care. An online laboratory will teach drug database information technology. Graded on A-F basis only.

**Credit Hours:** 4

**Prerequisites or Corequisites:** BIO\_SC 3700 or MPP 3202 or MPP 4202 or equivalent physiology course from other colleges

**Recommended:** nutrition or biochemistry courses are recommended but not required

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**MPP 8000: Scientific Discovery Leading to Life Science Innovations**

(same as BIOL\_EN 8000). This course explains the scientific discovery process from idea to product release, examining problem identification, need validation, and commercialization. Clinical, business and engineering perspectives are examined to understand translating innovation into clinical practice. May be repeated for credit. Graded on A-F basis only.

**Credit Hours:** 3

**Prerequisites:** must be enrolled in a graduate degree program

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**MPP 8004: Regulatory Issues in Clinical Research and Clinical Trials**

(same as BIOL\_EN 8004). The goal of the course is to highlight key FDA regulatory issues for conducting human clinical trials and clinical research. For clinical trials, FDA has set up several compliance programs and guidance documents as a part of human subject protection (HSP)/ Bioresearch Monitoring (BIMO) initiatives. The aim of the program was to strengthen FDA oversight and protection of subjects in clinical trials and to preserve confidentiality of data. The HSP/BIMO initiative comprehends all FDA regulated clinical trials including human drugs and biological drug products, devices, foods, and veterinary medicine. The course is designed for students in medical professions, management, biomedical engineering, and related areas. Adequate knowledge regarding FDA guidance in conducting human clinical trials and clinical research will help professionals steer drug/device development and commercialization in their respective field. This course will be offered online only. An introduction to essential disciplines for conducting clinical trials and clinical research will be provided. The basics of good clinical practices (GCPs), biostatistics and clinical epidemiology in relation to clinical trials will be presented. Several relevant case studies for conducting clinical trials, both nationally and internationally, will be discussed. The importance of data collection and data management while conducting clinical trials will be explained. Graded on A-F basis only.

**Credit Hours:** 3

**Recommended:** Knowledge in biomedical sciences, clinical sciences

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**MPP 8085: Graduate Problems in Medical Pharmacology and Physiology**

Guided study to strengthen knowledge in physiology and pharmacology. Graded on A-F basis only.

**Credit Hour:** 1-3

**Prerequisites:** instructor's consent

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**MPP 8090: Thesis Research in Medical Pharmacology and Physiology**

Research for Master's Students in physiology or pharmacology, leading to dissertation. Graded on a S/U basis only.

**Credit Hour:** 1-99

**Prerequisites:** instructor's consent

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**MPP 8100: Design and Development of Biomedical Innovations**

(same as BIOL\_EN 8100, ENGINR 8100). The overarching goal of this course is to help participants understand the design and development (drug or device) process in biomedical innovation. This course will help participants to understand the process of choosing unmet clinical needs, articulate a need statement without integrating solution, design and develop a solution. Participants will learn to assess the commercial potential of clinical needs by performing market analysis and valuing customer needs. A conceptual understanding about development of a prototype for a device and also drug development by different brainstorming process will be provided. Details of regulatory, reimbursement, patenting process required for product development will be explained with examples. An overview about how to evaluate preliminary designs, define product specifications, comply with manufacturing principles and methods, costs, cGMP requirements will be explained. Quality control and Quality assurance necessities for drug/device will be elucidated with case studies. Participants will gain knowledge about different business models for drug and devices, estimate market penetration and how to make profitable, patient-driven products. Graded on A-F basis only,

**Credit Hours:** 3

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**MPP 8200: Medical Pharmacology I**

This course is the first of two courses; Students will be able to understand the basic concepts of pharmacology and the pharmacological basis of therapeutics. Students will be introduced to the core principles of drug action in terms of bioavailability, pharmacokinetics, pharmacodynamics, and the mechanism of action of drugs in the treatment of diseases.

**Credit Hours:** 3

**Recommended:** Cell Biology, Biochemistry

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**MPP 8250: Medical Pharmacology II**

This course is the second of two courses; Students will be able to understand the basic concepts of pharmacology and the pharmacological basis of therapeutics. Students will be introduced to the core principles of drug action in terms of bioavailability, pharmacokinetics, pharmacodynamics, and the mechanism of action of drugs in the treatment of diseases.

**Credit Hours:** 3

**Recommended:** Cell Biology, Biochemistry

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**MPP 8300: Medical Physiology I**

In this first two courses students will be able to understand the basic concepts of physiology and ensure that they understand how the body works. Students will be able to understand the function, regulation, and integration of human body organ systems.

**Credit Hours:** 3

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**MPP 8350: Medical Physiology II**

In this second of two courses students will be able to understand the basic concepts of physiology and ensure that they understand how the body works. Students will be able to understand the function, regulation, and integration of human body organ systems.

**Credit Hours:** 3

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**MPP 8375: Medical Pharmacology and Physiology Laboratory**

The main aim of this laboratory is to link several key aspects of general human physiology functions necessary for everyday living with fundamental aspects of pharmacology.

**Credit Hours:** 3

**Recommended:** Pharmacology, Physiology

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**MPP 8411: Mammalian Pharmacology and Physiology**

An integrated course covering the basic concepts in physiology and pharmacology of the cardiovascular, gastrointestinal, endocrine, renal, and respiratory systems with an emphasis of applying the key concepts to clinically relevant examples. Graded on A-F basis only.

**Credit Hours:** 5

**Prerequisites:** instructor's consent

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**MPP 8412: Seminar in Medical Pharmacology and Physiology**

Instruction in critical evaluation, review, and summary of scientific data and practice in oral presentation of scientific research seminar. Taught in conjunction with weekly department seminar series.

**Credit Hour:** 1

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**MPP 8415: Responsible Conduct of Research thru Engagement, Enactment and Empowerment NIH and other Federal Age**

The emphasis is on the scientific research ethics problems in interdisciplinary work. Student involvement can include designing mock misconduct trials or writing advocacy letters to change current policy.

**Credit Hours:** 2

**Prerequisites:** instructor's consent

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#### **MPP 9001: Topics in Physiology**

A graduate level course with the goal to train Integrative Physiology graduate students to become effective teachers. This course is a component of professional development as well as a curriculum vitae asset for graduate students pursuing careers in academia, industry, teaching entrepreneurship, and more. The teaching associated with this course will provide opportunities in both didactic and hands-on, one-and-one teaching experiences. This course will equip graduate students with tools to effectively teach students and generally engage and communicate better with others. A graduate student enrolled in this course will be expected to work as a Teaching Assistant (TA) in the undergraduate discussion sessions associated with the 5-credit undergraduate MPP 3202 Elements of Physiology course. Graded on S/U basis only.

**Credit Hours:** 2

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#### **MPP 9090: Thesis Research in Medical Pharmacology and Physiology**

Research for PhD students in physiology or pharmacology, leading to dissertation. Graded on a S/U basis only.

**Credit Hour:** 1-99

**Prerequisites:** instructor's consent

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#### **MPP 9422: Medical Pharmacology and Physiology Journal Club**

On a weekly basis, individual students are assigned current high profile journal articles to present to their fellow students and faculty in a journal club setting. Each student in the course is required to read the paper in advance and participate in discussions of the figures and general topics that is being presented. Graded on S/U basis only.

**Credit Hour:** 1

**Prerequisites:** enrolled in MPP PhD graduate program

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#### **MPP 9426: Transmembrane Signaling**

This course is for advanced level graduate students. The course is designed to develop state of the art knowledge and understanding of current research issues in the cell signaling. The major emphasis is on receptor and non-receptor mediated transmembrane signaling events underlying physiological and pharmacological responses of the cells. Students are also involved in class presentations, and the development and critical review of new research proposals, all focused on cellular signaling.

**Credit Hours:** 4

**Prerequisites:** basic courses in biochemistry and or cell and molecular biology or equivalent

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#### **MPP 9430: Cardiovascular Physiology**

This course is designed to provide the student with an in depth knowledge of specific aspects of cardiovascular physiology with major emphasis on cardiac structure and function. Topics are covered in 1, 3-4 hour session per week and are based on reading assignments from the literature. The following topics have been addressed in previous offerings but the specific topics may vary from year to year: Heart muscle structure and remodeling, myofilament protein structure/function, sarcomere as a therapeutic target, excitation contraction coupling, cardiomyocyte Ca<sup>2+</sup> handling, cardiac myocyte energetics, myocyte survival and cell death pathways, cell-to-cell communication, cardiac remodeling, heart failure, myocardial extracellular matrix, effects of exercise training on cardiac function, regulation of coronary blood flow.

**Credit Hours:** 4

**Prerequisites:** MPP 7422 or the equivalent (e.g., UM first year medical school curriculum, V\_BSCI 8420, or BIO\_SC 3700-with supporting courses)

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#### **MPP 9431: Control of Energy Metabolism**

(same as V\_BSCI 9431). This advanced elective is in a lecture/discussion format using primary literature to explore how cells organize and regulate metabolism to meet energy demands.

**Credit Hours:** 3

**Prerequisites:** instructor's consent

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#### **MPP 9434: Microvascular Physiology**

(same as V\_BSCI 9425). An in-depth study of microcirculatory structure and function in various organs with emphasis on understanding the mechanisms involved in the regulation of local blood flow, nutrient supply, lymphatic function, and tissue fluid balance.

**Credit Hours:** 4

**Prerequisites:** V\_BSCI 8420 and V\_BSCI 8421 or equivalent and instructor's consent

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#### **MPP 9435: Molecular Exercise Biology**

(same as V\_BSCI 9435). Skeletal muscle mechanics, contractions theories, transgenic models, development, gene expression regulation, adaptation to exercise, aging, metabolic functions, and inactivity induced chronic diseases.

**Credit Hour:** 1-3

**Prerequisites:** course director's consent required for enrollment

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#### **MPP 9437: Neural Cardiorespiratory Control**

(same as V\_BSCI 9467). Course objectives include developing a general understanding of CNS mechanisms in the regulation of the cardiovascular and respiratory system, including autonomic, neurohumoral and body fluid homeostatic mechanisms, gaining knowledge of the major advances and topics in the field and becoming familiar with some of the methods

used to study CNS cardiorespiratory regulation. Graded on A-F basis only.

