ALL COURSES - SCHOOL OF MEDICINE

All Courses School of Medicine

ANE 333. Anesthesiology (OMA). 2 credits.
Students will become familiar with the specialty of anesthesiology through daily, hands-on preoperative, intraoperative, and postoperative anesthetic management of patients of all ages.

ANE 334. Anesthesiology (PHX). 2 credits.
Working closely with staff anesthesiologists in a variety of settings, students will become familiar with the specialty of anesthesiology through daily, hands-on preoperative, intraoperative, and postoperative anesthetic management of patients of all ages. Student will learn how to successfully manage an airway.

ANE 335. Anesthesiology (PHX). 2 credits.
Working closely with staff anesthesiologists in a variety of settings, students will become familiar with the specialty of anesthesiology through daily, hands-on preoperative, intraoperative, and postoperative anesthetic management of patients of all ages. Students will learn how to successfully manage an airway.

ANE 450. Neuroanesthesia Sub-Internship (PHX). 1-4 credits.
Student will develop the knowledge and skills to effectively deliver anesthesia to neurosurgical patients undergoing a wide variety of procedures including aneurysm clipping, complex spine surgery, brain tumor resection, and pediatric neurosurgery. Also, the student will have the opportunity to perform and assist in the placement of central venous catheters, arterial lines, intubations, and fiber optic bronchoscopy. Finally, the student will develop a basic working knowledge of pharmacology, physiology, and the pathophysiology of neurologic disorders.

ANE 451. Introduction to Anesthesiology (PHX). 4 credits.
Working closely with staff anesthesiologists in a variety of settings, students will become familiar with the specialty of anesthesiology through daily, hands-on preoperative, intraoperative and postoperative anesthetic management of patients of all ages. Students will learn how to successfully manage an airway.

ANE 456. Introduction to Anesthesiology - Valleywise (PHX). 4 credits.
Working closely with staff anesthesiologists in a variety of settings, students will become familiar with the specialty of anesthesiology through daily, hands-on preoperative, intraoperative and postoperative anesthetic management of patients of all ages. Students will learn how to successfully manage an airway.

ANE 461. Introduction to Anesthesiology (OMA). 4 credits.
Working closely with staff anesthesiologists in a variety of settings, students will become familiar with the specialty of anesthesiology through daily, hands-on preoperative, intraoperative and postoperative anesthetic management of patients of all ages. Students will learn how to successfully manage an airway.

ANE 470. Anesthesiology Pain Medicine (OMA). 4 credits.
The student will participate as a sub-intern in the care of acute and chronic pain patients in the hospital and clinic under the supervision of the medical staff at CHI Creighton Medical Center and Midwest Pain Clinics. Students will develop a basic working knowledge of pharmacology, physiology, pathophysiology of pain. Also, students will have the opportunity to assist with interventional pain procedures such as injections and nerve blocks.

ANE 472. Anesthesiology ILAC Service in the Dominican Republic. 2 credits.
The course provides the opportunity for students to use their anesthesiology skills in a primitive setting and allow students opportunities to provide health care to a needy population and interact with another culture. It is expected that the students will understand more deeply the advantages of the health care system we are privileged with, but to also come to understand and know the blessings of the simplicity and gratitude lived by those in the culture they will be immersed in.

ANE 473. Anesthesiology Capstone (PHX). 4 credits.
The senior student will participate in the anesthesiology capstone curriculum in the final block of his/her fourth year of training. Scheduled learning activities will includes a variety of lectures, small group discussions, patient simulation exercises, procedure development, as well as hands-on patient care sessions.

ANE 498. Anesthesiology Extramural (OMA & PHX). 1-8 credits.

BMS 303. Physiology. 4 credits. SP
Provides Nursing and other Health Profession students with a basic knowledge of human physiology. Presents an overview of the function of the major organ systems using lectures and demonstrations. 4R. P. NUR major or IC.

BMS 311. Basic Human Anatomy. 4 credits. FA
Course designed to provide pre-professional students with an introduction to human gross anatomy, histology, and neuroanatomy. A systemic approach is used. Dissected cadaver specimens and anatomical models are available as learning aids. P.IC.

BMS 451. Gross Anatomy (PHX). 4 credits.
BMS 451 is an elective designed to allow fourth-year medical students the opportunity to review and expand their knowledge of human gross anatomy by dissecting a selected region of a human cadaver. The goal is to enable students to expand their appreciation for the importance of human anatomy in clinical medicine.

BMS 452. Gross Anatomy (PHX). 2 credits.
BMS 452 is a two-week elective designed to allow fourth-year medical students the opportunity to improve their general knowledge of an anatomical region by dissecting a human cadaver. The appreciation for the importance of human anatomy in clinical medicine is an important aspect of this course.

BMS 461. Gross Anatomy (OMA). 2-4 credits.
The two-week elective is for students interested in improving their general knowledge of an anatomical region, while the four-week elective is for students wanting to undertake a more detailed examination and study. The latter option is especially designed for students interested in specific aspects of surgical anatomy.

BMS 470. Teaching Practicum in Medical Anatomy (OMA). 4 credits.
M4s participate as near-peer teaching assistants in medical gross anatomy laboratory with M1 and M2 students. Students will assist in prosecting donors for each laboratory session and actively teaching the M1s and M2s during the lab. M4s are encouraged to assist with tutorials outside of scheduled lab sessions.

BMS 497. Directed Independent Research. 1-3 credits. OD
This course consists of original scientific investigation under supervision and guidance of the instructor. Upon successful completion of this course, students will acquire the skills necessary to perform experiments, assess, and interpret results; demonstrate competence in the laboratory, effectively analyze, synthesize, and interpret data; and communicate their results. P. IC.

BMS 609. Introduction to Omics Data Analysis. 1 credit.
this is an introductory course to familiarize students with the principles of bioinformatic and computational analysis of transcriptomic, genomic and epigenomic data. A few hand-on projects will be designed for the students to practice the basic analyzing skills and to stimulate their interests for more advanced applications. P. BIO 202 or BMS 622.

BMS 622. Biochemistry, Molecular and Cell Biology. 4 credits.
This course covers fundamental principles of structural biochemistry and metabolism, and molecular and cell biology. P. IC.

BMS 630. Fundamentals of Hearing. 3 credits. FA, SP, SU
This is an advanced graduate level course focusing on the anatomy and physiology of the auditory system. The course will introduce students to the basics of normal human hearing with a focus on the peripheral auditory system, neural coding of sound, and the perception of simple sounds. P. Gr. Stdg. or IC.

BMS 680. Biology of Aging and Age-related Diseases. 3 credits.
This course covers the biology of aging at the molecular, cellular, and organismal level, as well as discussions on age related diseases. Topics include sections of cellular and molecular pathways of again, molecular pathways of aging, model organism of aging, and the interrelationship between aging and disease, including hearing loss, cardiovascular disease, neurodegeneration, and cancer. P. BMS 622, or IC.

BMS 708. Cancer Biology. 2 credits.
This course covers the biology of aging at the molecular, cellular, and organismal level, as well as discussions on age-related diseases. Topics include sections on cellular and molecular pathways of aging, model organism of aging, and the interrelationship between aging and disease, including hearing loss, cardiovascular disease, neurodegeneration, and cancer. P. BMS 622 or DC.

BMS 720. Advanced Topics in Molecular Structure/Function. 3 credits. FA, SP, SU
This course covers functional aspects of molecular structure, peptide chemistry, and molecular interactions. Topics vary will change with each iteration of the course permitting students to repeatedly enroll in the course but with each covering a different topic. Nine credit hours are the maximal applicable toward the degree. P. IC.

BMS 722. Mass Spectrometry and Biomedical Applications. 3 credits.
The Mass Spectrometry and Biomedical Applications course is designed to provide the necessary background for understanding the fundamental principles of mass spectrometry and application of this technique to answer questions in molecular and cellular biology. P. BMS 622.

BMS 730. Advanced Topics in Cell and Molecular Biology. 3 credits. FA, SP, SU
This course covers functional aspects of eukaryotic cells including gene regulation/expression, signal transduction, and cell-cell and cell-substrate interactions. Topics vary will change with each iteration of the course permitting students to repeatedly enroll in the course but with each covering a different topic. Nine credit hours are the maximal applicable toward the degree. P. IC.

BMS 740. Advanced Topics in Physiology. 3 credits. FA, SP, SU
This course covers specific aspects of physiology and pathophysiology of whole organisms and organ systems as well as cellular physiology. Topics vary will change with each iteration of the course permitting students to repeatedly enroll in the course but with each covering a different topic. Nine credit hours are the maximal applicable toward the degree. P. IC.

BMS 750. Advanced Topics in Morphology and Anatomy. 3 credits. FA, SP, SU
This course covers functional morphology ranging from cellular ultrastructure to gross anatomy and embryology. Topics vary will change with each iteration of the course permitting students to repeatedly enroll in the course but with each covering a different topic. Nine credit hours are the maximal applicable toward the degree. P. IC.

BMS 760. Advance Topics in Neuroscience. 3 credits. FA, SP, SU
This course integrates the areas of neuroanatomy, neurophysiology, neuropharmacology, and neuropathology at the cellular and organismal level. Topics vary with each iteration of the course permitting students to repeatedly enroll for the course but with each covering a different topic. Nine credit hours are the maximum applicable toward the degree. P. IC.

BMS 791. Seminar. 1 credit. FA, SP
This course consists of formal oral presentations and critical discussions of assigned subjects to familiarize students with the nature and extent of research literature, the analysis of research papers, and the collation and presentation of scientific information. This course is repeatable. P.IC.

BMS 792. Journal Club. 1 credit. FA, SP, SU
This course consists of detailed examination of the physiology, cell biology, and molecular biology of the nervous system, with emphasis on mammalian systems. The course will include membrane physiology, ion channels, synaptic physiology, neurotransmitters and receptors, sensory receptors, neural circuits, and advanced techniques. P. IC.

BMS 795. Directed Independent Study. 2 credits. FA, SP, SU
Each student, supervised by faculty members, will pursue in-depth reading and discussions on current research topics of interest to faculty and students. The purpose is to provide an environment whereby the student is introduced to scientific research methods and can improve critical thinking and reading skills as well as exchanging scientific information. P. IC.

BMS 797. Directed Independent Research. 1-9 credits. FA, SP, SU
This course consists of original investigation under supervision and guidance of individual staff members. P. IC.

BMS 799. Master's Thesis. 1-3 credits. FA, SP, SU
This course consists of review of the literature and research data; writing of the thesis. Students must register for this course in any term when engaged in formal preparation of the Master's thesis; however, six credit hours are the maximum applicable toward the degree. P. IC.

BMS 899. Doctoral Dissertation. 3-6 credits. FA, SP, SU
This course consists of review of the literature and research data and the writing of the dissertation. Students must register for this course in any term when engaged in formal preparation of the doctoral dissertation; however, twenty credit hours are the maximum applicable toward the degree. P. IC.

CIB 103. Foundational Science (OMA & PHX). 5 credits.
The overall goal of this course is to provide students with a comprehensive understanding of the fundamentals of the foundational sciences which serves as the basis of modern medicine. P. Admission to Medical School.

CIB 105. Immunology and Hematology (OMA & PHX). 4 credits.
This is an introductory block for first-year medical students to learn the principles of hematopoietic and lymphoreticular systems. The first part of the block will emphasize the relationship of immunology and human disease, as well as the biological mechanisms utilized by the immune system. The second part covers the normal and abnormal aspects of the hematopoietic system including physiology, pathology, and clinical disorders of blood cells, bone marrow, lymph nodes, spleen, and other lymphoid tissues.

CIB 107. Musculoskeletal and Integumentary Systems (OMA & PHX). 7 credits.
By the end of the course students will not only apply basic science knowledge to explain the normal and pathological states of the integumentary and musculoskeletal systems, but also relate that knowledge to the diagnosis, treatment, and prevention of common clinical diseases. P. Admission to Medical School.

CIB 109. Neuroscience (OMA & PHX). 7 credits.
This course structures the learning around the neurological clinical method of regional anatomical diagnosis. Students will learn factual material and also use the content to think as a neurologist in approaching clinical problems. The course integrates basic science and clinical science. Neuroanatomy, neurophysiology, neuropathology, neuropharmacology, and neurology will be interwoven with each other throughout the course. P. Admission to Medical School.

CIB 113. Cardiovascular System (OMA & PHX). 5 credits.
Each Clinically Integrated Block will be topic-centered with vertical integration across all disciplines, inclusive of Medical Science Disciplines, Personal and Professional Development Disciplines and Clinical Skills Training Disciplines. This Clinically Integrated Block is centered on topics related to the Cardiovascular System. P. Admission to Medical School.

CIB 115. Respiratory System (OMA & PHX). 4 credits.
The course teaches the anatomy and physiology of the lungs and airways, as well as the diagnosis and treatment of medical problems of the respiratory system including, upper airway disorders, reversible obstructive lung disease, chronic obstructive pulmonary disease, ALI-ARDS, restrictive lung disease, neoplasms, thrombosis, sleep apnea, and neonatal respiratory problems. P. Admission to Medical School.

CIB 117. HEENT (OMA & PHX). 2 credits.
This course introduces students to the anatomy, embryology, and physiology of the head and neck with an emphasis on the special senses. Basic and clinical sciences are integrated so that students learn the pathophysiology and pathology of common disorders within the region. P. Admission to Medical School.

CIB 119. Infectious Disease (OMA & PHX). 3 credits.
Worldwide, infections cause more morbidity or mortality than any other disease. This course helps students understand the structures of individual organisms, their pathogenic potential, and the diagnosis and treatment of the diseases they cause.

CIB 202. Gastrointestinal System (OMA & PHX). 5 credits.
Each Clinically Integrated Block will be topic-centered with vertical integration across all disciplines, inclusive of medical science, personal and professional development, and clinical skills training. The Gastrointestinal System block teaches the normal histology, embryology, pathology, anatomy, physiology, and basic clinical medicine of the GI system, integrated with a consideration of GI system abnormalities and appropriate therapy for these conditions. P. M1 Component.

CIB 204. Renal-Urinary System (OMA & PHX). 4 credits.
Each Clinically Integrated Block will be topic-centered with vertical integration across all disciplines, inclusive of medical science, personal and professional development, and clinical skills training. The Renal System block teaches the normal histology, embryology, pathology, anatomy, physiology, and basic clinical medicine of the renal system, integrated with a consideration of renal system abnormalities and appropriate therapy for these conditions. P. M1 Component.

CIB 206. Endocrine System (OMA & PHX). 3 credits.
Each Clinically Integrated Block will be topic-centered with vertical integration across all disciplines, inclusive of medical science, personal and professional development, and clinical skills training. The Endocrine System block teaches the normal histology, embryology, pathology, anatomy, physiology, and basic clinical medicine of the endocrine system, integrated with a consideration of endocrine system abnormalities and appropriate therapy for these conditions. P. M1 Component.

CIB 208. Reproductive System (OMA & PHX). 4 credits.
Each Clinically Integrated Block will be topic-centered with vertical integration across all disciplines, inclusive of medical science, personal and professional development, and clinical skills training. The Reproductive System block provides learning experiences on the anatomy, histology, physiology, pathology, pharmacology, and basic clinical medicine of the male and female reproductive systems integrated with a consideration of reproductive abnormalities and appropriate therapy for these conditions. Areas of focus include normal pregnancy and delivery and diseases of reproductive organs. P. M1 Component.

CIB 210. Life Cycle (OMA & PHX). 3 credits.
This four-week interdisciplinary block consists of lectures, pre-recorded videos, flipped classroom sessions and Team-Based Learning Sessions that focus on stages of life. Emphasis is placed on aspects of prenatal, childhood and geriatric stages that are not adequately covered in the organ system courses. P. M1 Component.

CIB 212. Multisystem Disease/Clinical Decision Making (OMA & PHX). 5 credits.
The Multisystem Disease/Clinical Decision-Making Block provides learning opportunities for students to increase their understanding of multisystem disease processes and to demonstrate competence in clinical decision-making skills. The course will include topics related to social determinants of health and interviewing culturally diverse patients. P. M1 Component.

CIB 214. Step 1 Guided Review and Study (OMA & PHX). 8 credits.
Each Clinically Integrated Block will be topic-centered with vertical integration across all disciplines, inclusive of medical science, personal and professional development, and clinical skills training. The Life Cycle block teaches the normal histology, embryology, pathology, anatomy, physiology, and basic clinical medicine of the different stages and cycles of life.P. M1 Component.

CIB 218. Brain and Behavior (OMA & PHX). 3 credits.
Students will learn the biological, psychological, and social origins of psychiatric syndromes, their definitions and symptom features, and the diagnostic criteria. Students will gain an understanding of the role of genetics, growth and development, environmental and psychosocial risk factors, dynamic experiential factors, and individual personality as parts of the complex process that can eventuate in psychiatric disorders.

DER 333. Dermatology (OMA). 2 credits.
This elective will introduce third year students to the field of Dermatology. The student should come to understand what dermatologists do and where they fit in the field of medicine. The student will recognize how the fields of internal medicine, surgery and pathology are all integral parts of dermatology and what the limits of dermatologists are in each area. He/she will also recognize that the diagnosis of certain skin disorders may point to other underlying medical conditions that dictate the need for further evaluation and possible consultation. There should be a clear understanding of ways to distinguish between benign and malignant skin growths. Also, the small number of life threatening dermatoses should be known.

DER 334. Dermatology (PHX). 2 credits.
This elective will expose the student to the full range of dermatologic services including General Medical Dermatology, Dermatologic Surgery, Cosmetic Dermatology, and Dermatology. The student will spend time during the elective with Dermatologists who specialize in each of the areas listed above. The student will be required to read each day/evening on a variety of dermatologic topics. Opportunities for special study and clinical research (i.e. case reports) will be available.

EME 301. Emergency Medicine Clerkship (OMA & PHX). 2 credits.
Students will care for patients of all ages who present to the Emergency Department. They will follow and manage patients under the direct supervision of the attending physician. Cases could include traumatic injuries, medical illnesses, as well as obstetric and gynecologic complaints. Day and night shifts are required, and students will complete an orientation at the beginning.

EME 333. Emergency Medicine. 2 credits.
This elective will give students exposure to the facets of the subspecialties that are combined in the acute care management and critical care of the emergency patient.

EME 334. Emergency Medicine. 2 credits.
In this rotation, the students will participate as a member of a team in the care of patients presenting to the Emergency Department. Students are assigned patients, and follow and manage the patients during their Emergency Department visit under the direct supervision of the attending physician. The patient population provides a wide range of experience in care of traumatic injuries, multiple medical illnesses, care of the patient with obstetric and gynecologic complaints, and management of the pediatric patient. Patients seen in the Emergency Department are of all ages. This is a very busy service, managing patients with a wide range of diagnoses. Students are assigned specific work schedules that involve both day and night exposure. There is no on call time during this rotation.

EME 335. Emergency Medicine - Valleywise (PHX). 2 credits.
Students join the team in the care of patients presenting to the Emergency Department. Students will follow and manage patients under the direct supervision of the attending physician. The wide range of experiences includes traumatic injuries, multiple medical illnesses, care of the patient with obstetric and gynecologic complaints, and management of the pediatric patient.

FAP 301. Family Medicine Clerkship (OMA & PHX). 4-8 credits.
The Department of Family Medicine administers a four-week required Family Medicine clerkship in the third year. Students work with supervising physicians who see patients in primary care clinics for general checkups, acute complaints, and chronic medical problems. Students will independently interview, examine, and assess patients prior to seeing the patients with the physician in the ambulatory setting.

FAP 416. Making Meaning at the End of Life (PHX). 4 credits.
Students will attend home visits with hospice and palliative medicine personnel. Learn the basics of medical management for patients near or at the end of life. Students will develop creative, meaning-based activities informed by patients' values to engage in with patients. This may include playing music, creating art, reading, or engaging in legacy work.

FAP 425. St. Vincent De Paul Medical & Dental Clinic (PHX). 1-5 credits.
This course is a two to four week elective in public health and community medicine for fourth year medical students with an interest in primary care medicine and the underserved. In clinic the students will have their own panel of patients while being supervised by family physicians, mostly the director, to gain experience treating the underserved with current evidence based guidelines. They will also participate in other public health related activities occurring in the clinic that can be used to aid in the healthcare delivered by the clinic or the safety net system as a whole.

FAP 428. Primary Care Sports Medicine (PHX). 2 credits.
This rotation is designed to provide in-depth exposure to primary care sports medicine with emphasis on care of non-articular rheumatic disorders, infectious, suppurative and degenerative arthritis conditions, acquired and congenital abnormalities of bones and joints, musculoskeletal and connective tissue disorders, evaluation and management of common sprains, fractures and dislocations, preventive care, rehabilitation, and restorative function.

FAP 431. Inpatient Family Medicine Sub-Internship (PHX). 4 credits.
In this course, the student participates as a sub-intern in the care of hospitalized Family Medicine patients. Students are assigned patients on a rotational basis and will follow their patients throughout their hospital stay, managing their care with duties and responsibilities similar to those of an intern.

FAP 438. Respite Care for the Homeless (PHX). 4 credits.
The student will work directly with the Circle the City staff physician at the Circle the City Medical Respite Center. Daily activities include pre-admission evaluation of potential patients at referring hospitals, admission work-ups, and daily medical care of the patients. Students will have the opportunity for learning opportunities with members of the interdisciplinary team, including nursing, physical therapists, case managers and the staff psychiatrist.

FAP 440. Inpatient Family Medicine Sub-Internship (PHX). 4 credits.
Inpatient Family Medicine is an elective in which the student participates as a sub-intern in the care of hospitalized Family Medicine patients. Students are assigned patients on a rotational basis and will follow their patients throughout their hospital stay, managing their care with duties and responsibilities similar to those of an intern. Patients are from the practices of family physicians on the staff, or are patients admitted from the community Family Medicine outpatient offices. The patient population provides a wide range of experience including Surgery, Pediatrics, Ob/Gyn, and Geriatrics. The number of patients admitted to the service varies from 20-30 per week, with an age range from birth to 99 years. This is a busy service with a wide variety of diagnoses. There are daily teaching rounds taught by Family Medicine faculty. The student will manage the assigned hospitalized patient under the supervision of the supervising resident and the attending physician, and complete the required paperwork. Students will also attend the weekly Core Content Lecture series. The successful completion of this elective fulfills the primary care sub-internship requirement.

FAP 450. Geriatrics (OMA). 4 credits.
Students will integrate the data gained from geriatric patients into a diagnosis and comprehensive treatment plan that exhibits the student's knowledge and skills to provide continuity of care, promote health through patient education, and provide humanistic and ethical care in a private family medicine physician office setting.

FAP 461. Inpatient Family Medicine Sub-Internship (OMA). 1-4 credits.
The student will manage assigned hospitalized patients with supervision during this selective and will master the skills needed to assess, diagnose, and manage common inpatient illnesses. Educational goals of this course are to assist the student to integrate the clinical data gained from each inpatient into a diagnosis and comprehensive treatment plan that also exhibits the students knowledge and skills to provide continuity of care, clinical reasoning skills, health promotion through patient education, and the provision of humanistic and ethical care in a family medicine hospital setting.

FAP 462. Rural Family Medicine Sub-Internship (OMA). 4 credits.
This selective gives the student opportunities in rural family medicine. The department of family medicine has a number of practitioners in western Iowa, western and central Nebraska, and eastern Wyoming who serve as preceptors. Students will work with a family physician on primarily an outpatient basis in their clinics. There will be inpatient and on-call experiences as well. The student will gain skills in diagnosis, treatment, outpatient management, and family/longitudinal care within a rural, small town context. The student will be assigned selected outpatients and inpatients to medically evaluate under the supervision of the assigned rural physician; complete required paperwork, and participate in other patient reviews as indicated by the rural preceptor.

FAP 464. Private Family Medicine (OMA). 2-4 credits.
In this elective, students are assigned to a specific family practitioner who has been approved by the Department for senior electives. The student follows all hospital patients of the individual physician and spends clinical time in the practitioner's office. The student will be assigned selected outpatients and inpatients to medically evaluate under the supervision of the assigned physician; complete required paperwork, and participate in other patient reviews as indicated by the preceptor. The goal of this course is to assist the student to integrate the informational data gained from all types of patients into a diagnosis and comprehensive treatment plan that also exhibits the student's knowledge and skills to provide continuity of care, promote health through patient education, and provide humanistic and ethical care in a private family medicine physician office setting.

FAP 465. Inpatient Family Medicine (OMA). 2 credits.
To integrate the clinical data gained from each inpatient into a diagnosis and comprehensive treatment plan that also exhibits the students knowledge and skills to provide continuity of care, clinical reasoning skills, health promotion through patient education, and the provision of humanistic and ethical care in a family medicine hospital setting.

FAP 469. Family Medicine Capstone (OMA). 4 credits.
The senior student will participate in the capstone family medicine curriculum in the final block of his/her fourth year of training. Scheduled learning activities will include a variety of lectures, small group discussions, patient simulation exercises, procedure development, as well as hands-on patient care sessions.

FAP 476. Family Medicine Capstone (PHX). 4 credits.
The senior student will participate in the capstone family medicine curriculum in the final block of his/her fourth year of training. Scheduled learning activities will include a variety of lectures, small group discussions, patient simulation exercises, procedure development, as well as hands-on patient care sessions.

FAP 481. Longitudinal COPC Public Health Endowed Research (OMA). 4 credits.
This is an elective that will complete the Longitudinal COPC Public Health Research Assistantship (FAP 480) that the student began during the summer between their M1 and M2 years. The student will be able to finalize their data analysis and manuscript/abstract/poster presentation during this month. The student will work closely with their research faculty mentor in order to complete their research findings and have their work ready for a regional or national presentation. It is expected that the student will present their work to a Specialty Society National Conference, the Midwest Research Forum, the COPC Common Ground meeting, etc.

FAP 498. Family Practice Extramural (OMA & PHX). 1-8 credits.

FAP 795. Independent Study in Family Medicine. 2-4 credits.

FAP 798. Directed Independent Study FAP. 1-4 credits.

GRS 591. Guided Research Selective I (OMA & PHX). 0.5 credits.
This course includes a general introduction to research and offers students an opportunity to explore their individual interests. Students will be guided to discover research opportunities, write a grant proposal, obtain IRB approval, and begin to build a research portfolio. Bench, clinical, translational, and public health research opportunities will be available. P. Admission to Medical School.

GRS 592. Guided Research Selective II (OMA & PHX). 0.5 credits.
This course will allow students to continue the work that they started in GRS 591. At the completion of GRS 592, students will be expected to have a poster, presentation, or to have submitted their work for publication. P. GRS 591.

IDC 000. Study Abroad. 0-12 credits.

IDC 180. COPC Public Health Research. 0 credits.
This eight-week summer assistantship will expose the student to the Community Oriented Primary Care (COPC) process and improve their knowledge about health disparity issues.

IDC 183. The Healer's Art. 0.5 credits.
The Healer's Art course is designed to form of a genuine community of inquiry between students and physicians that encourages an in-depth sharing of experience, beliefs, aspirations, and personal truths. Students and faculty participate together in a discovery model to explore service as a way of life. The course's innovative educational strategy helps students uncover and recognize the personal and universal meaning in the daily work of medicine.

IDC 320. Jesuit Worldwide Learning: Global Perspectives in Liberal Arts. 1 credit.
This course is designed to introduce students to the mission of Jesuit Worldwide Learning (JWL) and to its students living at the margins. Texts and videos concerning Ignatian pedagogy and mission; marginalization and privilege; daily lives of refugees; and techniques for online teaching will be analyzed and discussed.

IDC 350. M3 Gold Track (OMA & PHX). 1-2 credits.
Ethics, humanities, personal and professional development, leadership, evidence-based medicine, and health systems science are built into this course which expands upon the Gold Track material from years 1 and 2. Activities occur within clerkships through small groups, reflections, didactics, and hands-on experience to develop a deeper, more critical understanding of the practice of medicine.

IDC 398. USMLE Enrichment Course. 0-1 credits.
Medical students will be enrolled in this course after the Associate Dean for Student Affairs approves a formal program of study for USMLE Step 1 examination. This course is reserved for those students who have been unsuccessful in passing the USMLE Step 1 examination. The student will be reassigned from clinical clerkships to this independent study course. The purpose is to guide and direct the student in preparation for retaking the USMLE Step 1toward the goal of successfully passing the exam. Satisfactory/Unsatisfactory only.

IDC 401. Service Learning in Local Communities - Sports and Education. 3 credits.
This course combines service learning in a local community and in a foreign country in order to compare experiences of the relationship between sports, education, and development across different cultures. P. Sr. stdng.

IDC 410. Simulation (PHX). 2-4 credits.
The student will select 10 task trainer and or simulation scenarios for the 2 week course or 20 task trainer and or simulation scenarios for the 4 week course. For each simulation event chosen the student will learn the risks and benefits of the procedure, indications and contra-indications, steps to follow to safely perform the procedure and understand the role as a physician during the procedure or scenario. Once the student has mastered the procedure he/she will record the event which will be viewed and evaluated by the course director.

IDC 412. Clinical Moral Perception, Art, and Medicine (OMA). 4 credits.
Students who enroll in this elective will cultivate these skills by exploring art, narrative, and related interdisciplinary healthcare ethics and humanities topics. With guidance from the course director and Joslyn Museum staff, students will compile a journal. With guidance from the course director, students will also write an article. Required materials are a notebook (paper or electronic) to bring to the museum. A purpose of this course is to offer students opportunities to experience art, reflect on their futures as physicians, resonate with the humanities and visual art in this phase of their professional development, internalize the humanistic impulses of artists whose work is represented in the Joslyn, critically appraise their own patterns of perception, and relate their own sensitivities to their relationships with patients, patients' loved ones, and colleagues.

