



**ROCKY VISTA**  
UNIVERSITY



# **Student Handbook and Catalog 2022-2023**

# Table of Contents

<b>Degree Programs</b> .....	4	Anesthesiology .....	36
Clinical Clerkship Degree Requirements .....	4	Critical Care .....	36
Doctor of Osteopathic Medicine (DO) - MCOM - Cloned .....	4	Dermatology .....	36
Doctor of Osteopathic Medicine (DO) - RVUCOM .....	5	Emergency Medicine .....	36
Doctor of Osteopathic Medicine (MCOM) .....	6	Global Health .....	36
Master of Medical Sciences (MMS) - Montana Campus .....	6	Humanities .....	38
Master of Physician Assistant Studies (PA) .....	7	Integrative Medicine Training .....	39
Master of Science in Biomedical Sciences (MSBS) .....	8	Long Term Care .....	39
Pre-Clinical Curriculum (RVUCOM) .....	8	Military .....	40
<b>Courses</b> .....	10	Neurology .....	40
Biomedical Sciences .....	10	Ophthalmology .....	41
Osteopathic Medicine .....	12	Orthopedics .....	41
Behavioral Medicine .....	19	Osteopathic Manipulative Medicine .....	41
Family Medicine .....	20	Pathology .....	42
Internal Medicine .....	20	Physician Science .....	42
Interprofessional Education .....	22	Psychiatry .....	42
Medicine - General .....	22	Radiology .....	42
Osteopathic Principles and Practice .....	25	Research .....	43
Pediatrics .....	26	Rural and Wilderness Medicine .....	44
Surgery .....	29	Trauma .....	44
Women's Health .....	31	Urban Underserved Medicine .....	44
Physician Assistant .....	32	Urgent Care .....	45
Academic Medicine and Leadership .....	35	Urology .....	45
Anatomy .....	35	Wound Care .....	45



## Degree Programs

### Clinical Clerkship Degree Requirements

#### Class of 2023

*Minimum credit hours to be completed in OMS III and OMS IV*

**Class of 2023 Fellows may be eligible for 86 credit hours if OST 4010 was taken in the 2021-2022 AY**

Item #	Title	Credits
MED 3001	Fundamentals of Clinical Medicine	2
OST 3010	OPP Clinical Integration	1
OST 4010/ OST 4011	Advanced OPP Clinical Integration I and II	2
FAM 3001	Family Medicine Core	8
INT 3001/ 3002	Internal Medicine Core	8
WMN 3001	Women's Health Core	4
PED 3001	Pediatrics Core	4
BHM 3001	Behavioral Medicine Core	4
SRG 3000	Fundamentals of Surgery	1
SRG 3001/ 3002	Surgery Core	7
MED 3020	Critical Reflection and Professional Career Development I	1
Electives	Required Elective Clerkships (2023)	45

#### Class of 2024

*Minimum credit hours to be completed in OMS III and OMS IV*

Item #	Title	Credits
MED 3001	Fundamentals of Clinical Medicine	2
OST 3010/ OST 3011	Advanced OPP Clinical Integration	2
OST 4010/ OST 4011	Advanced OPP Clinical Integration I and II	2
FAM 3001	Family Medicine Core	8
INT 3001/ 3002	Internal Medicine Core	8
WMN 3001	Women's Health Core	4
PED 3001	Pediatrics Core	4
BHM 3001	Behavioral Medicine Core	4
SRG 3000	Fundamentals of Surgery	1
SRG 3001/ 3002	Surgery Core	7
MED 3020	Critical Reflection and Professional Career Development I	1
MED 3021	Critical Reflection and Professional Career Development II	1
Electives	Required Elective Clerkships (2024)	46
<b>Total Credits</b>		<b>90</b>

### Doctor of Osteopathic Medicine (DO) - MCOM - Cloned Curriculum

The design of the curriculum is based on a proven systems-based integrated academic model. It emphasizes interdisciplinary collaboration, guiding students to develop a holistic, and more importantly, an osteopathic approach to medicine. In utilizing a systems approach to medical education, basic biomedical science disciplines are integrated with clinical sciences in a fashion that reflects clinical relevancy, rather than broken down into individual segregated disciplines. The overall curriculum is scheduled in blocks with intervening periods of integrations, reflection, wellness, and time for scholarly activity and electives. Weekly schedules follow a format of faculty guided Student Directed Learning during most afternoons and group Active Learning Sessions most mornings. Assessments are formative and summative with an emphasis on learning of material and competency of skill. MCOM continually correlates basic scientific information and methodology with fundamental clinical application.

Students are exposed to clinical settings and simulation beginning in their first semester and continuing

throughout the first two years of coursework, giving them the opportunity to prepare for the “real world” of medicine. We believe that by adding early clinical exposure, simulation, and active learning in a team or small group setting early in the curriculum, we strengthen the students’ ability to think critically, solve clinical problems and develop the skills they will require to continue to learn throughout their careers. Professionalism and ethics are key components for a physician and are emphasized throughout the entire curricular experience at MCOM.

Third and fourth-year students are placed at one of our regional centers throughout the state and region to ensure continuity and coordination of clinical education within RVU’s vast and growing clinical training network. The competency-based curriculum is designed to fulfill our mission of training students who are competent and ready to enter graduate medical education and training, with an emphasis on preparing students to become primary care physicians.

MCOM has a dedicated faculty; established affiliations with medical centers, hospitals, and health care systems; a structured and supported rural medicine program; and a mission to educate the finest osteopathic physicians possible.

## Doctor of Osteopathic Medicine (DO) - RVUCOM Course of Study

The design of the applications-based systems curriculum is based on integrated academic models for the first two years of the curriculum. Each system is studied twice, first with an emphasis on normal form and function in Year 1, followed by an emphasis on the pathophysiology and clinical approach to each system in Year 2. As well, the curriculum highlights interdisciplinary collaboration and guides students to develop an osteopathic approach to medicine. Basic scientific information and methodology is regularly correlated with fundamental clinical application. Students have the potential to participate in the clinical setting during their first year. This clinical exposure expands in the second year, and the students have increased opportunity to interact with standardized patients on campus, as well as be involved, under physician supervision, with real patients in the office and hospital setting.

The COM has a dedicated faculty; established affiliations with medical centers, hospitals, and healthcare systems; a structured and supported rural medicine program; and a mission to educate the finest osteopathic physicians possible. Students are placed at one of the college’s regional centers to ensure

continuity and coordination of clinical education within the COM’s vast and growing clinical training network. Our innovative curriculum is designed to fulfill the COM’s mission of training students who are competent and ready to enter graduate medical education and training with an emphasis on becoming primary care physicians.

Physicians do not work alone, but rather as part of a healthcare team, and RVUCOM promotes interdisciplinary cooperation and interprofessional educational opportunities in the classroom and in all of its clinical settings. RVUCOM is dedicated to the incorporation of milestones, competencies, and Entrustable Professional Activities (EPAs) into its curricular framework as outlined by the American Association of Colleges of Osteopathic Medicine (AACOM) and the Association of American Medical Colleges (AAMC).

## Program Learning Outcomes

Based on the American Osteopathic Association (AOA) seven core competencies for osteopathic medical students, the College of Osteopathic Medicine (COM) faculty, staff, and leadership have established the following program learning outcomes for the Doctor of Osteopathic Medicine program:

### Graduates of the Doctor of Osteopathic Medicine Program will:

1. **Apply** osteopathic principles and practices to patient care. (Osteopathic Philosophy/ Osteopathic Manipulative Medicine)
2. **Apply** knowledge of biomedical sciences to clinical medicine. (Medical Knowledge)
3. **Perform** comprehensive patient care utilizing best practices of osteopathic medicine. (Patient Care)
4. **Utilize** effective communication skills to support positive patient-centered and inter-professional relationships. (Interpersonal & Communication Skills)
5. **Uphold** principles of the RVU Osteopathic Oath. (Professionalism)
6. **Evaluate** patient-care practices through critical thinking using evidence-based medical principles. (Practice-Based Learning & Improvement)
7. **Analyze** health systems science to deliver individualized patient care. (Systems-Based Practice)

## Clinical Clerkship Degree Requirements

[Click here to review the Clinical Clerkship Degree Requirements](#)

## Pre-Clinical Curriculum

[Click here to review the Pre-Clinical Curriculum](#)

## Doctor of Osteopathic Medicine (MCOM) Curriculum

The design of the curriculum is based on a proven systems-based integrated academic model. It emphasizes interdisciplinary collaboration, guiding students to develop a holistic, and more importantly, an osteopathic approach to medicine. In utilizing a systems approach to medical education, basic biomedical science disciplines are integrated with clinical sciences in a fashion that reflects clinical relevancy, rather than broken down into individual segregated disciplines. The overall curriculum is scheduled in blocks with intervening periods of integrations, reflection, wellness, and time for scholarly activity and electives. Weekly schedules follow a format of faculty guided Student Directed Learning during most afternoons and group Active Learning Sessions most mornings. Assessments are formative and summative with an emphasis on learning of material and competency of skill. MCOM continually correlates basic scientific information and methodology with fundamental clinical application.

Students are exposed to clinical settings and simulation beginning in their first semester and continuing throughout the first two years of coursework, giving them the opportunity to prepare for the “real world” of medicine. We believe that by adding early clinical exposure, simulation, and active learning in a team or small group setting early in the curriculum, we strengthen the students’ ability to think critically, solve clinical problems and develop the skills they will require to continue to learn throughout their careers. Professionalism and ethics are key components for a physician and are emphasized throughout the entire curricular experience at MCOM.

Third and fourth-year students are placed at one of our regional centers throughout the state and region to ensure continuity and coordination of clinical education within RVU’s vast and growing clinical training network. The competency-based curriculum is designed to fulfill our mission of training students who are competent and ready to enter graduate medical education and training, with an emphasis on preparing students to become primary care physicians.

MCOM has a dedicated faculty; established affiliations with medical centers, hospitals, and health care systems; a structured and supported rural medicine program; and a mission to educate the finest osteopathic physicians possible.

## Master of Medical Sciences (MMS) - Montana Campus

The Rocky Vista University MCOM Master of Medical Sciences Program is a 1-year program that provides students with a deep foundation in biomedical sciences, humanism, and professionalism in an immersive medical school environment.

***\*Please Note this Program is only Available at our Montana Campus***

### Why choose the MMS program?

The Master of Medical Sciences (MMS) program has been carefully designed for students who have a strong ambition to go to medical school or other health professional school but do not yet meet the requirements after they've completed their undergraduate degree. Students in the program are immersed in the Montana College of Osteopathic Medicine (MCOM) curriculum so that candidates can gain foundational biomedical sciences knowledge alongside first year medical students. All courses are offered and taught by MCOM faculty. Students are required to attend on-campus in Billings, MT. Courses cover the normal functioning of the systems of the human body.

### Highlights:

- Study alongside medical school students
- Set yourself up for success in medical school or other health professional school
- Gain admission to the MCOM after 1-year program if high standards are met

## Application Requirements

Academic requirements for admission to the MMS program will be evaluated on an individual basis by the program administrators. An interview will not be required. The requirements are as follows:

- US citizen or permanent resident
- An earned or expected bachelor’s degree from a U.S. accredited college or university before matriculation into the program



- The program will also consider International Students or students who graduated from a reputable college outside the U.S. Applicants must meet all the international requirements of the RVU Office of Admissions and must demonstrate English language proficiency (interview required).
- Completion of all prerequisite coursework with a grade of 'C' or better in each course
- An overall GPA minimum of 2.7 (on a 4.0 scale)
- Official standardized test scores: GRE, MCAT, PCAT, or DAT (others potentially approved upon request)
- Resume including all relevant volunteer and paid work experience, along with service and leadership activities as well as any engagement in diversity, equity, and inclusion initiatives.
- Two Letters of Recommendation written by individuals who can evaluate the applicant's background and educational work ethic.

### Transcripts

An official transcript must be sent directly to RVU-Montana from the qualifying degree granting institution. Official test scores must be sent directly from the testing agency to RVU-Montana.

Transcripts and test scores can be sent digitally from the institution to [jsparling@rvu.edu](mailto:jsparling@rvu.edu) or physically to:

**Rocky Vista University**  
**Attn: Admissions**  
 4130 Rocky Vista Way  
 Billings, MT 59106

<b>Total Credits</b>	<b>0</b>
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## Master of Physician Assistant Studies (PA)

### Curriculum

#### Competency-Based Medical Education Model

The Rocky Vista University (RVU) Physician Assistant (PA) Program designed its curriculum in the competency-based medical education (CBME) model. CBME is defined as an outcome-based approach to the design, implementation, assessment, and evaluation of a medical education program and its learners using an organizing framework of competencies.

The PA Program is a 27-month curriculum developed and implemented under the authority of the Provost following approval by the PA Program Curriculum Committee and the RVU Institutional Curriculum Committee. The PA Program website contains details of the curriculum.

## Year I - Semester I (Fall)

Item #	Title	Credits
PAS 5001	Interprofessional Education Seminar I	1
PAS 5111	Normal Human Development I	2
PAS 5113	Molecular and Cellular Concepts I	4
PAS 5115	Anatomy I	4
PAS 5131	Clinical Medicine: Professional Seminar I	3
PAS 5133	Clinical Medicine: Illness and Disease I	4
PAS 5135	Clinical Medicine: Evidence-Based Practice I	2
PAS 5137	Clinical Medicine: Skills and Assessment 1	4
PAS 5139	Reasoning and Application I	3

## Year I - Semester II (Spring)

Item #	Title	Credits
PAS 5002	Interprofessional Education Seminar II	1
PAS 5112	Normal Human Development II	1
PAS 5114	Molecular and Cellular Concepts II	5
PAS 5116	Anatomy II	4
PAS 5132	Clinical Medicine: Professional Seminar II	2
PAS 5134	Clinical Medicine: Illness and Disease II	6
PAS 5136	Clinical Medicine: Evidence-Based Practice II	2
PAS 5138	Clinical Medicine: Skills and Assessment II	5
PAS 5140	Reasoning and Application II	3

## Year I - Semester III (Summer)

Item #	Title	Credits
PAS 5150	Introduction to Supervised Clinical Practice Experiences	1
PAS 5251	Clinical Seminar I	1
PAS 5261	Supervised Clinical Practice I	10

## Year II - Semester I (Fall)

Item #	Title	Credits
PAS 5252	Clinical Seminar II	1
PAS 5262	Supervised Clinical Practice II	14

## Year II - Semester II (Spring)

Item #	Title	Credits
PAS 5253	Clinical Seminar III	1
PAS 5263	Supervised Clinical Practice III	14

## Year II - Semester III (Summer)

Item #	Title	Credits
PAS 5254	Clinical Seminar IV	1
PAS 5264	Supervised Clinical Practice IV	10
PAS 5271	Research Proposal	1

## Year III - Semester I (Fall)

Item #	Title	Credits
PAS 5272	Capstone	11
PAS 5233	Professional Seminar III	1
<b>Total Credits</b>		<b>122</b>

## Master of Science in Biomedical Sciences (MSBS) Curriculum

The MSBS program's innovative curriculum is designed to graduate competent students who are prepared for success in a graduate, professional training program in a health sciences field. The curriculum emphasizes interdisciplinary collaboration and correlates foundational science information with clinical application. The MSBS program defines one credit hour for every 15 contact hours.