**Credit Hours:** 3

**Prerequisites:** instructor's consent

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#### **NEUROL 6003: Neurology Clerkship**

Students see patients with neurological disorders in the outpatient clinics, in hospital settings, and on consultation services.

**Credit Hours:** 4

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#### **NEUROL 6013: Rural Neurology Clerkship**

Rural Neurology Clerkship

**Credit Hours:** 4

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#### **NEUROL 6023: Springfield Neurology Clerkship**

Students see patients with neurological disorders in the outpatient clinics, in hospital settings, and on consultation services.

**Credit Hours:** 4

**Prerequisites:** successful completion of the first two years of medical school

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#### **NEUROL 6063: LINC Neurology Clerkship**

A Longitudinal Integrated Clerkship (LINC) includes medical students in patient care over time, allowing enduring learning relationships to develop with patients and physician-teachers. Students will meet required core clinical competencies in multiple disciplines through interleaved, longitudinal experiences over the course of the clinical training year. In contrast to a block curriculum, students meet and follow their patients across multiple settings of care and different disciplines.

**Credit Hours:** 4

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#### **NEUROL 6103: Remediation Neurology Clerkship**

Enrolled students are those who received an unsatisfactory grade in a Child Health Clerkship at any Mizzou Med location or site. This course gives the student an opportunity to rectify their deficiency.

**Credit Hours:** 4

**Prerequisites:** NEUROL 6003 Neurology Clerkship, received unsatisfactory grade

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#### **NEUROL 6107: Re-Remediation Neurology Clerkship**

Re-Remediation of Neurology Clerkship.

**Credit Hours:** 4

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#### **NEUROL 6113: Remediation of Rural Track Neurology Clerkship**

Student remediation of rural track neurology clerkship.

**Credit Hours:** 4

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#### **NEUROL 6123: Remediation Springfield Neurology Clerkship**

Students see patients with neurological disorders in the outpatient clinics, in hospital settings, and on consultation services.

**Credit Hours:** 4

**Prerequisites:** successful completion of the first two years of medical school

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#### **NEUROL 6163: LINC Remediation Neurology Clerkship**

Remediation of LINC Neurology Clerkship.

**Credit Hours:** 8

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#### **NEUROL 6303: ABS Neurology Research**

ABS Neurology Research

**Credit Hours:** 5

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#### **NEUROL 6845: Neurology**

Neurology

**Credit Hours:** 5

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#### **NEUROL 6850: Advanced Neurology**

Advanced Neurology

**Credit Hours:** 5

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#### **NEUROL 6923: Neuromuscular Disorders**

One week will be spent in the outpatient unit and one inpatient. The inpatient experience will consist of rounding on neuromuscular patients and being an integral part of patient care. A significant portion of the experience will be spent in Electromyography (EMG). During the outpatient experience, the student will rotate with one of three neuromuscular specialists and participate in patient care, and participate in MDA clinic.

**Credit Hours:** 2

**Prerequisites:** successful completion of the first two years of medical school

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**OB\_GYN 6004: Obstetrics/Gynecology Clerkship**

Students rotate on the obstetric service, the gynecology service and the gynecologic oncology service, seeing a broad range of patients in both inpatient and outpatient settings. In addition, they attend lectures and interactive case presentations.

**Credit Hours:** 8

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**OB\_GYN 6014: Rural Obstetrics/Gynecology Clerkship**

Rural Obstetrics/Gynecology Clerkship

**Credit Hours:** 8

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**OB\_GYN 6024: Springfield Obstetrics and Gynecology Clerkship**

Students rotate on the obstetric service, the gynecology service and the gynecologic oncology service, seeing a broad range of patients in both inpatient and outpatient settings. In addition, they attend lectures and interactive case presentations.

**Credit Hours:** 8

**Prerequisites:** successful completion of the first two years of medical school

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**OB\_GYN 6041: SCC Gynecologic Surgical Oncology Selective**

The medical student will work as a member of the Gynecologic Oncology team providing hands-on clinical and surgical services in the inpatient, outpatient, and consultative settings. Students will learn using a variety of evidence-based resources, on-line resources, and from clinical dialogue with the members of the health care team.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of the 7 core clerkships. One of the 5 must be the Obstetrics and Gynecology Clerkship

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**OB\_GYN 6053: SCC Obstetrics/Gynecology Selective**

The fourth-year student will work as a member of the health-care team, providing hands-on clinical and surgical services in the inpatient, outpatient, and consultative settings. The medical student will participate in daily rounds under the direction of the attending physician. Students will learn using a variety of evidence-based resources, on-line resources, and dialogue with other team members in the clinical setting. The student will be expected to perform at a sub-intern level. To provide the student with additional clinical and surgical experience in obstetrics and gynecology. The student will learn how to integrate previously acquired knowledge and concepts, then apply them in the management of patients.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of the 7 core clerkships. One of the 5 must be the Obstetrics and Gynecology Clerkship. Springfield faculty approval is required prior to registration

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**OB\_GYN 6064: LINC Obstetrics and Gynecology Clerkship**

A Longitudinal Integrated Clerkship (LINC) includes medical students in patient care over time, allowing enduring learning relationships to develop with patients and physician-teachers. Students will meet required core clinical competencies in multiple disciplines through interleaved, longitudinal experiences over the course of the clinical training year. In contrast to a block curriculum, students meet and follow their patients across multiple settings of care and different disciplines.

**Credit Hours:** 8

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**OB\_GYN 6104: Remediation OB/GYN Clerkship**

Enrolled students are those who received an unsatisfactory grade in a OB/GYN Clerkship at any Mizzou Med location or site. This course gives the student an opportunity to rectify their deficiency.

**Credit Hours:** 8

**Prerequisites:** OB\_GYN 6004 Clerkship, received unsatisfactory grade

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**OB\_GYN 6108: Re-Remediation of OB/GYN Clerkship**

Student will remediate portions of the Ob/Gyn clerkship that they did not complete successfully.

**Credit Hours:** 8

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**OB\_GYN 6124: Remediation of Springfield Obstetrics and Gynecology Clerkship**

Students rotate on the obstetric service, the gynecology service and the gynecologic oncology service, seeing a broad range of patients in both inpatient and outpatient settings. In addition, they attend lectures and interactive case presentations.

**Credit Hours:** 8

**Prerequisites:** successful completion of the first two years of medical school

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**OB\_GYN 6164: LINC Remediation Obstetrics and Gynecology**  
LINC Remediation of OB Clerkship.

**Credit Hours:** 8

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**OB\_GYN 6313: ABS OB/Gynecology Research**

ABS OB/Gynecology Research

**Credit Hours:** 5

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**OB\_GYN 6315: ABS OB/Gynecology Research and Review**

ABS OB/Gynecology Research and Review

**Credit Hour:** 5-10

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**OB\_GYN 6563: OB/GYN Clinical Reproductive Endocrinology**

OB/GYN Clinical Reproductive Endocrinology

**Credit Hours:** 5

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**OB\_GYN 6565: Reproductive Medicine and Infertility Offsite**

The 4th year student will work as a member of the Reproductive Endocrinology and Infertility team, providing hands-on clinical and surgical services in the inpatient, outpatient and consultative settings. The medical student will participate in daily outpatient clinic and any observe surgical services related to care of those patients. Students will learn using a variety of evidence-based resources, on-line resources and from clinical dialogue with the members of the care team.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the first two years of medical school and the OB/GYN Clerkship

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**OB\_GYN 6583: Obstetrics/Gynecology Offsite Advanced Elective**

Obstetrics/Gynecology Offsite Advanced Elective

**Credit Hours:** 5

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**OB\_GYN 6765: OB/GYN - Rural**

OB/GYN - Rural

**Credit Hours:** 5

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**OB\_GYN 6864: Springfield Maternal Fetal Medicine Advanced Medical Selective**

The fourth-year student will work as a member of the Maternal Fetal Medicine team, providing hands-on OB clinical and surgical services in the inpatient, outpatient, and consultative settings. The medical student will participate in daily rounds, outpatient high-risk clinic and on-site mini teaching sessions. Students may also be involved with consultations on high-risk antepartum patients in the inpatient setting. The student may also be exposed to antenatal testing and ultrasonography involved in screening and surveillance of high-risk pregnancies. Students will learn using a variety of evidence-based resources, on-line resources, and dialogue with other OB GYN team members in the clinical setting.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of 7 core clerkships one must be OB GYN M3 core clerkship

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**OB\_GYN 6865: Maternal-Fetal Medicine Selective**

Goals/Objectives: To expose the student to high-risk obstetrical experiences in the Maternal Fetal Medicine division. All obstetrical selectives are done at Women's and Children's Hospital.

**Credit Hours:** 5

**Prerequisites:** Ob-Gyn Clerkship

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**OB\_GYN 6866: Obstetrical**

Goals/Objectives: To provide the student with additional obstetrical experience in the Labor and delivery suite. All obstetrical electives are done at the Missouri Ob/Gyn Associates Clinic and Women's and Children's Hospital. Evaluations: The student will be graded on their ward performance. An evaluation for this rotation will be completed by the appropriate faculty and resident physicians. Notes: While on this rotation students will have exposure to various faculty members, residents, and fellow medical students. Students will participate in the evaluation of patients on labor and delivery including those presenting for evaluation of first trimester problems and labor evaluations. Some participation in operative procedures and labor management is expected. Students will have exposure to antenatal testing and ultrasonography including the interpretation of ultrasounds and limited participation in genetic counseling and invasive ante-partum diagnostic procedures is expected. Night call will be required and can be worked into the core rotation's student call schedule. Teaching will be on an ongoing bases with Dr. Floyd keeping daily routine with the students expected to participate in management decisions.