IDC 413. Anatomy (PHX). 1-5 credits.
The Anatomy elective is an elective designed to allow students the opportunity to review and expand their knowledge of human gross and imaging anatomy by working on a synthetic cadaver, reviewing normal plain film, CT, ultrasound and MRI anatomy and by doing ultrasound on a partner to identify normal anatomic structures.

IDC 414. Planetary Health (OMA). 4 credits.
This elective weaves together immersion in wild silences in the forest, principles in ecopsychology, indigenous perspectives, and the creativity and kinship that emerge in the woods. Students will develop their own creative writing and activity prompts around themes of how deeper connections with nature can contribute to their formation as physicians and to the mental and physical health of their patients.

IDC 417. Medicine and the Law (OMA). 4 credits.
This elective familiarizes medical students with various topics in law that influence the delivery of health care. The minority of medical schools (and residencies) offer formalized education in law and medicine, and this elective is strategically positioned in the fourth year of medical education to bridge the knowledge gap of legal aspects of medical care in the transition from undergraduate to graduate medical education.

IDC 419. Medicine as Ministry: Death and Dying (PHX). 2 credits.
Identify how a hospital setting can better care for the whole person: body, mind and spirit. How does the approach of the physician create a more caring experience? Experience pastoral care for patients and families by shadowing hospital chaplains. Care for dying patients and families through Hospice care. Recognize the power of death to clarify values. Experience how physicians can care for themselves while caring for others.

IDC 421. Why Catholic Medicine? (OMA & PHX). 4 credits.
This course is designed for students who would like to take a deeper dive into a Catholic understanding of medicine, Catholic moral theology and bioethics, and its application to contemporary cases and policies. The course will engage theological and philosophical ideas and arguments and show how abstract ideas matter for the most practical matters of contemporary clinical medicine.

IDC 422. Theology, Bioethics & Medicine (OMA). 4 credits.
This course is designed to orient students to a Catholic understanding of medicine, the relation between theology and medicine, and Catholic moral theology and bioethics. The course will engage theological and philosophical ideas and arguments but will be accessible to those who are not trained in these fields.

IDC 428. Bearing Witness: Memoirs of Dying, Death and Grief (OMA). 4 credits.
Students will discuss the concept of "bearing witness," as well as the role that personal narratives such as memoirs play in that process. Drawing on their clinical experience with patient narratives, students will develop a framework for exploring the ways in which the memoirs we read "bear witness" to dying, death, and grief.

IDC 432. Medical Jurisprudence (OMA). 4 credits.
Students work with a physician-attorney who specializes in representing plaintiffs in cases of professional negligence and medical malpractice. Students will learn the principles of medical jurisprudence including duty to report negligence, factors that increase liability, medicolegal implications of informed consent and leaving against medical advice, prevention of medical errors, improving the delivery of patient care, and the basic tenets of professional negligence and causation.

IDC 434. Relational Care: Self-Care in Medicine (OMA). 4 credits.
Self-care practices specifically designed for healthcare professionals have gained attention as a way to mitigate the symptoms of moral injury and burnout. Justification can be made that self-care strategies intended for healthcare professionals are not going far enough to enhance well-being and foster a lifetime of joy in medicine. This course is designed to address this issue.

IDC 440. Street Medicine (PHX). 4 credits.
The Street Medicine course aims to prepare students to provide compassionate, evidence-based, and interprofessional care to people experiencing homelessness, focusing on the unique health challenges, social determinants, and systems-based barriers faced by this population. Students will develop practical skills through didactic learning and direct service in the community.

IDC 443. Teaching Practicum Medical Anatomy (PHX). 4 credits.
M4 students in this course will participate as near-peer teaching assistants in medical gross anatomy laboratory sessions with M1 and M2 students. M4 students will actively teach M1 and M2 students during each scheduled anatomy lab for the elective. M4s are encouraged to assist with anatomy “office hours” (optional weekly review sessions hosted by other teaching assistants in the lab) as they are available, outside of scheduled lab sessions.

IDC 462. Medical Informatics (OMA). 4 credits.
This course will focus on how medical informatics impacts two major roles played by physicians: the role of life-long learning and the role of communicator/educator. Students will learn how to more efficiently access, use, and manage information using computer based technologies, various types of resources, and information sources.

IDC 464. Residency Application and Interviewing (OMA & PHX). 1 credit. FA, SP
Each fourth-year medical student is responsible for developing a plan to maximize their success in the residency application and matching process. Students work with the Associate and Assistant Deans for Student Affairs on their campus to develop a curriculum vitae and personal statement. They also work with their Specialty Advisor to complete the Residency Counseling Checklist before meeting individually with the Associate or Assistant Dean for Student Affairs for their MSPE interview, which acts as a mock residency interview and an opportunity to review the student’s CV, personal statement, and Residency Counseling Checklist including residency application strategies.

IDC 470. Step 2 Clinical Knowledge Exam Guided Review (OMA & PHX). 2 credits.
The purpose of this course is to help students prepare for the Step 2 Clinical Knowledge Exam. IDC 470 is required for all third-year medical students and it will be held the last two weeks of the M3 academic year. Once advanced to the M4 year, students may enroll in the optional IDC 471, which immediately follows IDC 470, if they wish to extend their participation in guided review prior to taking Step 2.

IDC 471. Step 2 Clinical Knowledge Exam Guided Review (OMA). 2 credits.
The purpose of this course is to help students prepare for the step 2 Clinical Knowledge Exam. IDC 470, 471, and 472 are all unique Step 2 CK guided reviews. IDC 470, 471, and 472 will each review different topics and have different practice exams. Students may enroll in any one or all three courses.

IDC 482. Minority Health Disparities-Issues and Strategies (OMA). 2 credits.
This course explores cultural diversity and health disparities globally and locally. Through a cultural self-assessment, students explore how their own culture influences their worldview. Selected components of complex cultural environments that relate to health disparities will be analyzed. Students examine existing health disparities, systems and potential solutions. This course recognizes cultural competency as a basic requirement of any health care system and its constituents. Students will determine the importance of responding respectfully to and preserving the dignity of people of all cultures both within and outside of health and social systems.

IDC 485. LGBTQIA Health Disparities: Issues and Strategies (OMA). 2 credits.
Lesbian, Gay, Bisexual, Transgender, Transsexual, Queer, Questioning, Intersex, Intergender, Asexual/Aromantic (LGBTQIA) individuals face well-documented disparities when interacting with the health care system including: poorer access to needed care, bias and discrimination, a lack of provider knowledge and/or comfort in providing care, absent or suboptimal risk factor assessment, and medical management of diseases that is not grounded in the current evidence-based practices. These disparities can lead to unnecessary and preventable negative health outcomes. Students will examine LGBTQIA health disparities, policies, systems, and recommend possible solutions. This course recognizes the right of the LGBTQIA individuals to receive primary and comprehensive health care. Students will determine the importance of responding respectfully to and preserving the dignity of LGBTQIA community both within and outside of health and social systems.

IDC 491. Women in Science. 1 credit. SP
Course designed to provide an historical overview of women in science while focusing on current practices. Discussion will emphasize barriers that women have faced in the past and strategies for coping, presently, in what is no longer a "man's field." Class meets once a week.

IDC 497. Directed Independent Research (OMA & PHX). 1-8 credits.
Fourth-year medical students have the opportunity to participate in directed independent research for elective credit. The purpose of directed independent research is to explore an area of interest within and related to medicine under the supervision of a faculty member.

IDC 498. Directed Independent Study (OMA & PHX). 1-4 credits.
Fourth-year medical students have the opportunity to participate in directed independent study for elective credit. The purpose of directed independent study is to explore an area of interest within or related to medicine under the supervision of a faculty member.

IDC 561. Exploring Holistic Health-Implications for Care and Policy. 3 credits.
This course explores different understandings of health and how these influence perceptions of care and ultimately policies pertaining to public health and health care. Students compare and contrast their understandings and perceptions with those of diverse groups encountered during a study abroad program.

IDC 590. Collaboration and Diversity: A Journey Through the Balkans. 3 credits.
This blended FLPA course introduces students to the context of the Balkans and involves visits to religious and historical sites. Through the course, students gain a sense of the world, their place within it, and understanding of the values of Men and Women for and With Others and Cura Personalis.

IDC 601. Responsible Conduct of Research. 1 credit.
This required course for students in the graduate programs at Creighton University School of Medicine is designed to introduce fundamental concepts, principles and guidelines regarding scientific integrity in biomedical research. Through readings, lectures, and case discussion students are given an opportunity to reflect on ways in which they can help foster and maintain responsible conduct in research. They also become acquainted with existing regulations, guidelines, ethical themes and on-line resources regarding the ethics of their profession.

IDC 625. Introduction to Biostatistics for the Biomedical Sciences. 3 credits.
This course will provide instruction on the common statistical methods used in biomedical science and their correct application to the design and analysis of research study questions, in-class assignments will be given for each class session based specifically on the material covered during lecture. Students will be allowed to work together to complete assignments, but must complete and submit their own work for credit. One comprehensive final exam will be given to evaluate student learning throughout the semester.

IDC 627. Research Methods. 3 credits.
Study of modern experimental methods, instrumentation, and bioinformatics tools and approaches used in biomedical research. Major course components include detection, analysis, and genetic manipulation of nucleic acids, antibody-based experimental techniques, generation, detection, and analysis of recombinant proteins, microscopy, and various experimental model systems.

IDC 701. Research Writing. 3 credits.
This course will provide instruction on grant preparation and strategy, using the NIH R21 as a model. Content will consider alternative sources of grant funding and be relevant to all research grant applications. Emphasis will be placed on writing clear English.

IDC 797. Summer Research Project. 1 credit.
Students work with a faculty research mentor during the spring semester to develop a research proposal that is typically carried out during the summer before Component II.

IDC 997. Professional Practice Remediation. 1-16 credits.
This course is designed to provide remediation in preparation for repeating a clinical rotation in which an 'Unsatisfactory' or 'Failing' grade was earned.

IDC 998. Professional Practice Remediation. 1-20 credits.
This course is designed to provide remediation in preparation for repeating a professional practice course in which an "Unsatisfactory" grade was earned. P. Grade of Unsatisfactory in a professional practice course.

IDC 999. Continuing Graduate Studies. 0 credits.

IHW 013. HWC: Theory to Practice. 0 credits.
This hybrid course combines online learning with a five-day on campus residency that builds on the knowledge, skills, and values gained throughout the HWC curriculum. Students apply theory to practice during the residency component of the course through case studies, face-to-face coaching sessions, and interactive group projects.

IHW 021. The Use of Journaling in Your Health Coaching Practice. 0 credits.

IHW 024. Using Motivational Interviewing Principles to Resist the "Righting Reflex" for Hlth Coaches/HC Profs. 0 credits.

IHW 028. Supporting Purposeful Behavior Change: SMART-EST Goals for Client Success. 0 credits.

IHW 032. Advanced Lifestyle Medicine. 0 credits.
Non-credit: Lifestyle medicine is the use of healthy lifestyle behaviors to prevent and treat chronic diseases. In this course, students will consider comprehensively applying lifestyle medicine strategies to healthy individuals, to those with chronic diseases, and as part of a self-care program. Students will also consider lifestyle medicine as its own medical explanatory framework for disease, illness and health.

IHW 038. Health Behavior Modification. 0 credits.
Noncredit: This course provides students with a broad perspective on the many factors that determine health, with emphasis on healthy lifestyle behaviors. Students will construct, implement and modify healthy lifestyle programs for case patients/clients with and without chronic disease and across the lifespan. Special emphasis will be placed on understanding the pathophysiology and current treatment strategies of common chronic diseases. Students also learn how to evaluate and read research papers that are based on lifestyle medicine practices and procedures.

IHW 053. Stress and Sleep Management. 0 credits.

IHW 065. Exercise for Chronic Disease. 0 credits.
This non-credit course reviews the basic principles of aerobic and anaerobic fitness and their relationship with health and disease. Students will learn and practice how to construct, implement, and modify personalized exercise programs for patients/clients with and without chronic disease and across the lifespan. Students also learn how to evaluate and read research papers that are based on exercise practices and procedures.

IHW 501. Personal Development for the Health and Wellness Professional. 3 credits.
A fundamental component for health and wellness professionals is self-awareness, continuous personal development, reflection, balance, and well-being. This course provides students with tools and practices to achieve and maintain these fundamental components of self-care. This course includes participation in academic service learning.

IHW 570. Healthy Aging: Concepts and Strategies for a Life Well Lived. 3 credits.
This course offers students an opportunity to develop an understanding of health promotion for the older adult. Several chronic diseases will be examined with emphasis placed on lifestyle medicine and its influence on the aging experience.

IHW 605. Foundations in Integrative Health and Wellness. 2 credits.
Integrative care is a broad term used to describe a type of personal care that addresses more of the whole person than simply a disease or condition. Integrative care purposefully adds evidence-based complementary medicine interventions to the conventional care treatment plans of patients within the current healthcare system. This course will provide a broad overview of the integrative care interventions commonly used in the U.S. healthcare system, with a particular focus on lifestyle medicine and the social determinants of health.

IHW 650. Health Behavior Modification. 3 credits.
This course provides students with a broad perspective on the many factors that determine health, with emphasis on healthy lifestyle behaviors. Students will construct, implement and modify healthy lifestyle programs for case patients/clients with and without chronic disease and across the lifespan. Special emphasis will be placed on understanding the pathophysiology and current treatment strategies of common chronic diseases. Students also learn how to evaluate and read research papers that are based on lifestyle medicine practices and procedures.

IHW 651. Nutrition for Chronic Disease. 3 credits.
This course reviews the basic principles of human nutrition with emphasis on the relationship between diet and health, and diet and disease. Students will learn and practice how to construct, implement, and modify personalized nutrition programs for patients/clients with and without chronic disease and across the lifespan. Students also learn how to evaluate and read research papers that are based on nutrition practices and procedures.

IHW 652. Exercise for Chronic Disease. 3 credits.
This course reviews the basic principles of aerobic and anaerobic fitness and their relationship with health and disease. Students will learn and practice how to construct, implement, and modify personalized exercise programs for patients/clients with and without chronic disease and across the lifespan. Students also learn how to evaluate and read research papers that are based on exercise practices and procedures.

IHW 653. Stress and Sleep Management. 3 credits.
This course studies stress and sleep and their respective impacts on health and chronic disease across the lifespan. Several stress management techniques are debated and practiced with emphasis on mind-body medicine and the relaxation response. Students also learn how to evaluate and read research papers that are based on stress and sleep management practices and procedures.

IHW 670. Research Methods and Program Design. 3 credits.
This course will explore of quantitative and qualitative research techniques applicable to health and wellness literature and program design. By the end of the course, students will be able to evaluate research and the program designs of others. In addition, students will be able to design their own programs with the appropriate methods of evaluation.

IHW 760. Advanced Health and Wellness Coaching. 3 credits.
This advanced course will prepare students for health and wellness coaching through the practice of program design and implementation of individuals within the community. Special emphasis will also be placed on team building skills and business practices related to health and wellness coaching.

IHW 770. Wholism as a Guiding Principle for Leadership and Well-Being. 3 credits.
Wholism is the philosophy that says that the parts of a whole are in intimate interconnection such that they cannot exist independently of the whole and cannot be understood without reference to the whole. This course explores the notion that all parts that make up the whole of an individual are interconnected where the guiding principles that form a person's leadership philosophy cannot be separated from those that guide personal health behaviors such that, "how we do anything is how we do everything" (Richard Rohr). Along with gaining a more in-depth sense of wholism, this course begins by exploring the interconnectedness of our relationships with others with the factors that determine health, balancing our inner world with our outer experiences, connecting dualism to our leadership style and personal health outcomes, and exploring our true-self and life purpose. Additionally, these elements are discussed in the context of chronic stress and the role that it plays in both personal health and leadership activities. The course ends with a practical application of these elements to employee health programs that emphasize improvements in quality-of-life, enhanced worker productivity, and cost savings to an organization.

IHW 780. Health and Wellness Coaching Skills, Techniques, & Tools. 3 credits.
The art and science of health and wellness coaching is enhanced with practice. In this course, students will utilize knowledge, skills, techniques, and tools acquired throughout the curriculum. Students will collaborate with clients seeking to improve their general well-being and with clients who are physician-diagnosed with chronic disease states. P. IHW 760 and Department Consent.

IHW 781. Health and Wellness Coaching: Theory to Practice. 3 credits.
This hybrid course combines online learning with a five-day on campus residency that builds on the knowledge, skills, and values gained throughout the Health & Wellness Coaching curriculum. Students apply theory to practice during the residency component of the course through case studies, face-to-face coaching sessions, and interactive group projects. P. IHW 760 and Department Consent.

IHW 795. Directed Independent Study. 1-6 credits.
Students participate in independent scholarly projects under the supervision of a faculty member. P. Department Consent.

IHW 798. Practicum in Health and Wellness Coaching. 3 credits.
Students who opt for the practicum track will work with a health/well-being-related organization to gain experience in the field of health and wellness coaching. During the practicum, students will design and develop an independent project that is mutually beneficial to the student and the organization. Students will be supervised by someone within the organization and by a faculty instructor. Course is repeatable up to 6 credits. P. Department Consent.

IHW 799. Capstone in Integrative Health and Wellness. 3 credits.
This course is designed to challenge students to reflect upon the Health and Wellness Coaching curriculum with the goal of defining their vocation, creating their personal health coaching philosophy, and identifying evidence based strategies they plan to use in their future health coaching practice while considering the broad and distinct landscape of health and well-being. P. Department Consent.

IHW 999. Awarded/Transfer Credit. 1-3 credits.

MBS 732. Bioscience Internship. 3 credits.
The internship will allow students to develop skills outside their current area of expertise through working on a time-limited project within a science and business context. Each internship will be supervised by both a science and business PSM program faculty member.

MED 005. Coronavirus, COVID-19, and the Pandemic. 0 credits.
The purpose of this course is to provide faculty and students of Creighton University School of Medicine and other Schools and Colleges of Creighton University the opportunity to learn about the novel coronavirus (SARS-CoV-2) and the disease caused by the virus (COVID-19), including diagnostic tests and medical treatments of the disease. Elements of the global pandemic caused by coronavirus will be explored, including prevention strategies, public health issues, and the impact on society.

MED 301. Internal Medicine Clerkship (OMA & PHX). 4,8 credits.
The Internal Medicine Clerkship is a required eight-week clinical rotation in the third year of medical school. It is composed of two four-week sessions. You will care for some very complex patients with multiple chronic and acute medical problems. You will also have the opportunity to see some esoteric and complicated tertiary care patients. The Department of Medicine views this Clerkship as integral to your development as a physician. We believe that what you will learn over the next eight weeks will be of use to you no matter what field of Medicine you ultimately choose. The scope of Internal Medicine can be daunting. We have designed the Clerkship to promote self-directed, reflective learning habits that should serve you well throughout your career. You are expected to take the initiative in all aspects of your learning. This includes actively seeking feedback, participating in discussions, sharing your knowledge with others, and of course, spending time with your patients.

MED 333. Outpatient Internal Medicine (OMA). 2 credits.
This elective will provide students with a broad experience of internal medicine in the ambulatory setting. Internists see a wide variety of patients and this elective will allow students to appreciate the importance and difficulty of caring for patients with many co-morbidities.

MED 334. Outpatient Internal Medicine. 2 credits.
This elective will provide students with a broad experience of internal medicine in the ambulatory setting. Internists see a wide variety of patients and this elective will allow students to appreciate the importance and difficulty of caring for patients with many co-morbidities.

MED 335. Ambulatory Internal Medicine (PHX). 2 credits.
This course will introduce third-year medical students to outpatient internal medicine. The student will be expected to perform H&Ps, present SOAP notes, and formulate plans for diagnosis and treatment, under the supervision of a resident. After formulating a plan, the student will present to an attending.

MED 401. General Medicine Sub-Internship (OMA). 4 credits.
The senior student will participate as a sub-intern in the care of hospitalized patients. Patients are assigned to the students on a rotational basis under the supervision of a supervisory resident and/or an attending physician. The patients are admitted from a variety of locations including community outpatient clinics, the Emergency Department, and transfers from outside hospital systems. The student will manage his or her patients throughout their hospital stay. The patient population provides a wide variety of disease processes related to internal medicine, primarily acute cardiac, pulmonary, gastrointestinal, neurological, and infectious diseases problems. The emphasis is on the initial evaluation and management of acute problems and on the appropriate use of consultative subspecialty services in definitive management. A small number of evening call assignments may be required.

MED 403. Emergency Medicine - Chandler/Mercy (PHX). 4 credits.
This rotation is designed for fourth-year medical students who are interested in pursuing a career in Emergency Medicine. Students will work with clinical faculty one-on-one, participate in a robust EM educational curriculum, and receive dedicated coaching to set yourself up for success on future rotations and as a future intern.

MED 404. Internal Medicine Sub-Internship - Valleywise (PHX). 4 credits.
Development of clinical skills via supervised, advanced experience in examination and care of hospitalized patients. Improvement in problem identification and problem-solving skills.

MED 405. Allergy and Immunology (PHX). 4 credits.
This elective offers students the opportunity to observe, interact and explore a variety of allergic and immunologic diseases. The medical student will interact with patients, residents, fellows, and faculty physicians to develop a basic understanding of etiology, physiology, pathogenesis, diagnostic procedures of allergic diseases and inborn errors of immunity. This is an outpatient rotation.

MED 408. Infectious Diseases Sub-Internship (PHX). 4 credits.
This course builds on the foundation laid by previous courses including Medical Microbiology (Infectious Diseases Block), Physical Diagnosis, and the Internal Medicine clerkship. The student will be supervised in these activities by the attending physician. The students are provided responsibility for evaluating patients seen in clinic or consultation with critique of their findings and supervision of their day-to-day clinical decisions, own review and presentation.

MED 411. Internal Medicine Sub-Internship (PHX). 4-6 credits.
Development of clinical skills via supervised, advanced experience in examination and care of hospitalized patients. Improvement in problem dentification and problem-solving skills.

MED 412. Pulmonary Diseases Sub-Internship (OMA). 4 credits.
The pulmonary service is a consulting service that sees patients both in the inpatient wards and as outpatients. Students are provided initial responsibility for evaluating patients with careful critique of their findings and close supervision of their day-to-day clinical decisions. Attending physicians spend approximately four hours each day with the medical students and are integrally involved in the educational process.

MED 415. Internal Medicine Hospital Medicine Sub-Internship (PHX). 4 credits.
The sub-internship rotation in hospital medicine is designed to develop students' clinical skills in history, exam, and medical decision-making in the area of hospital medicine under the supervision of residents and faculty.

MED 417. Endocrinology, Diabetes, and Metabolism (PHX). 2 credits.
The overall goal of the course is for the student to gain proficiency in recognizing, evaluating and treating the wide variety of Endocrine, Diabetes and Bone disorders. The patient population provides a wide range of experience in diabetes, thyroid problems, hyperlipidemia, bone metabolism, osteoporosis and general endocrinology.

MED 418. Endocrinology and Metabolism (PHX). 4 credits.
To strengthen student skills in the care and evaluation of patients with endocrine and metabolic diseases, including evaluation, differential diagnosis, and the appropriate use of diagnostic testing in Diabetes, Thyroid, Osteoporosis and Reproductive disorders. Includes experience in thyroid ultrasound testing and thyroid nodule biopsies.

MED 420. Infectious Diseases Sub-Internship (PHX). 4 credits.
This elective provides the opportunity to learn the consultation process for diagnosis and treatment of infectious diseases and to build on the foundation laid by previous courses including Medical Microbiology, Physical Diagnosis, and the Internal Medicine clerkship. The students participating in this elective are provided responsibility for evaluating patients seen in clinic or consultation with critique of their findings and supervision of their day-to-day clinical decisions, own review and presentation. Each student also has the opportunity to spend time in the Microbiology Laboratory to receive more in-depth exposure to common tests used in Infectious Diseases.

MED 421. Renal Medicine Sub-Internship - Valleywise (PHX). 4 credits.
This course will help students to develop clinical skills and advance their advance experience in examination and care of hospitalized patients with renal disease. By the end of this course, students will have improved skills in problem identification and problem-solving skills for the treatment of acute and chronic kidney diseases, acid base and electrolyte disturbances.

MED 422. Renal Medicine Sub-Internship (OMA). 4 credits.
The purpose of this selective in renal medicine is to familiarize the students with common renal disorders seen in everyday clinical practice in the wards, clinics and in the ICUs. These include acute and chronic renal failure and their associated problems including dialytic therapies, fluid and electrolyte disorders, acid base disorders, difficult to control hypertension in different clinical settings as well as renal transplant management. The students are required to perform a pertinent history and physical exam as well as prepare differential diagnosis and treatment plans. At the end of course, students should feel comfortable with assessing and managing patients with common renal disorders.

MED 426. Interventional Pulmonary Medicine (PHX). 4 credits.
Interventional pulmonary medicine focuses on minimally invasive procedures for management of diseases of the airway, lung, and pleural surface. The course introduces the learner to point-of-care ultrasound, lung cancer screening, and the indications and contraindications of commonly performed pleural, advanced diagnostics, and interventional pulmonary procedures for management of lung cancer, pleural effusion, severe emphysema, tracheal stenosis etc.

MED 427. Genitourinary Oncology. 1-5 credits.
The student will be assigned to the outpatient Genitourinary Oncology clinic at UACC. Working alongside a full-time faculty member, and with nurse practitioners, rotating house staff, nurses, and other health care personnel of the inter-disciplinary team, the student will gain experience with the diagnosis and management of patients with GU malignancies.

MED 430. Hospice and Palliative Care (OMA). 2 credits.
This elective will introduce the student to the field of hospice and palliative care. Based on the student's interest, emphasis can be provided in a community setting with hospice teams or in an acute care setting on the palliative inpatient consult service at Creighton University Medical Center Bergan Mercy. Students will explore these related fields using the National Coalition for Hospice and Palliative Care's guidelines which detail various "domains" of care.

MED 431. Dermatology (OMA). 4 credits.
In this elective, the student should come to understand what dermatologists do and where they fit in the field of medicine. The student will recognize how the fields of internal medicine, surgery and pathology are all integral parts of dermatology and what the limits of dermatologist are in each area. He/she will also recognize that the diagnosis of certain skin disorders may point to other underlying medical conditions that dictate the need for further evaluation and possible consultation. Students will develop a clear understanding of ways to distinguish between benign and malignant skin growths. Also, the small number of life threatening dermatoses should be known. Students learn technique in local anesthesia, cryotherapy and cutaneous surgeries including laser surgery. There are assigned and directed readings regarding interesting patients in this elective.

MED 435. Medical Hematology/Oncology/Palliative Care (OMA). 2-4 credits.
Students taking this rotation will learn about palliative and supportive care for cancer patients, end of life care, and be given instruction in patient physician communication. With staff supervision, students may be able to do bone marrow aspiration, biopsy and daily didactic sessions with faculty covering a wide variety of hematological, oncological and supportive care topics. Patients with cancer, anemia, and bleeding disorders offer the student a unique opportunity to gain valuable experiences, not only in cancer management, but also in general medicine.

MED 436. Research in Medical Hematology/Oncology/Palliative Care and Primer in Bio-Statistics (OMA). 4 credits.
The research component of student training are designed to establish competency in the design, conduct, interpretation and presentation of research by requiring the student to complete at least one major project and to participate in additional projects time permitting. Students learn clinical research methods which includes cancer outcomes and statistical analysis. Data interpretation along with presentation in various formats i.e., abstracts, posters and articles will be done.

MED 437. Hematology/Oncology Sub-Internship (OMA). 4 credits.
The sub-intern will have increased responsibility for patient management in preparation for internship. They will see 4-6 inpatients and evaluate 2-3 new consults per day. They will take responsibility for inpatients on a hematology/oncology consult service, develop treatment plans, improve communication skills by relating information to patients and families, and communicate with the primary team and other consultants.

MED 438. Hematology & Oncology Sub-Internship - Valleywise (PHX). 4 credits.
To strengthen students' skills in the management of patients with malignant disease and in the clinical evaluation of hematologic disorders.

MED 439. Emergency Medicine (PHX). 4 credits.
In this rotation, the students will participate as a member of a team in the care of patients presenting to the Emergency Department. Students are assigned patients, and follow and manage the patients during their Emergency Department visit under the direct supervision of the attending physician. The patient population provides a wide range of experience in care of traumatic injuries, multiple medical illnesses, care of the patient with obstetric and gynecologic complaints, and management of the pediatric patient. Patients seen in the Emergency Department are of all ages. This is a very busy service, managing patients with a wide range of diagnoses. Students are assigned specific work schedules that involve both day and night exposure. There is no on call time during this rotation.

MED 442. Inpatient Cardiology (OMA). 4 credits.
In this course, the student will come to appreciate the full breadth of cardiovascular diagnostic techniques and management of patients with cardiac disease. This elective is divided into four one-week blocks in which the student can choose electives. Each student who signs up for this course will be assigned two consecutive weeks on the inpatient service as a member of the team and will be responsible for the care of the patients admitted to the CCU and Cardiovascular services at Bergan and CUMC. The senior students will be assigned patients and will be responsible for the assessment and management of that patient during the patient's stay in the hospital. The student will be responsible for daily progress notes and orders on these patients. The patient population provides a wide range of experience in cardiovascular disease management. For the remaining two weeks of the course, the student can then choose from the following one week electives: A. Diagnostic Techniques; B. Outpatient Management; C. Independent Reading.

MED 444. Cardiology Sub-Internship - Valleywise (PHX). 4 credits.
To provide a broad overview of contemporary issues in the management of patients presenting with a wide variety of problems involving the cardiovascular system.