### Semester I - Fall

Item #	Title	Credits
BMS 5012	Foundations of Success	1
BMS 5011	Evidence-Based Medicine	2
BMS 5008	Medical Humanities	1
BMS 5021	Molecular Basis of Medicine I	2
BMS 5041	Physiology I	4
BMS 5051	Human Anatomy I	2
BMS 5060	Microbiology and Infectious Diseases	3

### Semester II - Spring

Item #	Title	Credits
BMS 5002	Biomedical Pharmacology	3
BMS 5010	Journal Club	2
BMS 5022	Molecular Basis of Medicine II	2
BMS 5042	Physiology II	4
BMS 5052	Human Anatomy II	2
BMS 5070	Immunology	3
<b>Total Credits</b>		<b>31</b>

## Pre-Clinical Curriculum (RVUCOM)

### OMS I - Semester One - Fall

Item #	Title	Credits
IPE 1901	Introduction to Interprofessional Education Seminar I	1
OM 1003	Cardiovascular System I	3
OM 1004	Respiratory System I	2
OM 1012	Molecular and Cellular Mechanisms	4
OM 1013	Musculoskeletal System I	7
OM 1015	Osteopathic Principles and Practice I	3
OM 1019	Principles of Clinical Medicine I	3
OM 1021	Renal System I	2
OM 1023	Hematology and Immunology I	3
OM 1070	Introduction to Evidence-Based Medicine	1

### OMS I - Semester Two - Spring

Item #	Title	Credits
IPE 1902	Introduction to Interprofessional Education Seminar II	1
OM 1006	Endocrine/Reproductive System I	4
OM 1007	Gastrointestinal System I	3
OM 1014	Neuroscience System I	8
OM 1016	Osteopathic Principles and Practice II	2
OM 1020	Principles of Clinical Medicine II	3
OM 1040	Medical Ethics	1
OM 1080	Transition to Clinical Medicine	4
OM 1090	Microbes and Infectious Diseases	3

### OMS II - Semester One - Fall

Item #	Title	Credits
OM 2003	Hematologic/ Lymphatic System II	3
OM 2005	Cardiovascular System II	5
OM 2006	Respiratory System II	4
OM 2009	Gastrointestinal System II	4
OM 2013	Renal System II	5
OM 2016	Osteopathic Principles and Practice III	3
OM 2018	Principles of Clinical Medicine III	4



## OMS II - Semester Two - Spring

Item #	Title	Credits
OM 2001	Musculoskeletal System II	3
OM 2002	Neuroscience System II	4
OM 2008	Endocrine System II	3
OM 2014	Reproductive System II	3
OM 2017	Osteopathic Principles and Practice IV	2
OM 2019	Principles of Clinical Medicine IV	3
OM 2020	Psychiatry System	2
OM 2040	Advanced Medical Ethics	1
OM 2070	Pre-Clinical Capstone	2

## OMS III and IV Clinical Requirements

Item #	Title	Credits
MED 3001	Fundamentals of Clinical Medicine	2
OST 3010/ OST 3011	Advanced OPP Clinical Integration	2
OST 4010/ OST 4011	Advanced OPP Clinical Integration I and II	2

## Required Core Externships

Item #	Title	Credits
FAM 3001	Family Medicine Core	8
INT 3001/ 3002	Internal Medicine Core	8
PED 3001	Pediatrics Core	4
BHM 3001	Behavioral Medicine Core	4
SRG 3000	Fundamentals of Surgery	1
SRG 3001/ 3002	Surgery Core	7
WMN 3001	Women's Health Core	4
	4000+ Choice of Elective	8

## Required Elective Externships

Item #	Title	Credits
	Required Elective Clerkships	45
	Minimum 2 Required Audition Externships	
	<b>Total Credits</b>	<b>204</b>

# Courses

## Biomedical Sciences

### **BMS 5002 : Biomedical Pharmacology**

Biomedical pharmacology presents an overview of the basic concepts and principles of pharmacology complemented by selected topics in pharmacotherapeutics. Students explore mechanisms of drug action, pharmacokinetics, pharmacodynamics, pharmacogenomics, and toxicology. Additional classroom sessions highlight the basic and clinical pharmacology of agents that exert effects on a variety of physiologic systems. Students will be required to complete an innovative new drug capstone project demonstrating their ability to provide peer-feedback, work on a team, appropriately review and synthesize recent medical literature, and conduct an oral presentation. Successful completion of the course will prepare students for doctoral level study of pharmacology.

**Credits** 3

**Prerequisites**

None

### **BMS 5008 : Medical Humanities**

The Medical Humanities course examines the relationships between the humanities and biomedical sciences. Topics vary by year and include, but are not limited to, communication, implicit bias mitigation, human subject research history and ethics, professional identity formation, illness narratives. This course is grounded in a variety of literary and textual sources and involves small and large group discussions, collaboration, written analyses, service-learning, and critical reflection, all of which are intended to foster self-examination and compassionate behavior.

**Credits** 1

**Prerequisites**

None

### **BMS 5010 : Journal Club**

The course aims to provide MSBS students the opportunity to evaluate and investigate evidence through critically reading, interpreting, and presenting primary literature for peers, RVUCOM students, and faculty. This course helps students stay abreast of current knowledge in the field, develop presentation skills, and create solutions to real-world issues through applying knowledge from the biomedical sciences.

Topics will include advances across biomedical research and inter-professional teamwork. Emphasis is placed on developing presentation and teaching skills and in communicating scientific studies in seminar. The format of the course includes: 1) an introduction to and guided research of issues from national health initiatives (NIH, CDC, HHS and/or HRSA); 2) critical appraisal and formal presentation of biomedical research.

**Credits** 2

**Prerequisites**

None

### **BMS 5011 : Evidence-Based Medicine**

The role of Evidence-Based Medicine (EBM) is to foster students' information literacy and develop understanding of the process of evidence-based medicine in order to leverage, create, use, and connect information to scenarios. The course is organized around the five elements of evidence-based medicine: ASK, ACQUIRE, APPRAISE, APPLY, ASSESS. Each of those components will be explored in depth to increase the awareness, understanding, and skills of the students. Students will learn to identify and understand various research methodologies, research designs, and bio-statistical concepts as elements of developing their understanding of medical and scientific information.

**Credits** 2

**Prerequisites**

None

### **BMS 5012 : Foundations of Success**

This course is designed to introduce students to the foundational skills necessary to be a successful graduate student. This course will focus on a variety of techniques to increase student confidence and develop graduate level study skills, and professionalism. It will cover principles of learning strategies, problem solving, note-taking, test-taking, critical listening and thinking, self-assessment, goal setting, and time management.

**Credits** 1

**BMS 5021 : Molecular Basis of Medicine I**

This course is a two-semester course that incorporates a case-based approach to investigative fundamental biomedical concepts. The objective of the course is to promote student learning of the biochemical, molecular, and cellular mechanisms underlying normal physiology and metabolism, thus providing a foundation for understanding disease processes. The course provides a foundation in cellular and molecular biology, including cell structure, cellular macromolecules, DNA and RNA structure and function, protein synthesis, and regulation of gene expression, energetics, metabolism, regulation, organization and function of cellular organelles, flow of genetic information, and the regulation of selected cell activities.

**Credits 2**

**Prerequisites**

None

**BMS 5022 : Molecular Basis of Medicine II**

A continuation of BMS 5021, Molecular Basis of Medicine II, incorporates a case-based approach to investigative fundamental biomedical concepts. The objective of the course is to promote student learning of the biochemical, molecular, and cellular mechanisms underlying normal physiology and metabolism, thus providing a foundation for understanding disease processes. The course provides a foundation in cellular and molecular biology, including cell structure, cellular macromolecules, DNA and RNA structure and function, protein synthesis, and regulation of gene expression, energetics, metabolism, regulation, organization and function of cellular organelles, flow of genetic information, and the regulation of selected cell activities.

**Credits 2**

**Prerequisites**

None

**BMS 5041 : Physiology I**

This course is the first of two one-semester courses which together provide a complete systems-based curriculum to enable the student an opportunity to build a cognitive framework and knowledge base necessary to understand and medically apply normal human physiology to pathophysiology. Systems covered in the first semester include cellular physiology, homeostatic mechanisms, basic neurophysiology, the cardiovascular system, the respiratory system, and the renal system. Basic clinical skills, clinical reasoning, physical exam skills are also integrated throughout. This curriculum combines lecture with clinical correlations, case studies, independent study, projects, and simulation activities.

**Credits 4**

**Prerequisites**

None

**BMS 5042 : Physiology II**

A continuation of BMS5042 Physiology I, this course provides a systems-based curriculum to enable the student an opportunity to build a cognitive framework and knowledge base necessary to understand and medically apply normal human physiology to pathophysiology. Systems covered in the first semester include cellular physiology, homeostatic mechanisms, basic neurophysiology, the cardiovascular system, the respiratory system, and the renal system. Basic clinical skills, clinical reasoning, physical exam skills are also integrated throughout. This curriculum combines lecture with clinical correlations, case studies, independent study, projects, and simulation activities.

**Credits 4**

**Prerequisite Courses**

[BMS 5041: Physiology I](#)

**BMS 5051 : Human Anatomy I**

This is the first of a two-semester course encompassing all aspects of human functional anatomy and clinical gross anatomy. This course will focus on the gross anatomy of all systems in the human body. In addition, imaging techniques such as x-ray radiography, CT scans, and MRI emphasizing structural relationships will introduce students to a clinical perspective of the structure of the human body. Course objectives include the acquisition of anatomical structural knowledge, the development of oral presentation and written communication skills, as well as the development of critical assessment of biomedical literature. Students will experience hands on learning with cadavers dissection. Learning is facilitated through lecture, team problem based learning, and clinical case presentations.

**Credits 2**

**Prerequisites**

None

**BMS 5052 : Human Anatomy II**

This is the second of a two-semester course encompassing all aspects of human functional anatomy and clinical gross anatomy. This course will focus on the gross anatomy of all systems in the human body. In addition, imaging techniques such as x-ray radiography, CT scans, and MRI emphasizing structural relationships will introduce students to a clinical perspective of the structure of the human body. Course objectives include the acquisition of anatomical structural knowledge, the development of oral presentation and written communication skills, as well as the development of critical assessment of biomedical literature. Students will experience hands on learning with cadavers dissection. Learning is facilitated through lecture, team problem based learning, and clinical case presentations.

**Credits 2**

**Prerequisite Courses**

[BMS 5051: Human Anatomy I](#)

**BMS 5060 : Microbiology and Infectious Diseases**

This course introduces graduate students to fundamental principles of microbiology including microbial structure/diversity, microbial metabolism and pathogenicity, and classes and actions of antimicrobial drugs. This overview includes discussions of the interaction between pathogen and host during the infectious process and adaptations by the pathogens to overcome or evade the immune system and cause human disease. Representative microorganisms belonging to each class of pathogen (bacterial, viral, fungal, and parasitic) are discussed. Other topics will include emerging diseases, public health epidemiology, vaccines, antimicrobial resistance, and eradication of disease. A combination of methods will be used to deliver material including, but not limited to, didactic lectures, small group work, and case studies/applications.

**Credits** 3

**Prerequisites**

None

**BMS 5070 : Immunology**

This course is designed to introduce students to the foundational knowledge necessary to understand the normal and abnormal functions of the immune system. Immunological principles involving innate and adaptive immunity, host responses to pathogens, blood groups, immunopathology, immunodeficiencies, autoimmunity, vaccines, transplantation, classes and actions of immunologically active drugs, and targeted immunotherapies will be discussed. Didactic lectures, small group discussions, clinical case studies, designated reading assignments, and application sessions will be utilized in this course. In addition, there will be an interdisciplinary component to this course as students will also write critical reflections regarding team service-learning projects.

**Credits** 3

**Prerequisites**

None

## Osteopathic Medicine

**OM 1003 : Cardiovascular System I**

The Cardiovascular System is an intensive, multidisciplinary course structured with the goal of enabling the student to obtain the requisite knowledge necessary to understand the normal structure and function of the cardiovascular system. It is designed to provide the student with an overview of the cardiovascular system, including the biomedical science that underlies disorders of the heart and circulatory system. The structural content of this course utilizes lectures, human cadaver dissection, reading assignments, Designated Student Assignments (DSA), and Clinical Integrative Sessions (CIS).

**Credits** 3

**Prerequisites**

None

**OM 1004 : Respiratory System I**

The Respiratory System I course encompasses the macro and micro-structure of the respiratory system and the basics of respiratory function, including Perfusion and Diffusion, Ventilation, Gas Transport, Mechanics of Breathing, Acid/Base Balance, Control of Breathing, and Pulmonary Defense Mechanisms. Each topic area is examined individually then integrated into case studies to illustrate pulmonary function. By the conclusion of the course, the student will be able to relate how the lung and chest function to control oxygen delivery to organs and carbon dioxide elimination, and will be able to identify common respiratory diseases based on laboratory findings and lung function.

**Credits** 2

**Prerequisites**

None

**OM 1006 : Endocrine/Reproductive System I**

The Endocrine/Reproductive System I course is designed to teach the basic principles of hormone secretion and action related to the major endocrine structures and reproductive and systemic tissues. Students are expected to be familiar with the structure and function of the major endocrine glands and the action of the major hormones secreted. This course will focus on the anatomy, histology, and physiology of endocrine and reproductive systems as a basis for understanding the pathological conditions resulting from endocrine dysfunction.

**Credits** 4

**Prerequisites**

None

**OM 1007 : Gastrointestinal System I**

The Gastrointestinal System course is an intensive, multidisciplinary course designed to provide a basic biomedical science foundation for students. This course will provide the requisite knowledge necessary to understand the normal structure and function of the entire gastrointestinal and hepatobiliary system. The entire course will be devoted to an intensive look at basic physiological principles involved in digestion, absorption, secretion, and gastrointestinal motility, including the hepatobiliary and pancreatic systems. Emphasis will be also on the GI structure including embryology, histology, microscopic, and gross anatomy. It will provide the students with an in-depth knowledge of normal structure and function of GI tract and hepatobiliary system; regulation of mechanical and chemical digestive processes of the gastrointestinal (GI) tract and the accessory organs of digestion; the nervous and hormonal mechanisms regulating control of secretion in the digestive organs; and absorption and elimination of food. The goal of this course is to provide the students with knowledge of how GI structure (embryology, histology, microscopic, and gross anatomy) integrates with function (physiologic mechanisms of GI motility, digestion and absorption, and liver and pancreatic function). Students will then be able to describe the mechanisms contributing to absorption of nutrients into the body and apply their basic medical science knowledge to clinical problem-solving.

**Credits 3****Prerequisites**

None

**OM 1012 : Molecular and Cellular Mechanisms**

This course is a trans-disciplinary course that incorporates the fundamental aspects of biochemistry, molecular biology, cell biology, and genetics. It is presented using lectures, clinical correlations, medical vignettes, directed assignments, and integrated learning sessions. The objective of the course is to promote student learning of the biochemical, molecular, and cellular mechanisms underlying normal physiology and metabolism, thus providing a foundation for understanding disease processes. The course provides a foundation in cellular and molecular biology, including cell structure, cellular macromolecules, DNA and RNA structure and function, protein synthesis, and regulation of gene expression, energetics, metabolism, regulation, organization and function of cellular organelles, flow of genetic information, and the regulation of selected cell activities.