**Credit Hours:** 5

**Prerequisites:** Ob-Gyn Clerkship. Core reading for this rotation will include Obstetrics, Normal and Problem Pregnancies, latest edition, edited by Gabbe, Niebyl and Simpson

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**OB\_GYN 6867: Obstetrical/Gynecological Outpatient**

Obstetrical/Gynecological Outpatient

**Credit Hours:** 5

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**OB\_GYN 6868: Urogynecology Selective**

The 4th year medical student will work as part of a team providing hands-on clinical services in an inpatient, outpatient, and consultative setting. Students will participate in daily morning report, weekly didactic sessions, weekly surgical procedures and Friday afternoon seminars. Students will learn using a variety of evidence-based resources and direct faculty interaction. Successful completion of one of the core Obstetrics and Gynecology Clerkship courses: OB\_GYN 6004 or OB\_GYN 6014, and/or OB\_GYN 6104.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the first two years of medical school

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**OB\_GYN 6930: Obstetrics/Gynecology Outpatient Two-Week Elective**

The 3rd or 4th year medical student will work as part of a team providing hands-on clinical services in an outpatient setting. Students will participate in daily clinic evaluations of patients. Students will learn using a variety of evidence-based resources and direct faculty teaching. Students will also participate in weekly teaching didactics within the OB/GYN department such as Grand Rounds.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**OB\_GYN 6937: Ultrasound Two Week Elective**

To provide additional clinical ultrasound experience in the outpatient setting. Students will learn how to integrate acquired knowledge and concepts; then apply them in the management of patients in an outpatient OB/GYN setting.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two year of medical school

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**OB\_GYN 6960: Gynecologic/Oncology Surgery**

**Goals/Objectives:** To provide the student with additional surgical and gynecological clinical experience. All gynecologic surgical electives are performed at Ellis Fischel Cancer Center and the University Hospital. **Evaluations:** An evaluation for this rotation will be completed by the elective chairmen and appropriate resident physicians. The students will be graded on their clinic, ward, and operating room performance. **Notes:** While on this rotation, students will have exposure to faculty members, three residents, and other fellow medical students. They will have the opportunity to assist in gynecologic oncology surgical cases, attend tumor clinics where they will encounter various procedures such as colposcopies, cryotherapy, and cervical and endometrial biopsies. A copy of a representative weekly schedule is available from the department student coordinator. In addition, students will be required to make two ten minute presentations with audio-visual aids on assigned topics. The students will not take night call, but are expected to attend patient rounds on weekdays and weekends with the residents. The department also holds conferences on Tuesdays and Thursdays which are to be attended. Core reading for this rotation will include Clinical Gynecologic Oncology by DiSaia and Creasman."

**Credit Hours:** 5

**Prerequisites:** Ob-Gyn Clerkship

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**OB\_GYN 6963: Springfield OB GYN Outpatient 2-Week Elective**

Third- or fourth-year medical student(s) will work as a member of the team providing hands-on OB-GYN clinical and surgical services in outpatient and consultative settings. Students will participate in the daily clinical care setting and mini lectures throughout the week. Students will learn using a variety of evidence-based resources including online

references, case conferences, and daily clinical dialogue with members of the care team.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**OB\_GYN 6964: Obstetrics/Gynecology Offsite Advanced Selective**  
Obstetrics/Gynecology Offsite Advanced Selective

**Credit Hours:** 5

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**OB\_GYN 6992: Columbia Obstetrics Surgical Selective**

The fourth-year medical student will work as part of the team of providers providing medical and surgical services for patients in outpatient clinic, inpatient and labor and delivery (L&D) services. Students will participate in OB triage, vaginal/cesarean deliveries, antepartum, and postpartum care. Didactics will include weekly resident didactic sessions when appropriate. Students are also expected to help manage the responsibilities and experiences of the third-year medical students on their core clerkship by dividing cases, teaching, and providing guidance as necessary. The student will participate in procedures such as fetal doppler exams, ultrasound, pelvic examinations, review fetal heart tracings, cervical exam, vaginal/cesarean delivery and fundal checks. The fourth-year student is expected to function at an intern level under the chief resident's supervision on service. Students will spend two weeks on L&D (one week days and one week nights) and two weeks on ambulatory clinic. Only one M4 student will be assigned for each shift.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of the 7 core clerkships. One of the 5 must be the obstetrics and gynecology clerkship

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**OPHTH 6050: SCC Introduction to Ophthalmology**

This curriculum is designed to introduce you to the specialty of ophthalmology, which involves the recognition, diagnosis, and management of diseases of the eye. Students will work in the outpatient setting seeing patients Monday through Friday. The primary clinic for this course may be in Bolivar or Springfield. Students on the Ophthalmology elective are integrated into the outpatient, inpatient, and surgical care programs as if they were beginning first-year resident physicians in the specialty. They are taught ophthalmic instrumentation, ophthalmological examination techniques, and the fundamentals of ocular surgical procedures.

**Credit Hours:** 5

**Prerequisites:** Surgery Clerkship

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**OPHTH 6323: ABS Ophthalmology Research**

ABS Ophthalmology Research

**Credit Hour:** 5-10

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**OPHTH 6585: Ophthalmology**

Ophthalmology

**Credit Hours:** 5

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**OPHTH 6903: SCC Ophthalmology Two-Week Elective**

This curriculum is designed to introduce students to the specialty of ophthalmology, which involves the recognition, diagnosis, and management of diseases of the eye. Students will work with an attending Ophthalmologist from the Springfield Clinical Campus. This may involve travel to Bolivar. During this two-week elective, students will become familiar with the screening eye examination, learn to perform a more comprehensive ocular examination, learn about common ocular abnormalities and treatments, and become familiar with the common ophthalmic instruments.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**OPHTH 6936: Introduction to Ophthalmology**

Welcome to the Ophthalmology Elective. This curriculum is designed to introduce you to the specialty of ophthalmology, which involves the recognition, diagnosis, and management of diseases of the eye. Students will work in the outpatient setting seeing patients at the University Eye Institute. Students will participate in didactic sessions each week. During this 2 week elective, students will become familiar with the screening eye examination, learn to perform a more comprehensive ocular examination, learn about common ocular abnormalities and treatments, and become familiar with the common ophthalmic instruments.

**Credit Hours:** 2

**Prerequisites:** successful completion of the first two years of medical school

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**OPHTH 6969: Springfield Ophthalmology Surgical Selective**

The medical student will be exposed to the full spectrum of medical and surgical ophthalmology. The medical student will work alongside Ophthalmology attendings in outpatient clinics and in the operating room. The medical student will take histories and perform ocular examinations in an outpatient setting. The medical student will observe inpatient consultations and operating room procedures as warranted.

**Credit Hours:** 5

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**OPHTH 6990: Ophthalmology Surgical Selective**

The medical student will be exposed to the full spectrum of medical and surgical ophthalmology. The medical student will work alongside Ophthalmology attendings, fellows, and residents in outpatient clinics and in the operating room. The medical student will take histories and perform

ocular examinations in an outpatient setting. The medical student will observe inpatient consultations and operating room procedures.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of the 7 core clerkships

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**PSCHTY 6005: Psychiatry Clerkship**

Students see patients with psychiatric disorders in the outpatient clinics, in hospital settings and on consultation services.

**Credit Hours:** 6

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**PSCHTY 6015: Rural Psychiatry Clerkship**

Rural Psychiatry Clerkship

**Credit Hours:** 6

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**PSCHTY 6025: Springfield Psychiatry Clerkship**

Students see patients with psychiatric disorders in the outpatient clinics, in hospital settings and on consultation services.

**Credit Hours:** 6

**Prerequisites:** successful completion of the first two years of medical school

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**PSCHTY 6065: LINC Psychiatry Clerkship**

A Longitudinal Integrated Clerkship (LINC) includes medical students in patient care over time, allowing enduring learning relationships to develop with patients and physician-teachers. Students will meet required core clinical competencies in multiple disciplines through interleaved, longitudinal experiences over the course of the clinical training year. In contrast to a block curriculum, students meet and follow their patients across multiple settings of care and different disciplines.

**Credit Hours:** 6

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**PSCHTY 6105: Remediation Psychiatry Clerkship**

Enrolled students are those who received an unsatisfactory grade in a Psychiatry Clerkship at any Mizzou Med location or site. This course gives the student an opportunity to rectify their deficiency.

**Credit Hours:** 6

**Prerequisites:** PSCHTY 6005 Psychiatry Clerkship, received unsatisfactory grade

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**PSCHTY 6125: Remediation of Springfield Psychiatry Clerkship**

Students see patients with psychiatric disorders in the outpatient clinics, in hospital settings and on consultation services.

**Credit Hours:** 6

**Prerequisites:** successful completion of the first two years of medical school

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**PSCHTY 6165: LINC Remediation Psychiatry Clerkship**  
Remediation of LINC Psychiatry Clerkship.

**Credit Hours:** 8

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**PSCHTY 6363: ABS Psychiatry Research**  
ABS Psychiatry Research

**Credit Hour:** 5-10

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**PSCHTY 6630: Narrative Med and the Meaningful Life**  
The 4th year medical student will attend didactics and participate in discussions. They will complete suggested readings (short stories, poems and essays), assessments and writing assignments/projects. May be repeated for credit.

**Credit Hours:** 5

**Prerequisites:** 4th year medical student, all core clerkships

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**PSCHTY 6631: Clinical Psychopharmacology Part 1**  
The medical student will learn about a wide range of psychiatric medications using a "medication mascot" visual mnemonic system for drug/trade name pairings and drug/drug interactions, with curriculum designed by Dr. Cafer. In the morning the student will shadow Dr. Cafer and learn about specific medications as they are encountered. The student needs to commit weekday afternoons toward learning the course material. While rounding at Missouri Psychiatric Center, the student will become familiar with a paper dashboard used for a "systematic approach to psychiatric medication management" that will become the focus of a subsequent elective if the student chooses to continue with Clinical Psychopharmacology Part 2, which is a selective. To focus on the learning process, the student will not be entering notes into the medical record. Instead, the student will be processing patient information on a paper dashboard.