MED 448. Inpatient Cardiology Sub-Internship (PHX). 4 credits.
In this course, the student will come to appreciate the full breadth of cardiovascular diagnostic techniques and management of patients with cardiac disease. This elective is divided into four one-week blocks in which the student can choose electives. Each student who signs up for this course will be assigned two consecutive weeks on the inpatient service as a member of the team and will be responsible for the care of the patients admitted to the CCU and Cardiovascular services. The senior students will be assigned patients and will be responsible for the assessment and management of that patient during the patient's stay in the hospital. The student will be responsible for daily progress notes and orders on these patients. The patient population provides a wide range of experience in cardiovascular disease management. For the remaining two weeks of the course, the students can then choose from the following one week electives: A. Diagnostic Techniques; B. Outpatient Management; C. Independent Reading.

MED 451. Emergency Medicine Ultrasound - Valleywise (PHX). 4 credits.
The student will do at least four ultrasound shifts with the director; complete and archive 150 scans documenting on data sheets; provide follow-up and confirm all scans with radiographic studies or clinical exams; record and archive the images and clips for review and evaluation; complete a case study for use by director in conferences and other educational projects; participate in ongoing research projects and lectures; complete required readings. During the rotation students will learn how to integrate bedside ultrasound into their clinical practice.

MED 453. Introduction to Global Health (OMA). 2-4 credits.
This course will provide an academic framework in Global Health for future practitioners with a focus on equity and engagement. The course will utilize the Millennial Development Goals as a framework for discussion of Global Health. In addition, students will be provided with tools for travel preparation and project assessment.

MED 454. Gastroenterology Sub-Internship - Valleywise (PHX). 4 credits.
To provide students with a broad exposure to gastrointestinal and hepatic disorders in both the acute and outpatient setting.

MED 456. Gastrointestinal Medicine (OMA). 1-4 credits.
In this elective, the student would be exposed to educational opportunities on the in-patient GI service and will work closely with medicine house staff officers as well as attending physicians. By the end of the rotation the student will be able to diagnose and treat patients with gastrointestinal conditions commonly found in the inpatient Internal Medicine setting.

MED 458. Pulmonary/Lung Transplant (PHX). 4 credits.
The Lung Transplant Critical Care Selective for Senior Medical Students include the expansion of knowledge gained as sophomore and junior students in the fundamentals of physical diagnosis and disease recognition, evaluation and management. The advanced lung disease and lung transplant team is a consulting service that sees patients both in the inpatient wards and outpatients in the evaluation unit. The students are closely supervised in these activities by pulmonary critical care medicine fellows and attending physicians. The students are provided initial responsibility for evaluating primary patients and patients seen in consultation with careful critique of their findings and close supervision of their day-to-day clinical decisions.

MED 459. Minding the Gap (PHX). 4 credits.
Fourth-year medical students interested in primary care, pediatrics, and psychiatry will experience a course focused on understanding autism and related disorders from a medical and psychosocial perspective as well as from the community, where people live and learn. Our vision is to build a healthcare equity model where no one goes untreated or is medically misunderstood because of autism and other related disorders.

MED 460. Outpatient Internal Medicine Sub-Internship (PHX). 4 credits.
The majority of medical care occurs in the ambulatory setting and medical students must familiarize themselves with acute and chronic conditions in the outpatient setting, as well as counseling and providing preventive health services. This clinical experience is crucial to prepare senior medical students for internship.

MED 464. Endocrinology & Metabolism - Valleywise (PHX). 4 credits.
To strengthen student skills in the care and evaluation of patients with endocrine and metabolic diseases, including evaluation, differential diagnosis, and the appropriate use of diagnostic testing in both the acute and outpatient setting. Includes experience in thyroid, reproductive endocrinology, bone disease, and diabetes.

MED 465. Endocrinology, Diabetes, and Metabolism (OMA). 2-5 credits.
The overall goal of the course is for the student to gain proficiency in recognizing, evaluating, and treating the wide variety of Endocrine, Diabetes and Bone disorders. In this rotation the student will participate as a senior student in the care of hospitalized patients and clinic patients. The patient population provides a wide range of experience in diabetes, thyroid problems, Hyperlipidemias, bone metabolism, osteoporosis and general endocrinology. Patients are seen for a wide variety of diagnoses that include: Type 1 and Type 2 diabetes, Ketoacidosis, hyper- and hypothyroidism, osteoporosis, osteomalacia, Hypercalcemia, hyper-and hypoadrenalism, pituitary insufficiency, male and female Hypogonadism (partial list only).

MED 467. Rheumatology - Valleywise (PHX). 4 credits.
Students will learn how to diagnose and treat rheumatologic diseases including inflammatory autoimmune diseases (RA, SLE, scleroderma, myositis, vasculitis), degenerative conditions (OA, osteonecrosis), crystal disease/arthritis (gout, hyperuricemia, pseudogout, calcium pyrophosphate), soft tissue rheumatism, seronegative, spondyloarthropathies, (AS Reiters, psoriatic arthritis), and metabolic bone disease (osteoporosis, osteomalacia, Paget's).

MED 468. Infectious Diseases Sub-Internship (OMA). 2-4 credits.
The goal of this selective is to learn the consultation process for diagnosis and treatment of infectious diseases. This selective builds on the foundation laid by previous courses including Medical Microbiology, Physical Diagnosis, and the Internal Medicine clerkship. The students are provided responsibility for evaluating patients seen in clinic or consultation with critique of their findings and supervision of their day-to-day clinical decisions, own review and presentation. Each student also has the opportunity to visit the HIV Clinic and also to spend one evening in the Travel Clinic where patients receive pre-travel counseling and immunizations.

MED 469. Rheumatology (OMA). 2-4 credits.
The Rheumatology Service is concerned with the care of patients both in the outpatient and inpatient setting. As a result, the student can become familiar with all types of musculoskeletal disorders. Because the nature of rheumatology is an outpatient predominant discipline, there is close and daily interaction between students, house officers and faculty. This interaction includes examination of history and physical taking techniques, understanding of the laboratory evaluations of patients with rheumatic diseases, interpretation of x-rays and formulations of therapeutic plans. In addition, the student is taught proper technique in aspiration and analysis of synovial fluid.

MED 470. ILAC Outpatient Medicine-Dominican Republic (OMA). 4 credits.
This rotation provides the student an opportunity to improve their knowledge and ability regarding Global Health issues and patient care. Students will also have direct, 24 hours a day contact with rural Dominicans and will be able to improve their basic fund of knowledge regarding healthcare needs, nutrition, economic and social problems and to develop a greater understanding for interaction between medical, social and economic pressures. The student will participate as a member of the team in the care of people in rural Dominican Republic. The Institute for Latin American Concern is a unique, faith-based program affiliated with Creighton University in the Dominican Republic. Our goals include providing an environment for spiritual enrichment in the form of on-site support for ministry, reflection, journaling, and worship. It is important for the student to be aware the Institute for Latin American Concern is a unique, faith-based program affiliated with Creighton University in the Dominican Republic. A goal for this experience is to provide an environment for spiritual enrichment in the form of on-site support for ministry, reflection, journaling and worship. We ask students to share their faith story in this journey with each other and the Dominicans we serve.

MED 471. Emergency Medicine Sub-Internship (OMA). 4 credits.
The Emergency Medicine rotation provides an experience for the 4th year student in which the facets of all subspecialties are combined in the acute care management and critical care of the emergency patient. The student will be given the opportunity to improve their differential diagnosis insight and skills and to work with inpatient and outpatient healthcare, involving primary care providers and other services. In this rotation, the student will participate as a member of a team in the care of patients presenting to the Emergency Department. The patient population provides a wide range of experience in care of traumatic injuries, multiple medical illnesses, care of the patient with obstetric and gynecologic complaints, and management of the pediatric patient.

MED 472. Critical Care Sub-Internship (OMA). 4 credits.
In this course students will gain an understanding of the clinical presentation, differential diagnosis and the approach to management of common critical care illnesses. Students will also gain the ability to recognize and learn the importance of communication and team work for managing ICU patients. Students will participate as a member of the team in the care of patients admitted to the ICU, managing their care with duties and responsibilities under the direct supervision of a attending physician, supervisory resident and first year resident. The patient population provides a wide range of in depth experience in critical care management, including invasive procedures and assessment. A wide variety of critical care problems in an acute setting focusing on pulmonary and cardiac complications. Management consultations are provided for the surgical ICU, approximately 10-15 number patients are seen with an age range from 40-80.

MED 473. ILAC Outpatient Medicine for Student Coordinators-Dominican Republic (OMA). 6 credits.
This rotation is meant for the student coordinator who will participate as a leader for the students in MED 470. The student coordinator performs as expanded role with higher responsibility and more time spent in-country. The student coordinator is responsible for logistics management, coordination with the central office, and coordinating the interprofessional teams which include students, as well as nursing, dental, pharmacy, and medical professionals.

MED 474. Critical Care Medicine Sub-Internship - Valleywise (PHX). 4 credits.
To provide the student with hands-on practical experience in the intensive care unit. The emphasis will be on learning an organized diagnostic and therapeutic approach to the critically ill patient with multiple organ system disease.

MED 477. Emergency Medicine Sub-Internship - Valleywise (PHX). 4 credits.
This elective teaches the principles of emergency care. Students evaluate patients and help formulate testing and treatment strategies. Active participation skills are emphasized. Students will also complete assigned readings from emergency medicine references, attend weekly conferences, and have a final exam. Students will be exposed to undifferentiated patients to establish a solid foundation of skills and knowledge.

MED 480. Pulmonology - Valleywise (PHX). 4 credits.
To strengthen the student's skills in the care of patients with a wide variety of pulmonary diseases including evaluation, differential diagnosis, and the appropriate use of diagnostic testing in both the acute and outpatient setting.

MED 481. Pulmonary Intensive Care Unit (OMA). 4 credits.
The objective of this selective is to expose the student to the wide variety of critical care medicine and acute pulmonary disorders, as well as to teach the early recognition and management of organ dysfunction, and the most current pathophysiological explanations for shock, sepsis and respiratory failure. Also covered in this course will be current concepts of vasopressor and inotropic support therapy including mechanisms of drug action and examination of the interaction of lung diseases with other organ systems and with other medical illnesses. Students will acquire knowledge of airway management and ventilatory support. The students will spend 2 weeks on the Pulmonary Consultation Service and 2 weeks on the Intensive Care Unit Service.

MED 482. Emergency Medicine Sub-Internship (OMA). 4 credits.
Patients are assigned to students and residents on a rotational basis. Patients will be a mix of ambulatory patients, ambulance arrivals and clearance of both the acute psychiatric patient and patient wishing to undergo substance abuse treatment. There will be a wide variety of medical conditions seen including acute cardiac, pulmonary, gastrointestinal, neurological and infectious disease. There will also be potential for many procedures including ABG's, arthrocentesis, paracentesis, thoracentesis and central lines.

MED 484. Intensive Care Unit (OMA). 4 credits.
The Intensive Care Unit (ICU) elective rotation for senior medical students includes the expansion of knowledge gained as sophomore and junior students in the fundamentals of physical diagnosis and disease recognition, evaluation and management. The Intensive Care Unit team provides care to critically ill patients with a broad spectrum of medical and surgical diseases. The students are closely supervised by pulmonary and critical care fellows and attending physicians. The Critical Care Unit model involves a multidisciplinary team approach where the student will be an integral part of the team rounding with physicians, nurses, respiratory therapists, pharmacists, and others. Students are required to actively participate in daily rounds and attend didactic presentations.

MED 486. Medical Education (OMA). 2-4 credits.
The Medical Education Elective is a two or four week non-clinical elective that will introduce fourth-year medical students to general topics in teaching, foster interest in medical education, and provide instruction to promote teaching skills particularly in small group and clinical settings. The four-week elective will introduce students to medical education scholarship, and provide support for the development of a scholarly project.

MED 487. Internal Med Sub-Internship (PHX). 4 credits.
The senior student will have increased responsibility for patient management in preparation for internship. As acting intern ,the student will evaluate new patients on each of the team's admitting days and follow those patients throughout their hospitalization. The senior resident and attending will assist in formulation of the plan for diagnosis and treatment. The student will make daily work rounds with the team and also attend all educational conferences.

MED 490. Critical Care Medicine (PHX). 2-5 credits.
The Pulmonary/Critical Care Medicine selective for senior medical students includes the expansion of knowledge gained as sophomore and junior students in the fundamentals of physical diagnosis and disease recognition, evaluation and management. Since the Pulmonary/Critical Service has both primary care patients and patients who are being evaluated in consultation, the student has the opportunity to evaluate and learn about both types of patients. The students are closely supervised in these activities by junior and senior medical residents, pulmonary fellows and pulmonary medicine attending physicians. The students are provided initial responsibility for evaluating primary care patients and patients seen in consultation with careful critique of their findings and close supervision of their day-to-day clinical decisions.

MED 491. Internal Medicine Capstone (OMA). 4 credits.
The senior student will participate in the capstone curriculum in the final rotation block of his/her fourth year of training. Scheduled learning activities will include a variety of lectures, small group discussions, patient simulation exercises, as well as hands on practical educational sessions.

MED 492. Internal Medicine Capstone (PHX). 4 credits.
The senior student will participate in the capstone curriculum in the final rotation block of his/her fourth year of training. Scheduled learning activities will include a variety of lectures, small group discussions, patient simulation exercises, as well as hands on practical educational sessions.

MED 498. Medicine Extramural (OMA & PHX). 1-8 credits.

MED 795. Evidence Based Medicine - Independent Study (OMA). 2-4 credits.
Evidence Based Medicine is important to the practice of medicine and this elective course will build upon the foundations learned at M1 and M3 students and assist students in transition to residency. The purpose of this elective is to enhance the student's ability to critically appraise the medical literature and implement evidence based medicine into clinical decision making.

MHE 600. Scholarly Reading and Writing. 3 credits.
The course will build on and improve existing writing skills. Students and faculty are all members or a larger writing community in which everyone contributes to an on-going dialogue. The course assumes one's writing can always improve. The specific aims of the course are: 1) to produce clear and precise writing and 2) to accurately credit and incorporate the others' scholarly work. The course includes recognizing, attributing and summarizing existing scholarship. The course also stresses responses to existing work, distinguishing response types, anticipating arguments or objections, and tying it all together. Concrete templates and rhetorical moves are employed to enhance reasoning and organizational abilities. Students incorporate detailed instructor feedback in multiple writing assignments. The course assumes understanding of the rules of English grammar, spelling, syntax, and punctuation.

MHE 601. Health Policy. 3 credits.
MHE 601 explores health policy and its development, emphasizing social justice and human rights. Students consider institutional, local, regional, national, and international approaches to public health, health systems, and priorities for research and development. American health systems - operations, processes, successes, and failures - are extensively analyzed. Students consider processes for and challenges in making health policy at institutional, state, and federal levels. Past and current attempts at health systems reform are reviewed, stressing 2010 U.S. healthcare reform.

MHE 602. Research Ethics. 3 credits.
This course will enhance students' understanding of core ethical issues in biomedical research and improve their ability to analyze, explain, and justify relevant cases, arguments, positions, and policies. The focus is biomedical research involving human participants. A stress is investigation involving populations and communities with vulnerability. Study of historically pivotal cases leads to review of ethical, policy, and programmatic responses. Students also study ethical factors in community-based research, informed consent, multinational research, genomics, and neuroscience. Discussions develop collective inquiry related to core topics. Individual papers also develop students' knowledge and aim to enhance their analytical and compositional skills.

MHE 604. Social and Cultural Contexts of Health Care. 3 credits.
This class introduces the student to the various contexts of personal and social experience that construct and interpret bioethics. Participants consider identity and autonomy as embedded in social matrices ranging from the body itself to global configurations. Various power dynamics of class, legitimacy, and ideology are considered. Participants analyze the culture of the biomedical project and the challenge of finding one's voice within it.

MHE 605. Philosophical Bioethics. 3 credits.
This course reviews the nature of ethical reasoning, including various epistemological challenges to moral judgment. Second, major theories of ethics will be introduced, including virtue ethics, deontology, utilitarianism, casuistry and principlism. Third, signature texts by protagonists of these historical theories will be compared and contrasted with contemporary critics, with specific reference to issues of vulnerability. P. MHE 600; MHE 610.

MHE 606. Theories of Justice. 3 credits.
This course will introduce students to theoretical and practical complexities, ambiguities, and persistent questions at the intersections of clinical ethics, social policy, and health justice.

MHE 607. Practical Ethics in Health Care Settings. 3 credits.
The practical application of ethics to clinical situations is much more than following standards of practice. This course will provide the opportunity to apply foundational concepts of ethics to a variety of health care settings. Additionally, the use of deliberative methods to think through and discuss the unique features presented by different health care settings and professional conduct will be an integral component of the course. The typical charges of institutional ethics committees will be examined: consultation, education, and policy review/development.

MHE 609. Capstone. 3 credits.
This final required course serves as a culminating learning experience in which students integrate insights and competencies from both bioethics and health humanities. Drawing on methods of ethical analysis and humanistic inquiry, students will complete one or two capstone projects: a consultative report addressing a specific practical challenge or a scholarly paper examining a contemporary theme at the intersection of ethics, health, and the human experience. Students are encouraged to build upon prior coursework, professional practice, and interdisciplinary perspectives to craft a meaningful and well-supported final project. P. DC.

MHE 610. Introduction to Bioethics. 3 credits.
Bioethics is a complex field with few easy answers. This course uses an interdisciplinary lens to introduce students to the ethical dilemmas inherent in health care and health policy with specific emphasis on populations with vulnerability, disadvantage, or marginalization. Students develop a broad understanding of the philosophical, historical, cultural, economic, technological, and political dimensions of ethical issues the discipline of bioethics encompasses.

MHE 614. Ethical Aspects of End-of-Life Care. 3 credits.
This course examines different end-of-life care practices including forgoing treatment, PAS/euthanasia, palliative care, sedation and decision-making for incompetent patients. Students reflect on their own views on disabilities, aging and dying; examine the merits of policies/legislation; and consider how society at large can come to appreciate those dying in our midst.

MHE 615. Patient-Centered Consultation. 3 credits.
This course is an interactive introduction to the key, basic-level skills in healthcare ethics consultation involving adult patients. The course will focus on the three categories of skills for healthcare ethics consultants - ethical assessment and analysis, process skills and interpersonal skills - that are the foundation of the Core Competencies for Healthcare Ethics Consultants, 2nd ed., a report of the American Society of Bioethics and Humanities (ASBH, 2011).

MHE 695. Independent Study in Health Care Ethics. 3 credits.
This course offers students the opportunity to explore a topic in health care ethics in depth. Specifically, students will collaborate with the instructor to design a plan to achieve agreed upon learning goals, strategies to achieve goals, and evidence of learning.

MIC 141. Microbiology. 4 credits. FA
Introductory course, consisting of lectures, study groups, and computerized self-instruction, designed to provide nursing students with a basic knowledge of medical microbiology and immunology. P. None.

MIC 463. Topics in Immunology/Application to Clinical Medicine (OMA). 4 credits.
Selected Topics in Immunology is an elective for those wishing to study in-depth a variety of selected topics in immunology. The elective will be available Second Semester continuously. This course will consist primarily of conferences, directed reading assignments in selected areas of immunology or immunochemistry. The interests and needs of the students will determine which topics they will be expected to study in-depth and will be determined on an individual basis with each student prior to the first class meeting. Some examples of selected topics would be immunologic disorders in the newborn, autoimmune methods in clinical diagnosis, etc.

MIC 541. Medical Microbiology and Immunology. 3 credits. FA
Introductory course focusing on foundations of general bacteriology and virology, antibacterial therapy and mechanisms of antibacterial resistance, infectious diseases caused by bacteria, viruses, fungi, and parasites, and the host defenses against these microorganisms. R, L. P. Second year Pharm.D. student or degree seeking graduate student. Upper level undergraduate or other students require approval from course director.

MIC 543. Essentials of Immunology. 3 credits. SP
Lecture course covering the major areas of contemporary immunology including host resistance to infection, the chemistry of antigens and physiology of the immune system, immunogenetics and transplantation immunology, immunological techniques, tumor immunology, and immunopathology. P. MIC 541, or IC.

MIC 721. Foundations of Microbiology. 4 credits.
Lecture course that emphasizes (1) the foundations of general bacteriology and virology, (2) microorganisms of medical importance and the diseases, (3) antimicrobial, and (4) scientific logic for critical analysis of original research articles in the field. A required course for graduate students in the program.

MIC 733. Advanced Microbial Pathogenesis. 3 credits. AY, SP
Lectures, seminars, literature review, and group discussion concerning mechanisms by which microorganisms cause disease. P. MIC 617 or IC.

MIC 735. Diagnostic Microbiology. 4 credits. AY, SP
Laboratory and conferences which deal with selection of clinical specimens for diagnosis, isolation of pathogenic microorganisms and preparation of media for their growth. 4 R. L arr. P. IC.

MIC 739. Bacterial Physiology. 3 credits. AY, SP
Study of molecular, cellular, and genetic processes in bacteria. Includes molecular structure and function, cell division, synthesis of macromolecules, and metabolism.

MIC 740. Host Defense. 3 credits. SP
The student will be provided with the information to have a clear understanding of various subject areas, including antigen recognition, development of B & T cells, constitutive host defenses, immunopathology, inflammation, transplantation, allergy, and tumor immunology. Lecture presentations, assigned reading and computer-aided instruction. P. IC.

MIC 745. Cellular And Molecular Immunology. 3 credits. SP
This course will focus on the basic and clinical aspects of cellular and molecular immunology. 2 R&L arr. P. MIC 740 or IC.

MIC 746. Advanced Immunology. 3 credits. AY, FA
Lectures and conferences providing a coordinated and detailed account of current immunology at an advanced level. Students will be expected to familiarize themselves with the original literature, and emphasis will be given to the more rapidly progressing areas. 3 R&L arr. P. MIC 543 or IC.

MIC 749. Molecular Virology. 3 credits. AY, FA
Study of the physical, chemical, and biological properties of viruses. Selected topics will include such areas of investigation as cultivation and identification, replication, host-virus interactions, interference, and viral oncogenesis. P. IC.

MIC 753. Advanced Antimicrobial Agents And Chemotherapy. 3 credits. AY, FA
Chemistry, pharmacology, and biology of antibiotic substances and their use in therapy of infectious diseases. P. IC.

MIC 790. Current Topics in Medical Microbiology and Immunology. 2 credits. FA
Lectures and literature discussion covering recent advances in the fields of microbiology, immunology, and virology, with roughly a third of the course devoted to each field of study. P. MIC 541.

MIC 791. Department Seminar And Teaching. 1 credit.
The student is required to register each semester of his/her residence. The maximum credit applicable toward a degree is two for the M.S.; six for the Ph.D. This course is graded satisfactory/unsatisfactory.

MIC 793. Directed Independent Readings: Selected Topics In Medical Microbiology And Immunology. 1-4 credits. FA, SP, SU
Conferences and reading assignments providing an opportunity for in-depth study of recent developments and associated problems in carefully selected and highly specialized areas of medical microbiology such as parasitology, mycology, clinical microbiology, pathogenesis, immunology, and epidemiology and public health.

MIC 795. Directed Independent Study. 4 credits.

MIC 797. Directed Independent Research for Master's Degree Students. 1-8 credits. FA, SP, SU
Investigative work on selected subject. (Non-thesis research optional). L&R arr.

MIC 799. Master's Thesis. 1-6 credits. FA, SP, SU
Research, under departmental supervision, in connection with the preparation of the Master's thesis. Student must register for this course in any term when engaged in formal preparation of the Master's thesis; however, six credit hours are the maximum applicable toward the degree.

MIC 893. Directed Independent Readings: Selected Advanced Topics In Medical Microbiology And Immunology. 1-4 credits. FA, SP, SU
Conferences and reading assignments providing an opportunity for in-depth study of recent developments and associate problems in carefully selected and highly specialized areas of medical microbiology such as parasitology, mycology, clinical microbiology, pathogenesis, immunology, and epidemiology and public health.

MIC 897. Directed Independent Research for Doctoral Students. 1-8 credits. FA, SP, SU
Investigative work on a selected subject.

MIC 899. Doctoral Dissertation. 1-8 credits. FA, SP, SU
Research, under departmental supervision, in connection with the preparation of the doctoral dissertation. Student must register for this course in any term when engaged in formal preparation of the doctoral dissertation; however, 20 credit hours are the maximum applicable toward the degree.

MMS 510. MCAT. 3 credits. FA, SP, SU
This course aims to prepare Creighton University undergraduate students for their MCAT examination. Using a combination of lecture, self-directed learning, small groups, and review session, the student will master content knowledge while developing test-taking skills. This course may be repeated up to 9 credit hours. P. Pre-health student or IC.

MMS 600. Foundations of Medicine. 4 credits.
This five-week immersive course is taken with the first-year medical students and introduces the basics of medical cell and molecular biology. The course will use lecture, case discussion, and problem-based learning discussion to expose students to common pathologies and various specialty topics in preparation for the systems block.

MMS 601. Human Physiology. 2 credits.
This course examines basic concepts of cellular physiology and organ system physiology of the nervous, endocrine, muscle, cardiovascular, respiratory, gastrointestinal, and renal systems, as well as multisystem integration. P. Graduate standing or Instructor Consent.

MMS 602. Human Gross Anatomy. 5 credits.
Graduate students in the MS in Medical Sciences program have the opportunity to learn the detailed structure of the human body. Through integration of cadaveric dissection, a holographic atlas, and team-based learning, students will develop a thorough understanding of the 3D relationships necessary for a medical professional. Prereq: Instructor Consent.

MMS 603. Microscopic Anatomy. 3 credits.
This course is for graduate students in the MS in Medical Sciences program interested in the structure and function of human cells, tissues and organs at the microscopic level. The goal of the course is for students to develop an understanding of the architecture of human cells, tissues, and organs and to relate microscopic structure to the function, or disfunction, of the human organism. P. Instructor Consent.

MMS 604. Clinical Embryology. 2 credits.
This is a course in human embryology designed to provide students with insight into the important correlation between human embryology and clinical problems associated with pregnancy and birth defects. The course will cover development of all of the systems of the body. The fetus, placentation, birth and delivery will also be covered. Major congenital malformations will be discussed in detail. P. Instructor Consent.

MMS 620. Medical Ethics and Humanities. 2 credits.
Through multiple small-group discussions, this course aims to prepare health professionals to provide respectful, humane patient care and to address current ethical problems in health care.

MMS 625. Fundamentals of Clinical Neuroanatomy. 4 credits.
This course presents the functional anatomy of the nervous system and employs it in clinical context. We will use a combination of lecture, lab, and clinical case review to study the relevant anatomy of the nervous system and pertain it to system disorders and injuries.

MMS 630. Human Head and Neck Anatomy. 3 credits.
This course is for Master's in Medical Sciences students and is held concurrent with a course on human neuroanatomy. Using a dissection- and clinical-based approach, students will study the structure and anatomical systems of the head and neck.

MMS 635. Directed Independent Research. 4 credits.
This course presents students with an opportunity to conduct original investigation under supervision and guidance of individual faculty mentor. P. Approval of the Course Director. CO: IDC 627.

MMS 640. Clinical Rotations. 2 credits.
This course provides opportunities to experience day to day applications of gross anatomy in the clinical specialties of surgery, radiology, and pathology. Weekly discussions of the various cases will be held during which the pertinent anatomical correlations will be analyzed as will methods of best conveying to health sciences students the clinical information gained. Students will be expected to write a synopsis of each case and conduct the necessary literature research for a current relevant bibliography. P. IC.

MMS 645. Educational Techniques in Anatomy. 4 credits.
Master's in Medical Sciences students will have the opportunity to design and implement educational techniques appropriate for lecture, small group, and laboratory applications. Each student will prepare and deliver formal lectures and assist in teaching anatomy in the lab.

MMS 651. Capstone Project. 3 credits.
This course will present students with an opportunity to acquire foundational skills necessary for research in a medically-related discipline. After introduction to the scientific method and related topics, students will identify a mentor in the student's area of interest, develop a research proposal, and defend the research question and approach. Each student will then work with a Capstone Mentor to generate and present a poster summarizing their capstone project.

MOS 581. Mission Outreach Selective I (OMA & PHX). 0.5 credits.
This course provides a framework of inquiry to ongoing, immersive mission outreach service experiences. By completing mission service work, students engage with communities and learn firsthand the strengths and the challenges within the community in which they are working. P. Admission to Medical School.

MOS 582. Mission Outreach Selective II (OMA & PHX). 0.5 credits.
This course provides an immersive experience in a mission outreach activity. The student will work with a mission team and a preceptor at an approved mission site. Students will write a 7-10 page research paper on medical mission work, a reflection on their experience at the site, or a related scientific area of research. P. MOS 581.

MOS 583. Mini Medical School M1 Selective (OMA & PHX). 0.5 credits.
This M1 selective provides a local mission service-oriented experience for first-year medical students. Students will choose a project and participate in an immersive experience that includes a minimum of two Mini Medical School events, with a minimum of 30 approved contact hours. Participation will be outside of the traditional academic semester schedule. P. Admission to Medical School.

MOS 584. Mini Medical School M2 Selective (OMA & PHX). 0.5 credits.
This M2 selective provides a local mission service-oriented experience for second-year medical students. Students will choose a project and participate in an immersive experience that includes a minimum of two Mini Medical School events, with a minimum of 30 approved contact hours. Participation will be outside of the traditional academic semester schedule. P. Admission to Medical School.

MPH 561. Exploring Holistic Health - Implications for Care and Policy. 3 credits.
This course explores different understandings of health and how these influence perceptions and practices of care as well as policies pertaining to public health care. Students will compare and contrast their own understandings with those of diverse groups and professionals encountered during a two-week program abroad.

MPH 601. Organization and Management of Public Health Services. 3 credits.
This course examines the organization, delivery, and financing of health care services from a managerial and policy perspective. Specific focus will be given to the role, responsibilities, and functions of public health services; the integral relationship of public health within the larger health system; and management principles and practices applicable to public health organizations.