**Credits 4****Prerequisites**

None

**OM 1013 : Musculoskeletal System I**

The Musculoskeletal System course is multidisciplinary in nature. It is structured to enable the student to obtain the requisite knowledge necessary to understand the normal structure and function of the musculoskeletal system, as well as the biomedical science that underlies disorders associated with skeletal muscle, bone, joints, and peripheral nerves. The course utilizes lectures, human cadaver dissection laboratories, reading assignments, Designated Student Assignments (DSA), Basic Science Correlations (BSC), and Clinical Integrative Sessions (CIS).

**Credits 7****Prerequisites**

None

**OM 1014 : Neuroscience System I**

The Neuroscience System course presents the student with an intense consideration of the Central Nervous System (Brain and Spinal Cord) and Head and Neck anatomy. The Neuroanatomy portion of this course addresses the following topics in integrated fashion: Neuroanatomy, Neurophysiology, Neurohistology, Neuroembryology, and Neuroradiology. The study of Neuroanatomy and Head and Neck anatomy are bridged by the cranial nerves which begin in the central nervous system and distribute throughout the head and neck. Concepts in this course are presented utilizing traditional/clinical lectures, human cadaver/brain dissection laboratories, and reading assignments. These concepts are reinforced by numerous clinically-based lectures and Clinical Integrative Sessions (CIS), which emphasize the importance of integrating basic neuroanatomical knowledge with the clinical symptoms presented by a neurological deficit.

**Credits 8****Prerequisites**

None

**OM 1015 : Osteopathic Principles and Practice I**

This course is designed to provide the student with a fundamental understanding of the principles and philosophies of osteopathic medicine. This understanding will allow a foundation for students to build osteopathic knowledge and provide every student the chance to offer their patients an additional approach to conventional medical care. This course will also emphasize the current biomechanical, functional, and physiologic philosophies providing a foundation for continued future education and development within the art and science of osteopathic medicine.

All seven core competencies of the Osteopathic Profession are addressed in a variety of ways in the course. In addition, medical knowledge, patient care, interpersonal communication skills, and professionalism are woven into the labs during hands on interactions with faculty members and fellow students. The course is designed to be foundational in knowledge, with clinical application emphasized when appropriate, to help the students learn not only the lexicon of OMM but also its application in medical care. The students are allowed time during and after lab to practice and master what has been taught and demonstrated.

**Credits** 3

**Prerequisites**

Successful completion of all Year 1 coursework.

**OM 1016 : Osteopathic Principles and Practice II**

This course is a continuation of OM 1015 Osteopathic Principles and Practice I and is designed to provide the student with a fundamental understanding of the principles and philosophies of osteopathic medicine. This understanding will allow a foundation for students to build osteopathic knowledge and provide every student the chance to offer their patients an additional approach to conventional medical care. This course will also emphasize the current biomechanical, functional, and physiologic philosophies providing a foundation for continued future education and development within the art and science of osteopathic medicine.

All seven core competencies of the Osteopathic Profession are addressed in a variety of ways in the course. In addition, medical knowledge, patient care, interpersonal communication skills, and professionalism are woven into the labs during hands on interactions with faculty members and fellow students. The course is designed to be foundational in knowledge, with clinical application emphasized when appropriate, to help the students learn not only the lexicon of OMM but also its application in medical care. The students are allowed time during and after lab to practice and master what has been taught and demonstrated.

**Credits** 2

**Prerequisites**

Successful completion of all Year 1 coursework.

**OM 1019 : Principles of Clinical Medicine I**

The course is the first of four PCM courses designed to provide the student with the knowledge and educational experiences that will allow the student to develop active clinical thinking skills, acquire medical and social knowledge, develop the skills needed to complete a comprehensive or focused history and physical examination, demonstrate documentation and order-writing skills, demonstrate competency and the clinical application of basic medical procedures, and develop critical clinical thinking. The course content will be divided into several areas that include history and physical exam, skills laboratories and small group discussions, basic medical procedures, doctor-patient relationship skills, ethics, community medicine, clinical thinking and problem solving, and standardized patient experiences.

**Credits** 3

**Prerequisites**

None

**OM 1020 : Principles of Clinical Medicine II**

The course is the second of four PCM courses designed to provide the student with the knowledge and educational experiences that will allow the student to develop active clinical thinking skills, acquire medical and social knowledge, develop the skills needed to complete a comprehensive or focused history and physical examination, demonstrate documentation and order-writing skills, demonstrate competency and the clinical application of basic medical procedures, and develop critical clinical thinking. The course content will be divided into several areas that include history and physical exam, skills laboratories and small group discussions, basic medical procedures, doctor-patient relationship skills, ethics, community medicine, clinical thinking and problem solving, and standardized patient experiences.

**Credits** 3

**Prerequisites**

None



**OM 1021 : Renal System I**

This course utilizes a multidisciplinary approach to prepare students with a foundational understanding of the normal structure and function of the renal system.

In addition to instruction relating to the basic functional principles of the organs of urine production and excretion, this course integrates the principle, relevant clinical correlations. It includes the gross anatomy, histology, and embryology of the kidney and urinary tract. A thorough investigation of the essential physiology of kidney function will include the primary renal processes, urine formation, and renal blood flow.

In addition, the renal system's role in ion regulation, acid-base balance, fluid volume, and salt-water balance will be examined along with the regulatory control mechanisms of these functions. An understanding of the renal system will be accomplished through student involvement in lectures, directed student assignments, and clinical interactive sessions.

**Credits 2**

**Prerequisites**

None

**OM 1023 : Hematology and Immunology I**

This course is multidisciplinary, emphasizing the foundational knowledge necessary to understand the normal function of the immune system, the red cell, and coagulation. It is designed to provide the student with an overview of the human immune system, including the aberrant immunological processes that lead to immunopathogenesis. This course will utilize lectures, designated reading assignments, and clinical integrative case discussions.

**Credits 3**

**Prerequisites**

None

**OM 1040 : Medical Ethics**

Medical Ethics is a competency-based course that applies ethical principles to medical practice, healthcare policy, and biomedical research. Participants learn to recognize ethical issues; engage in moral reasoning; and make decisions that respect the rights of patients, fulfill the obligations of physicians, and increase the quality, safety, and availability of healthcare. The emphasis of this course centers around the philosophy and principles underlying medical ethics, medical decision making, research ethics, physician-patient relationships and end-of life ethical issues. Graded pass/fail/honors.

**Credits 1**

**Prerequisites**

None

**OM 1070 : Introduction to Evidence-Based Medicine**

Introduction to Evidence-Based Medicine is a semester-long competency-based course that fosters information literacy and evidence-based practice. This course develops student doctors' skills and abilities to determine a need for, locate, access, evaluate, and present medical information. Designated student assignments and clinical integration sessions introduce standards, resources, strategies, and technologies that are then applied by small groups in developing and presenting a clinical case in a capstone activity. Graded pass/fail.

**Credits 1**

**Prerequisites**

None

**OM 1080 : Transition to Clinical Medicine**

This course is a foundational introduction to mechanisms of disease (and some therapy) and will serve as a means to migrate from acquisition of basic scientific knowledge to utilization of such knowledge in understanding disease processes. During this course, there will be a transition towards clinical thinking while integrating the scientific foundation that explains the clinical manifestations of the disorders covered. The course consists variably of lectures, student designated (and scheduled) self-study (DSA), clinical contextual integrations, and case-based interactive learning sessions (CIS). Broad topic areas to be emphasized include cellular damage, inflammation, healing and tissue repair, immunopathology, pathophysiology of hemodynamic and hemostatic disorders, genetic diseases, mechanisms of neoplasia, medical microbiology and its applications in infectious disease, environmental and nutritional disorders, an overview of diseases of infancy and childhood, and introductory pharmacology of antimicrobials. Throughout the courses, the language of medicine is emphasized in conjunction with etiologic mechanisms, clinical features, differential diagnoses, and morphology. In addition, important aspects of clinical laboratory involvement and data utilization in the diagnosis of disease are discussed, as appropriate. It is expected that students in this course will function as mature adult learners and will seek all the knowledge necessary from any and all sources available.

**Credits 4**

**Prerequisites**

None

**OM 1090 : Microbes and Infectious Diseases**

This course is a foundational introduction to pathogens, pathogenic mechanisms, and infectious diseases (and some therapy). This course covers bacteria, viruses, fungi, parasites, and prions in their roles as infectious agents. The course requires, and builds on, previous knowledge of immunology and how it relates to the body's reactions to pathogens. It will serve as a means to migrate from acquisition of basic scientific knowledge of pathogens to utilization of such knowledge in understanding infectious disease processes. We will start with basic concepts of infections, progress to learning the microbiology of specific pathogens, learn how to identify and test for these pathogens, and conclude with the clinical implications of the discussed pathogens. The course consists variably of live and video lectures, student designated (and scheduled) self-study (DSA), clinical contextual integrations, and case-based interactive learning sessions (CIS). Students will understand the structure, pathogenicity, laboratory findings, and clinical aspects of numerous pathogens. Throughout the course, the language of medicine is emphasized in conjunction with etiologic mechanisms, clinical features, differential diagnoses, and morphology. This course includes introductory pharmacology of antimicrobials in order to facilitate discussion of infectious disease diagnosis and treatment. In addition, important aspects of clinical laboratory involvement and data utilization in the diagnosis of disease are discussed as appropriate. It is expected that students in this course will function as mature adult learners and will seek all the knowledge necessary from any and all sources available.

**Credits 3****Prerequisites**

None

**OM 2001 : Musculoskeletal System II**

The Musculoskeletal System II course is designed to deliver pertinent topics of diseases of skin, bone, joint, soft tissue, peripheral nerve, and skeletal muscle in a multidisciplinary format. Neuromuscular physiology will be reviewed at the beginning of the course. Pathological concepts of disease presentation, pathophysiology, and outcomes will be discussed. Anti-inflammatory and neuromuscular pharmacology will be integrated into the therapy of these disorders. There will be a clinical integration of rheumatologic disorders, gout and crystal joint disease, dermatology connective tissue disease, and vasculitides.

**Credits 3****Prerequisites**

Successful completion of all Year 1 coursework

**OM 2002 : Neuroscience System II**

This course is designed to use the neuroanatomy and neurophysiology basic science information presented in Year 1 to underpin a comprehensive overview of neuropathology, including both non-neoplastic and neoplastic diseases. Neuroanatomy, neurophysiology, and clinical neurology are integrated to build the clinical framework necessary to succeed during Year 3 and Year 4 clinical clerkships. Relevant and necessary neurohistology, neuroembryology, and neuroradiology are discussed.

**Credits 4****Prerequisites**

Successful completion of all Year 1 coursework

**OM 2003 : Hematologic/ Lymphatic System II**

This course is designed to provide the student with a comprehensive overview of hematology and hematopathology. All blood cell lines will be discussed in the context of the pathophysiology and pathology of both non-neoplastic and neoplastic diseases. Specifically, the course will begin with sessions on hematopoiesis, followed by discussions of red cell disorders and the clinical work-up of anemia. Common diagnostic tests and their interpretation will be integrated into this initial content. Information regarding white cell disorders then will be presented, including non-neoplastic disorders and neoplastic disorders such as leukemias, non-Hodgkin lymphomas, and Hodgkin lymphoma. An in-depth treatment of bleeding and hypercoagulable disorders will be provided. In addition, students will be exposed to concepts related to solid organs of the hematologic/lymphatic system, the spleen and thymus, transfusion medicine, the molecular biology of red cells, and pertinent pharmacologic information related to the treatment of anemia and the use of pharmacologic agents aimed at modulating the immune system, coagulation, fibrinolysis, and neoplastic diseases.

**Credits 3****Prerequisites**

Successful completion of all Year 1 coursework

**OM 2005 : Cardiovascular System II**

The Cardiovascular System II course is an intensive multidisciplinary course structured with the goal of enabling the student to obtain the requisite knowledge necessary to understand the pathophysiology, pharmacology, and clinical medicine of the cardiovascular system. After completion of the course, each student will be able to recognize the presenting signs and symptoms of various cardiovascular diseases and be able to ascertain and differentiate the various entities involved in cardiac health and disease, with an eye to treatment of various cardiovascular disorders. Various aspects of evaluating cardiac patients will be presented, with special emphasis on interpretation of EKGs.

**Credits 5****Prerequisites**

Successful completion of all Year 1 coursework

**OM 2006 : Respiratory System II**

The Respiratory System II course will concentrate on the pathology, pathophysiology, diagnosis, and treatment of major disorders of the lungs, and the relationship multisystem diseases have with the pulmonary system. Student activities will concentrate on the fundamental obstructive, restrictive, and infectious diseases. Pulmonary emergencies and primary and secondary malignancies will be presented, with an emphasis on diagnostic techniques and treatment methodologies.

**Credits 4**

**Prerequisites**

Successful completion of all Year 1 coursework

**OM 2008 : Endocrine System II**

The Endocrine System II course will review the basic principles of endocrine hormone signaling, storage, secretion, and action. Abnormalities in normal endocrine physiology will be discussed through pathophysiology correlations and clinical discussions.

The course will emphasize the hypothalamic/pituitary complex, thyroid, parathyroid, adrenal, and endocrine functions of the pancreas. Students are expected to be familiar with the hypofunctioning or hyperfunctioning of key endocrine glands, the structure, secretion, and action of endocrine hormones (peptide, steroid and thyroid hormones), and the major clinical endocrine disorders related thereto. Pharmacology as it relates to hormone secretion and action will be discussed, as will pharmacological treatment of glandular hormonal under and over production. Emphasis will be placed on understanding the pathophysiology of each endocrine gland with the intent to use the general principles of endocrine pathophysiology and pharmacology to effectively diagnose, manage, and care for patients with endocrine disorders.

**Credits 3**

**Prerequisites**

Successful completion of all Year 1 coursework

**OM 2009 : Gastrointestinal System II**

The course covers the gastrointestinal system, including the hepatobiliary and pancreatic systems. After a brief review of normal physiologic principles and processes, the initial two weeks are devoted to a thorough study of gastrointestinal pathology. Clinicopathological correlations are emphasized. The remainder of the course is devoted to the application of the integrated pathophysiological principles in clinical settings under the guidance of appropriate clinical faculty. Material that has been previously covered is integrated into clinical application and used to build the clinical framework needed to be a competent osteopathic physician. Emphasis is placed on understanding the pathophysiology and the ability to correlate and use basic principles in the management of gastrointestinal disorders. Clinical discussions and lectures focus on disease states the students will encounter throughout their careers.

**Credits 4**

**Prerequisites**

Successful completion of all Year 1 coursework

**OM 2013 : Renal System II**

The first week of the Renal System II course will focus on the general principles of pharmacology (i.e. pharmacodynamics, pharmacokinetics, drug biotransformation, and clinical trials). Also included in this first week is a basic review of autonomic pharmacology and subsequent introduction to the drugs that act on the autonomic nervous system. The remainder of the Renal System II course is structured using a fundamental template common to all second-year system courses. The Renal System II course will contain a brief review of renal medical physiology, followed by presentations of pathologic entities of the renal system. Clinically-focused topics are discussed during the final week of the course. Pharmacology topics as they relate to the renal system will be presented throughout the course when appropriate.