**Credit Hours:** 5

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**PSCHTY 6632: Geriatric Psychiatry**  
The fourth-year medical student will work as part of a team providing hands-on geriatric psychiatry services in inpatient, outpatient, and consultative setting. Students will participate in patient evaluation and care, weekly didactic sessions, and TMS and ECT treatments. Students will learn about geriatric psychiatry through supervised and guided direct evaluation and care experiences using a variety of evidence-based resources, bedside teaching, interactive lectures, and online modules.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the first two years of medical school and 5 of 7 core clerkships including psychiatry

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**PSCHTY 6731: Psychiatry Rural Elective**  
The 4th year medical student will participate in the evaluation of adult psychiatric patients and child psychiatric patients in a clinical setting.

**Credit Hours:** 5

**Prerequisites:** PSCHTY 6005; restricted to 4th year medical students

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**PSCHTY 6835: Psychiatry Outpatient Clinic**  
Psychiatry Outpatient Clinic

**Credit Hours:** 5

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**PSCHTY 6836: Psychiatry Adult Inpatient Service**  
Psychiatry Adult Inpatient Service

**Credit Hours:** 5

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**PSCHTY 6837: Psychosomatic Medicine**  
Psychosomatic Medicine

**Credit Hours:** 5

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**PSCHTY 6838: Forensic Psychiatry**  
Forensic Psychiatry

**Credit Hours:** 5

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**PSCHTY 6839: Child/Adolescent Psychiatry**  
Child/Adolescent Psychiatry

**Credit Hours:** 5

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**PSCHTY 6840: Geriatric Psychiatry**  
Geriatric Psychiatry

**Credit Hours:** 5

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**PSCHTY 6841: Clinical Psychopharmacology Part 2**  
This is Part 2 of Dr. Cafer's Clinical Psychopharmacology offering. The student will continue learning about psychiatric medications and how they are used clinically, as a continuation of Part 1. In the morning, the student will shadow Dr. Cafer and actively analyze medication regimens and treatment planning. The student will not be entering documentation

into the medical record, instead using a paper dashboard comprising a "systematic approach to psychiatric medication management", which will mimic the dashboard Dr. Cafer uses. Essentially, Dr. Cafer will repurpose his patient management tool as a teaching tool. Throughout the morning, Dr. Cafer will hand the student his dashboards (one for each patient) for the student to copy and compare. Although the core education will be focused on medication regimens, the student will become familiar with methods of organizing other information about the patient including medical/psychiatric/social histories as applicable to mental status exam, diagnosis formulation, risk assessment, and discharge planning. Incidentally to reviewing Dr. Cafer's dashboards, the student will learn abbreviations and shorthand techniques that may be useful for future personal notetaking. The student needs to commit weekday afternoons toward learning about medications and analyzing patients' medication regimens. The student will be orally quizzed on medication facts to solidify memorization.

**Credit Hours:** 5

**Prerequisites:** Must have completed Clinical Psychopharmacology Part 1, PSCHTY 6631

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**PSCHTY 6842: Springfield Addictions Medicine Selective 4WK**

This elective rotation consists of at least 160 hours. Addictions Medicine medical selective is designed to provide M4 students the opportunity to expand and deepen their exposure to interviewing and treating patients dealing with addiction in multiple substances. They will become familiar with the multiple levels of care involved in treating patients with substance use disorders. Students will select an appropriate topic to present to attending faculty at the end of the elective. Prerequisites: Medical Students Only: Successful completion of 5 of the 7 core clerkships. One of the 5 must be Psychiatry.

**Credit Hours:** 5

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**PSCHTY 6939: Two Week - Psychiatry Adult Inpatient Service**

The student will work as a member of an inpatient multidisciplinary team and participate in the evaluation and treatment of adults on an acute care inpatient psychiatry service at MUPC. Typical activities include following several patients, observing and conducting psychiatric evaluation, collecting collateral information, reviewing medical records, participation in staffings, rounds and therapeutic groups and documentation in the medical record.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**PSCHTY 6940: Two Week - Child and Adolescent Psychiatry**

The student will work as a member of an inpatient multidisciplinary team and participate in the evaluation and treatment of children and adolescents on an acute care child inpatient psychiatry service at MUPC. Typical activities include following several patients, observing and conducting psychiatric evaluation, collecting collateral information, reviewing medical records, participation in staffings, rounds and therapeutic groups and documentation in the medical record.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**PSCHTY 6941: Two Week - Psychiatry Consultation and Liaison**

Students will participate in the psychiatric consultation process for medical rehabilitation, medical and surgical inpatients. The types of patients seen present with a wide spectrum of psychiatric conditions such as depression, substance abuse, anxiety disorders, delirium, dementia, somatoform disorders, personality disorders, psychotic disorders and organic behavior/mood disorders. Typical duties include bedside evaluation in collaboration with attendings and residents, documentation and presentation of findings and recommendations and participation in rounds.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**PTH\_AS 2201: Human Anatomy Lecture**

A systems-based survey of human gross anatomy including structure, function and history. Internet access required: lectures and assignments will be online. Graded on A-F basis only.

**Credit Hours:** 3

**Recommended:** Minimum cumulative MU GPA of 2.5 required

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**PTH\_AS 2203: Human Anatomy Laboratory**

A systems-based survey of human gross anatomy. Internet access required: most materials will be online. One on-campus laboratory meeting per week. Graded A-F only. Recommend: Minimum cumulative MU GPA of 2.5 and completed or currently enrolled in PTH\_AS 2201.

**Credit Hours:** 2

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**PTH\_AS 2203H: Human Anatomy Laboratory - Honors**

A systems-based survey of human gross anatomy. Internet access required: most materials will be online. One on-campus laboratory meeting per week. Graded A-F only. Recommend: Minimum cumulative MU GPA of 2.5 and completed or currently enrolled in PTH\_AS 2201.

**Credit Hours:** 2

**Prerequisites:** Honors eligibility required

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**PTH\_AS 3460: Research and Instructional Techniques**

Involves library and laboratory research. Includes development of oral and written communications skills.

**Credit Hours:** 3

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**PTH\_AS 4210: Seminar in Pathology and Anatomical Sciences**

Presentation and discussion of original investigations and current literature.

**Credit Hour:** 1

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**PTH\_AS 4220: Forensic Pathology and Death Investigation**

(cross-leveled with PTH\_AS 7020). Forensic Pathology and Death Investigation.

**Credit Hours:** 2

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**PTH\_AS 4220H: Forensic Pathology and Death Investigation - Honors**

(cross-leveled with PTH\_AS 7020). Forensic Pathology and Death Investigation.

**Credit Hours:** 2

**Prerequisites:** Honors eligibility required

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**PTH\_AS 4220HW: Forensic Pathology and Death Investigation - Honors/Writing Intensive**

(cross-leveled with PTH\_AS 7020). Forensic Pathology and Death Investigation.

**Credit Hours:** 2

**Prerequisites:** Honors eligibility required

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**PTH\_AS 4220W: Forensic Pathology and Death Investigation - Writing Intensive**

(cross-leveled with PTH\_AS 7020). Forensic Pathology and Death Investigation.

**Credit Hours:** 2

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**PTH\_AS 4222: Gross Human Anatomy (The Health Professions)**

(cross-leveled with PTH\_AS 7222). Gross structure and neuroanatomy of the human body; dissection of extremities, back, head, neck abdomen and thorax.

**Credit Hours:** 7

**Prerequisites:** instructor's consent

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**PTH\_AS 4222H: Gross Human Anatomy (The Health Professions) - Honors**

(cross-leveled with PTH\_AS 7222). Gross structure and neuroanatomy of the human body; dissection of extremities, back, head, neck abdomen and thorax.

**Credit Hours:** 7

**Prerequisites:** instructor's consent; Honors eligibility required

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**PTH\_AS 6033: SCC ABS Surgical Anatomy**

The 4th year anatomy student will work independently or as a team to dissect and explore regions of cadavers particular to their interests. We generally offer the following regions (Lower Limb, Upper Limb, Pelvis, Thorax, Abdomen, Head & Neck). Students will improve their anatomical knowledge and learn using hands-on experiences and a variety of evidence-based resources while exploring the human body.

Requirements: A) Complete a dissection relevant to your interests of the following regions: brain, head and neck, thorax, abdomen, pelvis, upper limb (one side), lower limb (one side). B) Give a 15-minute presentation to Occupational Therapy or Physician Assistant class about the anatomy of your region behind clinical practice. Schedule this presentation with the course coordinator and/or the course director within two months of the scheduled block. However, presentation slides must be given to the course faculty leader by the end of the block. C) Prepare 5 PowerPoint slides for use in Occupational Therapy or Physician Assistant courses on clinically-relevant anatomy for the audience by the end of the block. After review by course faculty the slides will also be sent to Columbia for consideration of use in M1 classes. D) Complete an exit interview with a faculty member to discuss the student's experience during the course.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the first 2 years of medical school and 5 of the 7 core clerkships

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**PTH\_AS 6331: ABS Advanced Medical Neurosciences**

ABS Advanced Medical Neurosciences

**Credit Hour:** 5-10

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**PTH\_AS 6333: ABS Pathology/Anatomical Science Research**

ABS Pathology/Anatomical Science Research

**Credit Hours:** 5

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**PTH\_AS 6341: ABS Science Anatomical Science Teaching**

ABS Science Anatomical Science Teaching

**Credit Hours:** 5

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**PTH\_AS 6343: ABS Surgical Anatomy**

ABS Surgical Anatomy

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**Credit Hours: 5**

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**PTH\_AS 6345: ABS Surgical Anatomy of the Head and Neck**

ABS Surgical Anatomy of the Head and Neck

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**Credit Hours: 5**

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**PTH\_AS 6347: ABS Surgical Anatomy of the Back and Limbs**

ABS Surgical Anatomy of the Back and Limbs

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**Credit Hours: 5**

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**PTH\_AS 6600: Anatomic Pathology**

Anatomic Pathology

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**Credit Hours: 5**

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**PTH\_AS 6601: Springfield Anatomic Clinical Pathology Elective 4 WK**

M4 students may observe the gross dissection of surgical specimens and follow them through to final microscopic diagnosis. During final check out of surgical specimens between the attending pathologists, the student may participate actively in the study or discussion of slides via a multi-headed microscope. This rotation encourages substantial independent study by the student as well as attendance at and participation in available teaching and/or case discussions each week. Students seeking experience in a particular organ system(s) will be encouraged to review the relevant present study sets and to help select additional cases to add to the appropriate set(s).