MPH 602. Community Health Assessment. 3 credits.
This course examines the concepts, methods and practices for assessing the health of a community. Topics include measuring community health status, developing community health profiles, identifying the determinants of health, and the utilization of community health assessment in developing public health interventions.

MPH 604. Social and Behavioral Aspects of Public Health. 3 credits.
This course is an exploration of concepts and methods of social and behavioral sciences relevant to the identification and solution of public health problems. This course will focus on the basic set of competencies that is central to the field, including identifying theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice.

MPH 605. Epidemiology. 3 credits.
This course offers a foundation for the study of the distribution, history, and determinants of disease and disability in human populations. In addition to examining the biological basis of health, the course will explore social epidemiology and the interrelationship between the social and biological determinants of health.

MPH 606. Environmental Health. 3 credits.
This course examines the environmental factors that impact population health. This course focuses on the biological, physical and chemical agents affecting human health. Additional topic areas that will be explored include the regulatory framework for environmental health, workplace health, and contemporary issues in environmental justice.

MPH 607. Biostatistics. 3 credits.
This course focuses on descriptive and inferential statistical concepts, methods, and the applications of statistical methods in the analysis and assessment of population health.

MPH 608. Health Communication and Informatics. 3 credits.
This course provides a foundation for understanding the concepts and best practices in health communication and for developing skills in building effective communication campaigns with multiple and culturally diverse audiences. Recognizing the importance of informatics in health communication, this course will also address skills in the use of information technology for the retrieval, management and dissemination of information that promotes population health.

MPH 609. Introduction to Community-Based Participatory Research. 3 credits.
This course provides an introduction to Community-based Participatory Research (CBPR). This course is NOT a methodology course; CBPR is an approach to conducting research that can be used with many research designs and methodologies. It is intended to provide students a grounding in the goals and application of CBPR; the theoretical background that informs CBPR; an introduction to theories of race, ethnicity, power, difference, gender and sexuality; the formation and maintenance of community partnerships; the use of CBPR to promote health equity and social justice; and the introduction of CBPR techniques to institutional review boards and funders.

MPH 611. Practice Experience. 3 credits.
Opportunity to apply the knowledge and skills acquired through core courses and elective/area of concentration under the supervision of a qualified preceptor who is a public health professional. P. Completion of pre-applied practice experience checklist (P-APEx).

MPH 612. Capstone. 3 credits.
In this final required course of the degree program, students are expected to integrate insights gained and competencies acquired throughout the program. Applying methods of scholarly inquiry and composition, students will synthesize insights and findings from their practice experience in a publishable-quality article or commentary and will present the findings to fellow students and faculty. P. MPH 611.

MPH 615. Ethical Issues in Public Health: A Global Perspective. 3 credits.
This course provides students with a foundational understanding of the ethical issues related to public health as a discipline and to its practice. The course will emphasize the global dimension of these issues along with their national and local repercussions. While students will explore the theoretical issues with the discipline itself (about the ethical framework best fits population health enterprise), there will also be a more in-depth study of concrete cases that will highlight the multiple and global dimensions of health and healthcare. Global public health ethical issues will be explored within the context of the social and systemic factors that affect population health across the globe. Concrete cases that will be explored may include (but will not be restricted to): globesity, pandemics and vaccination, disasters and humanitarian aid, conflict of interest in screening and medical guidelines, medical research agenda and global justice.

MPH 617. Emerging Global Health Issues. 3 credits.
This course presents an overview of global health issues through examination of major determinants of health and key areas of disease burden. Student will be introduced to the complex tapestry of social, economic, political, and environmental factors that affect the health of populations globally.

MPH 632. Human Resources for Healthcare Managers. 3 credits.
This course approaches human resources in healthcare organizations from a strategic perspective. It is designed to equip human resource managers and those acting in that capacity with an understanding of how human resource practices need to align with the strategic plan and mission of the organization. We will cover key human resources aspects: 1) job analysis, 2) recruitment and selection, 3) managing a diverse workforce, 4) performance management, 5) rewards and compensation, 6) organizational development and learning, and 7) quality improvement in human resources. In addition, we will discuss the legal contexts around human resource management and the broader labor market.

MPH 633. Health Economics and Finance. 3 credits.
The course examines fundamental theories in health economics and health care finance and the application of these theories in public health administration. The course emphasizes an understanding of economic issues within the larger social and political context in which public health operates. Economic and finance theories and practices pertinent to the public health sector as well as concepts and practices in financial management that support the successful leadership and administration of public health organizations will be explored in this course.

MPH 634. Health Planning and Marketing. 3 credits.
This course focuses on the understanding and application of health planning and health care marketing models and practices. The course encompasses a range of health planning and marketing models, methods and applications including health systems planning, strategic planning and marketing, program planning and social marketing for public health services. Recognizing the integral role of program evaluation in the planning process, this course will also review best practices for the integration of program evaluation as a component of the overall plan.

MPH 635. Public Health Leadership. 3 credits.
The purpose of this course is to explore leadership theories, identify leadership challenges, and analyze best practices in public health leadership. Emphasis is given to reflection and self-development of decision-making and leadership styles in assuming leadership roles within public health organizations.

MPH 636. Public Health Intervention. 3 credits.
In this course, students will explore critical foundation concepts of public health promotion and intervention, including the use of behavior-oriented theories and environment-oriented theories. Students will discuss how to apply these theories in a systematic step-by-step process for intervention development called intervention mapping.

MPH 637. Environmental Health Risk Communication. 3 credits.
This course covers key concepts of risk communication theory as well as their practical application to the collection and sharing of information in support of individual and community decision-making about public health issues. Emphasis in the course is on professional best practices, especially how to communicate with the general public, special populations, and the news media. Use of social media, especially for disaster communication and response, will also be explored. Challenges in communicating with underserved and non-English speaking populations will be discussed.

MPH 639. Communicable Disease and Prevention. 3 credits.
This course takes a comprehensive look at the history, theory and practical aspects of public health and communicable diseases. An overview will be given of critical topics related to the identification, control, and prevention of newly emerging, as well as long recognized infectious diseases with public health importance. The clinical presentation, modes of transmission, geographic distribution and prevention of these infections will be considered form an epidemiologic perspective. This course provides foundational knowledge that help prepare public health and healthcare professionals to work in the prevention and control of infectious diseases. Selected communicable disease control programs and policies will be assessed for their strengths and weaknesses.

MPH 640. Planetary Health and Sustainability. 3 credits.
This course will provide students with a big picture perspective of planetary health, research, policy, and practice issues related to it, and the implications and opportunities related to planetary health for public and population health globally. A key theme throughout will be consideration of health and social equity issues and the differential impacts of climate and other environmental changes on populations in light of these issues.

MPH 641. Environmental Health Policy. 3 credits.
This course provides an overview of the development, structure, function, and implementation of environmental health policy at local, national, and global scales.

MPH 643. Public Health Grant Writing. 3 credits.
Grant funding is critical to develop public health knowledge and infrastructure. Organizations such as community-based agencies may write grants to obtain funding to improve the health of their community, and other organizations, such as universities, may write grants to conduct research. In this course, students will learn major grant writing aspects: developing an idea for a project, writing a succinct and impactful one page summary of an idea, considering potential funding sources, and writing a grant application. This course presents a step-by-step approach to writing grants. Throughout this course, students will develop an idea into a written grant proposal. The course culminates in this draft proposal, not an actual grant submission. However, submission may be possible with further development.

MPH 645. Global Health Epidemiology. 3 credits.
This course focuses on the studies of the classic functions of field epidemiology and the application of epidemiological methods to unexpected global health issues. Students will examine global health interventions to understand features of successful programs.

MPH 707. Introduction to Mixed Methods. 3 credits.
This course provides an overview and introduction to mixed methods research, which involves collecting, analyzing, and integrating both quantitative and qualitative research in a study. After a brief review of the similarities and distinctions between quantitative and qualitative research, this introduction consists of defining mixed methods research and its foundations. We will then examine the types of mixed methods designs available and discuss the process of research as it relates to each of these designs. Throughout the course, we will cover the components of rigorous mixed methods.

MPH 795. Selected Topics MPH Pre-Practicum. 1-3 credits.
Students will complete the necessary pre-practicum requirements for their practicum placement in MPH 611. To achieve a successful practicum placement, MPH 795 Selected Topic Pre-Practicum requires the student to work in collaboration with their practicum course director and practicum course instructor.

NEU 301. Neurology Clerkship (OMA & PHX). 4 credits.
This core clerkship is designed to give the student experience in evaluation of patients with neurologic disorders, to provide an opportunity to master the neurological exam and to enhance their knowledge of common neurological diseases. The format of the clerkship consists of four week rotations. Students doing their rotations in Omaha will have two weeks of outpatient experience and two weeks of inpatient service (which includes stroke and general neurology service). While on the inpatient services, the student will be required to perform a complete history and physical exam with emphasis on the neurologic findings, prepare written and verbal presentations, interpret laboratory data and begin to develop a differential diagnosis and management plan on all assigned patients. While on outpatient services, the student will participate in a variety of general neurology and specialty clinics in the Neurology department at Creighton University. Students will be required to perform appropriately focused history and physical exams and to participate in the management plan for the patient. Preparation through recommended reading materials will be required. Each clinic faculty will evaluate the student on their preparation and participation in that clinic.Didactic lectures will include a combination of live interactive lectures and some pre-recorded lectures. Some of the students will also take part in presenting case based discussion based on the patients seen during the clerkship.

NEU 401. General Neurology Sub-Internship (PHX). 2-4 credits.
During this clerkship the students will be taught the elements of a good neurological history and physical examination. The students will learn to interpret findings and to develop a differential diagnosis based on those findings. The students will learn the appropriate use of diagnostic testing to verify or clarify a diagnosis and learn the basics of neurological treatments of common neurological disorders.

NEU 415. Clinical Neurology - Valleywise (PHX). 4 credits.
To strengthen the student's skills in evaluating patients with neurologic and neurovascular disorders.

NEU 462. General Neurology (OMA). 2-5 credits.
During this elective the student will be taught the elements of a good neurological history and physical examination. Students will also learn to interpret findings and to develop a differential diagnosis based on those findings. The students will learn the appropriate use of diagnostic testing to verify or clarify a diagnosis and learn the basics of neurological treatments of common neurological disorders. This will be accomplished by direct patient contact in clinics and hospital services, by informal teaching rounds and formal teaching conferences like Grand Rounds and Epilepsy conferences.

NEU 465. General Neurology Sub-Internship (OMA). 4 credits.
Students will learn the principles and skills for the recognition and management of neurologic diseases at the level of a sub-intern. They will learn the elements of a neurological history and physical examination, to interpret findings and develop a differential diagnosis, the appropriate use of diagnostic testing, and the basics of neurological treatments via patient contact and informal and formal teaching rounds and conferences.

NEU 498. Neurology Extramural (OMA & PHX). 1-8 credits.

OBG 301. Obstetrics and Gynecology Clerkship (OMA & PHX). 6 credits.
During your six-week clerkship, you will be exposed to normal and high-risk obstetrics, as well as office and surgical gynecology. Conferences have been designed to build upon the core lectures you received during your second year. You will spend half of the six-week clerkship at Creighton University Medical Center and the other half at Bergan Mercy Medical Center if you are in Omaha. In Phoenix, your entire experience will be at St. Joseph's Hospital and Medical Center. The curriculum is designed to acquaint you with all aspects of Obstetrics and Gynecology in private and institutional medicine.

OBG 432. Gynecologic Surgery (PHX). 4 credits.
The gynecologic surgery elective is available for M4 students who choose to rotate at VH. Attending physicians and residents directly supervise students in both the outpatient clinic and the hospital service. Students may also be assigned to a specific sub-specialist in the sub-specialty of gynecologic oncology or urogynecology.

OBG 435. Specialty Clinics in Obstetrics and Gynecology - Valleywise (PHX). 4 credits.
Working in the Women's Care Clinic at Valleywise Health Medical Center/ Comprehensive Care Clinic, students will see a diverse patient population for routine obstetric care, common gynecological issues, and healthcare maintenance. Students will perform pelvic exams and participate in gynecology procedures. Procedures may include gynecology ultrasound, colposcopy, and outpatient gynecology minor surgical procedures.

OBG 438. Minimally Invasive Gynecologic Surgery Sub-Internship (PHX). 4 credits.
The fourth-year medical student will act as a first-year surgical house officer and be integrated into pre-operative, operative, and post-operative care of gynecologic surgical patients. The course will broaden the clinical experience in gynecologic surgery, including exposure to treatments and surgical procedures, management of endometriosis, fibroids, large adnexal masses, complex hysterectomy, and pelvic pain.

OBG 441. Labor and Delivery (PHX). 4 credits.
This rotation provides an in-depth clinical experience in Obstetrics & Gynecology along with weekly conferences and night call. Students will be an integral part of the health care team. The rotation offers a learning experience where the student may further develop their diagnostic and patient management skills.

OBG 442. Maternal Fetal Medicine Sub-Internship - East Valley (PHX). 4 credits.
The goal is to expand knowledge in the field of maternal fetal medicine and expose students to high risk and serious complications in the obstetric population. The medical student will become involved in the diagnosis and management of at-risk patients and participate as an active member of the maternal fetal management team.

OBG 446. Urogynecology Sub-Internship (OMA). 4 credits.
For patients presenting for Female Pelvic Medicine and Reconstructive Surgery/Urogynecology specialty services, the student will participate in clinic, surgery, pelvic health physical therapy, and inter-disciplinary meetings. The student will gain experience working with the pelvic floor physical therapists while on service. The student will be expected to carry a patient load and present patients every day to faculty.

OBG 447. Outpatient Gynecology Sub-Internship (OMA). 4 credits.
This sub-internship will expose students to a wide range of gynecologic conditions in the outpatient settings, with the student gaining medical knowledge and practical experience in managing these conditions.

OBG 450. Women's Imaging - Valleywise (PHX). 4 credits.
Students will spend time in the clinic and on the ward assisting in the performance and interpretation of obstetric and gynecologic imaging with members of the Ob/Gyn and Radiology Departments. There will be a special emphasis on point-of-care obstetric ultrasound examination and recognition of common gynecologic pathology using ultrasound.

OBG 451. Maternal Fetal Medicine Sub-Internship (PHX). 4 credits.
The fourth-year medical student will act as a first-year intern and be integrated in pre-operative, operative, and post-operative care of patients. The sub-internship will be balanced with time spent in the MFM clinic, ultrasound and prenatal diagnosis, didactic conferences, and morning rounds with the high-risk obstetrics team.

OBG 461. High Risk OB Sub-Internship (OMA). 4 credits.
The goal of this elective is develop the student's skills to identify and formulate management plans for the complicated pregnancy and follow their labor and delivery. In this course the students will develop techniques to identify the complications of pregnancy. Students have the opportunity to round with the physicians, participate in labor and delivery as well as clinical consults. In this course the student will work only with the patients with high risk pregnancies.

OBG 462. Obstetrics and Gynecology Sub-Internship (Immanuel) (OMA). 4 credits.
This course will provide gynecology knowledge and information necessary to diagnose and manage the most common gynecologic disorders that are likely to be encountered in the practice by the general obstetrician/gynecologist. This includes the use of appropriate diagnostic tests and procedures encountered in the primary gynecologic care in the ambulatory health care setting and performing inpatient surgeries from that practice. The student will experience and achieve an overview of the multileveled facts of a private office-based practice in gynecology by the end of the elective.

OBG 464. Prenatal Diagnosis (OMA). 4 credits.
The student will learn the systematic approach to the diagnosis of prenatal fetal anomalies and growth disturbances. Upon completion of this rotation, the student will be able to perform a fetal anatomic survey, as well as standard fetal ultrasound measurements to estimate gestational age and fetal weight. The student will be expected to accurately do an obstetric ultrasound, complete with measurements and assessment of anatomy, to successfully complete the rotation.

OBG 466. Gynecology Oncology (OMA). 4 credits.
The goals of the Gynecologic Oncology subspecialty experience for senior medical students are the expansion of knowledge and understanding of gynecologic oncology physical diagnosis, disease recognition and evaluation, and management of gynecologic oncology disorders.

OBG 467. General Obstetrics - Foreign Service (Dominican Republic). 4 credits.
The purpose of this elective is to expose the student to a different culture and appreciate the differences in the delivery of Women's Health within a third world country and compared to Omaha, NE. In addition, the student will gain extensive experience in outpatient gynecology and the performance of pelvic exams. The student will have the opportunity to experience the Dominican culture first-hand and provide medical care to an underserved population. The student will also gain experience in the private and rural clinic settings. The Institute for Latin American Concerns (ILAC) is a unique, faith-based program affiliated with Creighton University in the Dominican Republic. This rotation in another culture attempts to take advantage of the Jesuit tradition that inspires ILAC, through conscious awareness of culture differences, sensitivity to culture context in medical practice, and reflection on the experience in a way that helps us become beneficiaries who are grateful that we often receive more than we give.

OBG 467A. Delivery of Women's Healthcare-Foreign Service (Dominican Republic) A. 2 credits.
In this elective the student will gain extensive experience in outpatient gynecology and the performance of pelvic exams while being exposed to a different culture and attaining an appreciation of the differences in the delivery of Women's Health within a third world country as compared to Omaha, NE. The student will have the opportunity to experience the Dominican culture first hand and provide medical care to an under-served population. The student will gain an understanding of the differences in which healthcare is delivered to women in a third world country. The student will also gain experience in the private and rural clinic settings. It is important for the student to be aware that the Institute for Latin American Concerns (ILAC) is a unique, faith based program affiliated with Creighton University in the Dominican Republic. This rotation in another culture attempts to take advantage of the Jesuit tradition that inspires ILAC, through conscious awareness of culture differences, sensitivity to culture context in medical practice and reflection on the experience in a way that helps us become beneficiaries who are grateful that we often receive more than we give.

OBG 468. OB/GYN Sub-Internship (PHX). 4 credits.
The student will do two weeks of night float and will admit, manage, and deliver laboring obstetric patients at Saint Joseph's Hospital in Phoenix, Arizona. The student will also gain experience in gynecology and attend surgeries for the next two weeks. Free housing is available near Saint Joseph's Hospital.

OBG 472. Inpatient Gynecology (OMA). 2-4 credits.
The student will function as a sub-intern on the University Inpatient Gynecology Service. He/she will participate in morning rounds and surgery everyday with option to participate in resident or faculty outpatient gynecology clinics and gynecologic ultrasound clinics. The student will be expected to carry a patient load and present patients in rounds everyday to the attending faculty.

OBG 474. Obstetrics and Gynecology Sub-Internship (CUMC Bergan) (OMA). 4 credits.
The student will function as a sub-intern working in the OR and the office with private patients. He/she will participate in morning rounds and surgery everyday with participation in resident or faculty outpatient gynecology clinics and gynecologic ultrasound clinics. The student will be expected to carry a patient load and present patients in rounds everyday.

OBG 489. Obstetrics and Gynecology Capstone (PHX). 4 credits.
The goal of this course is to prepare students to meet all ACGME OB/GYN milestones expected of an incoming PGY-1. The course with comprise of simulations, interaction with standardized patients, clinical experiences, and radiology.

OBG 490. Obstetrics and Gynecology Capstone (OMA). 4 credits.
The goal of this course is to allow students to experience what it will be like to be an OB/Gyn PGY-1 while still in medical school. Through first hand experience, students will better understand the responsibilities and expectations that will be placed upon them as a PGY-1. In effect, the student will act as the PGY-1 while on this rotation. The responsibilities of students on this rotation will include the primary evaluation of triage patients, management of intrapartum patients, and first-assisting during procedures. The course will be four weeks long, subdivided into week-long “rotations”, which will include Labor and Delivery days, Night Float, Ultrasound, and High-Risk Clinic. By the end of the course, students who have completed this “bootcamp” will start their PGY-1 year with competence and confidence.

OBG 498. Obstetrics and Gynecology Extramural (OMA & PHX). 1-8 credits.

PAS 601. Foundations for Clinical Medicine. 6 credits.
This course provides an introduction to the knowledge, concepts, and principles that are essential to understanding the fundamental mechanisms of immunology, microbiology, pharmacology, anatomy, physiology, and ethics. This course provides the necessary framework for the study of clinical medicine.

PAS 603. Clinical Medicine: Orthopedics/Rheumatology. 6 credits.
This course uses an integrated approach to the study of musculoskeletal and rheumatologic diseases across the life span. Students will study basic science and its application to clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting these systems. In addition, ethical content pertaining to these systems will be addressed. Content synthesis is accomplished by integrating classroom lectures, team-based learning, problem-based learning, and other learning modalities.

PAS 605. Clinical Medicine: HEENT/Dermatology. 7 credits.
This course uses an integrated approach to the study of head and neck, ear, eye, nose, throat, and dermatologic diseases across the life span. Students will study basic science and its application to clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting these systems. In addition, ethical content pertaining to these systems will be addressed. Content synthesis is accomplished by integrating classroom lectures, team-based learning, problem-based learning, and other learning modalities.

PAS 607. Clinical Medicine: Neurology/Psychiatry. 7 credits.
This course uses an integrated approach to the study of neurologic and psychiatric diseases across the life span. Students will study basic science and its application to clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting the neurologic system and mental health. In addition, ethical content pertaining to these systems will be addressed. Content synthesis is accomplished by integrating classroom lectures, team-based learning, problem-based learning, and other learning modalities.

PAS 611. Clinical Medicine: Cardiology/Pulmonology. 9 credits.
This course uses an integrated approach to the study of pulmonary and cardiovascular diseases across the life span. Students will study basic science and its application to clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting the cardiovascular system. In addition, ethical content pertaining to this system will be addressed. Content synthesis is accomplished by integrating classroom lectures, team-based learning, problem-based learning, and other learning modalities.

PAS 613. Clinical Medicine: Gastrointestinal/Nutrition. 6 credits.
This course uses an integrated approach to the study of gastrointestinal diseases and nutrition across the life span. Students will study basic science and its application to clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting the gastrointestinal system and nutrition. In addition, ethical content pertaining to these systems will be addressed. Content synthesis is accomplished by integrating classroom lectures, team-based learning, problem-based learning, and other learning modalities.

PAS 614. Clinical Practice Skills I. 4 credits.
This is the first semester of a three-semester series of courses that provides students with instruction and practice in physical examination, procedural skills, and written and interpersonal communication which will provide students with the skills necessary for effective clinical practice. Through this course the student will gain understanding and practice of the physical examination, procedures, documentation, and interpersonal skills relevant to aligned clinical medicine topics.

PAS 615. Clinical Medicine: Endocrinology/Nephrology/Urology. 5 credits.
This course uses an integrated approach to the study of endocrine and nephrologic and genitourinary diseases across the life span. Students will study basic science and its application to clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting these systems. In addition, ethical content pertaining to these systems will be addressed. Content synthesis is accomplished by integrating classroom lectures, team-based learning, problem-based learning, and other learning modalities.

PAS 616. PA Profession and the Health System I. 1 credit.
This is part one of a two-semester course that is designed to introduce the student to the physician assistant profession including concepts related to the history and future of the PA profession, professional organizations, challenges, professionalism, and professional lifestyle management. In addition, this course will address issues related to the healthcare delivery system to include but not limited to public health, access to care, health equity, risk management, reimbursement, health reform, and the role of the PA in the health care system.

PAS 617. Clinical Medicine: Women's Health/Hematology/Oncology. 5 credits.
This course uses an integrated approach to the study of reproductive, hematologic, and oncologic diseases across the life span. Students will study basic science and its application to clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting these systems. In addition, ethical content pertaining to these systems will be addressed. Content synthesis is accomplished by integrating classroom lectures, team-based learning, problem-based learning, and other learning modalities.

PAS 624. Clinical Practice Skills II. 2 credits.
This is the second semester of a three-semester series of courses that provides students with instruction and practice in physical examination, procedural skills, and written and interpersonal communication which will provide students with the skills necessary for effective clinical practice. This course builds upon the knowledge and skills learned in Clinical Practice Skills I. Through this course the student will gain understanding and practice of the physical examination, procedures, documentation, and interpersonal skills relevant to aligned clinical medicine topics. P. PAS 614.

PAS 626. PA Profession and Health System II. 1 credit.
This is part two of two-semester course is designed to introduce the student to the physician assistant profession including concepts related to the history and future of the PA profession, professional challenges, and professional lifestyle management. In addition, this course will address issues related to the healthcare delivery system to include but not limited to public health, access to care, health equity, risk management, reimbursement, health reform, and the role of the PA in the health care system.

PAS 628. Research Applications in Medicine. 2 credits.
This course is designed to introduce the student to clinical research. Concepts covered include the critical appraisal of scientific research and medical literature, study design and methodology, and statistical analysis and its application to the evidence-based medical decision-making process. As part of this course, students will formulate a clinical question utilizing medical literature and complete a research project.

PAS 634. Clinical Practice Skills III. 2 credits.
This is the third semester of a three-semester series of courses that provides students with instruction and practice in physical examination, procedural skills, and written and interpersonal communication, which will provide students with the skills necessary for effective clinical practice. This course builds upon the knowledge and skills learned in Clinical Practice Skills I and II. Through this course the student will gain understanding and practice of the physical examination, procedures, documentation, and interpersonal skills relevant to aligned clinical medicine topics. P. PAS 614 and PAS 624.

PAS 640. Clinical Anatomy. 5 credits.
This course is designed to provide students with knowledge of the anatomy of the human body and relevant embryological development in a lecture and lab format. Students will participate in dissection of the human body, which will provide foundational information for conducting the physical examination, performing clinical procedures, and understanding the anatomical mechanisms of structural injury and disease. Instruction in this course will be focused on anatomy as it relates to clinical medicine.(Location: Phoenix Health Sciences Campus).

PAS 642. Foundational Sciences I. 3 credits.
This course introduces students to the knowledge, concepts, and principles that are essential to understanding the fundamental mechanisms of immunology, microbiology, pharmacology, physiology, pathology, genetics, and evidence-based medicine. This course provides the necessary framework for the study of clinical medicine. (Location: Phoenix Health Sciences Campus).

PAS 644. Foundational Sciences II. 1 credit.
This is the second course in a four-course series; concepts taught in this course will build upon the introductory knowledge acquired in PAS 642, providing the necessary framework for the study of clinical medicine. Students will study basic science principles as they apply to concepts concurrently delivered in clinical medicine courses. (Location: Phoenix Health Sciences Campus).

PAS 646. Patient Evaluation I. 4 credits.
This is the first semester of a three-semester series of lecture/laboratory-based courses that provide students with instruction and practice in medical history-taking, physical examination skills, and basic procedural and technical skills. Medical documentation, preventive medicine assessments, and interpersonal communication skills necessary for effective clinical practice will also be emphasized. Content in this course will be relevant to the aligned clinical medicine topics. (Location: Phoenix Health Sciences Campus).

PAS 648. Special Topics in Medicine I. 1 credit.
This is the first semester of a three-semester series of courses that is designed to introduce the student to concepts related to the following four topics: 1) medical humanities, 2) medical ethics, 3) the PA profession and professionalism, and 4) the healthcare delivery system. When relevant, content in this course will be aligned with material in the clinical medicine, foundational sciences, and clinical applications courses. (Location: Phoenix Health Sciences Campus).

PAS 650. Clinical Medicine: Musculoskeletal/Rheumatology. 3 credits.
This course provides students with the opportunity to study musculoskeletal and rheumatologic diseases across the life span. Students will study clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting these systems. The content presented in this course will be integrated with basic science concepts taught in PAS 644 and content being taught in PAS 646 and PAS 654. (Location: Phoenix Health Sciences Campus).

PAS 652. Clinical Medicine: HEENT/Dermatology. 4 credits.
This course provides students with the opportunity to study head and neck, ear, eye, nose, throat, and dermatologic diseases across the life span. Students will study clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting these systems. The content presented in this course will be integrated with basic science concepts taught in PAS 644 and content being taught in PAS 646 and PAS 654. (Location: Phoenix Health Sciences Campus).

PAS 654. Clinical Applications I. 1 credit.
This is the first semester of a three-semester series of lecture/laboratory-based courses that will focus on applying the knowledge and skills acquired in all concurrently enrolled courses. The course will emphasize instruction and practice in procedural and technical skills that will be utilized throughout the clinical year. Additionally, students will be provided opportunities to apply acquired knowledge to patient care with team-based learning, case-based learning, and other active learning experiences. (Location: Phoenix Health Sciences Campus).

PAS 656. Foundational Sciences III. 3 credits.
This is the third course in a four-course series; concepts taught in this course will build upon the knowledge acquired in PAS 642 and PAS 644, providing the necessary framework for the study of clinical medicine. Students will study basic science principles as they apply to concepts concurrently delivered in clinical medicine courses. (Location: Phoenix Health Sciences Campus).

PAS 658. Patient Evaluation II. 3 credits.
This is the second semester of a three-semester series of lecture/laboratory-based courses that provide students with instruction and practice in medical history-taking, physical examination skills, and basic procedural and technical skills. Medical documentation, preventive medicine assessments, and interpersonal communication skills necessary for effective clinical practice will also be emphasized. This course builds upon the knowledge and skills learned in PAS 646. Content in this course will be relevant to aligned clinical medicine topics. (Location: Phoenix Health Sciences Campus).

PAS 660. Special Topics in Medicine II. 1 credit.
This is the second semester of a three-semester series of courses that is designed to introduce the student to concepts related to the following four topics: 1) medical humanities, 2) medical ethics, 3) the PA profession and professionalism, and 4) the healthcare delivery system. When relevant, content in this course will be aligned with material in the clinical medicine, foundational sciences, and clinical applications courses. (Location: Phoenix Health Sciences Campus).

PAS 662. Clinical Medicine: Cardiology/Pulmonology. 7 credits.
This course provides students with the opportunity to study cardiovascular and pulmonary diseases across the life span. Students will study clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting these systems. The content presented in this course will be integrated with basic science concepts taught in PAS 656 and content being taught in PAS 658 and PAS 668. (Location: Phoenix Health Sciences Campus).