Broad topics to be emphasized include the wide spectrum of physiologic functions of the human kidney, pathologic renal entities (e.g. glomerulopathy, glomerulonephritis, tubulointerstitial disorders, infections, toxic and ischemic insults, vascular disease, and neoplasms), drugs used in the treatment of hypertension, and clinical aspects of the above-mentioned disorders. Key aspects of clinical laboratory test ordering and data utilization in the diagnosis and monitoring of kidney and urinary tract disease are discussed.

**Credits 5**

**Prerequisites**

Successful completion of all Year 1 coursework

**OM 2014 : Reproductive System II**

This course will cover female and male health-related reproductive issues. Following a review of normal reproductive physiology, pathophysiological perspectives of the female genital tract, breasts, and pregnancy are presented. The approach to the gynecologic patient, including examination and diagnostic procedures, are discussed. All phases of pregnancy, including antepartum, labor/delivery, and post-partum care, are reviewed in concert with complications and procedures of each phase of pregnancy. Infectious and neoplastic pathology of the male genital tract is covered. Pharmacology as it relates to both female and male reproductive systems will be integrated throughout the course. Clinical correlations will focus on the pathology that students will encounter on clinical clerkships and throughout their medical career.

**Credits 3**

**Prerequisites**

Successful completion of all Year 1 coursework

**OM 2016 : Osteopathic Principles and Practice III**

This course is a continuation of OM 1016 Osteopathic Principles and Practice II and is designed to provide the student with a fundamental understanding of the principles and philosophies of osteopathic medicine. This understanding will allow a foundation for students to build osteopathic knowledge and provide every student the chance to offer their patients an additional approach to conventional medical care. This course will also emphasize the current biomechanical, functional, and physiologic philosophies providing a foundation for continued future education and development within the art and science of osteopathic medicine.

All seven core competencies of the Osteopathic Profession are addressed in a variety of ways in the course. In addition, medical knowledge, patient care, interpersonal communication skills, and professionalism are woven into the labs during hands on interactions with faculty members and fellow students. The course is designed to be foundational in knowledge, with clinical application emphasized when appropriate, to help the students learn not only the lexicon of OMM but also its application in medical care. The students are allowed time during and after lab to practice and master what has been taught and demonstrated.

**Credits 3**

**Prerequisites**

Successful completion of all Year 1 coursework

**OM 2017 : Osteopathic Principles and Practice IV**

This course is a continuation of OM 2016 Osteopathic Principles and Practice III and is designed to provide the student with a fundamental understanding of the principles and philosophies of osteopathic medicine. This understanding will allow a foundation for students to build osteopathic knowledge and provide every student the chance to offer their patients an additional approach to conventional medical care. This course will also emphasize the current biomechanical, functional, and physiologic philosophies providing a foundation for continued future education and development within the art and science of osteopathic medicine.

All seven core competencies of the Osteopathic Profession are addressed in a variety of ways in the course. In addition, medical knowledge, patient care, interpersonal communication skills, and professionalism are woven into the labs during hands on interactions with faculty members and fellow students. The course is designed to be foundational in knowledge, with clinical application emphasized when appropriate, to help the students learn not only the lexicon of OMM but also its application in medical care. The students are allowed time during and after lab to practice and master what has been taught and demonstrated.

**Credits 2**

**Prerequisites**

Successful completion of all Year 1 coursework

**OM 2018 : Principles of Clinical Medicine III**

The course is the third of four PCM courses designed to provide the student with the knowledge and educational experiences that will allow the student to develop active clinical thinking skills, acquire medical and social knowledge, develop the skills needed to complete a comprehensive or focused history and physical examination, demonstrate documentation and order-writing skills, demonstrate competency and the clinical application of basic medical procedures, and develop critical clinical thinking. The course content will be divided into several areas that include history and physical exam, skills laboratories and small group discussions, basic medical procedures, doctor-patient relationship skills, ethics, community medicine, clinical thinking and problem solving, and standardized patient experiences.

**Credits 4**

**Prerequisites**

Successful completion of all Year 1 coursework

**OM 2019 : Principles of Clinical Medicine IV**

The course is the final PCM course in the four-course series designed to provide the student with the knowledge and educational experiences that will allow the student to develop active clinical thinking skills, acquire medical and social knowledge, develop the skills needed to complete a comprehensive or focused history and physical examination, demonstrate documentation and order-writing skills, demonstrate competency and the clinical application of basic medical procedures, and develop critical clinical thinking. The course content will be divided into several areas that include history and physical exam, skills laboratories and small group discussions, basic medical procedures, doctor-patient relationship skills, ethics, community medicine, clinical thinking and problem solving, and standardized patient experiences.

**Credits 3**

**Prerequisites**

Successful completion of all Year 1 coursework

**OM 2020 : Psychiatry System**

Psychiatry System is structured to expose students to psychiatric and behavioral medical issues commonly seen in practice. The psychiatric component of the course will focus on mental health disorders such as depression, bipolar disorder, mania, psychosis, anxiety, and drug abuse. Symptoms of these disorders will be explored in detail with a heavy emphasis on the available pharmacologic treatments. The behavioral component will explore issues related to human development and abnormal behavior such as paraphilias and eating disorders.

**Credits 2**

**Prerequisites**

Successful completion of all Year 1 coursework

**OM 2040 : Advanced Medical Ethics**

Advanced Medical Ethics is a competency-based course that applies ethical principles to medical practice, healthcare policy, and biomedical research. Participants learn to recognize ethical issues; engage in moral reasoning; and make decisions that respect the rights of patients, fulfill the obligations of physicians, and increase the quality, safety, and availability of healthcare. This course utilizes and builds on the principles learned in the Introduction to Medical Ethics.

Areas of emphasis are cross-cultural ethics, transplantation ethics, ethics in medical economics, ethical issues in the specialties of surgery, pediatrics, OB/GYN, psychiatry and genomic medicine, ethical issues in public health and healthcare information, and ethical issues that students and house staff face during their clinical clerkships. Graded pass/fail/honors.

**Credits 1**

**Prerequisites**

Successful completion of all Year 1 coursework

**OM 2070 : Pre-Clinical Capstone**

The Pre-Clinical Capstone course is a required, structured course that provides an opportunity for student synthesis and integration of all pre-clinical content and concepts. It is designed to facilitate student self-assessment of key concepts in biomedical disciplines and development of knowledge in areas of weakness. This is accomplished through a required full-length practice board exam at the beginning of the course that allows for student identification of knowledge gaps. Subsequently, students develop and submit a required study plan aimed at addressing content/subject deficits. After identification of areas of concentration for study, students complete required practice item banks with concentration on those areas identified for improvement and then complete a required full-length practice board exam to gauge their progress.

**Credits 2**

**Prerequisites**

Successful completion of all Year 1 and 2 coursework

## Behavioral Medicine

**BHM 3001 : Behavioral Medicine Core**

The Behavioral Medicine Clerkship will provide clinical exposure to various aspects of mental health issues. Students will gain knowledge, experience, and competency in the diagnosis, classification, and treatment planning of psychiatric patients in the clinical setting. Students will also become competent in the skills of performing a psychiatric interview, developing a differential diagnosis, and identifying and managing psychiatric emergencies. Prerequisite: successful completion of all pre-clinical (Year 1 and Year 2) coursework.

It is critical to note that the clinical clerkship experience is not intended to teach the student everything on the subject of Behavioral Health Medicine nor provide the student with clinical experience in every aspect of the discipline. The Clerkship Director and the assigned Preceptor may provide educational guidance, but it is each student's individual responsibility to learn the subject content. Lifelong self-learning is the ultimate goal and is expected in this core clinical clerkship. Students must show that adequate direct patient care experience has been achieved by demonstrating adequate patient log support of an average of at least 4 outpatients or 2 inpatients per day.

**Credits 4**

**Prerequisites**

(Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

# Family Medicine

## **FAM 3001 : Family Medicine Core**

The Family Medicine Clerkship will provide didactic, simulation, and clinical exposure to various aspects of general family medicine. Students will begin the course with one-week of synchronous virtual sessions and asynchronous material. The second week includes a 2-day on-campus intensive, which emphasizes acquiring and demonstrating competency in women's health, neonatology, and pediatrics skills-set

development followed by a 3<sup>rd</sup> day of virtual assessments. Students will be given the opportunity to receive formative and constructive feedback using simulation to increase competency in these key clinical skills under the guidance of practicing clinicians. Students will then gain knowledge and experience and demonstrate competence in diagnosing and managing various acute and chronic medical conditions in the inpatient and/or outpatient clinical setting through clinical experience. In addition, students will become competent in a broad spectrum of primary care preventive, diagnostic, and therapeutic challenges within patients of various ages, genders, and cultures. Prerequisite: successful completion of all pre-clinical (Year 1 and Year 2) coursework.

It is critical to note that the clinical clerkship experience is not intended to teach the student everything on the subject of Family Medicine nor provide the student with clinical experience in every aspect of the discipline. The Clerkship Director and the assigned Preceptor may provide educational guidance, but it is each student's individual responsibility to learn the subject content. Lifelong self-learning is the ultimate goal and is expected in this core clinical clerkship. Students must show that adequate direct patient care experience has been achieved by demonstrating adequate patient log support of an average of at least 4 outpatients or 2 inpatients per day.

**Credits** 8

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## **FAM 4001 : Family Medicine Elective**

Family medicine is a medical specialty devoted to comprehensive healthcare for people of all ages. The aim of family medicine is to provide personal, comprehensive, and continuing care for the individual in the context of the family and the community.

Variable Credits

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## **FAM 4200 : Occupational Medicine**

Occupational medicine (formerly industrial medicine) is the branch of medicine concerned with the maintenance of health in the workplace, including prevention and treatment of diseases and injuries, with secondary objectives of maintaining and increasing productivity and social adjustment in the workplace.

Variable Credits

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## **FAM 4210 : Sports Medicine Elective**

Sports medicine, also known as sport and exercise medicine, is a branch of medicine that deals with physical fitness and the treatment and prevention of injuries related to sports and exercise.

Variable Credits

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

# Internal Medicine

## **INT 3001/3002 : Internal Medicine Core**

The Internal Medicine Clerkship will provide clinical exposure to breadth and diversity of disease. Students will gain knowledge, experience, and competence in the diagnosis and management of various acute and chronic medical conditions in outpatient and inpatient clinical settings. Students will also become competent in their history and physical diagnosis skills, develop the ability to prioritize patient problems and generate a differential diagnosis, and implement patient management strategies and observe their effects.

Prerequisite: successful completion of all pre-clinical (Year 1 and Year 2) coursework.

It is critical to note that the clinical clerkship experience is not intended to teach the student everything on the subject of Internal Medicine nor provide the student with clinical experience in every aspect of the discipline. The Clerkship Director and the assigned Preceptor may provide educational guidance, but it is each student's individual responsibility to learn the subject content. Lifelong self-learning is the ultimate goal and is expected in this core clinical clerkship. Students must show that adequate direct patient care experience has been achieved by demonstrating adequate patient log support of an average of at least 4 outpatients or 2 inpatients per day.

**Credits** 8

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.



**INT 4001 : Internal Medicine Elective**

Internal medicine is the medical specialty dealing with the prevention, diagnosis, and treatment of adult diseases.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**INT 4200 : Nephrology Elective**

Nephrology is a specialty of medicine and pediatrics that concerns itself with the kidneys: the study of normal kidney function and kidney problems, the preservation of kidney health, and the treatment of kidney problems, from diet and medication to renal replacement therapy (dialysis and kidney transplantation). Systemic conditions that affect the kidneys (such as diabetes and autoimmune disease) and systemic problems that occur as a result of kidney problems (such as renal osteodystrophy and hypertension) are also studied in nephrology.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**INT 4210 : Infectious Disease Elective**

The branch of medicine that focuses on infections is referred to as infectious disease. Infectious disease, also known as transmissible disease or communicable disease, is illness resulting from an infection. Infections are caused by infectious agents including viruses; viroids; prions; bacteria; nematodes such as parasitic roundworms and pinworms; arthropods such as ticks, mites, fleas, and lice; fungi such as ringworm; and other macroparasites such as tapeworms and other helminths.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**INT 4220 : Rheumatology Elective**

Rheumatology is a branch of medicine devoted to the diagnosis and therapy of rheumatic diseases. Rheumatologists deal mainly with immune-mediated disorders of the musculoskeletal system, soft tissues, autoimmune diseases, vasculitides, and heritable connective tissue disorders. Many of these diseases are now known to be disorders of the immune system. Rheumatology is considered to be the study and practice of medical immunology.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**INT 4230 : Cardiology Elective**

Cardiology is a branch of medicine dealing with disorders of the heart as well as parts of the circulatory system.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) course-work and passing score on COMLEX Level 1.

**INT 4240 : Hematology**

Hematology is the branch of medicine concerned with the study of the cause, prognosis, treatment, and prevention of diseases related to blood.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**INT 4250 : Hematology/Oncology Elective**

The diagnosis, treatment, and prevention of blood diseases (hematology) and cancer (oncology) and research into them. Hematology-oncology includes such diseases as iron deficiency, anemia, hemophilia, sickle cell disease, the thalassemias, leukemias, and lymphomas, as well as cancers of other organs.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**INT 4260 : Oncology Elective**

Oncology is a branch of medicine that deals with the prevention, diagnosis, and treatment of cancer.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**INT 4270 : Pulmonology Elective**

Pulmonology is a medical specialty that deals with diseases involving the respiratory tract.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**INT 4280 : Endocrinology Elective**

Endocrinology is a branch of biology and medicine dealing with the endocrine system, its diseases, and its specific secretions known as hormones.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**INT 4290 : Gastroenterology Elective**

Gastroenterology is the branch of medicine focused on the digestive system and its disorders. Diseases affecting the gastrointestinal tract, which include the organs from mouth into anus, along the alimentary canal, are the focus of this specialty.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**INT 4300 : Geriatrics Elective**

Geriatrics, or geriatric medicine, is a specialty that focuses on healthcare of elderly people. It aims to promote health by preventing and treating diseases and disabilities in older adults.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**INT 4310 : Allergy/Immunology Elective**

Allergy and immunology involves the management of disorders related to the immune system. These conditions range from the very common to the very rare, spanning all ages and encompassing various organ systems.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Interprofessional Education

**IPE 1901 : Introduction to Interprofessional Education Seminar I**

This two-semester course introduces the fundamental principles of interprofessional education including roles and responsibilities, contributions of individual team members, communication skills that ensure smooth transition of care to other team members, and the impact of teams on population health and quality of care. As part of the course design, learners from the Doctor of Osteopathic Medicine program will interact with students from other health profession programs within RVU and in collaboration with extramural programs, as available.

**Credits** 1

**Prerequisites**

None

**IPE 1902 : Introduction to Interprofessional Education Seminar II**

This two-semester course introduces the fundamental principles of interprofessional education including roles and responsibilities, contributions of individual team members, communication skills that ensure smooth transition of care to other team members, and the impact of teams on population health and quality of care. As part of the course design, learners from the Doctor of Osteopathic Medicine program will interact with students from other health profession programs within RVU and in collaboration with extramural programs, as available.