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**Credit Hours: 5**

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**PTH\_AS 6602: Clinical Pathology**

Clinical Pathology

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**Credit Hours: 5**

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**PTH\_AS 6604: Forensic Pathology**

Forensic Pathology

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**Credit Hours: 5**

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**PTH\_AS 6606: Anatomic/Clinical Pathology**

Anatomic/Clinical Pathology

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**Credit Hours: 5**

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**PTH\_AS 6608: Anatomy Elective**

Anatomy Elective

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**Credit Hours: 5**

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**PTH\_AS 6900: Springfield Anatomic Clinical Pathology 2 WK**

Students participating in a two-week anatomic clinical pathology elective rotation will be exposed to surgical pathology and/or cytopathology. All students in this rotation will also have some observation in surgical pathology. All students will observe gross dissection and description of surgical specimens, intraoperative consultations ("frozen sections"), and will observe microscopic examinations and sign-out of such specimens. The surgical pathology exposures may include exposure to the subspecialties of hematopathology, neuropathology, and gastrointestinal/liver pathology, as well as to general surgical pathology. Those with an interest in cytopathology will be able to observe the preparative steps for cytopathology specimens and to observe microscopic examinations and sign-out of those specimens. Students are expected to attend available case discussions and or educational presentations. Student instruction may be from attending pathologists and senior technologists as appropriate to the service and the daily work flow of that service. Students have access to the Medical Library and to online educational and reference resources. This rotation encourages substantial independent study by the student. There are many excellent microscopic slide study slide sets available for personal study.

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**Credit Hours: 2**

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**PTH\_AS 6916: Anatomic Pathology Two-Week**

This is a two week rotation. Students will learn how to integrate information and apply previously acquired knowledge and concepts to the assessment and interpretation of surgical pathology, cytopathology, and/or autopsy cases. Students will learn about the procedures necessary to arrive at anatomic pathology diagnoses and the work that goes into specimen processing and examination so as to produce diagnoses.

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**Credit Hours: 2****Prerequisites:** Successful completion of the first two years of medical school

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**PTH\_AS 7020: Forensic Pathology and Death Investigation**

(cross-leveled with PTH\_AS 4220). Summary of Forensic Death Investigation from beginning to end. Will include some of the current laboratory techniques seen on "CSI" Team taught by experts in the fields including medical examiners, death investigators, forensic anthropologists, police CSI teams, lawyers and others.

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**Credit Hours: 2****Prerequisites:** Basic Biology

**PTH\_AS 7222: Gross Human Anatomy (The Health Professions)**  
(cross-leveled with PTH\_AS 4222). Gross/human structure through dissection. Graded on A-F basis only.

**Credit Hours:** 7

**Prerequisites:** Acceptance into Physical Therapy Programs or instructor's consent

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**PTH\_AS 7400: Seminars in Translational Medicine**

Students participate in regular seminars and discussion groups with other students interested in clinical and translational sciences. Students, working together with faculty in biomedical sciences and those working in clinical and translational fields, identify seminar topics. Learning objectives and written assignments are arranged on an individual basis. The course is open to all graduate level students and students enrolled in professional schools, for 0-5 credit hours, with instructor's approval. Graded on S/U basis only.

**Credit Hour:** 0-5

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**PTH\_AS 7450: Precision Medicine Informatics**

(same as INFOINST 8450). This course will introduce students with the theoretical and practical aspects of precision medicine informatics. Topics include: complex diseases, computational genomics/proteomics, informatics of molecular interactions and biological pathways, somatic mutations, signal transduction and cancer, biomarker discovery, machine learning and data mining for PMI, networks methods for PMI, knowledge representation and reasoning for PMI. The course will consist of a set of didactic lectures, computational assignments, in-class demonstrations of PMI methods and discussions of recent publications. Graded on A-F basis only.

**Credit Hours:** 3

**Prerequisites:** INFOINST 8005 with C or better or INFOINST 7010 with C or better or instructor's consent

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**PTH\_AS 8010: Current Issues in Anatomical Sciences**

Survey of the recent literature in integrative anatomy, including functional, evolutionary, developmental and translational anatomy, conducted through readings and discussion. Grade determined by participation and presentation of weekly readings. May be repeated for a maximum of 10 hours. Graded on S/U basis only.

**Credit Hour:** 1

**Prerequisites:** instructor's consent

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**PTH\_AS 8090: Advanced Pathology**

Open only to properly qualified graduate students, with counsel of faculty. Focus of MS-related research in evolutionary morphology, genomics, neuroscience, pathobiology or laboratory sciences. Graded on S/U basis only.

**Credit Hour:** 1-99

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**PTH\_AS 8100: Fundamentals of Evolutionary Biology**

Principles of modern evolutionary biology. Topics include: phylogeny, paleobiology, developmental processes, genetic and phenotypic variation, form and function, speculation, macroevolution, and molecular mechanisms.

**Credit Hours:** 3

**Prerequisites:** instructor's consent

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**PTH\_AS 8150: Fundamentals of Evolutionary Morphology**

This course is a survey of the fundamentals of modern evolutionary morphology. Topics will include: patterns of vertebrate evolution, comparative methods, development and ontogeny, constraint, functional morphology, evolutionary innovations, and experimental methods. Graded on A-F basis only.

**Credit Hours:** 3

**Prerequisites:** instructor's consent required

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**PTH\_AS 8201: Human Anatomy: Back and Upper Limb**

Developmental, gross, and clinical anatomy of the human back and upper limb, including skeletal, muscular, nervous, and vascular tissues. Graded on A-F basis only.

**Credit Hours:** 2

**Prerequisites:** instructor's consent required

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**PTH\_AS 8202: Human Anatomy: Thorax and Abdomen**

Developmental, gross, and clinical anatomy of the human thorax and abdomen. Graded on an A-F basis only.

**Credit Hours:** 2

**Prerequisites:** instructor's consent required

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**PTH\_AS 8203: Human Anatomy: Head, Neck and Neuroanatomy**

Developmental, gross and clinical anatomy of the human head, neck and neuroanatomy. Graded on A-F basis only.

**Credit Hours:** 2

**Prerequisites:** instructor's consent required

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**PTH\_AS 8204: Human Anatomy: Pelvis and Lower Limb**

Developmental, gross and clinical anatomy of the human pelvis and lower limb. Graded A-F basis only.

**Credit Hours:** 2

**Prerequisites:** instructor's consent required

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**PTH\_AS 8285: Problems in Pathology and Anatomical Sciences**

Regions or systems which may include developmental, microscopic, and gross anatomy.

**Credit Hour:** 1-99

**Prerequisites:** instructor's consent

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**PTH\_AS 8290: Research in Pathology and Anatomical Sciences**

Research unrelated to thesis work in evolutionary morphology, genomics, neuroscience, pathobiology or laboratory sciences.

**Credit Hour:** 1-99

**Prerequisites:** instructor's consent

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**PTH\_AS 8450: Human Anatomy Teaching Practicum**

Provides practical experience teaching clinically oriented human anatomy in lecture and laboratory settings. For students pursuing doctoral degrees in Pathobiology. Enrollment is limited to students who have completed PTH\_AS 8201, PTH\_AS 8202, PTH\_AS 8203, and PTH\_AS 8204. Graded on S/U basis only. May be repeated for credit.

**Credit Hour:** 1

**Prerequisites:** instructor's consent

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**PTH\_AS 8500: Seminar in Translational Neuroscience**

Students participate in seminars and discussion groups. Masters students identify seminar topics and present existing data with findings. PhD students identify seminar topics, conduct research and present findings. Learning objective and written assignments are arranged individually. May be repeated for credit. Graded on S/U basis only.

**Credit Hour:** 1-5

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**PTH\_AS 8640: Quantitative Methods in Life Sciences**

(same as BIO\_SC 8640). Quantitative Methods in Life Sciences is a graduate-level course in statistical analysis designed for the specific needs of students in life sciences, focusing on statistical literacy: performing, interpreting, and writing about biological data analysis. As such, the course assumes a basic understanding of some topics and little understanding of other topics. The course will cover most topics broadly and occasionally in great depth, highlighting the perils and pitfalls of different methods, while providing guidelines for a wide array of statistical approaches to data analysis. The course seeks to find the balance between really understanding all the math involved and learning to be a competent practitioner and consumer of analysis, emphasizing the practical over the theoretical, with additional focus on the communication of data (plotting, graphs, figures) and of results. Graded on A-F basis only.

**Credit Hours:** 3

**Prerequisites:** Consent of instructor

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**PTH\_AS 8642: Quantitative Methods in Life Sciences II**

(same as BIO\_SC 8642). A graduate-level course in statistical analysis designed for the specific needs of students in life sciences, focusing on advanced statistical methods: nonlinear statistics, multivariate statistics, structural equation modelling, correlation structures (phylogenetic and kinship methods), experimental design, mixed models, Bayesian statistics, permutation and distribution free methods, mathematical modelling. This course assumes a background knowledge of statistics and analysis in R. This course is modular and can be taken for variable credit. Students select 1-3 5-week module(s) of interest. Graded on A-F basis only. May be repeated for credit.

**Credit Hour:** 1-3

**Prerequisites:** BIO\_SC 8640/PTH\_AS 8640 or consent of instructor

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**PTH\_AS 9090: Research in Pathology and Anatomical Sciences**

Open only to properly qualified graduate students, with counsel of faculty. Focus of PhD-related research in evolutionary morphology, genomics, neuroscience or pathobiology. Graded on S/U basis only.

**Credit Hour:** 1-99

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**PTH\_AS 9290: Research in Pathology and Anatomical Sciences**

Open only with instructor's consent. Courses with specialized lectures in various topics such as evolutionary morphology, genomics, neuroscience and pathobiology, depending on faculty expertise and student demand. Graded on S/U basis only.