PAS 664. Clinical Medicine: Gastrointestinal/Nutrition. 3 credits.
This course provides students with the opportunity to study gastrointestinal and nutrition related diseases across the life span. Students will study clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting these systems. The content presented in this course will be integrated with basic science concepts taught in PAS 656 and content being taught in PAS 658 and PAS 668. (Location: Phoenix Health Sciences Campus).

PAS 666. Clinical Medicine: Neurology/Psychiatry. 5 credits.
This course provides students with the opportunity to study neurological and psychiatric diseases across the life span. Students will study clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting this system. The content presented in this course will be integrated with basic science concepts taught in PAS 656 and content being taught in PAS 658 and PAS 668. (Location: Phoenix Health Sciences Campus).

PAS 668. Clinical Applications II. 2 credits.
This is the second semester of a three-semester series of lecture/laboratory-based courses that will focus on applying the knowledge and skills acquired in all concurrently enrolled courses. The course will emphasize instruction and practice in procedural and technical skills that will be utilized throughout the clinical year. Additionally, students will be provided opportunities to apply acquired knowledge to patient care with team-based learning, case-based learning, and other active learning experiences. (Location: Phoenix Health Sciences Campus).

PAS 670. Foundational Sciences IV. 2 credits.
This is the final course in a four-course series; concepts taught in this course will build upon the knowledge acquired in PAS 642, PAS 644, and PAS 656, providing the necessary framework for the study of clinical medicine. Students will study basic science principles as they apply to concepts concurrently delivered in clinical medicine courses. (Location: Phoenix Health Sciences Campus).

PAS 672. Patient Evaluation III. 2 credits.
This is the final semester of a three-semester series of lecture/laboratory-based courses that provide students with instruction and practice in medical history-taking, physical examination skills, and basic procedural and technical skills. Medical documentation, preventive medicine assessments, and interpersonal communication skills necessary for effective clinical practice will also be emphasized. This course builds upon the knowledge and skills learned in PAS 646 and PAS 658. Content in this course will be relevant to aligned clinical medicine topics. (Location: Phoenix Health Sciences Campus).

PAS 674. Special Topics in Medicine III. 1 credit.
This is the final semester of a three-semester series of courses that is designed to introduce the student to concepts related to the following four topics: 1) medical humanities, 2) medical ethics, 3) the PA profession and professionalism, and 4) the healthcare delivery system. When relevant, content in this course will be aligned with material in the clinical medicine, foundational sciences, and clinical applications courses. (Location: Phoenix Health Sciences Campus).

PAS 676. Clinical Medicine: Endocrinology/Reproductive. 5 credits.
This course provides students with the opportunity to study endocrine and reproductive diseases across the life span. Students will study clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting these systems. The content presented in this course will be integrated with basic science concepts taught in PAS 670 and content being taught in PAS 672 and PAS 682. (Location: Phoenix Health Sciences Campus).

PAS 678. Clinical Medicine: Nephrology/Urology & Hematology/ Oncology. 4 credits.
This course provides students with the opportunity to study renal, urologic, hematologic, and oncologic diseases across the life span. Students will study clinical medicine, epidemiology, clinical presentation, evaluation, diagnosis, and the medical management of common conditions affecting these systems. The content presented in this course will be integrated with basic science concepts taught in PAS 670 and content being taught in PAS 672 and PAS 682. (Location: Phoenix Health Sciences Campus).

PAS 680. Preparation for Clinical Practice. 2 credits.
This course is designed to prepare the student for the transition into the clinical phase of the program. Instruction will focus on a higher level of critical thinking and medical decision-making skills which will further prepare students to apply knowledge to patient management. This course will include summative evaluation of knowledge and skills required for clinical practice.

PAS 682. Clinical Applications III. 1 credit.
This is the final semester of a three-semester series of lecture/laboratory-based courses that will focus on applying the knowledge and skills acquired in all concurrently enrolled courses. The course will emphasize instruction and practice in procedural and technical skills that will be utilized throughout the clinical year. Additionally, students will be provided opportunities to apply acquired knowledge to patient care with team-based learning, case-based learning, and other active learning experiences. (Location: Phoenix Health Sciences Campus).

PAS 684. Preparation for Clinical Phase. 1 credit.
The Preparation for Clinical Phase (PCP) course is designed to prepare the student for a successful transition into the clinical phase of the program. Students will be provided an overview of administrative tasks and expectations required during the clinical phase. Additionally, students will be provided instruction on the advanced application of select didactic curricular elements. (Location: Phoenix Health Sciences Campus).

PAS 700. Family Practice Rotation. 3,6 credits.
The family medicine rotation is a six-week clinical practice experience during which a student will have learning opportunities in a variety of outpatient settings (e.g., private practice, community health center, rural clinic, etc.) under the supervision of a clinician. The student will gain experience in preventive medicine, management of acute and chronic diseases, procedures, and other aspects unique to care of the patient and family. This rotation also provides the student an opportunity to participate in the team practice concept of health care. (Location: Phoenix Health Sciences Campus).

PAS 701. Internal Medicine Rotation. 3,6 credits.

PAS 702. Pediatrics Rotation. 3,6 credits.

PAS 703. Women's Health Rotation. 3,6 credits.

PAS 704. Psychiatry/Behavioral Health Rotation. 3,6 credits.

PAS 705. Emergency Medicine Rotation. 3,6 credits.

PAS 706. Surgery Rotation. 3,6 credits.

PAS 707. Selective Rotation. 3,6 credits.

PAS 708. Elective Rotation I. 6 credits.

PAS 709. Elective Rotation II. 6 credits.

PAS 710. Clinical Phase Seminar I. 1 credit.
The Clinical Phase Seminar I is a blended delivery course designed to provide formative assessments, instruction in advanced clinical skills, professional development, and the integration and application of evidence-based medicine in the clinical phase of the curriculum. (Location: Phoenix Health Sciences Campus).

PAS 711. Clinical Phase Seminar II. 1 credit.
The Clinical Phase Seminar II is a blended delivery course designed to provide formative assessments, instruction in advanced clinical skills, professional development, and the integration and application of evidence-based medicine in the clinical phase of the curriculum. (Location: Phoenix Health Sciences Campus).

PAS 712. Clinical Phase Seminar III. 1 credit.
The Clinical Phase Seminar III is a blended delivery course designed to provide instruction in advanced clinical skills, the opportunity for integration and application of evidence-based medicine, professional development, and the program's summative evaluation of students. (Location: Phoenix Health Sciences Campus).

PAS 713. Clinical Phase Seminar IV. 1 credit.
The Clinical Phase Seminar IV is a blended delivery course designed to provide instruction in advanced clinical skills, the opportunity for integration and application of evidence-based medicine, professional development, and assistance in transitioning from academia to clinical practice. (Location: Phoenix Health Sciences Campus).

PAS 721. Family Practice Rotation. 8 credits.
The family practice medicine rotation is an eight-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases across the life span, procedures, and aspects unique to the family practice setting. This rotation also provides the student an opportunity to participate in the team practice concept of health care.

PAS 723. Ambulatory Internal Medicine Rotation. 4 credits.
The outpatient internal medicine rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases in adult and geriatric patients, procedures, and aspects unique to outpatient internal medicine practice. This rotation also provides the student an opportunity to participate in the team practice concept of health care.

PAS 725. Hospital Medicine Rotation. 4 credits.
The hospital medicine rotation is a four-week clinical experience in which the student will have many learning opportunities in the inpatient setting under the supervision of a clinician. The student will gain experience in the evaluation and management of acute and chronic diseases in adult and geriatric patients, procedures, and aspects unique to hospital medicine practice. This rotation also provides the student an opportunity to participate in the team practice concept of health care.

PAS 726. Seminar Series I. 1 credit.
This course series includes advanced clinical skills instruction, practice-specific topic presentations, professional development, clinical assessments, and other activities.

PAS 727. Pediatrics Rotation. 4 credits.
The pediatric medicine rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases in pediatric patients, procedures, and aspects unique to pediatric medicine. This rotation also provides the student an opportunity to participate in the team practice concept of health care.

PAS 729. Women's Health Rotation. 4 credits.
The women's health rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases in women, prenatal care, pregnancy and delivery, procedures, and aspects unique to women's health. This rotation also provides the student an opportunity to participate in the team practice concept of health care.

PAS 731. Behavioral Health Rotation. 4 credits.
The women's health rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases in women, prenatal care, pregnancy and delivery, procedures, and aspects unique to women's health. This rotation also provides the student an opportunity to participate in the team practice concept of health care.

PAS 733. Emergency Medicine Rotation. 4 credits.
The emergency medicine rotation is a four-week clinical experience in which the student will have many learning opportunities in the emergency setting under the supervision of a clinician. The student will gain experience in management of medical emergencies across the life span, procedures, and aspects unique to emergency medicine practice. This rotation also provides the student an opportunity to participate in the team practice concept of health care.

PAS 735. Surgical Rotation. 4 credits.
The surgery rotation is an four-week clinical experience in which the student will have many learning opportunities in outpatient, inpatient, and/or surgical setting under the supervision of a clinician. The student will gain experience in preoperative and postoperative care, surgical procedures, and aspects unique to surgery. This rotation also provides the student an opportunity to participate in the team practice concept of health care.

PAS 736. Seminar Series II. 1 credit.
This course series includes advanced clinical skills instruction, practice-specific topic presentations, professional development, clinical assessments, and other activities.

PAS 739. Women's Health Elective. 4 credits.
The Women's Health elective rotation is a four-week clinical experience in which the student will have learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases in women, prenatal care, pregnancy and delivery, procedures, and aspects unique to women's health. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 740. Interventional Radiology Elective. 4 credits. OD
The interventional radiology elective rotation is a four-week clinical experience in which the student will have learning opportunities in the interventional radiology setting under the supervision of a physician and/or PA/NP. The student will gain experience pre-operative, intra-operative, and post-operative care, interventional radiology procedures, and aspects unique to interventional radiology. The rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Successful completion of Didactic Phase of the Physician Assistant Program.

PAS 741. Medically Underserved Rotation. 4 credits.
The medically underserved rotation is a four-week clinical experience in which the student will have many learning opportunities in a variety of settings under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases in an underserved population, procedures, and aspects unique to lower resourced medical settings. This rotation also provides the student an opportunity to participate in the team practice concept of health care.

PAS 742. Pediatrics Elective. 4 credits. OD
The pediatric medicine elective rotation is a four-week clinical experience in which the student will have learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases in pediatric patients, procedures, and aspects unique to pediatric medicine. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Successful completion of Didactic Phase of the Physician Assistant Program.

PAS 743. Surgery Specialty Selective Clinical Rotation. 4 credits.
The surgical specialty rotation is a four-week clinical experience in which the student will have many learning opportunities in outpatient, inpatient, and/or surgical setting under the supervision of a clinician. The student will gain experience in preoperative and postoperative care, surgical procedures, and aspects unique to surgery. This rotation also provides the student an opportunity to participate in the team practice concept of health care.

PAS 744. Pediatric Behavioral Hlth Elec. 4 credits.
The pediatric behavioral health elective rotation is a four-week clinical experience in which the student will have learning opportunities in the pediatric outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in pediatric (child/adolescent) psychiatric evaluation, assessment of mental status, management of acute and chronic psychiatric diseases, and aspects unique to pediatric behavioral health. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 745. Pediatric Cardiology Elective. 4 credits.
The pediatric cardiology rotation is a four-week clinical experience in which the student will have learning opportunities in the outpatient and/or inpatient setting under the supervision of a physician and/or PA/NP. The student will gain experience in preventative medicine, management of acute and chronic cardiovascular diseases, procedures, and aspects unique to pediatric cardiology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 746. Seminar Series III. 1 credit.
This course series includes advanced clinical skills instruction, practice-specific topic presentations, professional development, clinical assessments, and other activities.

PAS 747. Gynecologic Oncology Surgery Elective. 4 credits.
The Gyn/Onc Surgery elective rotation is a four-week clinical experience in which the student will have learning opportunities in the outpatient clinic, inpatient setting, and surgical suite under the supervision of a clinician. The student will gain experience in evaluation, medical and surgical management of acute and chronic diseases in women, procedures, and aspects unique to gynecologic oncology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 748. Pediatric Orthopedic Surgery Elective. 4 credits.
The pediatric orthopedic surgery elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the pediatric orthopedic surgical setting under the supervision of a physician, PA and /or NP. The student will gain experience in pre-, intra-, and post-operative care, orthopedic procedures, and aspects unique to pediatric orthopedic surgery. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 749. Pediatric Endocrinology Elective. 4 credits.
The pediatric endocrinology elective rotation is a four-week clinical experience in which the student will have learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a practitioner. The student will gain experience in diagnosing common diseases, management of acute and chronic endocrine diseases, procedures, and aspects unique to endocrinology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 750. Surgery Elective. 4 credits. OD
The elective surgery rotation is a four-week clinical experience in which the student will have learning opportunities in outpatient, inpatient, and / or surgical setting under the supervision of a clinician. The student will gain experience in pre-operative, intra-operative, and post-operative care, surgical procedures, and aspects unique to surgery. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Successful completion of Didactic Phase of the Physician Assistant Program.

PAS 751. Cardiology Elective. 4 credits.
The cardiology rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic cardiovascular diseases, procedures, and aspects unique to cardiology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 752. Family Practice Elective. 4 credits. OD
The family practice medicine elective rotation is a four-week clinical experience in which the student will have learning opportunities in the outpatient clinic and /or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases across the life span (children, adolescents, adults, and the elderly), procedures, and aspects unique to the family practice setting. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Successful completion of Didactic phase of Physician Assistant Program.

PAS 753. Orthopedic Surgery Elective. 4 credits.
The orthopedic surgery elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the orthopedic surgical setting under the supervision of a clinician. The student will gain experience in preoperative and postoperative care, orthopedic procedures, and aspects unique to orthopedic surgery. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 755. Urology Elective. 4 credits.
The urology elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic urologic diseases, procedures, and aspects unique to urology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 756. Seminar Series IV. 1 credit.
This course series includes advanced clinical skills instruction, practice-specific topic presentations, professional development, clinical assessments, and other activities.

PAS 757. Dermatology Elective. 4 credits.
The dermatology elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic dermatologic diseases, procedures, and aspects unique to dermatology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 759. Otolaryngology Elective. 4 credits.
The otolaryngology elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases, procedures, and aspects unique to otolaryngology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 761. Hematology/Oncology Elective. 4 credits.
The hematology/oncology elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic hematologic and oncologic diseases, procedures, and aspects unique to hematology/oncology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 763. Cardiothoracic Surgery Elective. 4 credits.
The cardiovascular surgery elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the cardiovascular surgical setting under the supervision of a clinician. The student will gain experience in preoperative and postoperative care, cardiovascular procedures, and aspects unique to cardiovascular surgery. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 765. Gastroenterology Elective. 4 credits.
The gastroenterology elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic gastrointestinal diseases, procedures, and aspects unique to gastroenterology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 767. Neurosurgery Elective. 4 credits.
The neurosurgery elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the neurosurgical setting under the supervision of a clinician. The student will gain experience in preoperative and postoperative care, neurosurgical procedures, and aspects unique to neurosurgery. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 769. Geriatrics Elective. 4 credits.
The gerontology elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases in the geriatric population, procedures, and aspects unique to gerontology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 771. Critical Care Elective. 4 credits.
The critical care elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the inpatient setting under the supervision of a clinician. The student will gain experience in the management of high acuity medical situation, procedures, and aspects unique to critical care. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 773. Neurology Elective. 4 credits.
The neurology elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic neurological diseases, procedures, and aspects unique to neurology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 775. Endocrinology Elective. 4 credits.
The endocrinology elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic endocrine diseases, procedures, and aspects unique to endocrinology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 777. Pulmonology Elective. 4 credits.
The pulmonology elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic pulmonary diseases, procedures, and aspects unique to pulmonology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 779. Plastic and Reconstructive Surgery Elective. 4 credits.
The plastic and reconstructive surgery elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the plastic and reconstructive setting under the supervision of a clinician. The student will gain experience in pre and postoperative care, plastic and reconstructive procedures, and aspects unique to plastic and reconstructive surgery. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 781. Nephrology Elective. 4 credits.
The nephrology elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic renal diseases, procedures, and aspects unique to nephrology. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 783. Urgent Care Elective. 4 credits.
The urgent care elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in preventative medicine, management of acute and chronic diseases, procedures, and aspects unique to the primary care setting. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 785. Infectious Disease Elective. 4 credits.
The infectious disease elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician(s). The student will gain experience in infectious disease principles, management infectious pathologies, antibiotic stewardship, emerging infectious threats, and aspects unique to infectious disease. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 787. Maternal Fetal Medicine Elective. 4 credits.
The maternal fetal elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the outpatient clinic and/or inpatient setting under the supervision of a clinician. The student will gain experience in high-risk pregnant females and aspects unique to maternal fetal medicine. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 789. Emergency Medicine Elective. 4 credits.
The emergency medicine elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the emergency setting under the supervision of a clinician to expand upon previous emergency medicine experiences. The student will gain experience in medical emergencies across the life span, procedures, and aspects unique to emergency medicine practice. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 791. Physical Medicine and Rehabilitation Elective. 4 credits.
The emergency medicine elective rotation is a four-week clinical experience in which the student will have many learning opportunities in the emergency setting under the supervision of a clinician to expand upon previous emergency medicine experiences. The student will gain experience in medical emergencies across the life span, procedures, and aspects unique to emergency medicine practice. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 793. Hospital Medicine Elective. 4 credits.
The hospital medicine elective rotation is a four-week clinical experience in which the student will have learning opportunities in the inpatient setting under the supervision of a clinician. The student will gain experience in the evaluation and management of acute and chronic diseases in adult and geriatric patients, procedures, and aspects unique to inpatient internal medicine practice. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 795. Pediatric Surgery Elective. 4 credits.
The pediatric surgery rotation is a four-week elective clinical experience in which the student will have learning opportunities in outpatient, inpatient, and/or surgical setting under the supervision of a clinician. The student will gain experience in pre-, intra-, and post-operative care, surgical procedures, and aspects unique to pediatric surgery. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 797. Pediatric Inpatient Hospitalists Elective. 4 credits.
The pediatric inpatient hospitalists elective rotation is a four-week clinical experience in which the student will have learning opportunities in the outpatient and/or inpatient setting under the supervision of a physician and/or PA/NP. The student will gain experience in preventative medicine, management of acute and chronic pediatric diseases, procedures, and aspects unique to pediatric inpatient medicine. This rotation also provides the student an opportunity to participate in the team practice concept of health care. P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PAS 799. Pediatric Emergency Medicine Elective. 4 credits.
The pediatric emergency medicine elective rotation is a four-week clinical experience in which the student will have learning opportunities in the pediatric emergency setting under the supervision of a clinician to expand on previous emergency medicine experiences. The student will gain experience in management of medical emergencies in infants, children, and adolescents, procedures, and aspects unique to pediatric emergency medicine practice. This rotation also provides the student an opportunity to participate in the team practice concept of health care.P. Good standing and successful completion of the didactic phase of the Physician Assistant Program.

PBS 301. Psychiatry Clerkship (OMA & PHX). 3-6 credits.
Psychiatry is an essential component of general medical practice in five primary ways:1) Common disorders: 40-50% of primary care patients have active psychiatric illness. 2) All physical illness has some overlay of psychological difficulty or change. 3) Physical illness often presents with behavioral & psychological symptoms. 4) Improving interview skills and sensitivity to psychiatric issues will help in every patient encounter. 5) Psychiatric illness increases risk or physical illness (e.g., depression and MIs).The Psychiatry Clerkship is a required six-week clinical rotation in the third year of medical school which focuses on the development of patient care, medical and psychiatric knowledge, practice-based learning and improvement, interpersonal and communication skills, and professionalism in the treatment of the psychiatric patient. Students are supervised by psychiatry faculty in a variety of care settings.

PBS 334. Psychiatry (PHX). 2 credits.
The rotation consists of two weeks of a psychiatric experience in an inpatient psychiatric setting providing exposure to various aspects of the management of patients.

PBS 336. Adult Inpatient Psychiatry. 2 credits.
This elective provides exposure to the practice of adult psychiatry in the inpatient setting.

PBS 410. General Hospital Psychiatry Sub-Internship (PHX). 1-4 credits.
This elective provides exposure to the practice of psychiatry in the general hospital setting. The patient population can be broadly divided into two groups: patients with medical illnesses that present with psychiatric symptoms, and patients with chronic mental illness that now have medical illness requiring hospitalization. Special teaching on diagnosis issues (primarily, differentiating psychiatric illness from medical/neurological illness), developing acute treatment plans, and short term intervention techniques.

PBS 414. Pediatric Psychiatry (PHX). 2-4 credits.
The Pediatric Psychiatry Elective is a clinical rotation at Phoenix Children's Hospital in one or a combination of clinical settings including Inpatient Psychiatry and Consultation-Liaison Psychiatry services. The rotation aims to provide a foundation for and/or enhance medical student knowledge and understanding the unique aspects of Child and Adolescent Psychiatry evaluation, assessment and treatments. It also aims to provide an opportunity for the medical student to further appreciate the role of Child and Adolescent Psychiatry as a medical specialty and to promote a better recognition, early detection and prevention of child mental health problems.

PBS 420. Special Topics in Psychiatry (OMA). 4 credits.
The purpose of this course is to advance the learner's experience and interest in academic psychiatry. The course will specifically focus on the exploration of one particular area of interest that the learner has in the area of psychiatry with the ultimate goal of producing a piece of written work appropriate for journal publication or presentation as a poster at an academic meeting. Skills involved will include literature searching, manuscript format and preparation, editing, and poster formatting.

PBS 425. Child & Adolescent Psychiatry Sub-Internship - Valleywise (PHX). 4 credits.
This sub-internship will expand the student's understanding of child and adolescent psychiatry as a specialty. The student will learn to integrate clinical data from each patient into a diagnosis and comprehensive treatment plan demonstrating knowledge and skills in providing continuity of care, clinical reasoning, health promotion through patient education, and the provision of humanistic and ethical care.

PBS 429. Adult Inpatient Psychiatry Sub-Internship - Valleywise (PHX). 4 credits.
Students will develop clinical knowledge of inpatient psychiatry, interviewing and examining patients independently and diagnosing common psychiatry disorders. Students will formulate treatment plans, work with a multi-disciplinary team, understand the role of each team member, and develop a knowledge of psychopharmacological agents. Students collaborate with treatment teams, receive individual supervision, and participate in rounds and case conferences.

PBS 435. Psychiatry ACT Sub-Internship - Valleywise (PHX). 4 credits.
Assertive Community Treatment (ACT) is an evidence based psychosocial treatment model for patients diagnosed with serious mental illness that have struggled to maintain stability within the community. In this outpatient setting the sub-intern will collaborate with the ACT team including psychiatrist, nurses, licensed therapists, and behavioral health specialist to provide care at a high level of intensity.

PBS 449. Psychiatry First Episode Clinic Sub-Internship (PHX). 4 credits.
The student will function as a sub-intern and work with the multi-disciplinary team as they learn the role and responsibility of each team member and develop medical knowledge in diagnosis and psychopharmacology of psychiatric disorders. They will learn the importance of coordinating care in the community and participate in patient visits, case conferences, and individual supervision.

PBS 462. Clinical Psychopharmacology (OMA). 4 credits.
This elective will provide contemporary information regarding the growing field of psychopharmacology. This will be achieved through guided independent learning (e.g., review of recent literature and assigned reading, small group discussion, participation in clinical teaching rounds, clinics, Grand Rounds, case discussions, and research activities).

PBS 463. Child and Adolescent Psychiatry (OMA). 2-4 credits.
This elective is a clinical rotation for those interested to explore in depth Child and Adolescent Psychiatry. The student will be exposed to residential level of inpatient care at Immanuel Residential Treatment Center and outpatient at the Creighton Psychiatry Outpatient Clinic and Family Services. The student will also gain knowledge about community based treatments. Students will have an opportunity to understand various systems that the Child and Adolescent Psychiatrist needs to deal with as they treat their patients; and receive exposure to various consultation sites in the community such as group homes; Behaven' Day Care; and Family Services. This elective will help the student develop an understanding of normal child and adolescent development along with its deviations and development of psychopathology. Student will be exposed to various systems a child and adolescent psychiatrist deals with; i.e.; schools, Juvenile Court, and social services. The student will be able to diagnose common child and adolescent problems with the use of DSM-5; will learn to formulate an appropriate treatment plan; learn to work with multi-disciplinary treatment team and understand the role and responsibility of each member of the team; develop basic skills in use of various psychopharmacological agents of common child and adolescent disorders; learn the role of Child and Adolescent Psychiatrist in consultation with schools, courts, and other community based systems of care for children and adolescents.

PBS 464. Psychiatry Research. 4 credits.
Students will spend this elective period involved in the Creighton Psychiatry Research Center, and/or its affiliated Research Clinics at the Omaha VA Medical Center on current active protocols or, by mutual agreement, special topics. Currently, these range from Clinical Trials of Psychopharmacological Medications (for Anxiety, Depression, Psychosis, etc.) to Laboratory Research in Behavioral Biology, as well as special topics in Psychiatry (Child, Adolescent, Geriatric, Forensics, etc.). Students taking this elective will acquire knowledge in ethical, regulatory and operational aspects of protocols. They will become familiar with scientific and methodological issues in research. Students will become adept at using structured interviews for DSM-V criteria and Clinical Symptom Rating Scales for specific syndromes and research protocols.

PBS 472. Adult Inpatient Psychiatry Sub-Internship (OMA). 2-4 credits.
This elective provides exposure to the practice of adult psychiatry in the inpatient setting. Students collaborate in treatment teams participating in rounds, case-conferences, Grand Rounds, and individual supervision with strong emphasis of differential diagnosis, planning and implementing a biopsychosocial treatment plan for psychiatric patients. Students will gain experience in the evaluation, diagnosis, and formation of treatment plans of acutely ill psychiatric patients in the inpatient setting.

PBS 475. Consultation/Liaison Psychiatry Sub-Internship (OMA). 4 credits.
This elective provides exposure to medically ill patients with emotional/psychiatric problems along with special teaching on psychiatric diagnostic issues, acute treatment plans, short-term intervention techniques, and supportive therapies. This elective will provide the student with exposure to consultations to acute medical/surgical units allowing the student to develop skills in evaluating and treating medical, surgical, obstetrical, and chronically ill patients who develop psychiatric problems.

PBS 483. Domestic Violence Practicum (OMA). 4 credits.
This community-based experiential course provides students with practical knowledge and experience in community agencies and sites dedicated to reducing domestic violence and aiding its victims in Omaha. Students will develop skills in assessment, interviewing, and treatment of persons subject to domestic violence; they will also better appreciate the role of physicians in the community effort to reduce violence. The course provides practical experience at shelter sites, instruction in the assessment of domestic violence victims, and contact with courts, support groups, and community action organizations.

PBS 486. Narratives in Illness (OMA). 2-4 credits.
This two- week or four-week reading course involves the student in reading first-person narratives of psychiatric and medical illness, with one or two short pieces of fiction. Students will read a variety of such written works with the objective of understanding the interplay of biological, psychological, and social factors in the dynamics of the illnesses, and the importance of social context and the strength of personal coping and of social support as important elements in the person's recovery. The student will them prepare a written work with the guidance of the course director at the conclusion of their study.

PBS 490. Psychiatry Capstone (OMA). 4 credits.
To emphasize the core entrustable professional activities that will be expected of psychiatry residents to be competent in performing without direct supervision on day one of residency. This course is offered in the final rotation of the fourth year. Learning activities include a variety of lectures, small group discussions, patient simulation exercises, and hands on practical educational sessions.

PBS 492. Psychiatry Capstone (PHX). 4 credits.
The psychiatry capstone course targets skills and competencies important for initial functioning of a resident on psychiatry rotations. It aims to emphasize the core entrustable professional activities that will be expected of psychiatry residents to be competent in performing without direct supervision on day one of residency.

PBS 498. Psychiatry Extramural (OMA & PHX). 1-8 credits.

PDT 120. Pediatric Summer Academy. 1 credit.
This elective is an opportunity for medical students, in good academic standing, to enhance their clinical skills between their first and second year. The course will occur between May and June. Students will be expected to complete at least 3 of the 7 weeks available. The course will include shadowing physicians, attending lectures, and learning on patient simulators. Upon satisfactory completion of the course, the student will receive one academic credit on their final transcript.

PDT 301. Pediatrics Clerkship (OMA & PHX). 3,6 credits.
PDT 301 is a 6-week Pediatric Clerkship. Three weeks of the Clerkship serves as the inpatient experience. During this experience, the students spend 1-2 weeks in Children's Hospital on the Inpatient Service. One to two weeks of the inpatient experience will also be spent in the Neonatal Intensive Care Unit at Bergan Mercy Medical Center or in the Neonatal Intensive Care Unit at Children's Hospital. For the second half of the clerkship, three weeks will be spent in a community based Pediatric Outpatient setting. Each student will also spend one week of mornings in the Normal Newborn Nursery at Bergan Mercy Medical Center. The clerkship involves several scheduled learning sessions ranging from didactic lectures, hands-on learning opportunities, and web-based simulated patient encounters (CLIPP cases). Students take both a mid-term quiz and a practice exam during the clerkship to help them track their acquisition of knowledge.

PDT 335. Pediatric Ophthalmology (OMA). 2 credits.

PDT 336. Pediatric Ophthalmology 2 M3 Elective (OMA). 2 credits. (M3 Elective)
Student will be able to recognize common childhood eye disorders, including strabismus, amblyopia, conjunctivitis, astigmatism, hyperopia, myopia, and cataracts.