**Credits** 1

**Prerequisites**

None

**IPE 5030 : Comparative Healthcare Professions and Practices**

This investigational course will engage students and faculty from multiple higher education institutions representing diverse health science professions in asynchronous, online presentations and discussions of clinical case studies. Students will learn how to compare diverse healthcare professions on the basis of practice scope and professional philosophies. Students will also learn how diverse healthcare professions prevent, treat, and diagnose common health conditions. At the conclusion of this course, students will have an enhanced understanding of how diverse healthcare professionals can collaborate in the delivery of coordinated, integrated, and cost effective primary care. Additionally, at the conclusion of this course, the participating higher education institutions will be able to anticipate the institutional requirement for inter-institutional online learning. Participants may include osteopathic, allopathic, naturopathic, Eastern Medicine, pharmacy, physician assistant, nursing, and other healthcare professions representatives. Special permission required.

**Credits** 1

## Medicine - General

**MED 2001 : Vaccine I Elective**

Students will obtain an in-depth understanding of how vaccines are produced by industry, undergo preclinical evaluation, vaccine public health topics, and evaluation for efficacy in clinical trials. The goal will be to inform students about vaccine topics to enable students to be able to discuss vaccines with their patients. Focus will be on domestic perspectives of vaccination for public health but will include some global health discussions on selected publications, and a final course research project individually developed by the student. This elective course offered through the Department of Tracks and Special Programs is open to OMS I and II and MSBS students.

**MED 3001 : Fundamentals of Clinical Medicine**

This course provides information on the policies and procedures that will govern the clinical years: the rights, responsibilities, and duties of the students, faculty, and teaching facilities; the third-year curriculum; and skills needed to enter the clinical arena. The course also includes an introduction to the resources used in clinical education, as well as tools for professional conduct for direct patient care and telehealth venues.

**Credits** 2

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework.

**MED 3020 : Critical Reflection and Professional Career Development I**

This one-week elective provides students with the skills to critically reflect on their experiences in clinical education. Issues such as resiliency and coping skills, dealing with mistakes, identifying bias, value exploration, broadening one's professional identity, and preparing a personal statement. The course is a blend of virtual synchronous discussions and asynchronous personal exploration and reflection.

**Credits** 1

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework.

**MED 3021 : Critical Reflection and Professional Career Development II**

This one-week elective provides students with the skills to critically reflect on their experiences in clinical education. Issues such as resiliency and coping skills, dealing with mistakes, identifying bias, value exploration, broadening one's professional identity, and preparing a personal statement. The course is a blend of virtual synchronous discussions and asynchronous personal exploration and reflection.

**Credits** 1

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework.

**MED 4200 : Pain Management Elective**

Pain management can be simple or complex, depending on the cause of the pain. This elective provides an opportunity for students to learn various, multi-faceted approaches to pain management: interventional procedures, medication management, physical therapy or chiropractic therapy, psychological counseling and support, acupuncture and other alternative therapies, and referral to other medical specialists. All of these skills and services are necessary because pain can involve many aspects of a person's daily life.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4210 : Disaster Medicine Elective**

Disaster medicine is the area of medical specialization serving the dual areas of providing healthcare to disaster survivors and providing medically related disaster preparation, disaster planning, disaster response, and disaster recovery leadership throughout the disaster life cycle. Disaster medicine specialists provide insight, guidance, and expertise on the principles and practice of medicine both in the disaster impact area and healthcare evacuation receiving facilities to emergency management professionals, hospitals, healthcare facilities, communities, and governments.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4220 : Nutrition Elective**

Focus during this course will be on the development of skills in assessing, planning, implementing, and evaluating nutritional care for patients.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4230 : Physical Medicine and Rehabilitation Elective**

Physical medicine and rehabilitation, also known as physiatry, is a branch of medicine that aims to enhance and restore functional ability and quality of life to those with physical impairments or disabilities. Physiatrists specialize in restoring optimal function to people with injuries to the muscles, bones, ligaments, or nervous system.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4240 : Sleep Study Elective**

The medical term for this study is polysomnogram, which is a noninvasive, pain-free procedure that usually requires spending a night or two in a sleep facility. During a polysomnogram, a sleep technologist records multiple biological functions during sleep, such as brain wave activity, eye movement, muscle tone, heart rhythm, and breathing via electrodes and monitors placed on the head, chest, and legs.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4250 : EKG Elective**

Students will be given the opportunity to expand their understanding of electrocardiograms (EKG or ECG). EKG/ECG reviewing, analyzing, and reporting will be covered.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4260 : Alternative Medicine Elective**

Alternative medicine is a term that describes medical treatments that are used instead of traditional (mainstream) therapies. Some examples of alternative medicine include acupuncture, chiropractic medicine, energy therapies, magnetic field therapy, therapeutic touch, herbal medicine, and ayurvedic medicine.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4270 : Integrative Medicine Elective**

Integrative Medicine is healing-oriented medicine that takes account of the whole person, including all aspects of lifestyle. It emphasizes the therapeutic relationship between practitioner and patient, is informed by evidence, and makes use of all appropriate therapies.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4280 : Hospice/Palliative Care Elective**

Palliative care is specialized medical care for people with serious illness. This type of care is focused on providing relief from the symptoms and stress of a serious illness. The goal is to improve quality of life for both the patient and the family.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4290 : Pharmacology Elective**

Pharmacology is the branch of biology concerned with the study of drug action, where a drug can be broadly defined as any manmade, natural, or endogenous (from within body) molecule that exerts a biochemical or physiological effect on the cell, tissue, organ, or organism. More specifically, it is the study of the interactions that occur between a living organism and chemicals that affect normal or abnormal biochemical function. If substances have medicinal properties, they are considered pharmaceuticals.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4300 : Podiatry Elective**

Podiatry is a branch of medicine devoted to the study, diagnosis, and medical and surgical treatment of disorders of the foot, ankle, and lower extremity.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4310 : Public Health Elective**

Public health is the science and art of preventing disease, prolonging life, and promoting human health through organized efforts and informed choices of society, public and private organizations, communities, and individuals.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4320 : Aerospace Medicine Elective**

Aviation medicine, also called flight medicine or aerospace medicine, is a preventive or occupational medicine in which the patients/subjects are pilots, aircrews, or astronauts.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4500 : Overview of Medicine**

This course is designed to provide the student with the opportunity to prepare for licensing board exams.

Variable Credits

**Prerequisites**

Clinical Education Department approval required.

**MED 4510 : Healthcare Quality Improvement Elective**

Students have the opportunity to complete a externship focusing on healthcare quality, patient safety, and population medicine.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4520 : Lifestyle Medicine Elective**

Lifestyle medicine is a scientific approach to decreasing disease risk and illness burden by utilizing lifestyle interventions such as nutrition, physical activity, stress reduction, rest, smoking cessation, and avoidance of alcohol abuse. Lifestyle medicine is the recommended foundational approach to preventing and treating many chronic diseases.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4530 : Medical Spanish Elective**

Students will participate in Spanish language immersion programs with a specific focus on medical Spanish.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 4540 : Business in Medicine Elective**

Students will focus on the integration of business practices within the medical community.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**MED 5011 : Medical Spanish**

Open to all programs: The knowledge and effective use of medical Spanish is paramount for any new physician. This course takes a student's remedial Spanish and turns it into a useful tool for bilingual clinical experiences.

**Credits** 1

**Prerequisites**

Basic knowledge of Spanish

**MED 5012 : Medical Spanish II**

Open to all programs: The knowledge and effective use of medical Spanish is paramount for any new physician. This course takes a student's remedial Spanish and turns it into a useful tool for bilingual clinical experiences.

**Credits** 1

**Prerequisites**

MED 5011 or basic knowledge of Spanish; course director approval.

**Notes**

Utah campus only

**MED 5013 : Medical Spanish III**

This course will introduce the practical language skills used in clinical settings to assist with the interaction of Spanish-speaking patients. Emphasis will be placed on an advanced level of common medical vocabulary that healthcare workers may encounter in the workplace.

**Credits** 1

**Prerequisites**

Successful completion of one semester in current degree program and fluency placement exam.

## Osteopathic Principles and Practice

**OST 3010 : OPP Clinical Integration**

This course builds upon the foundation of the principles and philosophies of osteopathic medicine established during the Osteopathic Principles and Practice I-IV courses. The goal of this course is to expand students' osteopathic knowledge base and apply new and previously learned techniques to the overall care of patients. The format will include online modules and associated quizzes that correspond to core clerkships as well as interactive OPP sessions.

**Credits** 1

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1

**OST 3010/OST 3011 : Advanced OPP Clinical Integration**

This course builds upon the foundation of the principles and philosophies of osteopathic medicine established during the Osteopathic Principles and Practice I-IV courses. The goal of this course is to expand students' osteopathic knowledge base and apply new and previously learned techniques to the overall care of patients. The format will include online modules and associated quizzes that correspond to core clerkships as well as interactive OPP sessions.

**Credits 2**

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1

**OST 3011 : Advanced OPP Clinical Integration**

This course builds upon the foundation of the principles and philosophies of osteopathic medicine established during the Osteopathic Principles and Practice I-IV courses. The goal of this course is to expand students' osteopathic knowledge base and apply new and previously learned techniques to the overall care of patients. The format will include online modules and associated quizzes that correspond to core clerkships as well as interactive OPP sessions.

**Credits 2**

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1

**OST 4010/OST 4011 : Advanced OPP Clinical Integration I and II**

This course builds upon the foundation of the principles and philosophies of osteopathic medicine established during the first three years of OPP courses. This course will teach students how to apply osteopathic techniques to treat specific patient presentations and disease processes. The format will include modules that review the integration of osteopathic principles and practices into the general practice of medicine. Each module will consist of an online PowerPoint presentation, pertinent osteopathic manipulative techniques, and a five-question quiz.

**Credits 2**

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1

**OST 4011 : Advanced OPP Clinical Integration II**

This course builds upon the foundation of the principles and philosophies of osteopathic medicine established during the first three years of OPP courses. This course will teach students how to apply osteopathic techniques to treat specific patient presentations and disease processes. The format will include modules that review the integration of osteopathic principles and practices into the general practice of medicine. Each module will consist of an online PowerPoint presentation, pertinent osteopathic manipulative techniques, and a five-question quiz.

**Credits 1**

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1

## Pediatrics

**PED 3001 : Pediatrics Core**

The Pediatrics Clerkship will provide clinical exposure to various aspects of pediatric issues. Students will gain knowledge, experience, and competency in the diagnosis and management from birth to adolescent patients. Students will also become competent in the complexities of working with minors who, in most jurisdictions, cannot make decisions for themselves. Prerequisite: successful completion of all pre-clinical (Year 1 and Year 2) coursework.

It is critical to note that the clinical clerkship experience is not intended to teach the student everything on the subject of Pediatrics nor provide the student with clinical experience in every aspect of the discipline. The Clerkship Director and the assigned Preceptor may provide educational guidance, but it is each student's individual responsibility to learn the subject content. Lifelong self-learning is the ultimate goal and is expected in this core clinical clerkship. Students must show that adequate direct patient care experience has been achieved by demonstrating adequate patient log support of an average of at least 4 outpatients or 2 inpatients per day.

**Credits 4**

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1



**PED 4001 : Pediatric Elective**

General clerkship focused on the branch of medicine that involves the medical care of infants, children, and adolescents.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1

**PED 4100 : Pediatric Anesthesiology Elective**

Pediatric anesthesiology focuses on the general anesthesia, sedation, and pain management needs of infants and children.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1

**PED 4110 : Pediatric Dermatology Elective**

Pediatric Dermatology focuses on care for children (newborns through adolescents) with skin disorders.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4120 : Pediatric Emergency Medicine Elective**

Pediatric emergency medicine is a medical subspecialty of both pediatrics and emergency medicine. It involves the care of undifferentiated, unscheduled children with acute illnesses or injuries that require immediate medical attention.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4130 : Pediatric Gynecology Elective**

Pediatric and Adolescent Gynecology focuses on conditions of the uterus, ovaries, vagina, and vulva.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4140 : Pediatric Internal Medicine Elective**

Pediatric internal medicine is a medical specialty in which doctors train to be board certified in both internal medicine and pediatrics. Med-peds physicians are given more training in order to become more proficient at treating and diagnosing more complex diseases, including more emphasis on critical care medicine.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4150 : Pediatric Neurology Elective**

Pediatric neurology or child neurology refers to a specialized branch of medicine that deals with the diagnosis and management of neurological conditions in neonates (newborns), infants, children, and adolescents. The discipline of child neurology encompasses diseases and disorders of the spinal cord, brain, peripheral nervous system, autonomic nervous system, muscles, and blood vessels that affect individuals in these age groups.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4160 : Pediatric Pathology Elective**

Pediatric pathology is a sub-specialty of surgical pathology that deals with the diagnosis and characterization of neoplastic and non-neoplastic diseases of children.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4170 : Pediatric Psychiatric Elective**

Pediatric psychiatry is a branch of psychiatry that focuses on the diagnosis, treatment, and prevention of mental disorders in children, adolescents, and their families.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4180 : Pediatric Surgery Elective**

Pediatric surgery is a subspecialty of surgery involving the surgery of fetuses, infants, children, adolescents, and young adults.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4190 : Pediatric Urology Elective**

Pediatric urology is a surgical subspecialty of medicine dealing with the disorders of children's genitourinary systems. Pediatric urologists provide care for both boys and girls ranging from birth to early adult age. The most common problems are those involving disorders of urination, reproductive organs, and testes.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4200 : Pediatric Cardiology Elective**

A pediatric cardiologist is a pediatrician who has received extensive training in diagnosing and treating children's cardiac problems. Evaluation and treatment may begin with the fetus since heart problems can now be detected before birth.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4220 : Pediatric Developmental Elective**

Developmental Pediatrics allows for the opportunity to become familiar with typical and abnormal development in childhood, behavior management techniques, various aspects of developmental assessment, and referral sources/patterns in the community for children with developmental disabilities.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4230 : Pediatric Ear, Nose, and Throat Elective**

Pediatric Otolaryngology (Ear, Nose, and Throat) focuses on the medical and surgical treatment of ear, nose, and throat diseases in children.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4240 : Pediatric Endocrinology Elective**

Pediatric endocrinology is a medical subspecialty dealing with disorders of the endocrine glands, such as variations of physical growth and sexual development in childhood, diabetes, and many more.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4250 : Pediatric Gastroenterology Elective**

Pediatric gastroenterology developed as a subspecialty of pediatrics and gastroenterology. It is concerned with treating the gastrointestinal tract, liver, and pancreas of children from infancy until age eighteen.

Variable Credits

**PED 4260 : Pediatric Hematology-Oncology Elective**

Pediatric Hematology-Oncology focuses on the medical needs of a child or adolescent diagnosed with a blood disease and/or cancer.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4270 : Pediatric Infectious Disease Elective**

The focus during a Pediatric Infectious Disease externship is providing medical care for recurring or persistent disease caused by an infectious agent such as bacteria, a fungus, a parasite, or other rare infection in children from birth through the teen years.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4280 : Pediatric Intensive Care Elective**

Pediatric Intensive Care focuses on the treatment of very sick and injured infants and children with a wide range of health problems, including congenital heart defects, trauma, childhood cancer, medical emergencies, and post-operative care following complex operations (such as a kidney transplant).