**Credit Hour:** 1-99

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**RADIOL 4328: Introductory Radiation Biology**

(same as BIO\_SC 4328, NU\_ENG 4328; cross-leveled with V\_M\_S 7328, BIO\_SC 7328, NU\_ENG 7328, RADIOL 7328). Concepts of ionizing radiations, their actions on matter through effects on simple chemical systems, biological molecules, cell, organisms, man.

**Credit Hours:** 3

**Prerequisites:** junior standing Sciences/Engineering; one course in Biological Sciences and Physics/Chemistry; or instructor's consent

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**RADIOL 6044: SCC Radiation Oncology Elective**

Students will enhance their knowledge, skills, and attitudes about patient-centered care through active participation in direct patient care activities while under the supervision of a faculty preceptor. Students will integrate previously acquired knowledge and concepts and apply them to the care and management of patients. During the elective, students will be expected to work-up patients, perform physical exams, and present cases to faculty. Students will also be exposed to treatment planning, simulations, and treatment deliveries throughout the rotation. At the end

of the elective, students will be expected to give a 10-minute presentation on a topic of their choosing.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the first two years of medical school

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#### **RADIOL 6373: ABS Radiology Research**

ABS Radiology Research

**Credit Hour:** 5-10

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#### **RADIOL 6645: Radiology**

Goals/Objectives: General survey of all subspecialties of radiology.

Evaluations: Written evaluations performed by both faculty and residents.

**Credit Hours:** 5

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#### **RADIOL 6646: SCC Radiology Elective**

Students on this elective rotate through the various areas of radiology, spending time in each of the following subspecialties: musculoskeletal, ultrasound/mammography, chest/body imaging, neuroradiology (CT/MRI), pediatric imaging, and/or Interventional Radiology. Students participate in workstation rounds. Information is presented using a variety of evidence-based resources and online modules, including case conferences, daily mini-lectures, and case review websites.

**Credit Hours:** 5

**Prerequisites:** Successful completion of the first two years of medical school; faculty approval

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#### **RADIOL 6650: Advanced Radiology**

Advanced Radiology

**Credit Hours:** 5

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#### **RADIOL 6651: Interventional Radiology Elective 4WK**

Vascular/Interventional Radiology is a 4-week elective experience for 3rd or 4th year medical students as a clinical rotation. Vascular/Interventional Radiology is a clinical subspecialty of the Department of Radiology, focused on minimally invasive, image guided procedures. The goal of this rotation is to familiarize students with the breadth of services which the VIR service provides within the department of radiology and hospital wide, with an opportunity to actively participate hands on with image guided procedures (CT, US, and fluoroscopy) alongside attending radiologists and fellows within the department of Interventional Radiology. This course does not include experience with Neurologic Intervention or the faculty performing those services. Vascular/Interventional Radiology is a clinically based service, utilizing imaging guidance to perform minimally invasive procedures. The catheter-based therapies of many medical specialties today originated in the hands of Interventional

Radiology providers, and our goal is to offer a basic introduction to the broad spectrum of minimally invasive procedures available to our patients across multiple organ systems. Examples of procedures commonly performed include basic percutaneous biopsy, abscess/fluid collection drainage, central line management, as well as opportunities to participate in more complex procedures within the department to include vascular interventions (angioplasty and stent placement), biliary and genitourinary interventions, oncologic therapy as well as musculoskeletal procedures such as vertebral augmentation.

**Credit Hours:** 5

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#### **RADIOL 6745: Radiology - Rural**

Radiology - Rural

**Credit Hours:** 5

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#### **RADIOL 6931: Introduction to Radiology**

This two week elective will provide students with exposure to chest and body imaging (1 week per area). They will participate in 2-3 didactic sessions focused on the basics of radiology and imaging that is important to all fields of medicine, as well as video lectures one day a week along with the upperclassmen that are doing their 4 week elective at that time. Videos present a case based learning plan involving common emergent situations that may be encountered during their clinical training.

**Credit Hours:** 2

**Prerequisites:** successful completion of the first two years of medical school

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#### **RADIOL 6952: SCC Radiation Oncology 2 week elective**

This course is intended as an introductory experience in the field of Radiation Oncology. Students will enhance their knowledge, skills, and attitudes about patient-centered care through active participation in direct patient care activities while under the supervision of a faculty preceptor. Students will integrate previously acquired knowledge and concepts and apply them to the care and management of patients. During the clerkship, students will be expected to work-up patients, perform physical exams, and present cases to faculty. Students will also be exposed to treatment planning, simulations, and treatment deliveries throughout the rotation.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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#### **RADIOL 6961: Radiation Oncology-2-Week Elective**

This will be an introduction of radiation oncology including the basics of radiation physics, radiation biology, and treatment planning. Each student will be asked to attend multidisciplinary tumor conference. They will participate in evaluation and management of patients with cancer. This will include seeing consults, participating in treatment planning, seeing patients who are on treatment, and follow-up of patients. Special procedures include radiation oncology three-dimensional treatment

planning, INRT, stereotactic radiosurgery and stereotactic body radiation therapy, and brachytherapy.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**RADIOL 6962: SCC Introduction to Radiology**

This two week elective will provide students with exposure to Chest, Body Imaging, Neuroradiology and Pediatric Imaging. Information is presented in a variety of evidence-based resources and online modules, including daily discussion and case review.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**RADIOL 6988: Interventional Radiology Elective 2 WK**

Vascular/interventional radiology two-week elective experience for third- or fourth-year medical students as a clinical elective rotation. Vascular/interventional radiology is a clinical subspecialty of the Department of Radiology, focused on minimally invasive, image-guided procedures. The goal of this rotation is to introduce students to the breadth of services that the VIR service provides within the Department of Radiology and hospital wide, with an opportunity to participate hands on with image-guided procedures (CT, US, and fluoroscopy) alongside attending radiologists and fellows within the Department of Interventional Radiology. This course does not include experience with neurologic intervention or the faculty performing those services. Vascular/interventional radiology is a clinically-based service, using imaging guidance to perform minimally invasive procedures. The catheter-based therapies of many medical specialties today originated in the hands of interventional radiology providers, and the goal is to offer an introduction to the broad spectrum of minimally invasive procedures available to our patients across multiple organ systems. Examples of procedures commonly performed include basic percutaneous biopsy, abscess/fluid collection drainage, and central line management, as well as opportunities to participate in more complex procedures within the department to include vascular interventions (angioplasty and stent placement), biliary and genitourinary interventions, and oncologic therapy as well as musculoskeletal procedures such as vertebral augmentation.

**Credit Hours:** 2

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**SURGRY 6006: Surgery Clerkship**

Emphasis is placed on the diagnosis and treatment of disorders requiring surgical intervention. Each student has a faculty mentor-advisor, attends faculty discussion sessions that cover objectives in the required textbooks and takes call under the supervision of surgical residents. Students are assigned patients from all surgical specialties, participate in preoperative examinations and evaluations, assist during surgical procedures and follow the postoperative management process.

**Credit Hours:** 8

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**SURGRY 6016: Rural Surgery Clerkship**

Rural Surgery Clerkship

**Credit Hours:** 8

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**SURGRY 6026: Springfield Surgery Clerkship**

Emphasis is placed on the diagnosis and treatment of disorders requiring surgical intervention. Students are assigned patients from all surgical specialties, participate in preoperative examinations and evaluations, assist during surgical procedures and follow the postoperative management process.

**Credit Hours:** 8

**Prerequisites:** successful completion of the first two years of medical school

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**SURGRY 6038: SCC Surgical Oncology**

The surgical oncology student will function as a "junior house officer" and be actively involved in the diagnosis, treatment and management of patients with cancer both Gynecologic and Head and Neck Cancers. The student will work in the clinics, participate in ward rounds, and be a full member of the surgical oncology team in and out of the operating room. The student will attend cancer conferences and will be given reading assignments in order to broaden his/her data base. The two course directors will collaborate on the student schedule in order to provide approximately half of the time in each specialty.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of the 7 core clerkships. One of the 5 must be the Surgery Clerkship. SURGRY 6006, 6016, 6026, or 6106

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**SURGRY 6039: SCC Vascular Surgery Selective**

The 4th year vascular surgery student will function similar to a "junior house officer" and be actively involved in the diagnosis and management of vascular disorders. They will work in the clinics, participate in ward rounds, teaching conferences, and will be a full member of the vascular team in and out of the operating room.

**Credit Hours:** 5

**Prerequisites:** Fourth Year Medical Student. Successful completion of 5 of the 7 core clerkships. One of the 5 must be the Surgery Clerkship. SURGRY 6006, 6016, 6026, or 6106

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**SURGRY 6040: SCC Advanced Clinical Surgical Selective**

Students will enhance their knowledge, skills, and attitudes about patient-centered care through active participation in direct patient care activities while under the supervision of a faculty preceptor. Students will integrate previously acquired knowledge and concepts and apply them to the care and management of patients.

**Credit Hours: 5**

**Recommended:** Successful completion of 5 of 7 core clerkships, including the Surgery clerkship. Additional department specific pre-requisites may apply

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**SURGRY 6042: SCC Pediatric Surgery Selective**

The pediatric surgery student will work as part of the team providing hands on clinical care in inpatient, outpatient, and emergent settings. Students will participate in rounds, clinic, and the operating room. The student will do one approximately 10 minute presentation on a mutually agreed upon topic.

**Credit Hours: 5**

**Prerequisites:** Successful completion of the first two years of medical school. Successful completion of 5 of the 7 core clerkships. One of the 5 must be the Surgery Clerkship

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**SURGRY 6046: SCC Plastic Surgery Selective**

The plastic surgery student will participate in all sub-specialty areas of plastic surgery including hand and microsurgery, head and neck cancer surgery, congenital deformities, burns, facial trauma, and major reconstruction, as well as cosmetic surgery. The student will be expected to perform at the level of a "junior house officer" on the Plastic Surgery team.

**Credit Hours: 5**

**Prerequisites:** Successful completion of 5 of the 7 clerkships. One of the 5 must be the Surgery Clerkship. This course requires prior approval by the Springfield faculty before final registration

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**SURGRY 6054: Springfield Cardiothoracic Surgery Selective 4-wk**

The fourth-year cardiothoracic surgery student will work as an extern on the surgical service. They will participate in rounds, clinics, operative arena, and the diagnostic laboratory. Management of complex cardiothoracic/thoracic pathology with a team approach will be defined. Students will participate both in an inpatient setting as well as an outpatient clinic with opportunities for educating patients regarding risk-factor modification in the prevention of cardiopulmonary disease.