PDT 401. Pediatric Physical Medicine and Rehabilitation (PHX). 4 credits.
Students will learn how to evaluate and treat children with disabling conditions, including brain injury, spinal cord injury, stroke, other neurologic conditions such as Guillain-Barré, as well as various cancers. Patients may have developmental conditions such as cerebral palsy. Students will also have exposure to procedures for the treatment of hypertonia with ultrasound and e-stim guidance.

PDT 402. Pediatric Otorhinolaryngology (PHX). 4 credits.
Students will experience a wide range of pathological conditions encountered in the head and neck region in children. In addition, they will receive a general overview of the surgical treatment of these disorders. The elective includes exposure to all areas of pediatric otolaryngology.

PDT 420. Pediatric Endocrinology (PHX). 4 credits.
The student will evaluate patients primarily in the out-patient setting, but also have the opportunity to participate with consults and admission to the hospital. At the end of the elective, the student will have a chance to make a formal presentation of an interesting topic or clinical case.

PDT 421. Pediatric Hematology-Oncology (PHX). 4 credits.
The student will be assigned to the outpatient hematology/oncology clinic at Phoenix Children's Hospital. Working alongside a full-time faculty member, and with nurse practitioners, rotating house staff, nurses, and other health care personnel of the inter-disciplinary team, the student will gain experience with the diagnosis and management of patients with presumed and established hematological and oncological diagnoses.

PDT 422. Pediatric Rheumatology (PHX). 4 credits.
The student will evaluate patients primarily in the out-patient setting, but also have the opportunity to participate with consults and admission to the hospital. At the end of the elective, the student will prepare a formal presentation of an interesting topic of a clinical case encountered during the elective.

PDT 423. Pediatric Gastroenterology and Nutrition (PHX). 4 credits.
The student will be an active participant in out-patient GI clinics, inpatient consultative services and neonatal consultative services. Didactic sessions on major topics in Pediatric GI will be given frequently throughout the elective period. The student will present a short talk on a GI topic of interest. The student will participate in the department teaching activities including attending rounds, grand rounds, afternoon lectures and daily noon teaching conferences.

PDT 424. Medical Care for Homeless and At-Risk Kids and Teens (PHX). 2-4 credits.
The medical student will participate in the care of the indigent, underinsured and at risk teenagers in the Phoenix Metropolitan area.

PDT 425. Pediatric Cardiology (PHX). 4 credits.
The Pediatric Cardiology Rotation is designed for Senior Medical Students and is an opportunity to gain exposure to the full range of pediatric cardiac disease, both congenital and acquired, with a specific focus on the outpatient component of pediatric cardiology. Under the direct supervision of the Pediatric Cardiology faculty, students will spend most of their time in the clinic setting where they will have great opportunity to learn the fundamentals of performing a pediatric cardiovascular exam including listening to murmurs and heart sounds and refining their skills in cardiac disease recognition, evaluation and management. Students will also experience the inpatient aspect of pediatric cardiology by being an active participant in the team performing consults in the emergency department, neonatal intensive care unit and the pediatric wards. Students will also have the opportunity to spend time in the Cardiovascular Operating Rooms, cardiac catheterization lab and echocardiography labs. Clinic Schedule will be provided at the beginning of the rotation.

PDT 426. Pediatric Urology (PHX). 4 credits.
By providing patient care under direct supervision of the urology faculty, the student will become acquainted with general principles of pediatric urology. The student will participate in daily patient care/attending rounds and has continuous informal attending contact while in the patient care setting. When appropriate and with supervision, the student will perform or participate in various procedures such as, bladder catheterization, urodynamic studies, etc.

PDT 428. Pediatric Rheumatology (OMA). 4 credits.
The student will participate in the care of pediatric patients with a variety of problems seen by Pediatric Rheumatology. There are weekly clinics and inpatient consults under the guidance of a board certified rheumatologist.

PDT 430. Pediatric Sports Medicine (OMA). 4 credits.
The student will participate in the care of pediatric patients with a variety of problems seen by a pediatrician specializing in sports related injuries. These include, but are not limited to: musculoskeletal problems, concussions, nutrition, weight management, etc.

PDT 432. Neonatology Critical Care PCH (PHX). 4 credits.
The student will participate in the care of a variety of neonatal patients with common diseases and complex medical conditions requiring extensive intervention and management. The student, under the supervision of pediatric residents, neonatal nurse practitioners and/or attending neonatologist, will carry a case load of 2-4 moderately ill NICU and intermediate nursery patients. Patients are followed from admission to discharge when possible.

PDT 433. Allergy and Immunology - PCH (PHX). 4 credits.
This elective offers students the opportunity to observe, interact and explore a variety of allergic and immunologic diseases. The medical student will interact with patients, residents, fellows, and faculty physicians to develop a basic understanding of the etiology, physiology, pathogenesis, diagnostic procedures of allergic diseases and inborn errors of immunity.

PDT 434. Pediatric Emergency Medicine (PHX). 4 credits.
Students will participate in the care of patients presenting to the Pediatric Emergency Department at Valleywise Hospital. This population provides a wide range of experience in the care of minor and major traumatic injuries, multiple pediatric medical illnesses, care of the poisoned patient, and patients with psychiatric illness. Students are assigned eight-hour shifts, with weekday and weekend exposure.

PDT 435. Pediatric Ophthalmology (OMA). 2 credits. (Children's Medical Center - OMA)
Introduce student to field of Pediatric Ophthalmology. Student will be able to recognize common eye disorders, including conjunctivitis, hyperopia, myopia, and cataracts.

PDT 436. Pediatric Plastic Surgery (OMA). 4 credits.
This elective provides students with an overview pediatric plastic surgery. Many principles overlap with general plastic surgery education, but many are specific to age and congenital problems. Under the guidance of board-certified plastic surgeons, the student will see a broad spectrum of patient problems ranging in age from infant to young adulthood.

PDT 437. Pediatric Anesthesia (PHX). 4 credits.
This rotation will provide students interested in pursuing a residency in anesthesiology with a broad overall experience in pediatric anesthesia. The focus will be on anatomy, physiology pharmacology specific to children, and the approach to providing anesthesia in response to the differences between children and adults.

PDT 438. High-Risk Adolescent Medicine (PHX). 4 credits.
Correctional medicine presents a unique setting to model evidence-based clinical practice and the use of basic clinical epidemiology and the GRADE method in appraising the medical literature to address clinical questions that arise in both the emergent and routine care practiced in a secure care setting and how this setting challenges what my be "typical" in a routine ambulatory care practice.

PDT 440. Breastfeeding Medicine (PHX). 1-4 credits.
The Department of Pediatrics offers an elective course in Breastfeeding Medicine for 4th year medical students. Students who will be applying for residencies in Family Medicine, Pediatrics, OB GYN, and Internal Medicine are encouraged to take this elective. This elective is an introduction to the knowledge and skills necessary to evaluate and diagnose common breastfeeding concerns in the inpatient and outpatient setting. By the end of the rotation students will have achieved early competency in managing the following issues: basic position/latch, milk supply issues, nipple shields, use of supplemental nursing system (SNS), pumping, mastitis, thrush, tongue tie, reflux, milk-protein allergy, extended nursing, return to work, relactation, breast augmentation/reduction, medications in milk.

PDT 442. General Pediatrics Outpatient/Nursery (PHX). 4 credits.
The student will participate in nursery rounds and morning clinic providing primary care to infants and children under the supervision of an Attending Pediatrician. The patients are both well and sick children and include some specialty referral patients. The student will also participate in the department teaching activities including attending rounds, grand rounds, daily new teaching conferences, and nursery conferences.

PDT 444. Anatomic and Clinical Pathology (PHX). 4 credits.
The elective in pediatric anatomic and clinical pathology offers the senior medical student in-depth exposure to pediatric surgical pathology, cytopathology, and autopsy pathology. Various aspects of the clinical laboratory may be experienced, including hematopathology, microbiology, transfusion medicine, and clinical chemistry. Clinical conference attendance is required, including pediatric oncology tumor board, brain tumor conference, and gastroenterology conference. Students are expected to read relevant published material related to cases and specimens encountered in the laboratory. The student is responsible for keeping a case log.

PDT 446. Pediatric Emergency Medicine Sub-Internship (PHX). 4 credits.
Students will participate in the care of patients presenting to the Pediatric Emergency Department at Children's Hospital. Students are assigned attending physicians, and will work with the attending physician to manage the patients during their Emergency Department visit. At all times, the student will be under the direct supervision of the attending physician. The patient population provides a wide range of experience in the care of minor and major traumatic injuries, multiple pediatric medical illnesses, care of the poisoned pediatric patient and pediatric patients with psychiatric illness. Patients seen in Phoenix Children's Hospital Emergency Department range in age from newborn to 18 years. Students are assigned eight-hour shifts, with week day and weekend exposure. There is no "on call" time during this rotation. The student is required to review the orientation pack and complete computer training prior to beginning the rotation.

PDT 448. Pediatric Otorhinolaryngology (PHX). 4 credits.
Students will receive a general overview of the surgical treatment of pathological disorders in the field of otorhinolaryngology as it applies to children. They will become familiar with the surgical treatments and become more proficient in examining the head and neck region, using indirect laryngoscopy and other diagnostic techniques with special considerations for performing these procedures on children with developmental delays.

PDT 449. Pediatric and Adolescent Gynecology (PHX). 4 credits.
Pediatric and Adolescent Gynecology (PAG) is a sub-specialty of Obstetrics and Gynecology that evaluates and treats the reproductive needs of girls and teens from birth through age 24. Students participate in general PAG clinic, and multidisciplinary clinics that include the Differences of Sexual Development Clinic, the Menorrhagia Clinic for teens with bleeding and clotting disorders, and the Metabolic and Vulvar Skin Disorders Clinic.

PDT 450. Pediatric Orthopedics (PHX). 4 credits.
Students will spend time at Phoenix Children's Hospital, Children's Rehabilitation Services (CRS), and local outside clinics. The student will function in the role of an acting intern, take histories and perform physical exams, participate in the pediatric orthopaedic call schedule, have in-patient responsibilities, and participate in emergency and elective operative procedures as either an observer or assistant. Outside reading is expected with completion of reading Staheli's Pediatric Orthopaedics ,and Rang's Pediatric Fracture texts provided during the rotation. Students are expected to attend teaching and clinical conferences. A pediatric orthopaedic topic will be decided upon by the student and faculty early in the elective and a presentation/discussion will be expected at the completion of the course. A pre- and post-rotation learning map will guide student education during the rotation. Students are expected to keep a log or portfolio of their pediatric activities.

PDT 451. Pediatrics Capstone (PHX). 4 credits.
This elective will combine didactic lectures, skill sessions, and simulated patient exercises. Learning activities will concentrate on general pediatric topics and be supervised by Creighton Pediatric Faculty and Residents.

PDT 459. Pediatric Genetics and Metabolic Disease (OMA). 4 credits.
The goal of this elective is to assist students to become familiar with the common genetic disorders seen in children and adolescents. Students will participate in the care of pediatric patients with a variety of problems seen by Genetics. There are weekly clinics and daily ward rounds with the on call physician.

PDT 460. Pediatric Inpatient Sub-Internship (OMA). 4 credits.
The student will participate in the care of the hospitalized pediatric patient. The acuity of the illness, the impact on the family, and the impact on the child make the care of the patient a multi-tiered task. The senior student on this rotation will assume primary responsibility for his/her patients, working with the resident and attending to ensure that quality and timely care is given. The student will continue to advance his/her communication, clinical problem solving and procedural skills, and become more familiar with common health problems in pediatrics.

PDT 461. Pediatric Critical Care Sub-Internship (OMA). 1-8 credits.
During this rotation, the student will be expected to observe, appreciate and learn the care and management of critical disease processes in the pediatric patient, from the neonatal period through adolescence. The student will learn the unique care and knowledge required by those in the pediatric critical care field to take care of critically ill children whose anatomy and physiology are constantly changing as they develop.

PDT 462. Pediatric Outpatient Department (PHX). 4 credits.
The student will participate in daily patient care/attending rounds in the treatment of critical ill pediatric patients. The student will perform or participate in various procedures, such as endotracheal intubation, lumbar puncture, CPR, and central line placement. The student will participate in attending rounds, grand rounds, afternoon lectures, and daily teaching conferences, as well as bi-weekly critical care conferences.

PDT 463. Pediatrics Infectious Disease Sub-Internship (OMA). 4 credits.
Students will learn to evaluate neonates, infants and children with a wide range of infectious diseases. This is primarily an inpatient experience with about 10% of patients seen in the outpatient clinic. Students will perform a complete workup and assessment, then present their findings and recommendations to the attending physician on daily rounds. Students are required to do considerable outside reading on their patients' illnesses. A selected reading list is provided to all students at the beginning of the rotation and students are responsible for all the material there in.

PDT 464. Neonatal Intensive Care Services Sub-Internship (OMA). 2-4 credits.
The purpose of this selective is to educate the senior medical student in the field of neonatology. The student will demonstrate competence in the critical care of sick and high-risk newborns. Student's participating in this selective will serve as "junior house officer" under the supervision of a staff Neonatologist and complete required paperwork The student will learn to evaluate neonates. This is entirely an intensive care unit experience.

PDT 465. Pediatrics GI and Nutrition - Valleywise (PHX). 4 credits.
Students will be familiarized with major presentations and evaluations of gastrointestinal, hepatic and nutritional disease. Included will be discussion of malabsorption, GE reflux, cholesteric inflammatory bowel disease, abdominal pain, and peptic disease. Students will participate in a GI clinic, consultative service, and nursery rounds. Didactic sessions will be given in major topics in pediatric GI.

PDT 466. Pediatric Cardiology (OMA). 4 credits.
Students will participate in the care and evaluation of pediatric patients with known or suspected congenital heart disease. Students will also encounter pediatric patients with acquired cardiomyopathy. Students will develop the understanding of cardiovascular physiology and development. The goal of this course is to educate senior medical students in the field of pediatric cardiology in an outpatient setting.

PDT 468. Pediatric Gastroenterology (OMA). 2-4 credits.
Students will learn to evaluate pediatric patients with chronic and infectious diarrhea, abdominal pain, constipation, malabsorption, inflammatory bowel disease, gastrointestinal infections, Hirschsprung's disease, neonatal cholestasis, growth failure, chronic vomiting, and liver disease. Students will develop an understanding of gastrointestinal physiology and development. Basic principles of enteral and parenteral nutrition in Pediatrics will be reviewed. The student will participate in the care of both hospitalized and ambulatory patients at Children's Hospital and Outreach Clinics. The student may choose to emphasize inpatient or outpatient activities based upon his/her prior experiences and individual career goals and needs. The medical student would work closely with the Pediatric Gastroenterology fellow, the pediatric house officers as well as the attending.

PDT 469. Pediatric Endocrinology Services (OMA). 2-4 credits.
The student will participate in the care of pediatric patients with a variety of problems seen in pediatric endocrinology private practice. There are ten half-day clinics weekly, and daily ward rounds with the on call physician. Regular formal discussions concerning endocrine problems are held. The purpose of this elective is for students to become familiar with the common endocrine disorders seen in children and adolescents.

PDT 470. Pediatric Hematology/Oncology Service (OMA). 4 credits.
This elective is for those students who are thinking about a career in pediatrics and wish in depth clinical exposure to hematology and cancer patients. Students will follow patients in the clinic and, if time allows, on the inpatient service. The purpose if this elective is to become familiar with common childhood malignancies and hematologic disorders, including differential diagnosis, therapy, and acute and late complications. There will be opportunity to review blood smears and bone marrow aspirate slides.

PDT 471. Pediatric Respiratory and Critical Care Medicine (OMA). 4 credits.
The goal of this rotation is to give the student a broad range of exposure to various pulmonary and upper respiratory problems ranging from asthma to cystic fibrosis through both inpatient and outpatient experiences. During the four weeks of this elective students will be provided with clinical experiences evaluating children with disorders of the respiratory system and acquiring skills necessary to perform the pediatric pulmonary exam and to develop a diagnostic and therapeutic approach to common pulmonary problems in children. Students are expected to be prepared for rounds, write patient notes, present patients, and be available for all rounds and clinics. Students are also expected to dictate consults and some clinic letters after review with the attending physician. Students are expected to review all tests performed in the pulmonary lab as time allows.

PDT 472. General Pediatrics (OMA). 2-4 credits.
The purpose of this elective is to educate senior medical students on newborn exams, routine health maintenance for various ages and diagnosis and treatment of common pediatric conditions. The student will be exposed to educational opportunities mostly in a pediatric ambulatory setting, but will also include patients in the newborn nursery and hospitalized patients. Basic approaches to childhood behavioral issues will also be included. This course is an ambulatory pediatric experience for those wishing to work in a general pediatric setting.

PDT 473. Pediatrics Capstone (OMA). 4 credits.
This elective is a didactic lecture series. Lectures will concentrate on general pediatric topics and will be given by Creighton Pediatric Faculty and Residents. In addition, each student will select a pediatric topic and give an oral presentation. The goal of this elective is to educate senior medical students regarding general and specialty pediatric illnesses in preparation for their residency.

PDT 474. Pediatric Emergency Medicine (PDT). 4 credits.
The purpose of this rotation is to provide the students with exposure to the practice of pediatric emergency medicine. Students will participate in the care of patients presenting to the Pediatric Emergency Department. Students will work with the attending physician to manage the patients during their Emergency Department visit. At all times, the student will be under the direct supervision of the attending physician. The patient population provides a wide range of experience in the care of minor and major traumatic injuries, multiple pediatric medical illnesses, care of the poisoned pediatric patient and pediatric patients with psychiatric illness. Patients seen in the Children's Hospital Emergency Department range in age from newborn to 21 years.

PDT 475. Pediatric Pulmonology (PHX). 4 credits.
The student will participate in Inpatient rounds and patient evaluation of pulmonary patients in the morning. They will also participate in outpatient clinic visits, evaluate and treat pulmonary patients in the afternoon. Interactive didactic discussion regarding pulmonary diseases will occur periodically throughout the rotation. The student may participate in the department teaching activities including attending rounds, grand rounds, afternoon lectures and daily noon teaching conferences.

PDT 477. Clinical Genetics/Dysmorphology (PHX). 4 credits.
The student will attend all clinical genetics clinics at Phoenix Children's Hospital. The student will also participate in all inpatient consultations. The student will attend all genetics teaching conferences. The student will be provided a reading syllabus of original articles relating to the embryology of congenital anomalies and the approach to diagnosis of genetic disorders, which they are expected to read during the elective. Discussion will follow with faculty supervisor. The student will carry out an independent, thorough literature review of a genetics/dysmorphology topic of his/her choice. The topic will be presented orally to the faculty supervisor at the end of the rotation. The student may participate in the department teaching activities including attending rounds, grand rounds, afternoon lectures and daily noon teaching conferences.

PDT 478. Pediatric Nephrology (PHX). 4 credits.
The student will participate in the diagnosis and management of inpatients and outpatient with kidney diseases and related problems. They will perform the initial evaluation of new patients in both the inpatient and outpatient setting. They will participate in the methods and procedures performed in the renal metabolic laboratory. They will participate in daily formal and informal discussions on pre-assigned topics relating to renal disease. The student will participate in the department teaching activities including attending rounds, grand rounds, afternoon lectures and daily noon teaching conferences.

PDT 480. Assessment of Child Abuse and Neglect (PHX). 4 credits.
Students will participate in consults, round on inpatients, observe multidisciplinary team meetings, read selected journal articles and chapters, participate in journal club, and complete a series of case studies that demonstrate common presentations of non-accidental injury. In addition, students may have the opportunity to “ride along” with CPS and observe courtroom testimony on a case by case basis.

PDT 481. Development and Behavioral Pediatrics (PHX). 4 credits.
The student will participate in patient care with direct attending faculty supervision in the Autism Diagnostic Clinic, ADHD Diagnostic Program, and the general Developmental-Behavioral Pediatric Clinic. The student has available independent learning from the Developmental-Behavior Pediatrics website (www.phoenixchildrens.com/dbpeds), ADHD packet, Autism packet, and Emily Center packets. The student will participate in the department teaching activities including grand rounds, and daily noon teaching conferences. The student will participate in site visits with residents to community partners.

PDT 483. Pediatric Neurology (PHX). 4 credits.
This elective is appropriate for students considering a career in pediatrics or neurology. It is particularly encouraged for those students considering a career in child neurology, developmental pediatrics, or developmental neuroscience. The student will act as a sub-intern, integrated into a team consisting of the pediatric neurology faulty member, pediatric neurology resident (fellow), and usually an adult neurology resident. Experience with inpatient consultation and a wide variety of outpatient clinics are provided. The choice of outpatient clinics can be tailored to the student's interests.

PDT 484. Pediatric Critical Care Sub-Internship (PHX). 4 credits.
The student will participate in daily patient care/attending rounds and has continuous informal attending contact while in the patient care setting. When appropriate and with supervision the student will perform or participate in various procedures such as, endotracheal intubation, lumbar puncture, CPR, central line placement, etc. The student will participate in the department teaching activities including attending rounds, grand rounds, afternoon lectures and daily noon teaching conferences as well as at least twice weekly critical care conferences. There is an overnight call responsibility approximately every 4-5th night. By participating fully in these activities the student will improve their ability to integrate their understanding of physiology with the bedside care of a critically ill pediatric patient.

PDT 485. Neonatology Critical Care (PHX). 4 credits.
During this elective the student will attend high-risk deliveries, under the supervision of pediatric residents, neonatal nurse practitioners and/or attending neonatologist carry a case load of 2-4 moderately ill NICU and intermediate nursery patients. Patients are followed from admission to discharge when possible. With supervision, the medical student will practice and become familiar with bag and mask ventilation, CPAP application, endotracheal intubation, assisted ventilation, venipuncture, arterial puncture, umbilical arterial and venous catheterization. Students will also participate in patient-related problem-solving sessions and attend scheduled didactic teaching sessions. The student will participate in the department teaching activities including attending rounds, grand rounds, afternoon lectures and daily noon teaching conferences. There is an overnight call responsibility approximately every 4-5th night.

PDT 486. Inpatient Pediatrics Sub-Internship (PHX). 4 credits.
During this elective the student will be the primary care provider for up to five ward patients under the supervision of a senior resident and attending physician. The student will participate in the department teaching activities including attending rounds, grand rounds, afternoon lectures and daily noon teaching conferences. At this time there is no over-night call requirement but participating in occasional evening ward activities. Weekend rounds are required. By participating fully in these activities the student will improve their data collection and analysis skills along with improving their clinical problem solving. They will become familiar with a variety of common and not so common pediatric medical and surgical diagnoses.

PDT 488. Pediatric Allergy and Immunology (OMA). 3-4 credits.
Students will participate in the care and evaluation of pediatric allergy and immunology patients seen with a variety of problems. Student will develop through clinical exposure, the understanding of common pediatric allergy and immunology conditions. The rotation is outpatient based.

PDT 490. Pediatric Cardiac Critical Care Sub-Internship (PHX). 4 credits.
The Pediatric Cardiac Critical Care Rotation is designed for Senior Medical Students and is an opportunity to gain exposure to the acute care of critically ill children in the setting of a Pediatric Cardiothoracic Intensive Care Unit. Under the direct supervision of the Pediatric Cardiac Intensive Care faculty, students will provide direct patient care to 2-3 critically ill children with various types of congenital or acquired heart disease as well as other organ system problems including respiratory failure, renal failure and shock. Students will participate in the pre and post-operative management of infants and children with heart disease and will have the opportunity to spend time in the Cardiovascular Operating Rooms, cardiac catheterization lab and echocardiography labs.

PDT 491. NICU Sub-Internship at Children's Hospital (OMA). 4 credits.
Students will serve as a sub-intern under the supervision of a staff neonatologist. Children's Hospital has a Level 4 regional NICU that provides the highest level of neonatal care for infants with complex congenital or acquired surgical, respiratory, cardiac, and metabolic problems. Students will participate in the admission, daily rounds, and discharge of infants with a wide variety of diagnoses. Instruction will be provided through daily teaching rounds and lectures.

PDT 494. Pediatric Urgent Care (PHX). 4 credits.
The student will attend the Phoenix Children's Hospital's Urgent Care Center. The student will attend 16 eight hour shifts per elective block. The student may participate in the department teaching activities including attending rounds, grand rounds, afternoon lectures and daily noon teaching conferences. The student is responsible for keeping a patient care log.

PDT 498. Pediatrics Extramural (OMA & PHX). 1-8 credits.

PMH 462. Clinical Genetics. 1-8 credits.
This elective program will be devoted primarily to genetic models using families with a high frequency of different diseases (e.g. cancer, heart disease, and others). This will enable students to evaluate the risk factors involved and the mode of genetic transmission of these diseases. Seminars will be offered to students on this subject to explain the genetic models that have been used in clinical medicine.

PMH 470. Preventive Ophthalmology (Dominican Republic). 4 credits.
Students will participate as team members in HS-MACA's Prevent Blindness Initiative (PBI) in collaboration with the Institute for Latin American Concern (ILAC). Students will conduct blindness prevention screenings in Latin America, where children are at risk for vitamin A deficiency and adults are at risk for glaucoma, cataract and pterygium. Students will have the opportunity to assist with ocular surgeries performed by local ophthalmologists and visiting eye surgeons from the United States.

PMR 333. Physical Medicine & Rehabilitation (OMA). 2 credits.
This elective will provide the medical student with an introduction to the discipline of Physical Medicine and Rehabilitation (PMR). Students on the inpatient service will assist with admissions, daily rounding, team conference, family conference, and discharge service for patients at Immanuel Rehabilitation Center; students on the outpatient service will train in various clinical locations.

PMR 334. Physical Medicine & Rehabilitation (PHX). 2 credits.
At the conclusion of this elective, the medical student will be able to describe the role of the physiatrist in the treatment and care of the PMR patient and gain a basic understanding of orthotics/prosthetics prescriptions.

PMR 421. Physical Medicine and Rehabilitation (PHX). 4 credits.
This elective will provide the medical student with a comprehensive overview of the discipline of Physical Medicine and Rehabilitation. Topics to be included are: Traumatic Brain Injury, Traumatic Spinal Cord Injury, Stroke and Pediatric Rehabilitation.

PMR 425. Pain Management (PHX). 4 credits.
At the conclusion of this elective, the medical student will be able to develop a basic working knowledge of pharmacology, physiology, and pathophysiology of pain. The students will develop a working knowledge of neuroanatomy and of conducting a thorough neurological examination.

PMR 498. Physical Medicine & Rehabilitation Extramural (OMA & PHX). 1-8 credits.

PTG 333. Pathology (OMA). 2 credits.
This elective will expose the medical student to the fields of Anatomic and Clinical Pathology including Surgical Pathology, Cytopathology, Hematopathology and Clinical Chemistry, Molecular Pathology, Autopsy Pathology, Microbiology and other areas of Laboratory Medicine.

PTG 334. Pathology (PHX). 2 credits.
Students will be exposed to the full range of anatomic and clinical pathology services provided in a tertiary hospital setting. The time is usually split between clinical and anatomic divisions, including clinical chemistry, microbiology, hematology, blood bank, surgical pathology, cytopathology and autopsy pathology.

PTG 418. Hematology/Hematopathology (PHX). 4 credits.
This course provides exposure to specialty diagnostics in the field of hematopathology. The student will participate in daily case evaluations, including peripheral smear examinations, coagulation studies, flow cytometry, bone marrow evaluations, and lymph node pathology. Principals of instrumentation and quality management will be stressed. The importance of professionalism and intra-/interdepartmental communication is also highlighted.

PTG 445. Anatomic/Clinical Pathology (PHX). 4 credits.
This elective may be individualized to suit the student's needs with prior agreement between the student, St. Joseph's faculty, and the Creighton electives coordinator. The elective offers the medical student an exposure to various pathology disciplines in a tertiary care pathology practice. Molecular biology and cytogenetic laboratories are recent additions to the curriculum.

PTG 461. Introduction to Pathology Practice (OMA). 4 credits.
The goal of PTG 461 is to provide the medical student a broad introduction to the practice of modern day pathology built around interaction with clinicians, pathologists, residents, and technical staff. The student will gain an appreciation of the role of the laboratory in the practice of medicine. The student will gain some facility in the art of gross description, microscopic evaluation and diagnosis of surgical pathology specimens. The student will also be introduced to practical microbiology, hematology, and blood bank. The elective is designed and tailored to students' interests. It is a good experience for students interested any specialty. For those interested in pathology it offers a chance to experience what a residency is like.

PTG 468. Microbial Laboratory Diagnosis (OMA). 4 credits.
This course is designed to familiarize the student with the practical, technical, strategic aspects of clinical microbiology. Emphasis will be placed on specimen selection, collection and processing, identification of microbial pathogens and antimicrobial susceptibility testing as an aid for the diagnosis of infectious diseases.

PTG 498. Pathology Extramural (OMA & PHX). 1-8 credits.

RAD 333. Diagnostic Radiology (OMA). 2 credits.
This is an introduction to clinical imaging targeted for students who are interested in radiology, as well as those pursuing other specialties.

RAD 334. Diagnostic Radiology (PHX). 2 credits.
This is an introduction to clinical imaging targeted at 3rd year medical students. This elective will provide an overview of medical radiology, including synthesis, imaging and management of diagnostic imaging. The focus will be on bone, abdomen, chest and pediatric imaging.

RAD 335. Diagnostic Radiology 2 (PHX). 2 credits.
The goal of this course is to introduce third-year medical students to diagnostic imaging techniques and procedures, based on an overview of medical radiology, including synthesis, imaging, and management of diagnostic imaging.

RAD 420. Remote Diagnostic Radiology (OMA). 4 credits.
This remote course is designed to allow fourth-year medical students the opportunity to review and expand their knowledge in Radiology. It will build upon your foundation as you transition into residency. This is an intensive simulation lab introduction to clinical imaging providing a comprehensive overview of basic image interpretation, different radiology imaging modalities and uses.