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4290 : Pediatric Neonatal Elective**

Neonatology is a subspecialty of pediatrics that consists of the medical care of newborn infants, especially the ill or premature newborn. It is a hospital-based specialty, and is usually practiced in neonatal intensive care units (NICUs).

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4300 : Pediatric Nephrology Elective**

Pediatric Nephrology offers comprehensive services for the entire spectrum of kidney and urinary diseases in children.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**PED 4310 : Pediatric Pulmonology Elective**

Pediatric pulmonology is a medical specialty that deal with diseases in children and adolescents involving the respiratory tract.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Surgery

**SRG 3000 : Fundamentals of Surgery**

This course provides students with initial exposure to their surgery clerkship on the RVU campus at the surgical simulation center for one week. Students will be expected to take call in the evenings.

**Credits** 1

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**SRG 3001/3002 : Surgery Core**

The Surgery clerkship will provide clinical exposure to various aspects of surgery. Students will gain knowledge, experience, and competency in the diagnosis and management of surgical patients in the inpatient and outpatient clinical settings. Students will also become competent in basic surgical procedures including, but not limited to suturing techniques and wound management. Prerequisite: successful completion of all pre-clinical (Year 1 and Year 2) coursework and successful completion of SRG3000 Fundamentals of Surgery.

It is critical to note that the clinical clerkship experience is not intended to teach the student everything on the subject of Surgery nor provide the student with clinical experience in every aspect of the discipline. The Clerkship Director and the assigned Preceptor may provide educational guidance, but it is each student's individual responsibility to learn the subject content. Lifelong self-learning is the ultimate goal and is expected in this core clinical clerkship. Students must show that adequate direct patient care experience has been achieved by demonstrating adequate patient log support of an average of at least 4 outpatients or 2 inpatients per day.

**Credits** 7

**Prerequisite Courses**

[SRG 3000: Fundamentals of Surgery](#)

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework, passing score on COMLEX Level 1, and successful completion of SRG3000

**SRG 4001 : General Surgery Elective**

General Surgery is a discipline of surgery having a central core of knowledge embracing anatomy, physiology, metabolism, immunology, nutrition, pathology, wound healing, shock and resuscitation, intensive care, and neoplasia, which are common to all surgical specialties.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**SRG 4100 : Urogynecologic Surgery Elective**

Urogynecologic surgery is a surgical specialty focusing on minimally invasive and robotic gynecologic surgical procedures.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**SRG 4200 : Bariatric Surgery Elective**

Bariatric surgery includes a variety of procedures performed on people who have obesity.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**SRG 4210 : Plastic Surgery Elective**

Plastic surgery is a surgical specialty involving the restoration, reconstruction, or alteration of the human body. It can be divided into two categories. The first is reconstructive surgery which includes craniofacial surgery, hand surgery, microsurgery, and the treatment of burns. The other is cosmetic or aesthetic surgery. While reconstructive surgery aims to reconstruct a part of the body or improve its functioning, cosmetic surgery aims at improving the appearance of it. Both of these techniques are used throughout the world.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**SRG 4220 : Oral Surgery Elective**

Oral and maxillofacial surgery specializes in treating many diseases, injuries, and defects in the head, neck, face, jaws and the hard and soft tissues of the oral (mouth) and maxillofacial (jaws and face) region. It is an internationally recognized surgical specialty.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**SRG 4230 : Thoracic Surgery Elective**

Cardiothoracic surgery (also known as thoracic surgery) is the field of medicine involved in surgical treatment of organs inside the thorax (the chest)—generally treatment of conditions of the heart (heart disease) and lungs (lung disease). In most countries, cardiac surgery (involving the heart and the great vessels) and general thoracic surgery (involving the lungs, esophagus, thymus, etc.) are separate surgical specialties; the exceptions are the United States, Australia, New Zealand, and some EU countries, such as the United Kingdom and Portugal.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**SRG 4240 : Transplant Surgery Elective**

Transplant surgery is the surgical removal of an organ(s), tissue, or blood products from a donor and surgically placing or infusing them into a recipient.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**SRG 4250 : Trauma Surgery Elective**

Trauma surgery is a surgical specialty that utilizes both operative and non-operative management to treat traumatic injuries, typically in an acute setting.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**SRG 4260 : Ear, Nose, and Throat (ENT) Surgery Elective**

Otorhinolaryngology is a surgical subspecialty within medicine that deals with conditions of the ear, nose, and throat (ENT) and related structures of the head and neck. Patients seek treatment from an otorhinolaryngologist for diseases of the ear, nose, throat, base of the skull, and for the surgical management of cancers and benign tumors of the head and neck.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) course-work and passing score on COMLEX Level 1.

**SRG 4270 : Podiatric Surgery Elective**

Podiatric surgery is a specialist field in the podiatry profession. Podiatric surgery is the surgical treatment of conditions affecting the foot, ankle, and related lower extremity structures by accredited and qualified specialist podiatrists.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**SRG 4280 : Gastrointestinal Surgery Elective**

Includes both upper gastrointestinal surgery (upper GI surgery), which focuses on the upper parts of the gastrointestinal tract including Liver resection, Esophagectomy, and Pancreaticoduodenectomy, and lower gastrointestinal surgery (or colorectal surgery) and surgery of the small intestine.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**SRG 4290 : Perioperative Care Elective**

Perioperative Care focuses on patient necessities before, during, and after a surgical procedure. Key elements may include patient preparation prior to the day of surgery, a standardized approach to patient monitoring and education on the day of surgery, and careful postoperative monitoring.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Women's Health

**WMN 3001 : Women's Health Core**

The Women's Health Clerkship will provide clinical exposure to the various aspects of women's health issues. Students will gain knowledge, experience, and competence in the diagnosis and management of gynecologic and obstetric patients in inpatient and outpatient clinical settings. Students will also become competent in their knowledge of the physiologic adaptations of pregnancy and the process of normal and abnormal labor and delivery as well as general reproductive health. Prerequisite: successful completion of all pre-clinical (Year 1 and Year 2) coursework.

It is critical to note that the clinical clerkship experience is not intended to teach the student everything on the subject of Women's Health nor provide the student with clinical experience in every aspect of the discipline. The Clerkship Director and the assigned Preceptor may provide educational guidance, but it is each student's individual responsibility to learn the subject content. Lifelong self-learning is the ultimate goal and is expected in this core clinical clerkship. Students must show that adequate direct patient care experience has been achieved by demonstrating adequate patient log support of an average of at least 4 outpatients or 2 inpatients per day.

**Credits** 4

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**WMN 4001 : Women's Health Elective**

Women's health refers to the health of women, which differs from that of men in many unique ways. Women's health is an example of population health, where health is defined by the World Health Organization as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity".

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**WMN 4100 : Gynecology Elective**

Gynecology is the medical practice dealing with the health of the female reproductive systems and the breasts.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) course-work and passing score on COMLEX Level 1.

**WMN 4110 : OBGYN Elective**

Obstetrics and gynecology is the medical specialty that deals with pregnancy, childbirth, and the postpartum period and the health of the female reproductive systems and the breasts.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**WMN 4120 : Gynecologic Oncology Elective**

Gynecologic oncology is a specialized field of medicine that focuses on cancers of the female reproductive system, including ovarian cancer, uterine cancer, vaginal cancer, cervical cancer, and vulvar cancer.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**WMN 4130 : Gynecological Surgery Elective**

Gynecological surgery refers to surgery on the female reproductive system and is usually performed by gynecologists. It includes procedures for benign conditions, cancer, infertility, and incontinence.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**WMN 4200 : Maternal/Fetal Medicine Elective**

Maternal-fetal medicine is a branch of medicine that focuses on managing health concerns of the mother and fetus prior to, during, and shortly after pregnancy. Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Physician Assistant

**PAS 5001 : Interprofessional Education Seminar I**

This two-semester course introduces the fundamental principles of interprofessional education including roles, responsibilities, and contributions of individual team members, communication skills that ensure smooth transition of care to other team members, and the impact of teams on population health and quality of care. Learners will interact with students from the physician assistant, master of science in biomedical sciences, and doctor of osteopathic medicine programs, in addition to nursing students.

**Credits** 1

**Prerequisites**

None

**PAS 5002 : Interprofessional Education Seminar II**

This course is a continuation of PAS 5001.

**Credits** 1

**Prerequisite Courses**

[PAS 5001: Interprofessional Education Seminar I](#)

**PAS 5111 : Normal Human Development I**

This core course introduces the fundamental principles of normal physical, social, and psychological development and function across the lifespan.

**Credits** 2

**Prerequisites**

None

**PAS 5112 : Normal Human Development II**

This course is a continuation of PAS 5111.

**Credits** 1

**Prerequisite Courses**

[PAS 5111: Normal Human Development I](#)

**PAS 5113 : Molecular and Cellular Concepts I**

This core course introduces the fundamental principles of biochemistry, cell biology, microbiology, genetics, physiology, and pharmacology in order to understand the pathophysiology of illness and disease and the rationale for therapeutic intervention.

**Credits** 4

**Prerequisites**

None

**PAS 5114 : Molecular and Cellular Concepts II**

This course is a continuation of PAS 5113.

**Credits** 5

**Prerequisite Courses**

[PAS 5113: Molecular and Cellular Concepts I](#)

**PAS 5115 : Anatomy I**

This core course introduces the fundamental principles of human anatomy, allowing the learner to correlate structure, function, and the clinical assessment of pathology.

**Credits** 4

**Prerequisites**

None

**PAS 5116 : Anatomy II**

This course is a continuation of PAS 5115.

**Credits** 4

**Prerequisite Courses**

[PAS 5115: Anatomy I](#)

**PAS 5131 : Clinical Medicine: Professional Seminar I**

This two-semester core course introduces the learner to issues related to professional practice by exploring both micro and macro approaches to healthcare and its delivery. This foundational course will focus on the role of the PA and the PA profession, communication skills, cultural competency, biomedical ethics, informed consent and provider wellness.

**Credits** 3

**Prerequisites**

None

**PAS 5132 : Clinical Medicine: Professional Seminar II**

This course is a continuation of PAS 5131.

**Credits** 2

**Prerequisite Courses**

[PAS 5131: Clinical Medicine: Professional Seminar I](#)

**PAS 5133 : Clinical Medicine: Illness and Disease I**

This two-semester core course introduces the learner to clinical medicine topics and includes presenting signs and symptoms, pathophysiology, appropriate diagnostic techniques, and management options, including prevention.

**Credits** 4

**Prerequisites**

None

**PAS 5134 : Clinical Medicine: Illness and Disease II**

This course is a continuation of PAS 5133.

**Credits** 6

**Prerequisite Courses**

[PAS 5133: Clinical Medicine: Illness and Disease I](#)



**PAS 5135 : Clinical Medicine: Evidence-Based Practice I**

This two-semester core course introduces the learner to principles of evidence-based medicine, including reviewing and evaluating the medical literature, formulating research questions, and designing a capstone project.

**Credits** 2

**Prerequisites**

None

**PAS 5136 : Clinical Medicine: Evidence-Based Practice II**

This course is a continuation of PAS 5135.

**Credits** 2

**Prerequisite Courses**

[PAS 5135: Clinical Medicine: Evidence-Based Practice I](#)

**PAS 5137 : Clinical Medicine: Skills and Assessment 1**

This two-semester course introduces the fundamental principles of clinical practice including history-taking, performing physical examinations, ordering and interpreting diagnostic and screening tests, documentation using the SOAP format, and best practices in transitioning care.

**Credits** 4

**Prerequisites**

None

**PAS 5138 : Clinical Medicine: Skills and Assessment II**

This course is a continuation of PAS 5137.

**Credits** 5

**Prerequisite Courses**

[PAS 5137: Clinical Medicine: Skills and Assessment 1](#)

**PAS 5139 : Reasoning and Application I**

This two-semester course introduces the fundamental principles of clinical reasoning and decision making through developing clinical hypothesis and differential diagnosis. Problem-based learning will provide the foundation for patient scenarios.

**Credits** 3

**Prerequisites**

None

**PAS 5140 : Reasoning and Application II**

This course is a continuation of PAS 5139.

**Credits** 3

**Prerequisite Courses**

[PAS 5139: Reasoning and Application I](#)

**PAS 5150 : Introduction to Supervised Clinical Practice Experiences**

This core course serves as orientation to supervised clinical practice experience (SCPEs). The learner will gain an understanding of the expectations associated with participating in clinical experiences. This includes a review of the EPAs, types of clinical presentations, skills and procedures learners will likely participate in, the clinical assessment rubrics and assessment schedule, and portfolio requirements. Additionally, workshops to learn the clinical tracking (patient logging) system, aseptic technique, and advanced cardiac life support (ACLS) will be held. Learners will complete requirements to enter supervised clinical practice (HIPAA, Blood Borne Pathogens), if not already completed.

**Credits** 1

**Prerequisites**

None

**PAS 5233 : Professional Seminar III**

This course is a continuation of PAS 5131 and PAS 5132.

**Credits** 1

**Prerequisite Courses**

[PAS 5131: Clinical Medicine: Professional Seminar I](#)

[PAS 5132: Clinical Medicine: Professional Seminar II](#)

**PAS 5251 : Clinical Seminar I**

This four-semester core course is primarily delivered via a case-based format and integrates advanced level content in focused history taking, focused physical examination, development of diagnostic reasoning, pharmacotherapeutics and therapeutic/diagnostic procedures. Students will also revisit didactic topics such as evidence-based practice, effective patient communication, ethical decision making, and professionalism. These courses signal the formal transition to practice, incorporating topics such as the business of medicine, access of resources for patients, systems-based practice, and advanced training (e.g. MAT training).

**Credits** 1

**PAS 5252 : Clinical Seminar II**

This course is a continuation of PAS 5251.

**Credits** 1

**Prerequisite Courses**

[PAS 5251: Clinical Seminar I](#)

**PAS 5253 : Clinical Seminar III**

This course is a continuation of PAS 5252.

**Credits** 1

**Prerequisite Courses**

[PAS 5252: Clinical Seminar II](#)

**PAS 5254 : Clinical Seminar IV**

This course is a continuation of PAS 5253.

**Credits** 1

**Prerequisite Courses**

[PAS 5253: Clinical Seminar III](#)

**PAS 5261 : Supervised Clinical Practice I**

The student will participate in supervised clinical practice experiences (SCPEs) across a variety of settings including in-patient, emergency department, and operating room. The student will be exposed to patients across the lifespan and provide preventative, emergent, acute, and chronic care to diverse populations requiring a wide range of healthcare.

Students will work under the supervision of a Program-determined preceptor or their designee(s). The student should prioritize gaining knowledge about evaluation and management of common conditions encountered within each clinical setting or discipline. The instructional knowledge objectives should guide the student's preparation for the End of Rotation (EOR) examinations. While not all diseases or conditions will be seen during clinical rotations, students are responsible for studying each area outlined in the objectives, as these are used to create each EOR. The instructional skills and attitude objectives should guide the student regarding expected level of participation and professional conduct. This course serves as a prerequisite to PAS 5262 and is the first of four supervised clinical practice experiences.