**Credit Hours: 5**

**Prerequisites:** Successful completion of 5 of the 7 core clerkships. One of the 5 must be the Surgery Clerkship

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**SURGRY 6066: LINC Surgery Clerkship**

A Longitudinal Integrated Clerkship (LINC) includes medical students in patient care over time, allowing enduring learning relationships to develop with patients and physician-teachers. Students will meet required core clinical competencies in multiple disciplines through interleaved, longitudinal experiences over the course of the clinical training year. In contrast to a block curriculum, students meet and follow their patients across multiple settings of care and different disciplines.

**Credit Hours: 8**

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**SURGRY 6106: Remediation Surgery Clerkship**

Enrolled students are those who received an unsatisfactory grade in a Surgery Clerkship at any Mizzou Med location or site. This course gives the student an opportunity to rectify their deficiency.

**Credit Hours: 8**

**Prerequisites:** SURGRY 6006 Surgery Clerkship, received unsatisfactory grade

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**SURGRY 6126: Remediation Springfield Surgery Clerkship**

Emphasis is placed on the diagnosis and treatment of disorders requiring surgical intervention. Students are assigned patients from all surgical specialties, participate in preoperative examinations and evaluations, assist during surgical procedures and follow the postoperative management process.

**Credit Hours: 8**

**Prerequisites:** successful completion of the first two years of medical school

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**SURGRY 6166: LINC Remediation Surgery Clerkship**

LINC Remediation Surgery Clerkship.

**Credit Hours: 8**

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**SURGRY 6383: ABS Surgery Research**

ABS Surgery Research

**Credit Hour: 5-10**

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**SURGRY 6655: Surgical Off-Site Elective**

Surgical Off-Site Elective

**Credit Hours: 5**

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**SURGRY 6658: Burn Unit**

Burn Unit

**Credit Hours: 5**

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**SURGRY 6661: Surgery Research Elective**

Surgery Research Elective

**Credit Hours: 5**

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**SURGRY 6688: Orthopaedic Surgery Reserach Elective**

Student will identify interest in surgical clinical research and other topical areas of orthopaedic surgery. The research will define concepts relevant to the practice of orthopaedic surgery. The student will engage in self-directed learning and evaluation of new information.

**Credit Hours:** 5

**Prerequisites:** SURGRY 6006; level M4

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**SURGRY 6926: Ambulatory Otolaryngology**

The student will recognize all subspecialty areas included on this rotation: facial trauma, otology/neurotology, head and neck surgical oncology, facial plastic surgery, sinus surgery, pediatric ENT, laryngology and allergy. The student will be exposed to a broad spectrum of patients (adult and pediatric) in both procedural and clinical settings. Students will demonstrate improved technical skills during the 2 week rotation.

**Credit Hours:** 2

**Prerequisites:** successful completion of the first two years of medical school

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**SURGRY 6942: SCC Urology Two Week Elective**

Students will work under the supervision of a faculty preceptor at the Springfield Clinical Campus. Students will see patients in the outpatient clinic and/or inpatient hospital setting, perform a history and physical exam, and develop a patient-centered assessment and plan. They will discuss their findings, assessment and plan with the faculty preceptor and see the patient together. The student will complete oral patient presentations and document patient encounters in the medical record as directed by the faculty preceptor. Students will gain significant exposure to the Urologic operating room environment and procedural treatments, including open, laparoscopic, robotic, and endoscopic procedures.

**Credit Hours:** 2

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**SURGRY 6944: SCC Vascular Surgery 2-week**

This course is intended as an introduction to the specialty of vascular surgery. The vascular surgery student will be actively involved in the diagnosis and management of vascular disorders. They will work in the clinics, participate in ward rounds, teaching conferences, and will be a full member of the vascular team in and out of the operating room.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the Surgery Clerkship

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**SURGRY 6945: SCC Pediatric Surgery 2WK Elective**

This course is intended as an introduction to the specialty for the novice clinical student. The pediatric surgery student will work as part of the team providing hands on clinical care in inpatient, outpatient, and emergent settings. Students will participate in rounds, clinic, and the operating room.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school. Must have completed Surgery clerkship

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**SURGRY 6946: Pediatric Orthopaedic Surgery 2WK**

The course is meant to be an introductory experience to Orthopedic Surgery with specific exposure to pediatric orthopaedics. The student will be actively involved in clinic, in-patient care, and the operating room. The student will learn the basic presentation, evaluation, and management of adult patients with common pediatric orthopedic problems, such as fractures, scoliosis, and neuromuscular disease.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**SURGRY 6947: Orthopaedic Sports Medicine 2WK**

The course is meant to be an introductory experience to Orthopedic Surgery with specific exposure to operative sports medicine. The student will be actively involved in clinic, in-patient care, and the operating room. The student will learn the basic presentation, evaluation, and management of adult patients with common orthopedic sports injuries, such as knee ligament instability, meniscal tears, and rotator cuff pathology.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**SURGRY 6948: Orthopaedic Surgery - Spine 2WK**

The course is meant to be an introductory experience to Orthopedic Surgery with specific exposure to spine. The student will be actively involved in clinic, in-patient care, and the operating room. The student will learn the basic presentation, evaluation, and management of adult patients with common orthopedic problems, such as spinal stenosis and herniated disc.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**SURGRY 6949: Orthopaedic Surgery - Adult Reconstruction 2WK**

The course is meant to be an introductory experience to Orthopedic Surgery with specific exposure to adult reconstruction. The student will be actively involved in clinic, in-patient care, and the operating room. The student will learn the basic presentation, evaluation, and management of adult patients with common orthopedic problems, such as hip and knee arthritis.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**SURGRY 6950: Orthopaedic Surgery - Hand Surgery 2 WK**

The course is meant to be an introductory experience to Orthopedic Surgery with specific exposure to hand surgery. The student will be actively involved in clinic, in-patient care, and the operating room. The student will learn the basic presentation, evaluation, and management of adult patients with common hand problems, such as carpal tunnel, fractures, tendon injuries, and trigger fingers.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**SURGRY 6954: SCC Plastic Surgery 2-week**

The plastic surgery student will have an introductory exposure to the subspecialty areas of plastic surgery including hand and microsurgery, head and neck cancer surgery, congenital deformities, burns, facial trauma, and major reconstruction, as well as cosmetic surgery. Students will integrate knowledge, reasoning, and clinical skills in providing plastic surgery patient-centered care. Students will obtain ambulatory and inpatient care exposure by participating in the evaluations, consultations, and care of patients in the clinics and on the wards. Students will acquire "hands on" operative experience and opportunity to learn, practice, and hone suturing techniques and to assist on many surgical procedures.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school. This course requires approval by the Springfield faculty prior to final registration

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**SURGRY 6955: Ambulatory ENT/Urology**

**Goals/Objectives:** This elective will offer students an exposure to ambulatory care in urology and otolaryngology. Students will see a broad range of patients and numerous outpatient procedures. Students will have close supervision during this experience. Both services have a combined outpatient population of 24,000 visits per year. Students will be exposed to numerous situations they would face in a primary care office. Clinic is offered five days per week by each service. Observation in the O.R. is available and attendance at teaching conferences is required. There will be a written exam given at the completion of the 2 weeks of ENT.

**Credit Hours:** 5

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**SURGRY 6957: Cardiothoracic Surgery**

Cardiothoracic Surgery

**Credit Hours:** 5

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**SURGRY 6958: Surgical off-Site Selective**

Surgical off-Site Selective

**Credit Hours:** 5

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**SURGRY 6959: General Surgery Externship**

**Goals/Objectives:** 1. Provide the student with ability to function as a first year general surgery house officer with close supervision and one-on-one instruction. 2. Become familiar with pre-operative, operative, and post-operative care of general surgical patients. 3. Become familiar with the graded responsibility structure necessary to ethically conduct post-graduate surgical residency training. 4. Develop bedside patient care skills. 5. Develop reading and clinical research skills necessary for contemporary surgical care.

**Credit Hours:** 5

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**SURGRY 6966: Springfield Ambulatory Otolaryngology 2WK**

The student will recognize all subspecialty areas included on this rotation: facial trauma, otology/neurotology, head and neck surgical oncology, facial plastic surgery, sinus surgery, pediatric ENT, laryngology, and allergy. The student will be exposed to a broad spectrum of patients (adult and pediatric) in both procedural and clinical settings. Students will demonstrate improved technical skills during the two-week rotation. This course is located at Springfield Campus.

**Credit Hours:** 2

**Prerequisites:** Successful completion of the first two years of medical school

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**SURGRY 6970: Springfield General Surgery Externship**

The 4th year general surgery student will function as a first year surgical house officer and be integrated in pre-operative, operative and post-operative care of general surgical patients.

**Credit Hours:** 5

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**SURGRY 6971: Surgical Critical Care**

The Surgical Critical Care student will acquire a broad exposure to assessment and management of critically ill and injured patients. The student will participate in daily rounds and patient care with the Surgical Critical Care service. Students will become an active member of the multidisciplinary ICU team and remain under the close supervision of Acute Care Surgery Faculty and Residents. Participation with the members of the multidisciplinary critical care team creates an excellent practical learning environment, while didactic conferences/case presentations compliment the experience.

**Credit Hours:** 5

**Prerequisites:** Surgery Clerkship

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**SURGRY 6972: Surgical Oncology**

Surgical Oncology

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**Credit Hours:** 5

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**SURGRY 6973: Head and Neck Surgical Oncology**

Head and Neck Surgical Oncology

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**Credit Hours:** 5

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**SURGRY 6974: Otolaryngology**

Goals/Objectives: The Otolaryngology student rotation offers learning through participation in daily care of patients, case discussion in conferences, and didactic conferences. All subspecialty areas are included on this rotation, including facial trauma, otology, neurotology, head and neck surgical oncology, facial reconstruction, sinus surgery, pediatric ENT and allergy. Significant outpatient experience is provided and the extent of operating room participation to the student's needs and preferences. The student sees a full spectrum of patients (adult and pediatric) at the University and the VA. The student sees and learns about a variety of outpatient problems during the outpatient segment of this rotation. A wide variety of surgical procedures are observed in the operating room. The residents and faculty encourage an individually tailored learning experience for the student. Supplemental texts and other teaching aids are encouraged. Clinical research projects are available for interested and committed students.