RAD 442. Interventional Radiology - Valleywise (PHX). 4 credits.
The student observes and participates in a wide variety of interventional radiology procedures, including angiography, vascular interventions (angioplasty, embolization, trauma, cancer treatment, thrombolysis, venous access procedures), non-vascular interventions (including CT-guided biopsy, abscess drainages), and complex non-vascular cases (such as biliary drainage and stenting, and percutaneous nephrostomy placement, tumor ablation).

RAD 447. Diagnostic Radiology - Valleywise (PHX). 4 credits.
This course will familiarize M4 students with the role of imaging in the evaluation and management of common conditions. Students will be introduced to diagnostic imaging techniques and procedures. The focus will be on Musculoskeletal, Body imaging, Chest and Pediatric imaging. The student will spend one week in each of these areas.

RAD 450. Interventional Radiology (PHX). 1-4 credits.
The Department of Radiology offers an elective course in Vascular and Interventional Radiology in which the medical student will learn the indications and techniques, as well as patient care considerations, of a wide variety of interventional procedures. The rotation includes the work-up and evaluation of patients for diagnostic angiography, therapeutic vascular and interventions (angioplasty, thrombolysis, venous access procedures) and non-vascular interventional procedures (including CT-guided biopsy, abscess drainages), and complex non-vascular cases (such as biliary drainage and stenting, and percutaneous nephrostomy placement).

RAD 455. Musculoskeletal Radiology (PHX). 1-5 credits.
This course is an introduction to Musculoskeletal Radiology for 4th year medical students with emphasis on overview of anatomy, common musculoskeletal fractures, appropriate use of various imaging modalities and image guided procedures.

RAD 458. Neuroradiology - Valleywise (PHX). 4 credits.
The student will learn about diagnostic imaging procedures of the head, neck, brain, and spine, working with patients who are seen for traumatic injuries, infections, malignancy, congenital anomalies, inflammatory conditions, and hydrocephalus. Students will learn the basic principles of interventional procedures, as well as the role of neuroimaging in the diagnosis and evaluation of common clinical conditions.

RAD 459. Pediatric Neuroradiology (PHX). 4 credits.
This course introduces M4 students to diagnostic imaging techniques utilized by pediatric neuroradiologists. Focus will be placed on acquisition and interpretation of MRI, CT, ultrasound, and nuclear medicine studies of the neuro-axis, as well as exploration into a career in pediatric neuroradiology.

RAD 460. Diagnostic Radiology (PHX). 1-4 credits.
The Department of Radiology offers an elective course in General Diagnostic Radiology. This is an introduction to clinical imaging targeted at 4th year medical students. This elective will provide an overview of medical radiology, including synthesis, imaging and management of diagnostic imaging. The focus will be on bone, abdomen, chest and pediatric imaging. The student will spend one week in each of these areas. Arrangements can be made if there is interest in other sub-specialty areas.

RAD 463. Diagnostic Radiology (OMA). 1-4 credits.
The Department of Radiology offers an elective course in General Diagnostic Radiology. This is an intensive introduction to clinical imaging targeted for fourth year medical students, both those interested in radiology and those pursuing other specialties. This elective will provide a comprehensive overview of medical radiology, range, uses, limitations and costs of diagnostic techniques. The program consists of subspecialty rotations, faculty interactive conferences and independent study of selected cases.

RAD 465. Angio/Interventional Radiology (OMA). 4 credits.
The Department of Radiology offers an elective course in Vascular and Interventional Radiology in which the medical student becomes a member of the interventional team. The rotation includes the work-up and evaluation of patients for diagnostic angiography, therapeutic vascular and interventions (angioplasty, thrombolysis, venous access procedures) and non-vascular interventional procedures (including CT-guided biopsy, abscess drainages), and complex non-vascular cases (such as biliary drainage and stenting, and percutaneous nephrostomy placement). The interventional team works as a cooperative group which provides initial assessment of a patient's care during the procedure and follow-up care on the ward as appropriate. The medical student will share the duties of the daily organization and management of the service.

RAD 471. Advanced Diagnostic Radiology - Valleywise (PHX). 4 credits.
This course is designed for fourth-year students considering radiology as a career. The expectations will be more advanced than those for RAD 447, which is the course intended for fourth-year students not pursuing radiology. The student will be interpreting imaging exams and publishing preliminary radiology reports, as well as performing image-guided procedures.

RAD 498. Radiology Extramural (OMA & PHX). 1-8 credits.

RAD 530. Advanced Statistics for Political Science. 3 credits.
This course is designed to acquaint students with advanced research tools used by political scientists. We will build on basic bivariate models to include an array of multivariate techniques, including those that incorporate time series and cross sectional data. By the end of the semester, students will be able to produce a sophisticated data analysis project that could be publicly presented.

RON 333. Radiation Oncology (OMA). 2 credits.
This elective familiarizes students with cancer care, including radiotherapy, chemotherapy and surgery.

RON 334. Radiation Oncology (PHX). 2 credits.
The student will be assigned to the Radiation Medicine department at St. Joseph's Hospital Medical Center and the University of Arizona Cancer Center. The student will work with the radiation oncologists, medical physicists, dosimetrists, nurses, and other medical personnel in order to manage and care for patients with established oncological diagnoses. In particular, the student will learn to compare and contrast the different radiation delivery modalities available for various malignancies, understand the nuances in radiation dosing, and anticipate and screen for common side effects based on treatment site.

RON 335. Radiation Oncology (OMA). 2 credits.
Students will experience the practice of radiation oncology, learning about staging malignancies, observing consultation and the radiotherapy delivery process, and attending tumor board conferences. (Location: CUMC-Bergan - OMA).

RON 410. Radiation Medicine - Dignity Health Cancer Institute (PHX). 4 credits.
The student will be assigned to the Radiation Medicine department at St. Joseph's Hospital Medical Center and the University of Arizona Cancer Center. The student will work with the radiation oncologists, medical physicists, dosimetrists, nurses, and other medical personnel in order to manage and care for patients with established oncological diagnoses. In particular, the student will learn to compare and contrast the different radiation delivery modalities available for various malignancies, understand the nuances in radiation dosing, and anticipate and screen for common side effects based on treatment site.

RON 464. Radiation Oncology (OMA). 4 credits.
Students will learn about the staging work-up for a wide range of malignancies including integration of radiation therapy. They will be involved in new patient consultations, treatment simulations, and observe the radiotherapy delivery process. Student will attend tumor board conferences and gain an understanding of the multidisciplinary approach for the treatment of cancer. (Location: Methodist - OMA).

RON 498. Radiation Oncology Externship (OMA & PHX). 1-12 credits.
Fourth-year medical students may arrange to participate in externships at LCME- or ACGME-accredited institutions in order to further their education in the field of Radiation Oncology. They are allowed up to 12 credit hours (weeks) of externships during the fourth year of medical school. Radiation Oncology is an emerging field and education places a heavy emphasis on systems-based practice along with rigorous methods to assess and find solutions for the health and healthcare problems of cancer patients. Through didactics and clinical experiences, students learn to collaborate with patients, healthcare providers, and organizations to improve the health outcomes of cancer patients. They learn current treatment modalities in the healthcare setting. Students pay tuition at Creighton University and earn academic credit when participating in externships, thus a formal evaluation and grade are required of the host institution.

SIS 101. Liberation Medicine. 0.5 credits.
Learners will delve into the concept of structural violence – the political, economic, educational, residential, and medical systems which systemically exclude or disadvantage certain groups. They will come to understand what it means to take a preferential option for the poor and will explore how accompaniment is pragmatic solidarity through readings, videos, discussions, and application in their local communities. P. Course open to Arrupe Scholars only.

SIS 501. Death, Health and Dickens. 0.5 credits.
The representation of disease and death demonstrate an important social awareness of healthcare in Victorian Britain that helps us understand today's medical and social landscape. Students will explore the connection between health, social conditions, and the works of Charles Dickens.

SIS 502. A History of Disability and Medicine (OMA). 0.5 credits.
This course introduces students to a diversity of perspectives on the causes, nature, understanding, and appropriate management of disability. Through an examination of evolving historical perspectives on disability, in the clinic and in society, students will critically analyze traditional medical conceptions of disability as an individual "problem" with biological origins. P. Admission to Medical School.

SIS 503. Creative Writing Workshop for Future Physicians (OMA). 1 credit.
Stories and writings are how we interact with the world. In keeping with the finest Jesuit and literary traditions to best prepare the student as a physician, the student will use creative writing to understand personal narratives and those narratives of patients.

SIS 504A. Communicating in Spanish for Medical Professionals I (OMA). 0.5 credits.
This course is designed for students who are planning a career in medicine and want to improve their communication skills when dealing with Spanish-speaking persons. Prior introduction to the Spanish language is recommended. This course is the first of two courses dedicated to this topic.

SIS 504B. Communicating in Spanish for Medical Professionals II (OMA). 0.5 credits.
This course provides students with a culturally contextualized foundation in vocabulary and grammar. The course focuses equally on the development of new knowledge and the ability to communicate medical information to patients and family members. This is the second of two courses.

SIS 505. Is Race Real? Racialization in Medicine and Science. 0.5 credits.
Through an exposure to relevant primary literature, popular media writings, academic talks, and through reflective writing and discussion, students will explore the effects of race on the patients they care for, and determine for themselves whether their role as clinicians in confronting the racialization of the health care system.

SIS 506. Childbirth and Social Justice (OMA). 0.5 credits.
This course encourages students to reflect on the connections between childbirth and social justice, and how social issues of access, equity, and participation have historically influenced maternal healthcare, especially among underserved or minority populations.

SIS 507. Physician's Vocation Program, Year 1: Introduction to Ignatian Spirituality in Medicine (OMA). 1 credit.
The first year of the Physician's Vocation Program is a formative introduction to Ignatian spirituality that explores its potential influence on the practice of clinical medicine through the intersection of reading, prayer, reflective writing, discussion, and spiritual direction.

SIS 508. Neurodiversity: Appreciating Variations in Cognitive Ability to Enhance Comm & Understanding. 0.5 credits.
In this course, students will consider how the language used to address and describe neurodiverse individuals affects them and their treatment. Students will also examine definitions of "quality of life," the value they place on a certain kind of cognition, and how understanding the goals of neurodiverse individuals might challenge those definitions.

SIS 509. The Art of the Examination: How Observation Leads to Empathy in Healthcare (OMA). 0.5 credits.
This course introduces students to concepts of observation. By examining selected works of art students will increase visual literacy and observational skills. Pensive concentration is the basis for empathy. Through drawing, students will enhance their sensitivities to the role of empathy in health care. Students need no prior art training.

SIS 510. Talking with Kids: Play, Empathy, and Communication with Children (OMA). 0.5 credits.
This course explores the nature of children's communication. Specifically, this course will examine the communicative abilities, practices, and behaviors of children ranging across toddler to school age years. This course offers a new, and positive perspective from which to view children's communication within families, schools, communities, and healthcare.

SIS 511. Communication Around Women's Health and Bodies (OMA). 0.5 credits.
This course explores the role of communication in our understanding, perceptions, and treatment of women's health concerns and bodies. In this course students will examine the following topic areas: history of women's health, women's sexuality, menstrual cycle and menopause, breast health, relational well-being, infertility, pregnancy, and motherhood.

SIS 512. Mindfulness and Medicine (OMA). 0.5 credits.
This experiential-based course is designed to provide medical professionals an introduction to mindfulness. This unique reflection and self-awareness tool helps develop greater capacity within medical professionals to engage with patients on physical, mental, and emotional levels which are at the heart of the practice of modern medicine.

SIS 513. Gender/Sex, Communication, and Culture (OMA). 0.5 credits.
The purpose of this course is to discuss the complex connections among communication, gender, sex, culture, and biology. Increasingly, gender/sex is a site of cultural struggle where (mis)communication is common and social controversies obscure the ability of the public, subject experts, and practitioners to engage with these topics. Students will explore the role communication plays in developing and enforcing gender norms and the implications those norms have on the dignity of people at the margins of our society. Students can expect to discuss a variety of topics, including definitions of sex and gender, health communication, masculinity/femininity, sexuality, feminisms, reproduction, sexual assault, religion, and mass media.

SIS 514. Exploring Resistance to Vaccination (OMA). 0.5 credits.
This course addresses the general question of why some people choose not to abide by authoritative medical recommendations. We will tackle that question by taking a look at social scientific research on childhood vaccinations—specifically, why some parents choose to opt out of immunizations for their children.

SIS 515. Developing a Professional Identity-Clinical Care and Accompaniment (OMA). 0.5 credits.
This course takes as its central concern a renewed attention to caregiving and accompaniment. Bringing these two concepts together encourages the development of a professional identity that conceptualizes clinical care as much more than providing medical services to a diseased individual. Students will develop an understanding of care relationships as collaborative, reciprocal, on-going, and committed to equality and solidarity.

SIS 516. The Medicalization of Deviance (OMA). 0.5 credits.
The "Medicalization of Deviance" is a course that explores with a symbolic interactionist lens how society defines deviance and often uses medicalized treatments to address deviant behaviors. Topics that will be discussed include homosexuality, community violence, illegal drug use, and sexual offending.

SIS 517. Lessons from People who Died (OMA). 0.5 credits.
Through a combination of case presentations, guided discussions, and relevant literature and/or media review, students will explore the complex interactions between serious illness, impending death, spirituality, communication, the human condition, and the singular privilege of serving others as a physician. Students will be required to complete short (< 15 minute) written reflections regarding each week's themed discussion immediately before and again after each session.

SIS 518. Problematic Progress in Parasitology (OMA). 0.5 credits.
This course will examine the history of discovery in parasitology with an emphasis on the life histories and pathologies of medically important parasites. It will question the process of scientific discovery as it has been portrayed in the past by considering "how we know" what we know about parasitic diseases and critically evaluating the means by which this knowledge has been acquired.

SIS 519. Restorative Recreation (OMA). 0.5 credits.
The SIS Courses provide opportunities for study of the humanities and related subject areas pertinent to the practice of medicine and contribute to the personal and professional development of the student.

SIS 520. Physician's Vocation Program: Theological Issues in Medicine (OMA). 1 credit.
The first year of the Physician's Vocation Program forms medical students into physicians who are contemplatives in action, that is doctors who are attentive to and cooperative with the movements of God's spirit in their lives and work as well as aware of and resistant to those forces that work to separate people from a loving and caring God.

SIS 521. Physician's Vocation Program: The Problem of Suffering (OMA). 0.5 credits.
Having examined the inadequacy and potential damaging effects of philosophical and theological explanations for the problem of suffering, the second semester of the Physician's Vocation Program seeks to help students develop a practical theodicy. Rather than try to explain or rationalize suffering, a practical theodicy seeks to deal with the reality of suffering by empowering people to continue to live with faith, hope, and love in the midst of it.

SIS 522. Trauma, Health and Medicine. 0.5 credits.
"Trauma, Health, and Medicine in Native American Literature" explores literature by and about Native North Americans about survival, resilience, and health in order to study the holistic concept of medicine in Indigenous culture and communities.

SIS 524. Religion and Medicine (OMA). 0.5 credits.
Some research suggests that religious practices may have positive impacts on health, but there are also times when a patient's religion can inhibit medical care. This selective introduces the complexities of religion and medicine, highlighting how a medical practitioner's sensitivity to religious beliefs and practices can enhance patient care.

SIS 525. Philosophy and Medicine. 0.5 credits.
Examination of philosophical concepts beyond biomedical ethics important for clinical judgment in medicine, focusing on our subjectivity and first-person perspectives as physicians and patients in relation to medicine as an objectively oriented, "third-person" science. Concepts discussed include practical wisdom (phronesis), pain, health, and illness as lived and embodied, and empathy.

SIS 526. Photography and Medicine (PHX). 0.5 credits.
This course facilitates powers of observation and creative expression of medical students through the skills of diaristic still photography and video imaging. As a class, we will also explore contemporary fine art photography as it relates to medicine.

SIS 527. Nature and Art Exposure (PHX). 0.5 credits.
This course will explore the concepts, theories, and research behind the benefits of nature and art exposure. Pertinent research on health conditions in all populations will be discussed and analyzed.

SIS 528. 3D Art and Empathy (PHX). 0.5 credits.
Overview of the materials, methods, tools and skills to translate scientific medical concepts into new forms of artistic expression by creating 3D clay forms to both help the public viewer to visualize diseases in order to empathize with better patient care, and to provide patients with a source of comfort to better cope with and confront their disease or illness and treatment.

SIS 529. Rasaboxes and Emotion (PHX). 0.5 credits.
Rasaboxes was originally used to train actors and performers. This course will allow students to build somatic emotional intelligence through physical movement, yoga, breath, sound, and somatic experience to gain a deeper understanding of their own emotional patterns and states in order to be mindful and present to the emotional states of others.

SIS 530. Drumming Cultures of the World (PHX). 0.5 credits.
This course will explore the rich variety of percussion-based musical cultures across the world. By learning to listen to and perform in several folkloric musical styles, students will learn how the act of drumming can be a model for collaborative teamwork, community building, humanism, and public health.

SIS 531. Design Thinking for Complex Problems (PHX). 0.5 credits.
This course introduces students to fundamental design thinking practices to explore complex problems and innovate new solutions. Through an exposure to relevant primary literature and popular media, presentations, and group exercises, students will explore practical system thinking frameworks and techniques to analyze their own thinking patterns to solve complex problems in healthcare.

SIS 532. Communicating in Spanish (PHX). 0.5 credits.
This seminar is designed for students who are in the medical professional fields or will be in preparation for these professions, and who often encounter Spanish-speaking persons in medical situations. This course will address the linguistic challenges and the cultural beliefs and practices of the Latino community.

SIS 533. Medicine and Marketplace (PHX). 0.5 credits.
This course examines the history of healthcare – in its various forms - in the early republic. It takes on the multiple meanings of "selling health" to examine competing prescriptions for a healthy life in the early republic. It is particularly concerned with nascent capitalism and its role in shaping the contours of the healthcare marketplace.

SIS 534. Healing Traditions (PHX). 0.5 credits.
Students will improve their ability to interpret historical events and express cultural cues to effectively communicate and develop respectful, trusting relationships with Spanish-speaking populations. This course takes an interdisciplinary approach to the intersectionality of human rights, theory, social norms, and wellness to produce research-based, actionable responses to community-related issues in healthcare.

SIS 535. Camus' Plague (PHX). 0.5 credits.
From the perspective of an overworked physician, Camus' novel explores how human beings respond to the existential threat posed by an outbreak of the plague in the Algerian town of Oran. This course will read and analyze Camus' fictional representations of health, illness, and community–alongside secondary readings on the nature of epidemic narratives and literary criticism of Camus' novel—to illuminate and reflect on contemporary cultural conditions in the era of the Covid-19 pandemic and how the stories of this time are being told.

SIS 536. Religion and Bioethics (PHX). 0.5 credits.
This course explores what religious perspectives must contribute to contemporary discussions of bioethical issues and how physicians and other members of the health care team might engage with religious and spiritual views and concerns.

SIS 537. Art and Examination (PHX). 0.5 credits.
This course will introduce students to artists' observational skills to cultivate a humanistic view of medicine. Students will improve their visual literacy through a guided examination of artworks and producing drawings of the human figure. Students do not need previous artistic training to participate in the course.

SIS 538. Practice of Creative Attention (PHX). 0.5 credits.
This course introduces students to the basic concepts of improvisation as a way of becoming more aware of self in interaction with others including patients and team members.

SIS 539. History of Disease (PHX). 0.5 credits.
This course introduces students to the relationship between patients, physicians, and illness before the advent of modern hospital medicine in Europe. Different cultural expectations of the world lead to different understandings—and experiences—of the body and its (ill)health. What did healthcare look like when patients asserted themselves as equal to the physicians or when people experienced disease as whole-body deficiencies instead of localized disease agents?.

SIS 540. Remember Thou Art Mortal (PHX). 0.5 credits.
This course uses craft skills as catalysts to encourage students to contemplate their own embodiment and physicality to foster empathy and improve their active listening tools in their professional practice.

SIS 541. Middle-Eastern Culture (PHX). 0.5 credits.
This course is intended for healthcare professionals to develop a better understanding of Arab and Muslim communities. This course will examine Arab beliefs, value systems and cultural/religious traditions impacting healthcare/medical interactions and field experiences. It will increase learners' awareness of, and confidence/efficacy in using, culturally sensitive communication strategies in their practices.

SIS 542. Power of Art (PHX). 0.5 credits.
This course focuses on connections between the visual arts, medicine, and healthcare. By strengthening observational and drawing skills and applying critical and visual thinking, students can improve the quality of patient examination, diagnosis, and level of patient care.

SIS 543. Design, Ideas, and Prototypes (PHX). 0.5 credits.
Professional designers think and make in particular ways. In this selective, students explore ways to understand problems and situations, generate ideas, prototype solutions and proposals, and test these prototypes. Health professionals can use these skills to improve health objects, services, and processes that influence the experience of patients, family members, and the healthcare professional team.

SIS 544. Empathy and Humility (PHX). 0.5 credits.
Empathy and humility are essential to effective patient-centered and team-based healthcare delivery. This course not only provides foundational knowledge on empathy and humility but also evidence-based practices to promote these interpersonal and interprofessional clinical skills.

SIS 545. Uncertain Futures (PHX). 0.5 credits.
For patients and their loved ones, medical events — including treatments — can be life changing. How do people, as clinicians, help patients confront uncertain futures as part of the approach to care? In this course, students will learn how to use tools from action research and critical ethnography as resources for working with patients to imagine and face the unknown.

SIS 546. Music and Grieving (PHX). 0.5 credits.
This course explores historical and current practice, as well as relatively recent peer-reviewed research, that explores and documents the benefits of including well-informed and thoughtfully offered musical experiences in times of grieving.

SIS 547. Learning to Walk Anew (PHX). 0.5 credits.
Walking anew takes an embodied, perceptual, and body-self unified approach to walking. Short walking explorations expand body-self-awareness deepening the lived body experience to better articulate how the moving body thinks AS it moves. Students will collect and analyze the data from his/her/their walking practice and interpret findings through in-class discussions.

SIS 548. When Cadavers Danced (PHX). 0.5 credits.
This class provides a supplemental understanding to anatomy and cadaver work by considering those same cadavers when tissues were juicy and alive with movement. When Cadavers Danced provides a dancer's experiential understanding of the body as a living, breathing, moving structure of tension and compression where support occurs from soft tissues.

SIS 549. Truth, Trust, and Conspiracy Theories (PHX). 0.5 credits.

SIS 550. Death Set to Music (PHX). 0.5 credits.
"Death Set to Music" examines four major musical works: Mozart's Requiem, A German Requiem by Brahms, the Verdi Requiem, and Thompson's Seven Last Words of the Unarmed. Through guided listening,students will gain an understanding of how the compositions work, how music conveys meaning, and how the student relates to the composer's ideas.

SIS 551. Art, Place, and Community (PHX). 0.5 credits.

SIS 552. Opera and Disease (PHX). 0.5 credits.
This course introduces 3 operas with their source stories to students, with a musical and character analysis of the heroines. Additionally, students will use character analysis to think about patient care and diagnosis. Students will have the opportunity to sing themselves, and learn how the body and voice can inform doctors about disease.

SIS 553. Art for Equity in Medicine (PHX). 0.5 credits.
Engaging with contemporary and historical artworks, students uncover the power of symbols to normalize practices, build cultures, and set standards. Each week, students visit museums and private collections, accessible by light rail. The course offers tools for maintaining a criticality of social constructs, using art for equity.

SIS 554. Race and Medical Education. 0.5 credits.
Examining scientific and medical racism will help students recognize the long-term impacts of these modes of thinking and forms of discrimination. Students will think critically about the racialized assumptions and practices that influence 21st century medical education, including asserted correlations among race, genetics, disease, and poor health, and the disproportionate reliance of medical schools on standardized testing and science GPAs for admissions decisions.

SIS 555. Theatrical Storytelling: Empathy, Treatment, Humanity (OMA). 0.5 credits.
Empathy and humility are essential to effective patient-centered and team-based healthcare delivery. This course not only provides foundational knowledge on empathy and humility but also evidence-based practices to promote these interpersonal and interprofessional clinical skills through the lens of theatre.

SIS 557. Reviled Bodies (PHX). 0.5 credits.
Fat, black, disabled, trans: these are labels ascribed to bodies that are often denigrated as unhealthy, inferior, broken, or otherwise problematic. But what do these labels mean, and why do they matter? How are we, as political animals, affected by the nature of our bodies? This class explores the body as a social justice topic.

SIS 558. Brain Death: What's the Latest? (OMA). 0.5 credits.
The shift to understand brain death as death has already produced enormous consequences and controversy: from organ donation to how we think about the nature of the human person. In addition to current debates, the course will explore emerging issues related to this topic that many clinicians will face in the near future.

SIS 559. Food Insecurity, Climate Change, and Public Health (OMA). 0.5 credits.
This course introduces students to the concepts of food security/insecurity, and explore how food insecurity impacts public health, how sustainable food movements are working to address these issues, and the challenges climate change poses to agriculture.

SIS 560. Hiking and Academic/Clinical Wellbeing (PHX). 0.5 credits.
Students will harness the power of hiking and connection with nature in order to maximize their academic and clinical wellbeing leading to improved patient care. Learners will identify and develop skills such as growth mindset, interpersonal communication, and endurance, so that they may translate these skills directly to patient care in the clinical setting.

SIS 561. Making Mistakes in Medical Practice (OMA). 0.5 credits.
In this course we will delve into the causes of errors, and the impact of medical error specifically on patients and physicians. Through an exploration of patient stories, we will identify approaches to respond to medical mistakes using best practices. Legal implications will be introduced, as well.

SIS 562. Historical Perspectives in Medical Education. 0.5 credits.
During this Student Interest Selective (SIS), students will be guided through important historical developments in medical education in early America, the transition of medical education into universities in the 19th and 20th centuries, and contemporary challenges in medical education from a historical perspective.

SIS 563. Financial Literacy. 1 credit.
This is a selective for first-year medical students to learn the principles of personal finance oriented toward medical students, residents, and physicians in practice. The selective will emphasize personal finance basics, debt management, budgeting, investing, taxes, insurance, retirement, estate planning, asset protection and contract negotiation.

SIS 564. Birth of the Clinic (OMA). 0.5 credits.
This course is a reading and discussion of Michel Foucault's Birth of the Clinic. The intent is to describe the moment of origin of the contemporary approach to physical examination and its role in diagnosis and treatment.

SIS 565. Compassion Science (OMA). 0.5 credits.
Fundamental to the practice of medicine is human connection. Research shows that making meaningful connections with a patient can lead to greater empathy followed by care rooted in compassion. Further, research shows that physicians scoring high on compassion scales provide better patient care, achieve better patient outcomes, experience greater personal well-being themselves, and save money for the healthcare system.

SIS 566. Eldercare, Brain Injury, and the End of Life (OMA). 0.5 credits.
This course focuses on consciousness, the brain, and moral status—and, beyond that, the course pays stained attention to both decision-making at the end of life and practical considerations surrounding the crisis of care for our elders and, in particular, the crisis of care for those facing Alzheimer's and other kinds of dementia.

SIS 567. Procreation and the Beginning of Life (OMA). 0.5 credits.
This course focuses on the radical equality of all human beings regardless of accidental traits like age, disease, disability, and level of dependence. Beyond that, however, the course pays stained attention both how a particular understanding of reproduction/procreation impacts issues at the beginning of life and how the complexity of abortion goes well beyond questions surrounding the moral status of the prenatal child.

SIS 568. Cultivating Media Literacy (OMA). 0.5 credits.
The course provides students the opportunity to discern how media impacts their everyday lives. We will consider strategies to encourage media literacy and discuss solutions to address issues such as disinformation, digital distractions, outrage culture, and conspiracy thinking.

SUR 301. Surgery Clerkship (OMA & PHX). 6 credits.
This clerkship will teach medical students the basics of procedural medicine. Students will learn surgery as a component of integrated medicine directed toward promoting health through safe and effective procedures applied through best medical evidence.

SUR 333. Ophthalmology (OMA). 2 credits.
Introduce student to field of Ophthalmology. Student will be able to recognize common eye disorders, including conjunctivitis, hyperopia, myopia, and cataracts. Student must be able to travel to Dr. Terp's clinics in Fremont or Blair, Nebraska each day.

SUR 334. Ophthalmology (PHX). 2 credits.
Outpatient Ophthalmology M3 Elective is a surgical specialty elective in which the student participates in the medical and surgical care of ophthalmology outpatients. M3 students are given opportunities to follow patients from consultation, specialized imaging and laboratory evaluation, clinic or surgical treatment, and post-treatment care.

SUR 335. Orthopedic Surgery (OMA). 2 credits.
This third-year elective introduces students to the field of orthopedic surgery. Students will improve their differential diagnosis skills, as well as work with inpatient and outpatient healthcare, involving primary care providers and other services. Students are assigned patients and follow and manage them under direct supervision of the attending physician.

SUR 336. Orthopedic Surgery (PHX). 2 credits.
This elective will teach medical students the basics of procedural medicine in Orthopedic Surgery. Students will learn surgery as a component of integrated medicine directed toward promoting health through safe and effective procedures applied through best medical evidence.

SUR 337. Orthopedic and Plastic Surgery (OMA). 2 credits.
This third-year elective introduces students to the fields of orthopedic and plastic surgery. Students will improve their differential diagnosis skills, as well as work with inpatient and outpatient healthcare, involving primary care providers and other services. Students are assigned patients and follow and manage them under direct supervision of the attending physician.

SUR 338. Plastic Surgery (PHX). 2 credits.
This elective will teach medical students the basics of procedural medicine in Plastic Surgery. Students will learn surgery as a component of integrated medicine directed toward promoting health through safe and effective procedures applied through best medical evidence.