**Credits** 10

**Prerequisite Courses**

[PAS 5150: Introduction to Supervised Clinical Practice Experiences](#)

**PAS 5262 : Supervised Clinical Practice II**

The student will participate in supervised clinical practice experiences (SCPEs) across a variety of settings including in-patient, emergency department, and operating room. The student will be exposed to patients across the lifespan and provide preventative, emergent, acute, and chronic care to diverse populations requiring a wide range of healthcare. This course serves as a prerequisite to PAS 5263 and is the second of four supervised clinical practice experiences.

Students will work under the supervision of a Program-determined preceptor or their designee(s). The student should prioritize gaining knowledge about evaluation and management of common conditions encountered within each clinical setting or discipline. The instructional knowledge objectives should guide the student's preparation for the End of Rotation (EOR) examinations. While not all diseases or conditions will be seen during clinical rotations, students are responsible for studying each area outlined in the objectives, as these are used to create each EOR. The instructional skills and attitude objectives should guide the student regarding expected level of participation and professional conduct. The student must successfully complete requirements of PAS 5262 before participating in PAS 5263.

**Credits** 14

**Prerequisite Courses**

[PAS 5261: Supervised Clinical Practice I](#)

**PAS 5263 : Supervised Clinical Practice III**

The student will participate in supervised clinical practice experiences (SCPEs) across a variety of settings including in-patient, emergency department, and operating room. The student will be exposed to patients across the lifespan and provide preventative, emergent, acute, and chronic care to diverse populations requiring a wide range of healthcare. This course serves as a prerequisite to PAS 5264 and is the third of four supervised clinical practice experiences.

Students will work under the supervision of a Program-determined preceptor or their designee(s). The student should prioritize gaining knowledge about evaluation and management of common conditions encountered within each clinical setting or discipline. The instructional knowledge objectives should guide the student's preparation for the End of Rotation (EOR) examinations. While not all diseases or conditions will be seen during clinical rotations, students are responsible for studying each area outlined in the objectives, as these are used to create each EOR. The instructional skills and attitude objectives should guide the student regarding expected level of participation and professional conduct. The student must successfully complete requirements of PAS 5263 before participating in PAS 5264.

**Credits** 14

**Prerequisite Courses**

[PAS 5262: Supervised Clinical Practice II](#)

**PAS 5264 : Supervised Clinical Practice IV**

The student will participate in supervised clinical practice experiences (SCPEs) across a variety of settings including in-patient, emergency department, and operating room. The student will be exposed to patients across the lifespan and provide preventative, emergent, acute, and chronic care to diverse populations requiring a wide range of healthcare. This course is the fourth in a series of four supervised clinical practice experiences.

Students will work under the supervision of a Program-determined preceptor or their designee(s). The student should prioritize gaining knowledge about evaluation and management of common conditions encountered within each clinical setting or discipline. The instructional knowledge objectives should guide the student's preparation for the End of Rotation (EOR) examinations. While not all diseases or conditions will be seen during clinical rotations, students are responsible for studying each area outlined in the objectives, as these are used to create each EOR. The instructional skills and attitude objectives should guide the student regarding expected level of participation and professional conduct.

**Credits** 10

**Prerequisite Courses**

[PAS 5263: Supervised Clinical Practice III](#)

**PAS 5271 : Research Proposal**

This course is a four-week, self-directed period in which learners will develop the graduate research project. Upon completion of the course, the learner will have a viable research proposal, serving as the foundation for the capstone project. The proposal must receive Program and Institutional Review Board (IRB) approval prior to implementation if an original research project or case study.

**Credits 1****Prerequisites**

None

**PAS 5272 : Capstone**

The student will demonstrate readiness for entry to the profession through mastery of the competencies for the newly graduated physician assistant (the competencies within all thirteen EPAs). Demonstration activities include presentation of the required research project and presentation of summarized clinical logging information.

Students will present individual research projects in the form of an oral and poster presentation.

**Credits 11****Prerequisite Courses**

[PAS 5271: Research Proposal](#)

**PAS 5391 : Independent Study**

This course is reserved for those learners who may require remediation in didactic, clinical, or both types of coursework. The course must be recommended and approved by the Physician Assistant Program before a learner can be enrolled. Course goals and objectives will be designed to meet the needs of the student.

**Credits 1-16**

Variable Credits

**Prerequisites**

Program Director approval

## Academic Medicine and Leadership

**AML 4001 : Clinical Academic Elective**

This course provides students with an opportunity to study healthcare and medicine in relation to academia. Variable Credits

**Prerequisites**

Acceptance and enrollment in the Academic Medicine and Leadership Track and Department of Clinical Education approval required.

**AML 5010 : Academic Medicine and Leadership I**

The Academic Medicine and Leadership Track is a selective enrichment course that will provide students with specialized training in various areas of academics and leadership development. With the expansion of medical schools and residency programs, there is a growing demand for well-trained academicians and faculty. Students in this specialty track will learn about various, multi-faceted topics in academics, medical education, organized medicine, health policy, and leadership development. The student will be trained in skills to be an effective public speaker, educator, and physician leader. The track will be a continuum of two consecutive semester courses starting in the spring semester of the first year and ending in the fall semester of the second year. The educational objectives and contents of this track will be in addition to the required core curriculum.

**Credits 2****Prerequisites**

Acceptance into the Academic Medicine and Leadership Track

**AML 5020 : Academic Medicine and Leadership II**

A continuation of AML 5010, this course will continue to build on the understanding that with the expansion of medical schools and residency programs in the United States, there is a growing demand for well-trained academicians and faculty. Students in this enrichment track will learn about the various, multi-faceted topics in academics, medical education, organized medicine, health policy, and leadership development. Skills necessary to become an effective public speaker, educator, and physician leader will be addressed.

**Credits 2****Prerequisite Courses**

[AML 5010: Academic Medicine and Leadership I](#)

## Anatomy

**ANT 4001 : Anatomy Elective**

Students will have the opportunity to develop and refine skills related to human anatomy.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**ANT 4901 : RVU Predoctoral Anatomy Fellowship**

The RVU Predoctoral Anatomy Fellowship program is designed to provide a continuum of the study of anatomy to the next level, as well as provide the student with tools that can be utilized to either teach or conduct anatomical research appropriate to the context of their final field of endeavor.

Variable Credits

## Anesthesiology

### **ANE 4001 : Anesthesiology Elective**

Anesthesiology is the practice of medicine dedicated to the relief of pain and total care of the surgical patient before, during, and after surgery.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Critical Care

### **CRT 4001 : Critical Care/ICU Elective**

Intensive care medicine or critical care medicine is a branch of medicine concerned with the diagnosis and management of life-threatening conditions that may require sophisticated organ support and invasive monitoring. Intensive care is usually only offered to those whose condition is potentially reversible and who have a good chance of surviving with intensive care support.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical coursework and passing score on COMLEX Level 1.

### **CRT 4100 : Critical Care Medicine Pediatric Elective**

Pediatric Critical Care focuses on children from birth through the teen years who are critically ill and require careful monitoring in a pediatric intensive care unit (PICU). Treatment is generally provided for, but not restricted to children with unstable, life-threatening conditions; children on respirators; children with severe heart and lung disease; and children with brain trauma.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical coursework and passing score on COMLEX Level 1.

## Dermatology

### **DRM 4001 : Dermatology Elective**

Dermatology is the branch of medicine dealing with the skin, nails, hair, and its diseases. It is a specialty with both medical and surgical aspects.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

### **DRM 4100 : Dermatopathology Elective**

Dermatopathology is a joint subspecialty of dermatology and pathology and to a lesser extent of surgical pathology that focuses on the study of cutaneous diseases at a microscopic and molecular level.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Emergency Medicine

### **EMR 4001 : Emergency Medicine Elective**

Emergency medicine, also known as accident and emergency medicine, is the medical specialty concerned with caring for undifferentiated, unscheduled patients with illnesses or injuries requiring immediate medical attention.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Global Health

### **GLB 4001 : Global Health Medicine Elective**

Global Health Medicine provides opportunities for medical students to better understand the depth, breadth, and interdisciplinary nature of global health challenges.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

### **GLB 4100 : Global Health Emergency Medicine Elective**

Internationally-focused emergency medicine clerkship focusing on the care of undifferentiated, unscheduled patients with illnesses or injuries requiring immediate medical attention.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**GLB 4110 : Global Health Family Medicine Elective**

International clerkship focused on providing healthcare to vulnerable populations worldwide. Careful attention may be given to the use of resources, knowledge, and experience of diverse societies to address health challenges as well as combining population-based health promotion and disease prevention with individual-led care.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**GLB 4120 : Global Health Internal Medicine Elective**

Students can supplement their domestic clerkship experiences by traveling abroad. Opportunities to strengthen diagnostic skills, shift dependency on diagnostic tests, build a further sense of global health needs, provide a service to a community in need, and address the challenges of healthcare within an ethnically and culturally diverse area may occur when focusing on global health.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**GLB 4130 : Global Health OBGYN Elective**

Global Health OBGYN clerkship will focus on engaging healthcare providers interested in the care of women in under-served communities internationally.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**GLB 4140 : Global Health Pediatric Elective**

International clerkship focused on healthcare for children from birth through adolescence. Students may experience how diverse socio-cultural determinants affect healthcare and diseases in children that are uncommon in resource-rich areas.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**GLB 4150 : Global Health Psychiatry Elective**

Clerkship experience aiming to increase awareness of global mental health issues and social disparities.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**GLB 4160 : Global Health Surgery Elective**

Surgery has not always been considered a global health priority, but the global health community has recently recognized that surgical conditions form a significant burden of disease and have cost-effective interventions. Students may experience/discuss firsthand the global burden of surgical disease, surgery in resource-poor settings, surgical workforce and task shifting, as well as the ethics of surgical care in resource-poor settings.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**GLB 4200 : Global Health OMM Elective**

Internationally-focused clerkship involving the using of hands to diagnose, treat, and prevent illness or injury.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) course-work and passing score on COMLEX Level 1.

**GLB 5031 : Global Medicine I**

According to the American Academy of Family Practice, Global Medicine is the new Family Medicine. The American population has been and continues to be a mixture of peoples from all over the world. Whether students work here or overseas, they must have a better understanding of how their patient's health is affected by not only where they live, but also factors such as socioeconomic status, type of government and healthcare system available to them, and culture. The major goals of this course are to provide an intensive survey, exposure, and clinical education surrounding these multiple aspects of global medicine over three semesters and 90+ hours of classroom activity. It is hoped that these students who have applied, been accepted, and succeed in this program continue to serve in this capacity. This is just one component of the Global Medicine Track, which is designed to span 3.5 years of formal osteopathic education and will include required international medical education experiences abroad and mixed cultural/public health experiences here in the United States.

**Credits** 2

**Prerequisites**

Acceptance into the Global Medicine Track.

**GLB 5032 : Global Medicine II**

This course is a continuation of GLB 5030 and will focus on furthering students understanding of the global burden of disease in both developing and already developed countries. Students will learn about various global diseases and what program criteria are required in the successful elimination and/or eradication of diseases, through interactive group discussions and faculty/guest presentations. Medical diseases to be covered during this course will focus on pertinent communicable and non-communicable diseases such as Malaria, TB, HIV, parasitic and helminthis and arthropod diseases common in the developing world.

**Credits 2**

**Prerequisite Courses**

[GLB 5031: Global Medicine I](#)

**GLB 5033 : Global Medicine III**

The focus of this course is to further strengthen students understanding of the global burden of disease in both developing and already developed countries through the use of a variety of didactic presentations and clinical experiences. During this course, guests will present specific diseases and their specific clinical experience in the global arena, and areas will be covered to ensure a well-rounded and comprehensive exposure of global health. Emphasis will be on those topics not already covered in the normal curriculum and all will be presented from a global health perspective.

**Credits 2**

**Prerequisite Courses**

[GLB 5032: Global Medicine II](#)

**GLB 5050 : Global Medical Outreach**

This is an RVUCOM medical outreach elective opportunity open to all first and second medical students. The goal of this course is to provide medical students a cross-cultural medical education experience through study and work outside of the United States in order to understand its challenges and apply the knowledge learned to their practice of medicine.

Students will be provided the opportunity to provide diagnostic and patient care services, participate in preventive and public health events, and work in areas such as minor surgery, pharmacy, triage, and clinical laboratory settings.

**Credits 2**

**Prerequisites**

Students must be currently in good academic standing. Course may be repeated up to 2 times (4 credits maximum).

## Humanities

**HUM 5001 : Graphic Novels and Medicine**

Open to all RVU programs: This course is designed to stimulate robust discussion and examination of human emotion surrounding illness and how non-clinical forces impact the medical system experience. Students are encouraged to participate in discussion and reflection on their own experiences as well as those of their peers using graphic novels as the springboard. This course has four different sections, so it is fresh every time it is offered.

**Credits 1**

**Prerequisites**

None

**HUM 5011 : History of Medicine**

Open to all RVU programs, this course seeks to examine the role of doctors, patients, diseases and society's reaction to them over time and asks how medicine, disease and health have been motors for change. Each session encourages its participants to understand how contemporary medicine differs from, but is indelibly marked by its past. It is only available in Colorado at this time.

**Credits 1**

**Prerequisites**

None

**HUM 5021 : Medicine in Film**

Open to all RVU programs, this course will use film as a medium for discussion of ethical, humanitarian, and professional topics relevant to healthcare professionals. It is only available in Colorado at this time.

**Credits 1**

**Prerequisites**

None



## Integrative Medicine Training

### **IMT 1001 : Fundamentals of East Asian Medicine**

This course engages students with the fundamental principles of acupuncture and oriental medicine. Students learn about the research-based mechanisms of action, as well as the Chinese medical perspectives of how and why acupuncture affects change in the body. Students receive a brief overview of the history and foundations of ancient Chinese medicine and the theoretical principles surrounding 8-Principle, 5-Element, Traditional Chinese Medicine, and other popular treatment approaches. Students learn about the acupuncture meridians (aka channels), acupuncture points, and pulse and tongue diagnosis. Students get a brief practical experience using acupuncture needles and will observe acupuncture treatments in class and in the clinical setting. Treatment demonstrations include but are not limited to needling, explanation of needling techniques, and the use of moxibustion, cupping, guasha, and tuina when appropriate. Students learn how to interact with acupuncturists, professionally, and within the context of interprofessional education and internal medicine. Students also learn about the laws governing the practice of acupuncture in the United States. This course is not comprehensive of the full body of knowledge students must undergo in order to become or identify as a "licensed acupuncturist (L.Ac.)" or use needles in a clinical setting. This course must enroll a minimum of 10 and is limited to the first 14 students to register. It is only offered in Utah at this time.

**Credits 1**

## Long Term Care

### **LTC 5010 : Long Term Care I**

Long Term Care I is an enrichment course that will provide students with specialized training and experience in longitudinal medical care. With the rapidly growing aging population and increasing needs for long term care resources, there is a growing demand for physicians to lead in quality management of longitudinal care services. Students in this track will learn various, multi-faceted topics in continuity of Post-Acute, Long Term, End of Life, Palliative, and Hospice Care; be assigned to a carefully selected resident in these areas; and will actively participate in the care of his or her assigned patient. Students will develop a relationship with their patient, serving as health advocates for wellness and in turn, help their patients achieve the healthiest, highest quality of life possible in their current stage of life. Ultimately, students will be familiar with and able to incorporate and demonstrate their knowledge and skills to care for the elderly through the interactions with their patient, as well as in a future Primary Care practice or other specialty involving Geriatric, Palliative, Nursing Home, or Hospice Care.