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**Credit Hours:** 5**Prerequisites:** Surgery Clerkship

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**SURGRY 6975: Pediatric Surgery**

Goals/Objectives: To gain a working knowledge of a) diagnosis, b) preoperative care, c) surgery, and d) postoperative care of the 1) congenital 2) traumatic 3) oncologic and 4) common surgical conditions affecting infants and children. This rotation is designed for the student planning a career that includes the care of infants and children. CURRICULUM: Attendance on daily rounds and participation in pediatric surgery clinic are mandatory. The student should also be present in radiology for all inpatient and outpatient contrast studies on surgical patients and consults. Operating room exposure can be individualized; the student is expected to be present, but not necessarily scrubbed, for the key portion of each case. Pediatric Surgical texts can be found in the Medical Library under RD 137, in the Pediatric or Surgery libraries, in the bookstore. Rowe - Essentials of Pediatric Surgery, Holder - Pediatric Surgery, Welch - Pediatric Surgery (4th ed.), Coran - Surgery of the Neonate.

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**Credit Hours:** 5**Prerequisites:** Surgery Clerkship

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**SURGRY 6976: Plastic Surgery**

Goals/Objectives: The plastic surgery student rotation is considered "hands on" experience for the student rotating in the division of plastic surgery. This is a busy rotation with good opportunity for clinical exposure. The patient population includes all subspecialty areas of plastic

surgery including hand and microsurgery, head and neck cancer surgery, congenital deformities, burns, facial trauma, and major reconstruction, as well as cosmetic surgery. On this rotation, the student is expected to have an in-depth opportunity to learn, practice, and hone surgical suturing techniques and to first or second assist on many major surgical procedures. The graphic specialty of plastic surgery is best appreciated by participation and observation and there will be ample opportunity for this. In addition to the ward and major operating room duties, the student will obtain ambulatory patient care exposure by participating in the clinics, in the evaluation of new patients, and the after care of surgery patients. In addition, a significant percentage of the surgery is done as an outpatient and the student should have the opportunity to gain appreciation of the nuances of surgery done in the ambulatory environment. Incumbent to these considerations are exposure and appreciation of cost containment in plastic surgical procedures.

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**Credit Hours:** 5

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**SURGRY 6977: Acute Care Surgery**

Students will participate in patient care, gather pertinent patient data, and develop plans of care for the patients on the surgery service. Case presentations will be given to the surgical team each day. Night and weekend call should be expected.

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**Credit Hours:** 5**Prerequisites:** Surgery and Internal Medicine Clerkship

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**SURGRY 6978: Springfield Otolaryngology Surgical Selective 4wk**

The fourth-year otolaryngology student will work as a sub-intern on the surgical team. The otolaryngology student will participate in daily care of patients, case discussion in conferences, and weekly head and neck conferences.

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**Credit Hours:** 5**Prerequisites:** Successful completion of 5 of the 7 core clerkships. One must be the Surgery clerkship

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**SURGRY 6979: Vascular Surgery**

Vascular Surgery

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**Credit Hours:** 5

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**SURGRY 6980: Urology**

The goal of the rotation is to provide a comprehensive urologic experience for those students who may be interested in Urology as a career as well as those students who simply want a more in-depth experience before pursuing another specialty. At the conclusion of the rotation, the student will be able to competently manage common urologic conditions such as hematuria, incontinence, and erectile dysfunction and recognize those patients who need referral to a specialist. To accomplish this, emphasis is placed on the management of both outpatients and inpatients. Active participation in the operating room is expected and the student will assist in a wide variety of urologic

procedures. Students will also participate in outpatient procedures such as cystoscopy and vasectomy. Basically, the student will function as an extern on the University Urologic Service with appropriate patient care responsibilities.

**Credit Hours:** 5

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**SURGRY 6981: Orthopaedic Surgery Sub-Internship**

**Goals/Objectives:** Rotation for students actively interested (more aggressive) students in orthopaedics as a career. Emphasis will be placed on surgical indications, operative technique and post-operative care of orthopaedic patients. The student will be assigned by Ortho faculty to two different orthopaedic teams (sports medicine, foot and ankle, total joint, general, pediatrics, trauma, and hand) for two weeks at a time. Each student would be given an extensive reading schedule, a list of topics to be covered, given a written or oral examination including both services emphasized at the end of block. Brief oral presentation, to the residency or service on which they are working, on orthopaedic subject of choice pertaining to Ortho service/residency assigned. **CURRICULUM:** The student will spend two weeks on two different university teams during this rotation. The student will be expected to participate in all aspects of the orthopaedics services they are assigned. This will include outpatient clinics, elective and emergent OR time, routine day-to-day care of patients on the orthopaedic service, and consultations. The student will take four nights of call with the Ortho residents assigned to service. The student will be evaluated by the attending and residents on the two services to which they have been assigned.

**Credit Hours:** 5

**Prerequisites:** Surgery Clerkship

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**SURGRY 6982: Introduction to Orthopaedic Surgery**

**Goals/Objectives:** Rotations for students interested in a career in primary care. The student will learn physical diagnosis and outpatient as well as surgical treatment of common orthopedic conditions. Each student will be given a list of topics that will be covered, a reading list to which the student would be obligated to read and given a short written and/or oral examination of the musculoskeletal system emphasized. Brief oral presentation, to the residency or service on which they are working, on an orthopedic subject of choice pertaining to Ortho service/residency assigned. The student will be assigned for the four weeks by Ortho Faculty to a preceptor from one of the following areas: sports medicine, foot and ankle, total joint, general, pediatrics, trauma or hand. **CURRICULUM:** The student on this rotation will be expected to learn to diagnose and manage commonly seen orthopedic conditions in the assigned orthopedic area. The student will participate in outpatient clinics, OR cases, rounds and conferences. The student will take two call nights with the Ortho Resident assigned to service. Basic techniques of splinting and cast application will be learned by sessions with the orthopedic cast technician.

**Credit Hours:** 5

**Prerequisites:** Surgery Clerkship

**SURGRY 6984: Springfield Burn Surgical Selective**

The fourth-year medical student will be integrated into the Burn Care Team. They will participate in intensive care delivery, wound management, and surgical procedures. The student will attend rounds, and available case conferences, and presentations.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of the 7 core clerkships. One of the 5 must be the Surgery Clerkship

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**SURGRY 6985: Neurosurgery A**

**Goals/Objectives:** This course will provide the conscientious student an opportunity to acquire the following: 1. The ability to perform comprehensive neurological evaluation of the patient including both history taking and physical examination. This will entail a review of basic neuroanatomy and neurophysiology and a correlation of that information with the requirements of clinical medicine. 2. A basic understanding of neurosurgical diseases and their evaluation and management. Of particular importance will be the emphasis placed upon the initial evaluation of patients with central and peripheral nervous system trauma and neoplasms, cerebrovascular disease, congenital diseases of the nervous system, pain problems, diseases of the spine and lumbar discs. **CURRICULUM:** In order to direct the objectives of this course, students will be exposed to the following: 1. Individualized teaching sessions with the faculty. 2. Combined conferences with neurology, neuroradiology and neuropathology. 3. Outpatient clinics at the UMHC and EFCC (Ellis Fischel). 4. The inpatient services of neurosurgery at UMHC. 5. The operating room at UMHC. **Evaluations:** The progress of the student will be evaluated through personal interaction with the faculty and residents and through an oral examination at the end of the course.

**Credit Hours:** 5

**Prerequisites:** Surgery Clerkship

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**SURGRY 6987: Springfield Surgical Critical Care**

The 4th year Surgical Critical Care student will acquire a broad exposure to assessment and management of critically ill and injured patients. The student will participate in daily rounds and patient care with the Surgical Critical Care service.

**Credit Hours:** 5

**Prerequisites:** Successful completion of 5 of the 7 core clerkships. Two of the 5 must be the Surgery Clerkship and Internal Medicine Clerkship

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**SURGRY 6989: Pediatric Neurosurgery**

**Goals/Objectives:** To provide interested students the opportunity to acquire exposure and knowledge in the field of pediatric neurosurgery. This elective will allow the student to learn about clinical entities such as craniofacial anomalies, hydrocephalus, neuroendoscopy, congenital and central nervous system anomalies, and trauma of the CNS. The student becomes part of a team and closely interacts with the attending physician, neurosurgery residents, and clinical nurse specialist. **CURRICULUM:** 1. Daily inpatient rounds. 2. Individualized teaching with faculty. 3. Clinics: Chiari and Pediatric Neurosurgery. 4.

Conferences: Neurosurgery Grand Rounds, Neuro-radiology, Neuro-pathology, Neuroscience. Prerequisites: Surgery Clerkship

**Credit Hours:** 5

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**SURGRY 6991: Longitudinal Neurosciences Selective**

The fourth year ambulatory longitudinal rotation in neurosciences follows neurosurgical patients from admission in the NSICU, through their operative encounter, and then on to their neuro-rehabilitation. The student will work as part of the multi-disciplinary team providing hands-on care in the inpatient, intensive care, and neuro-rehabilitative settings. The student is assigned selected hospitalized neurosurgical patients during their first two weeks of the rotation. The student will participate in the planned or emergent operative care of these selected patients. Once these patients are transferred to the inpatient and rehabilitative setting, the student will follow them through their recovery and rehabilitation. Student time will be spent equivalently across the different patient locations with emphasis placed on continuity of care. Faculty members in both Neurological Surgery and Physical Medicine and Rehabilitation will supervise this experience.

**Credit Hours:** 5

**Prerequisites:** Successful completion of five of the seven core clerkships with two of the five being the Neurology Clerkship and the Surgery Clerkship

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