

RowanSOM Programmatic Level Objectives:

The Rowan University School of Osteopathic Medicine (RowanSOM) is dedicated to providing excellence in medical education, research and health care for New Jersey and the nation. An emphasis on primary health care and community health services reflects the School's osteopathic philosophy, with specialty care and centers of excellence demonstrating our commitment to innovation and quality in all endeavors. The school seeks to develop clinically skillful, compassionate and culturally competent physicians from diverse backgrounds, who are prepared to become leaders in their communities.

Based on the competencies developed by the School's Curriculum Committee, following are the programmatic level objectives of our curriculum:

- I. Students will demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and psychosocial/behavioral concepts and their application to patient centered care.
- II. Students will provide osteopathic patient-centered care to promote health and to deliver compassionate, appropriate, and effective treatment of disease based on patient information and preferences, evidence-based medicine, and clinical judgment.
- III. Students will conduct themselves with poise, courtesy, honesty and responsibility when dealing with patients or other members of the health care and academic environment. Students will engage in self-care and regulation in order to maintain a productive career in medicine.
- IV. Students will demonstrate effective listening, speaking, writing, and nonverbal communication skills with patients or other members of the health care and academic environment.
- V. Students will appraise, assimilate, and apply scientific evidence to the care of their patients. They will engage in self-evaluation and life-long learning to ensure optimal patient outcomes.
- VI. Students will demonstrate a knowledge of health care systems and the resources available to provide comprehensive quality patient care and processes to deal with impediments to patient safety, quality, and access to care.

Course Descriptions for Current Curriculum

First-Year Course Descriptions

MBIO 6030M

BIOCHEMISTRY/ HUMAN GENETICS

Kai Mon Lee, Ph.D.

Michael McCormack, Ph.D.

Course Co-Directors

This course was revised in 2014 and integrates two well-established courses of biochemistry and genetics. The goal is to provide students with a broad and thorough understanding of the scientific basics of the life processes at the molecular level and to orient them towards the applications of the knowledge acquired in solving clinical problems. It will provide students with the biochemical knowledge necessary for their future development in their medical profession. At the end of the course, students will be able to: Describe the principal classes of biological macromolecules, identify their components and explain their functions; describe the major human biosynthetic pathways, the steps involved in these pathways and the regulation of key enzymes; outline the metabolic roles of the major tissues and organs of the body and how they interact with one another and the influence of extrinsic factors in maintaining the body's homeostasis; apply biochemical principles to the understanding of metabolic diseases; demonstrate an understanding of the role of basic science in guiding diagnosis, management, therapeutics and disease prevention; demonstrate the ability to contextually organize and synthesize relevant information to address an issue or problem.

The Genetics component of the course involves the study of inherited human traits and diseases. The course reviews the impact of alterations of human chromosome structures and its impact on chromosome function and the human phenotype. There is extensive review of the genetic mechanisms involved in inborn errors of metabolism as well as effects of gene mutations on the molecular basis of human genetic diseases including cardiovascular disease, neuromuscular diseases, cancer and neuropsychiatric diseases. The applications of knowledge, techniques and research discoveries to clinical medicine are stressed in topics such as antenatal diagnosis, newborn screening and heterozygote screening and genetic counseling, gene therapy and genetic epidemiology. Clinical specialists representing the disciplines of oncology, gastroenterology, cardiology, geriatrics, neurology and psychiatry will make presentations in this course. Ethical, legal and social implications of advances in topics will be presented in lecture format and in the context of numerous clinical correlations which are included. Additional course information will be presented either in the course, handouts or textbook.

The course consists of lectures, patient presentations and independent case studies. Students are assessed by examinations. All relevant course materials and information are available online. Included on the website is the course syllabus, schedule of course activities and lecture topics, reading assignments, handouts and self-paced and self-guided multimedia tutorials.

CBIO 6019M

HUMAN GROSS ANATOMY

James White, Ph.D.

Course Director

Human Gross Anatomy takes a regional approach. This approach offers the advantage of understanding how different systems are organized in the major regions of the human body. Furthermore, the course is organized to complement the other medical and basic science disciplines within a larger curricular module.

Students will begin to use anatomical terminology and the language of medicine in communication with their peers and faculty. Common clinical cases will serve as the basis for discussion of the region being studied.

The course begins with a regional focus on the thorax, moving into the abdomen, pelvis and perineum and then followed by neuroscience-integrated modules, the integrated back, and limbs and lastly, the head and neck. The topics and learning experiences are organized to foster integration of basic science concepts and to facilitate learning.

MBIO 6140M

HISTOLOGY

Jennifer Fischer, Ph.D.

Course Director

The SOM histology course presents the detailed microscopic anatomy of the healthy human body as well as the structural basis for its physiologic functions. Structural knowledge provides the foundation for understanding disease mechanisms and pathology. Students are expected to identify various cells, tissues and organs in light and electron micrographs. Upon successful completion of the course students will be able to identify and describe the microanatomy of human organs as well as the individual functions of its component cells and tissues. This information is then applied to recognize how structure and function contribute to clinical processes.

CBIO 6320M

MEDICAL PHYSIOLOGY

Deborah Podolin, Ph.D.

Course Director

The ultimate objective of this course is to understand the mechanisms that operate in mammals at all levels, ranging from the sub-cellular to the whole animal. Specifically, two major principles will recur throughout our study of mammalian physiology. First, function is based on structure. Our understanding of how a muscle contracts, for example, rests largely on an understanding of the molecular basis of the contractile machinery. The second major principle emphasized in this course involves the ability of mammals to regulate their internal environment within narrow limits. "Constancy of the internal milieu" as the great pioneer of modern physiology Claude Bernard phrased it, enables animals to survive in potentially stressful environments. When body systems are no longer able to maintain an optimal internal environment, pathophysiological states result.