**Credits 2**

#### **Prerequisites**

Acceptance into the Long Term Care Track.

#### **Notes**

Utah Campus Only

### **LTC 5020 : Long Term Care II**

A continuation of LTC5010, Long Term Care II is an enrichment course that will provide students with specialized training and experience in longitudinal medical care. With the rapidly growing aging population and increasing needs for long term care resources, there is a growing demand for physicians to lead in quality management of longitudinal care services. Students in this track will learn various, multi-faceted topics in continuity of Post-Acute, Long Term, End of Life, Palliative, and Hospice Care; be assigned to a carefully selected resident in these areas; and will actively participate in the care of his/her assigned patient. Students will develop a relationship with their patient, serving as health advocates for wellness, and in turn, help their patients achieve the highest quality of life possible in their current stage of life. Ultimately, students will be familiar with and able to incorporate and demonstrate their knowledge and skills to care for the elderly through the interactions with their patient, as well as in a future Primary Care practice or other specialty involving Geriatric, Palliative, Nursing Home, or Hospice Care.

**Credits 2**

#### **Prerequisites**

Acceptance into the Long Term Care Track.

#### **Notes**

Utah Campus Only

## Military

### **MIL 4001 : Military Training Elective**

Students with a military affiliation, HPSP, military reserve, or former armed forces that desires training during the clinical years will be provided the opportunity to participate.

Variable Credits

#### **Prerequisites**

Department of Clinical Education approval; Director of Military Medicine approval.

### **MIL 5041 : Military Medicine I**

Military Medicine I will incorporate a series of didactic instruction for military officer training with an emphasis on the unique aspects of being a military medical officer. Integral to the course is immersion-based experiential learning to include reality training, surgical simulation, information sessions, and skills development for briefing of relevant military medical information. Medical Corps Officer military obligations, leadership, discipline, harsh military environments, field exercises, disaster stabilization, evacuation, triage, and management in combat environments on land, sea, and air are the foundation of the elective. This course will also function in conjunction with COM enrichment pathway courses where synergies are evident and possible. Students may also have the opportunity to liaison with leaders, educators, and military officers at U.S. posts, bases, medical centers, hospitals, and other sites in order to achieve the goals and objectives of the program. Expert guests, military officers, and appropriate civilian physicians, and teachers will be hosted virtually and on campuses.

**Credits** 1

### **MIL 5042 : Military Medicine II**

A continuation of MIL 5041 Military Medicine I.

**Credits** 1

#### **Prerequisites**

Military Medicine Program member

### **MIL 5043 : Military Medicine III**

A continuation of MIL 5042 Military Medicine II.

**Credits** 1

#### **Prerequisites**

Military Medicine Program member

## Neurology

### **NEU 4001 : Neurology Elective**

Neurology is a branch of medicine focusing on disorders of the nervous system. Neurology deals with the diagnosis and treatment of all categories of conditions and disease involving the central and peripheral nervous systems, including their coverings, blood vessels, and all effector tissue, such as muscle. Neurological practice relies heavily on the field of neuroscience, which is the scientific study of the nervous system.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

### **NEU 4100 : Neurosurgery Elective**

Neurosurgery, or neurological surgery is the medical specialty concerned with the prevention, diagnosis, surgical treatment, and rehabilitation of disorders that affect any portion of the nervous system including the brain, spinal cord, peripheral nerves, and cerebrovascular system. Neurosurgery is often colloquially referred to as "brain surgery" though neurosurgeons often operate on the spinal cord and peripheral nervous system as well.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

### **NEU 4200 : Critical Care Medicine Neurology Elective**

Neurological Intensive Care is one of the newest and fastest-growing specialties in medicine today. Neuro-ICUs uniquely bring together specially trained physicians and nurses armed with advanced technology to perform clinical and basic science research on patients in a critical care setting to gain better understanding of their critical illnesses and to develop improved and innovative treatments for these conditions. Advanced monitoring techniques used in neuro-ICUs allow the identification of critical problems before permanent neurologic injury occurs. A neuro-ICU also provides many specialized therapeutic options for patients with serious neurologic illness.

Management of patients in a neuro-ICU is essential to achieve a favorable outcome.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.



**NEU 4210 : Alzheimer's/Dementia Elective**

Students will evaluate patients with dementia and other geriatric neurological issues.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Ophthalmology

**OPH 4001 : Ophthalmology Elective**

Ophthalmology is the branch of medicine that deals with the anatomy, physiology, and diseases of the eyeball and orbit.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1

## Orthopedics

**ORT 4100 : Orthopedic Surgery Elective**

Orthopedic surgery or orthopedics is the branch of surgery concerned with conditions involving the musculoskeletal system.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1

**ORT 4110 : Pediatric Orthopedic Surgery Elective**

Pediatric Orthopedic surgery focuses on the diagnostic, treatment, and management of children's musculoskeletal programs including, but not limited to, limb and spine deformities, gait abnormalities, broken bones, and bone or joint infections and tumors.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**ORT 4120 : Orthopedic Trauma Surgery Elective**

Orthopedic trauma is a branch of orthopedic surgery specializing in problems related to the bones, joints, and soft tissues (muscles, tendons, ligaments) of the entire body following trauma. The main goal of this specialized area in orthopedics is the healing of the fractured bones, as well as restoring the anatomic alignment of the joint surfaces to allow for recovery and return to maximum function of the injured body part.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) course-work and passing score on COMLEX Level 1.

## Osteopathic Manipulative Medicine

**OMM 4001 : Osteopathic Manipulative Medicine Elective**

Osteopathic manipulative treatment, or OMT, is hands-on care that involves using the hands to diagnose, treat, and prevent illness or injury.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1

**OMM 4901 : Pre-Doctoral Osteopathic Principles and Practice Fellowship**

The Pre-Doctoral Osteopathic Principles and Practice Fellowship program is designed to augment students' knowledge and application of the principles, philosophies, and procedures of osteopathic medicine in both the academic and clinical settings. This fellowship emphasizes an anatomic and physiologic understanding and application of OPP clinically, as well as the academic teaching experience in osteopathic principles and procedures. In addition, the fellowship provides excellent clinical experience through a variety of venues, including osteopathic healthcare for patients from infancy through geriatrics.

Variable Credits

**Prerequisites**

Acceptance into the program

# Pathology

## **PTH 4001 : Pathology Elective**

Pathology is a significant field in modern medical diagnosis and medical research, concerned mainly with the causal study of disease, whether caused by pathogens or non-infectious physiological disorder.

Variable Credits

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## **PTH 4200 : Pathology Blood Banking Elective**

Blood banking, the process of collecting, testing, processing, and storing blood for later use, is a cornerstone of emergency and surgical medicine and is dependent on the clinical laboratory for ensuring the safe use of blood and its components.

Variable Credits

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## **PTH 4210 : Pathology Forensic Elective**

Forensic pathology is pathology that focuses on determining the cause of death by examining a corpse.

Variable Credits

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

# Physician Science

## **PHY 5051 : Physician-Scientist I**

This course provides students with exposure to the scientific method and the many aspects of conducting independent research, exploring the key components at each step in the scientific process. The types of research highlighted in this course may include basic science, clinical, translational, and medical education research. Students should have a strong desire to understand what is required to be a successful principal investigator and may pursue supervised research during class time as part of their career development.

**Credits** 1

### **Prerequisites**

Acceptance into the Physician-Scientist Track.

## **PHY 5052 : Physician-Scientist II**

This course is a continuation of PHY 5051 Physician Science I.

**Credits** 1

### **Prerequisites**

Acceptance into the Physician-Scientist Track.

## **PHY 5053 : Physician-Scientist III**

This course is a continuation of PHY 5052 Physician Science II.

**Credits** 1

### **Prerequisites**

Acceptance into the Physician-Scientist Track.

# Psychiatry

## **PSY 4001 : Psychiatry Elective**

Psychiatry is the medical specialty devoted to the diagnosis, prevention, study, and treatment of mental disorders. These include various maladaptations related to mood, behavior, cognition, and perceptions. See glossary of psychiatry.

Variable Credits

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## **PSY 4200 : Psychopathology Elective**

Psychopathology is the scientific study of mental disorders, including efforts to understand their genetic, biological, psychological, and social causes; effective classification schemes; course across all stages of development; manifestations; and treatment. The term may also refer to the manifestation of behaviors that indicate the presence of a mental disorder.

Variable Credits

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## **PSY 4210 : Psychopharmacology**

Psychopharmacology is the scientific study of the effects drugs have on mood, sensation, thinking, and behavior.

Variable Credits

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

# Radiology

## **RAD 4001 : Radiology Elective**

Radiology is the science of dealing with X-rays and other high-energy radiation, especially the use of such radiation for the diagnosis and treatment of disease.

Variable Credits

### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**RAD 4100 : Neuroradiology Elective**

Neuroradiology is a subspecialty of radiology, which focuses on the diagnosis of abnormalities of the brain, spine, and head and neck.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**RAD 4200 : Radiology Diagnostic Elective**

Diagnostic radiology is the field of medicine that uses imaging exams and procedures to diagnose a patient. In any form of medical care, diagnostic radiology plays an integral part in the diagnosis of disease or injury.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

**RAD 4210 : Radiology: Interventional Elective**

Interventional radiology, sometimes known as vascular and interventional radiology, is a medical specialty that provides minimally invasive image-guided diagnosis and treatment of disease.

Variable Credits

**Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Research

**RSH 4001 : Research and Scholarly Activities Elective**

The research elective is designed for students wishing to engage in research activity during their third or fourth year of training under the direction of a faculty mentor. Achievement of the Student Learning Outcomes will demonstrate that the student can correctly and professionally perform in a research environment. Research can be in a variety of areas including biomedical, clinical, public health, educational, or translational research. Students wishing to enroll in this course must first meet with either the Director of Research or the Research Clerkship Director to discuss the type of research project, possible mentors, need for IRB or other approvals, methods, and expected outcomes of the project before preliminary approval for the elective will be given. Once preliminary approval is given, the student under the direction of the faculty mentor, will develop a specific research question, conduct a comprehensive literature review, apply for IRB approval if needed, and describe the aims/goals of the project and how the results will be disseminated. This information will be reviewed by the Clerkship Director before the next phase can begin. At this time the student may need to meet with a statistician to determine best methods of data collection and analysis if appropriate. In the next phase, the student will develop the research methodology and begin collecting data once approval has been given by the mentor. After data collection is complete, the student will analyze the data and begin the written report of the project. The report will be in a form suitable for publication in a scholarly journal, as well as a slide presentation or poster presentation, to be submitted to the Clerkship Director with a written evaluation by the faculty mentor. When possible, the work should be presented at the Annual Research Appreciation Day.

Variable Credits

## Rural and Wilderness Medicine

### **RWM 4001 : Rural and Wilderness Medicine Elective**

Rural and Wilderness Medicine is the branch of medicine that addresses prevention, assessment, and treatment of accidents and illness where rapid access to the national 911 systems is not an option. It has been defined as the practice of medicine with limited resources in austere environments and ranges from the initial treatment and evacuation of patients with acute injuries to the management of illnesses experienced by patients on long term expeditions. Its broad scope includes but is not limited to Trauma and Emergency Medicine, Sports Medicine, Rescue and Evacuation, Diving and Hyperbaric Medicine, Disaster Medicine, Tropical and Travel Medicine, Expedition Medicine, High-Altitude/Mountaineering Medicine, Survival Medicine, and Tactical Medicine.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

### **RWM 5021 : Rural and Wilderness Medicine I**

This course will introduce students to rural and wilderness medicine. Introductory clinical concepts will be presented and an emphasis will be placed on procedural competencies that support a rural medical practice. Students may have the opportunity to meet with actively practicing clinicians in the community, residency directors, and other administrators associated with rural residency programs.

**Credits** 1

#### **Prerequisites**

Acceptance into the Rural and Wilderness Medicine Track.

### **RWM 5022 : Rural and Wilderness Medicine II**

This course is a continuation of RWM 5021 Rural and Wilderness Medicine I.

**Credits** 1

#### **Prerequisites**

Acceptance into the Rural and Wilderness Medicine Track.

### **RWM 5023 : Rural and Wilderness Medicine III**

This course is a continuation of RWM 5022 Rural and Wilderness Medicine II.

**Credits** 1

#### **Prerequisites**

Acceptance into the Rural and Wilderness Medicine Track.

## Trauma

### **TRM 4200 : Trauma Elective**

Trauma surgery is a surgical specialty that utilizes both operative and non-operative management to treat traumatic injuries, typically in an acute setting.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Urban Underserved Medicine

### **URB 5011 : Urban Underserved Medicine I**

Racial and ethnic disparities in healthcare and lack of qualified manpower have created a serious need for physicians in America's urban areas. Members of racial and ethnic minority groups, who make up the majority of inner-city residents, are less likely than others to receive needed services than those from wealthier communities; this includes treatment for HIV infection, mental health problems, cardiovascular disease, and cancer. This track will teach students about healthcare inequities and disparities within different populations of patients in urban areas. It will also serve to inform and educate young physicians about the suffering of asylum seekers and refugees in the United States and the disparity between international humanitarian obligations and the government's current treatment of people in these situations. At its core, the program will also give students knowledge and foresight into providing for with patients who may have a different cultural, literacy, or socio-economic backgrounds and teach them how to become effective health care providers.

**Credits** 2

#### **Prerequisites**

Acceptance into the Urban Underserved Track.

#### **Notes**

Colorado Campus Only

### **URB 5012 : Urban Underserved Medicine II**

This course is a continuation of URB 5011 Urban Underserved Medicine I. Prerequisite: acceptance into the Urb

**Credits** 2

#### **Prerequisite Courses**

[URB 5011: Urban Underserved Medicine I](#)

#### **Prerequisites**

Acceptance into the Urban Underserved Track and successful completion of URB 5011.

#### **Notes**

Colorado Campus Only

## Urgent Care

### **URG 4001 : Urgent Care Elective**

Urgent care is a category of walk-in clinic focused on the delivery of ambulatory care in a dedicated medical facility outside of a traditional emergency room. Urgent care centers primarily treat injuries or illnesses requiring immediate care, but not serious enough to require an ER visit. Urgent care centers are distinguished from similar ambulatory healthcare centers such as emergency departments and convenient care clinics by their scope of conditions treated and available facilities on-site.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Urology

### **UTO 4001 : Urology Elective**

Urology, also known as genitourinary surgery, is the branch of medicine that focuses on surgical and medical diseases of the male and female urinary-tract system and the male reproductive organs.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.

## Wound Care

### **WND 4001 : Wound Care Elective**

Wound healing is an intricate process in which the skin repairs itself after injury. Wound healing is depicted in a discrete timeline of physical attributes constituting the post-trauma repairing process.

Variable Credits

#### **Prerequisites**

Successful completion of all pre-clinical (Year 1 and Year 2) coursework and passing score on COMLEX Level 1.