SUR 339. Vascular Surgery (OMA). 2 credits.
This third-year elective introduces students to the field of vascular surgery. Students will improve their differential diagnosis skills, as well as work with inpatient and outpatient healthcare, involving primary care providers and other services. Students are assigned patients and follow and manage them under direct supervision of the attending physician.

SUR 340. Burn Surgery (PHX). 2 credits.
This elective will teach medical students the basics of procedural medicine in Burn Surgery. Students will learn surgery as a component of integrated medicine directed toward promoting health through safe and effective procedures applied through best medical evidence.

SUR 341. Colorectal Surgery (OMA). 2 credits.
This third-year elective introduces students to the field of colorectal surgery. Students will improve their differential diagnosis skills, as well as work with inpatient and outpatient healthcare, involving primary care providers and other services. Students are assigned patients and follow and manage them under direct supervision of the attending physician.

SUR 342. Neurosurgery (PHX). 2 credits.
This elective will teach medical students the basics of procedural medicine in Neurosurgery. Students will learn surgery as a component of integrated medicine directed toward promoting health through safe and effective procedures applied through best medical evidence.

SUR 343. Urology (OMA). 2 credits.
This third-year elective introduces students to the field of urology. Students will improve their differential diagnosis skills, as well as work with inpatient and outpatient healthcare, involving primary care providers and other services. Students are assigned patients and follow and manage them under direct supervision of the attending physician.

SUR 344. Urology (PHX). 2 credits.
This elective will teach medical students the basics of procedural medicine in Urology. Students will learn surgery as a component of integrated medicine directed toward promoting health through safe and effective procedures applied through best medical evidence.

SUR 345. Breast Surgery (OMA). 2 credits.
This third-year elective introduces students to the field of breast surgery. Students will improve their differential diagnosis skills, as well as work with inpatient and outpatient healthcare, involving primary care providers and other services. Students are assigned patients and follow and manage them under direct supervision of the attending physician.

SUR 346. Breast Surgery (PHX). 2 credits.
This elective will teach medical students the basics of procedural medicine in Breast Surgery. Students will learn surgery as a component of integrated medicine directed toward promoting health through safe and effective procedures applied through best medical evidence.

SUR 347. Pediatric ENT Surgery (OMA). 2 credits.
This third-year elective introduces students to the field of pediatric ENT surgery. Students will improve their differential diagnosis skills, as well as work with inpatient and outpatient healthcare, involving primary care providers and other services. Students are assigned patients and follow and manage them under direct supervision of the attending physician.

SUR 348. ENT Surgery (PHX). 2 credits.
This elective will teach medical students the basics of procedural medicine in ENT Surgery. Students will learn surgery as a component of integrated medicine directed toward promoting health through safe and effective procedures applied through best medical evidence.

SUR 349. NE Spine Surgery (OMA). 2 credits.
This third-year elective introduces students to the field of spine surgery. Students will improve their differential diagnosis skills, as well as work with inpatient and outpatient healthcare, involving primary care providers and other services. Students are assigned patients and follow and manage them under direct supervision of the attending physician.

SUR 350. Thoracic Surgery (PHX). 2 credits.
This elective will teach medical students the basics of procedural medicine in Thoracic Surgery. Students will learn surgery as a component of integrated medicine directed toward promoting health through safe and effective procedures applied through best medical evidence.

SUR 351. Head and Neck Surgery (OMA). 2 credits.
This third-year elective introduces students to the field of head and neck surgery. Students will improve their differential diagnosis skills, as well as work with inpatient and outpatient healthcare, involving primary care providers and other services. Students are assigned patients and follow and manage them under direct supervision of the attending physician.

SUR 352. Neurosurgery Trauma (PHX). 2 credits.
Students will learn the basics of trauma neurosurgery and have opportunities to improve their differential diagnosis insight and skills in the management of the neurologically injured patient. Students will see patients of all ages in the trauma bay, critical care unit, and the inpatient and outpatient settings under direct supervision of the attending physician.

SUR 353. Pediatric Surgery. 2 credits.
Students on this elective will learn the basics of Pediatric Surgery as a component of integrated medicine directed toward promoting health through safe and effective procedures applied through best medical evidence. The student will improve their differential diagnosis skills and work with inpatient and outpatient healthcare.

SUR 354. Orthopedic Surgery Trauma (PHX). 2 credits.
Third-year students will experience a sub-specialty in trauma surgery and will get opportunities to improve their differential diagnosis insight and skills. They will with trauma orthopedic patients of all ages in both the inpatient and outpatient settings. Students are under direct supervision of the attending physician.

SUR 355. Neurological Surgery (OMA). 2 credits.
This elective will teach medical students the basics of Neurological Surgery. Students will learn Neurosurgery as a component of integrated medicine directed toward promoting health through safe and effective procedures applied through best medical evidence. The student will improve their differential diagnosis skills and work with inpatient and outpatient healthcare, involving primary care providers and other services.

SUR 356. Primary Care Ophthalmology (PHX). 2 credits.
Students will see patients in the outpatient, inpatient, and surgical settings. The patient population provides a wide range of experience including clinical evaluation skills, specialty examination techniques and instrumentation, and multiple related systemic diseases (such as diabetes, cardiovascular disease, auto-immune conditions, neurologic, and rheumatology illness). Students will help manage patients under the direct supervision of the attending physician.

SUR 357. Otolaryngology Head & Neck Surgery (OMA). 2 credits.
The goal of this two-week rotation is to expose third-year students to basic principles of Otolaryngology. Students will participate in the care of patients of all ages with head and neck disorders. The rotation will include patient care in clinic, hospital wards, and operating room.

SUR 358. Otolaryngology (PHX). 2 credits.
This elective will expose the student to the scope of practice for tertiary/sub-specialty otolaryngology. This includes the diagnosis and treatment of ENT disorders, especially as they pertain to subspecialty neurotology, rhinology, and head and neck oncologic and reconstructive surgery. The elective also provides exposure to other otolaryngology disease processes and their treatment.

SUR 359. Cardiac Surgery (OMA). 2 credits.
Students will learn the basics of cardiovascular disease being able to diagnose arterial, venous and lymphatic disease and understand treatment goals both surgical and non-surgical for the above disease processes.

SUR 360. Plastic Surgery (PHX). 2 credits.
This course will introduce third-year students to Plastic Surgery. Working closely with surgical faculty in a variety of settings, students will become familiar with the specialty of Plastic and Reconstructive Surgery through daily, hands-on preoperative, intraoperative, and postoperative evaluation and management of patients of all ages.

SUR 401. Trauma (OMA). 2 credits.
The student will be exposed to trauma evaluation and management, as they build a foundational knowledge base for the care of a critically ill/trauma patient. The student is expected to participate in teaching rounds and assist in the operating room for patients admitted to the general surgical trauma service. The student will function as a sub-intern and be expected to present cases during rounds as well as at trauma conferences.

SUR 402. Colorectal Surgery Sub-Internship - Chandler (PHX). 4 credits.
The fourth-year medical student will function as a first-year Colorectal Surgical House Officer. This specialized rotation promises an extensive understanding of colorectal surgical care, emphasizing both diagnostic and therapeutic components.

SUR 403. Wound Care (PHX). 4 credits.
This rotation will enhance the student's clinical acumen in the comprehensive care of patients with acute and chronic wounds, as well as those living with ostomies. The experience emphasizes patient-centered care, longitudinal follow-up, and real-time decision-making in an outpatient setting.

SUR 405. General Surgery Sub-Internship (Red) (OMA). 1-8 credits.
This course is an intensive surgical experience with emphasis on mini-invasive general surgical procedures. The sub-intern will be given opportunities to first assist in selected cases and manage critically ill patients.

SUR 405A. Selective in General Surgery. 2 credits.
This course is an intensive surgical experience with emphasis on minimally-invasive general surgical procedures. The sub-intern will be given opportunities to first assist in selected cases and manage critically ill patients.

SUR 407. Surgical Critical Care Sub-Internship – Chandler (PHX). 4 credits.
The fourth-year medical student will function as a first-year surgical house officer and be integrated in pre-operative, operative, and post-operative care of surgical and trauma patients. Students will participate in daily multidisciplinary hospital rounds, operative management, and care of trauma/acute care surgery patients in the SICU.

SUR 409. Vascular Surgery (OMA). 4 credits.
Students will learn the basics of vascular disease being able to diagnose arterial, venous, and lymphatic disease and understand treatment goals both surgical and non-surgical for these disease processes. Responsibilities will involve following and caring for critically ill patients who have undergone these procedures. Exposure in the operating room will include first assistant duties.

SUR 410. Cardiothoracic Critical Care Sub-Internship (PHX). 4 credits.
This course introduces the student to the subspecialty of cardiothoracic critical care and the management of complex post-operative patients in the ICU. It is designed to provide the student with a practical background of critical care medicine with an emphasis on end-stage lung disease, lung transplantation, mechanical circulatory support, lung cancer and esophageal disease.

SUR 411. Orthopedic Surgery Sub-Internship (PHX). 4 credits.
This elective will provide the senior medical student an opportunity to gain an understanding of the responsibilities, skills, and learning expectations of a PGY-1 resident. It is directed toward students interested in orthopedic surgery. On completion of the rotation, students should feel confident using their new understanding and skills to create a more seamless transition into residency. The purpose of the course is to provide the student with a basic foundation of the knowledge and skills required for first year resident training in orthopedic surgery.

SUR 414. Plastics and Reconstructive Surgery (PHX). 1-4 credits.
This elective will introduce to the student the spectrum of modern plastic surgery. It will encompass the basic fundamentals of wound healing, evaluation and treatment of maxillofacial injuries, repair and reconstruction of head and neck tumors, repair of congenital facial deformities, review of surgical physiology in the treatment of burns, in addition to exposure to the various cosmetic surgical procedures.

SUR 415. Urology (PHX). 1-4 credits.
The student will function as a sub-intern in urology, performing admission histories and physical examinations, planning patient study programs, and joining with the urology staff for patient care in the cystoscopy and operating rooms. This rotation provides students with an insight into general clinical urology and prepares them to identify common urological problems and recognize appropriate treatment plans.

SUR 416. Surgery Research (PHX). 4 credits.
This elective will provide the senior medical student an opportunity to gain an understanding of the responsibilities, skills, and learning expectations of a resident. The purpose of this course is to assist the student in their understanding of the key concepts in the responsible conduct of research allowing them to conduct research that conforms to the highest standards for the protection of human research subjects.

SUR 419. Head and Neck Surgery Sub-Internship (OMA). 4 credits.
This elective is designed to provide students a broad experience in the general practice of Otolaryngology/Head and Neck Surgery (Pediatric and Adult) in both office and hospital/surgical settings. Students will receive exposure to the more complex specialty areas of Otolaryngology/Head and Neck Surgery including: Head and Neck/Reconstructive Surgery, Neuro-Otology, Skull Base Surgery, Laryngology, and Pediatric Otolaryngology.

SUR 420. Trauma/Acute Care Surgery (PHX). 1-8 credits.
In this selective, students will function as sub-interns and participate in acute trauma resuscitations, operative care and ICU rounds during the rotation on the Trauma surgery Service. The student will evaluate and write daily progress notes under the supervision of the senior surgical resident and the surgical attending. Presentations during trauma rounds and at the weekly Trauma conference will be required.

SUR 421. Otolaryngology (PHX). 4 credits.
This course will familiarize the student with the practice of otolaryngology, including diagnosis and treatment of common ENT disorders, how to perform examination, and devise and execute a care plan. They will develop skills for diagnostic and therapeutic procedures, minor surgery, and surgical assisting. The student will be given responsibilities commensurate with their abilities.

SUR 422. General Surgery Sub-Internship (PHX). 4-5 credits.
Students in this course are expected to function as sub-interns and participate in office evaluation, daily hospital rounds, operative managements and pre and postoperative care of patients on the general surgical service. The student will evaluate and write daily progress notes under the supervision of the senior surgical resident and the surgical attending. The student will participate in daily “checkout rounds” with the surgical team. Presentations during teaching rounds and participation at General Surgery Basic Science and journal club will be required.

SUR 423. Urology Sub-Internship (PHX). 4 credits.
This rotation provides students with an insight into general clinical urology and prepares them to identify common urological problems and recognize appropriate treatment plans for the same.

SUR 424. General Thoracic Surgery (PHX). 4 credits.
The General Thoracic Surgery Rotation is designed for Senior Medical Students who have an interest in the specialty of thoracic surgery. It is an opportunity for students to gain exposure to the full range of management with regards to general thoracic diseases – e.g. benign esophageal disease, esophageal cancer, lung cancer, advanced lung disease – and their surgical management. Under the supervision of the faculty and residents, the students will spend their time both in the inpatient and outpatient setting where they will have an opportunity to understand disease processes of the chest and foregut, learn about their surgical management, and spend time in the Operating Rooms.

SUR 426. Seeing Beyond Ourselves in Surgery (PHX). 4 credits.
This non-clinical elective will prepare students for the challenges of a career in Surgery. Students will learn why shifting their own mindset matters in all their relationships and interactions. With this awareness they will explore the underlying drivers of relationships and the implications for how we approach our concepts of self-control and the ability to influence others and our environments.

SUR 427. General Surgery Sub-Internship - VA (OMA). 4 credits.
This course is an intensive surgical experience with emphasis on minimally invasive general surgical procedures. The sub-intern will be given opportunities to first assist in selected cases and manage critically ill patients.

SUR 431. Pediatric Surgery (PHX). 4 credits.
This rotation will expose the student to common surgical diseases and congenital deformities in infants and children. The student will be required to perform selected histories and physicals on these patients and will second or first assist in surgery.

SUR 432. General & Oncology Surgery Sub-Internship (OMA). 2-4 credits.
This course is an intensive surgical experience with emphasis on minimally invasive general surgical procedures. The sub-intern will be given opportunities to first assist in selected cases and manage critically ill patients. The student will incorporate into the team, with sub-intern responsibilities and will have opportunity to develop a skill set and foundational knowledge to help transition into the PGY1 year.

SUR 432A. Selective in Oncology/Surgery. 2 credits.
This course is an intensive surgical experience with emphasis on minimally invasive general surgical procedures. The sub-intern will be given opportunities to first assist in selected cases and manage critically ill patients. The student will incorporate into the team, with sub-intern responsibilities and will have opportunity to develop a skill set and foundational knowledge to help transition into the PGY1 year.

SUR 433. Urology Sub-Internship (OMA). 4 credits.
The student will function as a sub-intern in urology, performing admission histories and physical examinations, planning patient study programs, and joining with the urology staff for patient care in the cystoscopy and operating rooms. The student will assist in postoperative management of their patients. Students will function as a member of the urology team. Students will also learn the interpretation of other imaging studies such as CT scans.

SUR 436. Urology/Gynecology (OMA). 4 credits.
The student will function as a sub-intern in urology/gynecology, performing admission histories and physical examinations, planning patient study programs, and joining with the urology staff for patient care in the cystoscopy and operating rooms. The student will assist in postoperative management of their patients. Students will function as a member of the urology team. Students will also learn the interpretation of other imaging studies such as CT scans.

SUR 440. Burns Surgery Sub-Internship - Valleywise (PHX). 3-4 credits.
This sub-internship will allow the student to integrate basic burn pathophysiology and a variety of clinical burn and wound care experiences into the diagnosis and management of burn and wound patients and their families in a competent, evidence-based, patient and family-centered, compassionate manner.

SUR 442. Plastic & Reconstructive Surgery Sub-Internship - Valleywise (PHX). 4 credits.
This sub-internship will introduce students to the clinical practice of plastic and reconstructive surgery in a multi-specialty clinic setting where the emphasis is on patient care. Students will enhance their understanding of the principles of plastic and reconstructive surgery.

SUR 443. Orthopedic Spine Sub-Internship (OMA). 4 credits.
For students seeking a career in Orthopedics or Neurosurgery. Expose the M4 to the full range of clinical and teaching activities associated with an orthopedic spine, providing opportunity for the student to develop a sound foundation in Orthopedic & Neurosurgery patient management. This includes the emergent, operative, inpatient, and outpatient care of patients.

SUR 444. Orthopedic Sports Medicine Sub-Internship (OMA). 4 credits.
This course will expose the senior medical student to the full range of clinical and teaching activities associated with a sports medicine and adult reconstruction orthopedic service, providing opportunity for the student to develop a sound foundation in patient management. This includes the emergent, operative, inpatient, and outpatient care of patients.

SUR 445. Ophthalmology Elective (PHX). 4 credits.
In this elective the student participates in the medical and surgical care of ophthalmology outpatients. Students are given opportunities to develop key specialized history and ophthalmic physical examination skills, following patients from consultation, specialized imaging and laboratory evaluation, clinic or surgical treatment, and post-treatment care.

SUR 446. Neurosurgery Trauma and Critical Care (PHX). 4 credits.
Students will have exposure to and increased understanding of neurosurgical pathology and its treatment. Students are expected to develop the ability to diagnose patients presenting with neurosurgical conditions and outline appropriate treatment plans. Students will develop skills for diagnostic and therapeutic procedures, minor surgery, and surgical assisting. The student will learn how to address patients, perform examinations, and devise and execute a care plan.

SUR 448. Hand Surgery - Valleywise (PHX). 4 credits.
Students will participate, under faculty supervision, in the management of surgical and trauma patients requiring intensive care. A variety of educational opportunities will be provided, including daily faculty rounds, supervised procedures, guided literature review, and focus-based educational conferences and seminars. Direct faculty involvement and student interaction in patient care occurs daily and is emphasized.

SUR 449. Orthopedic Pediatric Surgery Sub-Internship (OMA). 4 credits.
This course will expose the senior medical student to the full range of clinical and teaching activities associated with an pediatric orthopedic service, providing opportunity for the student to develop a sound foundation in pediatric orthopedic patient management. This includes the emergent, operative, inpatient, and outpatient care of patients.

SUR 451. Surgical Critical Care - Valleywise (PHX). 4 credits.
Students will participate, under faculty supervision, in the management of surgical and trauma patients requiring intensive care. A variety of educational opportunities will be provided, including daily faculty rounds, supervised procedures, guided literature review and focused based educational conferences and seminars. Direct faculty involvement and student interaction in patient care occurs on a daily basis and is emphasized.

SUR 452. Ophthalmology - Terp (OMA). 4 credits.
This course introduces the fourth-year medical student to the field of Ophthalmology. Student will be able to recognize common eye disorders, including conjunctivitis, hyperopia, myopia, cataracts.

SUR 453. Cardiac Surgery Critical Care (OMA). 4 credits.
Students will learn the basics of cardiovascular disease being able to diagnose arterial, venous and lymphatic disease and understand treatment goals both surgical and non-surgical. This sub-internship will include all aspects of peripheral vascular surgery both venous and arterial, preoperative evaluation, intra-operative experience, and postoperative management of patients. Exposure in the operating room will include first assistant duties.

SUR 456. Breast Oncology Surgery Sub-Internship. 4 credits.
This course is an intensive surgical experience with emphasis on benign and malignant breast disease. The sub-intern will be given opportunities to first-assist in most surgical cases and occasionally co-manage critically ill patients. They will have the opportunity to develop a skill set and foundational knowledge to help them transition into the PGY1 year.

SUR 457. General Surgery Sub-Internship (OMA). 4 credits.
This sub-internship offers intensive experience in preoperative, surgical, and post-operative management of an array of general surgery topics including hernia repair, diverticulitis, colon cancer, bowel obstructions, breast cancer, and other acute and elective pathology. The sub-intern will first assist in selected cases and manage critically ill patients in order to develop a skill set and foundational knowledge to help them transition into the PGY1 year.

SUR 458. Trauma Surgery - Valleywise (PHX). 4 credits.
Learn and identify the correct sequence of priorities to be followed in the evaluation of traumatically injured patient. Identify and discuss key components and rationale for obtaining the patient's history and history of trauma incidents. Learn guidelines and techniques to be used in the initial resuscitative and definitive care phase in the treatment of the trauma patient.

SUR 459. General Surgery Sub-Internship (OMA). 4 credits.
This rotation at CHI Immanuel exposes students to a wide breadth of general surgery. Students will have extensive patient contact with a high volume of cases are performed with an emphasis on bariatric, minimally invasive (robotic and laparoscopic), hernia, foregut, and colorectal surgery. In addition, the strong endoscopic experience and first assist opportunities will develop their skill set and foundational knowledge to help them transition into the PGY1 year.

SUR 460. Vascular Surgery (OMA). 4 credits.
This elective will include all aspects of peripheral vascular surgery both venous and arterial, preoperative evaluation, intra-operative experience, and postoperative management of patients. Responsibilities will involve following and caring for critically ill patients who have undergone the above surgical procedures. Exposure in the operating room will include first assistant duties. The student will be part of a team caring for these patients and will participate actively in bedside and operating room teaching The goal of this course is that students will learn the basics of vascular disease being able to diagnose arterial, venous and lymphatic disease and understand treatment goals both surgical and non-surgical for the above disease processes.

SUR 462. Acute Care Surgery Sub-Internship (PHX). 4 credits.
The fourth-year medical student steps into the role of first-year Acute Care Surgical House Officer, delving deeply into the fast-paced world of acute surgical care. The student will participate in the assessment and workup of patients presenting with acute surgical conditions, engaging in preoperative planning, being actively involved in surgical procedures, and ensuring post-operative care is effectively managed.

SUR 463. Colorectal Surgery Sub-Internship (PHX). 4 credits.
The fourth-year medical student will function as a first-year Colorectal Surgical House Officer. This specialized rotation promises an extensive understanding of colorectal surgical care, emphasizing both diagnostic and therapeutic components. The student will actively participate in the clinic, operating room, on consultations, in the endoscopy lab, and tumor board conferences.

SUR 464. Endocrine Surgery Sub-Internship (PHX). 4 credits.
The fourth-year medical student will act as a first-year Endocrine House Officer and be integrated into the comprehensive treatment of surgical endocrine disorders. The student will participate in outpatient assessments, inpatient consultations, and operative management of patients with acute and chronic surgical diseases of the endocrine system.

SUR 465. Minimally Invasive Surgery Sub-Internship (PHX). 4 credits.
The fourth-year medical student will assume the role of a first-year MIS/Hernia Surgical House Officer, immersing themselves in the specialized domain of minimally invasive surgery and hernia management, as well as gaining a comprehensive understanding of the surgical techniques and holistic management, including risk factor modification.

SUR 466. Trauma Critical Care Sub-Internship (PHX). 4 credits.
The fourth-year medical student will act as a first-year Surgical House Officer and be integrated in pre-operative, operative, and post-operative care of surgical patients. The student will participate in office evaluation, daily hospital rounds, operative management, and pre- and post-operative care of patients on the general surgical service.

SUR 468. General Surgery/Vascular Sub-Internship (PHX). 4 credits.
The fourth-year medical student will be inducted into the responsibilities characteristic of a first-year General Surgical House Officer. This rotation is designed to offer an extensive overview of the multifarious sectors within general surgery, including but not limited to elective surgical procedures, acute surgical interventions, trauma care, critical care medicine, and vascular surgical procedures.

SUR 472. Neurological Surgery Critical Cae (OMA). 4 credits.
Students on this service will be responsible for routine daily care of neurological patients. Students will perform histories and physicals with emphasis on neurological examination. Students will actively participate in daily care, neurodiagnostic procedures, surgery, postoperative care, and attend Neurosurgery clinics and Neurosurgery conferences.

SUR 472A. Selective Neurological Surgery. 2 credits.
Students on this service will be responsible for routine daily care of neurological patients. Students will perform histories and physicals with emphasis on neurological examination. Students will actively participate in daily care, neurodiagnostic procedures, surgery, postoperative care, and attend Neurosurgery clinics and Neurosurgery conferences.

SUR 475. Orthopedic Trauma Surgery Sub-Internship (OMA). 2-4 credits.
The goal of this selective is to expose the senior medical student to the full range of clinical and teaching activities associated with an orthopaedic service, providing opportunity for the student to develop a sound foundation in Orthopaedic patient management. This includes the emergent, operative, inpatient, and outpatient care of patients. On this service, the students participate in the full range of clinical and teaching activities. The students evaluate patients in outpatient clinics and participate in the outline of the treatment plan. Students assist at surgery to become familiar with orthopaedic procedures and master the anatomy of the extremities and axial skeleton. The students participate in the post-operative in-hospital management and post-hospital clinic follow-up by preparing progress notes and writing patient care orders. The students participate in all teaching and conference aspects of the service.

SUR 475A. Selective in Orthopedic Surgery. 2 credits.
The goal of this selective is to expose the senior medical student to the full range of clinical and teaching activities associated with an orthopaedic service, providing opportunity for the student to develop a sound foundation in Orthopaedic patient management. This includes the emergent, operative, inpatient, and outpatient care of patients. On this service, the students participate in the full range of clinical and teaching activities. The students evaluate patients in outpatient clinics and participate in the outline of the treatment plan. Students assist at surgery to become familiar with orthopaedic procedures and master the anatomy of the extremities and axial skeleton. The students participate in the post-operative in-hospital management and post-hospital clinic follow-up by preparing progress notes and writing patient care orders. The students participate in all teaching and conference aspects of the service.

SUR 476. Otolaryngology (OMA). 4 credits.
This rotation in Otolaryngology and Human Communication, offers an exposure to the medical and surgical evaluation and management of associated problems of this specialty. Patient population consists of both outpatients and inpatients focusing on the adult and pediatric populations. Time will be divided between clinical experience, operative experience, and formal didactic on the various aspects of ENT. The student will have the opportunity to observe audiological, vestibular and speech/language evaluations, integral parts of the total ENT diagnostic and treatment plan. It is anticipated the student will acquire adequate skill in the performance of a complete ENT examination and become familiar with the diagnosis and management of the major ENT disorders. Knowledge of surgical indications and complication will be required and the student will be responsible for patient management.

SUR 477. Pediatric Surgery Sub-Internship (OMA). 4 credits.
This rotation will expose the student to common surgical diseases and congenital deformities in infants and children. The student will be required to perform selected histories and physicals on these patients and will second or first assist in surgery.

SUR 479. Plastic and Reconstructive Surgery (OMA). 1-4 credits.
The purpose of the course is to expose the medical student to the comprehensive care of plastic surgery patient in the outpatient and inpatient setting. This selective will introduce to the student the spectrum of modern plastic surgery encompassing the basic fundamentals of wound healing, evaluation and treatment of maxillofacial injuries, repair and reconstruction of head and neck tumors, repair of congenital facial deformities, review of surgical physiology in the treatment of burns, and exposure to the various cosmetic surgical procedures. Instruction will include observation, assistance and instruction on plastic surgical techniques. During this rotation students are expected to assist in surgery.

SUR 480. Otolaryngology Head & Neck Surgery (OMA). 4 credits.
The goal of this 4-week elective is to provide an overview of otolaryngology, which would be particularly beneficial for students considering primary care or those considering otolaryngology residency. Students will participate in ENT conferences including Tumor Board, Grand Rounds, Morbidity and Mortality, and Journal Club.

SUR 485. Surgical Intensive Care Unit (OMA). 1-4 credits.
The student is expected to participate in daily teaching rounds in the ICU. The student will function as a sub-intern and be expected to present assigned patients on rounds, attend all lectures and conferences and read required material. Students will also have the opportunity to do procedures under close supervision.

SUR 486. Burns - General Surgery Critical Care (OMA). 4 credits.
This course includes participation in preoperative and postoperative care of the general surgical patient. Students are expected to round with attending physicians and make appropriate orders and notes on patient charts. Students will act as sub-intern and will observe surgical techniques and perform simple procedures. During the month, students will be expected to present a 30-minute topic of their choice in an area of general surgery or Burns to the attending physicians.

SUR 491. Plastic and Reconstructive Surgery (OMA). 4 credits.
This rotation will introduce to the student the spectrum of modern plastic surgery. It will encompass the basic fundamentals of wound healing, evaluation and treatment of maxillofacial injuries, repair and reconstruction of head and neck tumors, repair of congenital facial deformities, review of surgical physiology in the treatment of burns, in addition to exposure to the various cosmetic surgical procedures. Instruction will include observation, assistance and instruction on plastic surgical techniques performed in Creighton University Medical Center. Didactic lectures will include a basic core of information supplemented by topics appropriate to the interests of the individual student.

SUR 494. Neurological Surgery - Barrow (PHX). 4 credits.
In this selective, students will learn skills fundamental to entering into PGY1 of residency; performing neurological examinations, introduced to reading neuroimaging and will be exposed to a breadth of neurological diseases and treatments for conditions such as intracranial diseases (i.e., trauma, tumors, headaches), spinal and peripheral nerve disease, epilepsy, pain management and movement disorders. This selective exposes the senior medical student to a high volume, full spectrum clinical neurosurgery service. 182 beds of the hospital are dedicated to the treatment of neurological patients, including 11 state-of-the-art neurosurgical operating theaters and 2 dedicated neurosurgery endovascular suites. Academic activities are an integral part of the program. Students are expected to actively participate in the care of patients, attend department conferences and will make one presentation during Clinical Conference. Students will also be assigned to the endovascular and pediatric neurosurgery services in addition to attending outpatient clinic.

SUR 495. Surgery Capstone (OMA). 4 credits.
This elective will provide the senior medical student an opportunity to gain an understanding of the responsibilities, skills, and learning expectations of a PGY-1 resident. It is directed toward students interested in general surgery or other surgical subspecialties. On completion of the rotation, students should feel confident using their new understanding and skills to creat a more seamless transition into residency. Coursework will consist of small group exercises and lectures, teaching rounds, independent study, skills lab practical experience, (cadaver dissection) and operating room exposure.

SUR 496. Surgery Capstone (PHX). 4 credits.
This elective will provide the senior medical student an opportunity to gain an understanding of the responsibilities, skills, and learning expectations of a PGY-1 resident. It is directed toward students interested in general surgery or other surgical subspecialties.

SUR 498. Surgery Extramural (OMA & PHX). 1-8 credits.