Understanding physiology is imperative for medical practice. Only with a solid understanding of function and dysfunction of the body is it possible to develop effective and scientifically sound treatments for human maladies. The physician who understands physiology is better equipped to make intelligent and insightful diagnoses and decisions, and less likely to commence on a course of treatment that is disruptive to the body's physiological balance. Without an understanding of physiological principles, a physician dispensing medicine will be relying entirely on the advertising of pharmaceutical companies. With this in mind, our two major goals in this course are: 1) to help you learn the fundamental mechanisms of human physiology needed to study and practice medicine; and, 2) to stimulate a lifelong interest in physiology and pathophysiology.

MBIO 6209M

MICROBIOLOGY/ IMMUNOLOGY

Susan Muller-Weeks, Ph.D.

Course Director

This course introduces students to basic concepts of immunology, microbiology and infectious disease. It begins with a focus on the immune system and its involvement in health and disease. Upon completion of this unit, students will be able to:

- Compare and contrast the humoral and cell mediated immune responses. Identify the specific cell types associated with each response and explain their functions.
- Explain how different immune reactions are generated in response to different stimuli.
- Describe how a defective or unwanted immune response manifests as a pathological condition.
- Explain the underlying principles of vaccination and differentiate between the various approaches.

The Microbiology unit provides an overview of the basic biology of microbial pathogens and the mechanisms by which microbes cause disease. It also introduces clinical presentation, diagnosis and prevention of infectious diseases. Upon completion of this unit, students will be able to:

- Discuss the structural, metabolic and genetic properties of disease-causing microbes.
- Explain how microbes cause disease including the roles of specific proteins and/or toxins.
- Describe clinical aspects of microbial infection including disease presentation, diagnosis and prevention.
- Discuss the types and mechanisms of action of antimicrobial agents including methods for developing/acquiring resistance to them.
- Evaluate clinical case-based problems/scenarios relating to infectious disease.

Educational methods include traditional lecture, audience response, case studies, self-assessments and flipped classroom sessions.

CBIO 6240M

NEUROSCIENCE

James White, Ph.D.

Course Director

The Neuroscience course integrates basic neuroscience providing students with a global learning opportunity in this discipline. In addition to lectures, self-directed problem-based learning will be utilized, along with small group case presentations.

The goal of the Neuroscience course is to provide a basis for understanding the structure, function and clinical features of the human central nervous system in terms of its cells and their connections.

In the first part of the course students will study the major divisions, nuclei, and pathways of the human central and peripheral nervous systems and their functional roles. In the second part of the course, students will integrate this material with neurology and neuropathology. The course also includes the back, and head and neck parts of Clinically Integrated Human Anatomy, along with the Microbiology of CNS infections and Histology of the eye, ear and glands.

FMED 6260M
ON DOCTORING I

Samantha Plasner, D.O.

Course Director

J. Niel Rosen, J.D., Ph.D.

Ethics Director

On Doctoring I is a patient care/clinical Preceptorship course for first-year medical students under the direction of the Department of Family Medicine. The course provides an opportunity for students to observe and experience the practice of clinical skills in an ambulatory/non-hospital setting early in the medical school curriculum. It aims to introduce medical students to the role of the physician in the delivery of patient-centered medical care through didactic instruction, practice encounters with Standardized Patients, a clinical Preceptorship and a community learning experience. Lecture topics are pertinent to history taking and documentation, and physical examination skills focus on the abdominal examination, central nervous examination, normal cardiopulmonary examination and vital signs. Lectures and discussion about professionalism, serve as an initial step in the student's development of a professional identity as a health care provider. This is a year-long course with the grade being given at the end of the spring semester.

OCSI 6270M

OSTEOPATHIC MANIPULATIVE MEDICINE I

James Bailey, D.O.

Course Director

The OMM course is integrated into the first year to take full advantage of the case-based, student adult learner model. The student must be an active participant in this hands-on course. Learning will occur in a combination of lectures and directed lab sessions. Reading for lectures and labs prior to their delivery by the OMM faculty is a necessity. There are fewer lecture hours and more lab hours to maximize the individualized instruction of this manual treatment and the philosophy behind its application. The lab sessions will be directed by OMM faculty and a low student to faculty ratio will be maintained through collaboration with the NMM/OMM and Family Medicine Residencies. This is a year-long course with the grade being given at the end of the spring semester.

Second-Year Course Descriptions

MED 7200M

CLINICAL MEDICINE

Magdala Chery, D.O.

Course Director

Clinical Medicine is a multidisciplinary course designed to introduce the student to the pathophysiology of illness. To this end, a strong didactic program, including lectures from expert faculty in each of the subsections of medical and surgical areas, is given through the year. This material is presented in a modular format designed to provide basic concepts both in pathophysiology and diagnosis of disease processes. Emphasis is placed on acquiring the clinical knowledge and diagnostic problem-solving skills required by the primary care physician. There is a focus on learning to synthesize clinical information with pathological and pharmacological information and apply these concepts to the diagnosis and treatment of the major disease processes through didactics and case-based learning.

Students demonstrate their ability to communicate the pathophysiology of common medical problems; discuss the differential diagnosis of common medical problems; associate the contribution of knowledge in pathology and pharmacology to an understanding in treatment of common medical problems; research, analyze, and present clinical information; practice basic diagnostic problem-solving skills; and evolve a rational approach to the management of common medical problems.

The Clinical Medicine modular sequence includes Prevention, NeuroMusculoskeletal Medicine, Cardiology, Pulmonary, Endocrinology, Nephrology, Gastroenterology, Hematology/ Oncology. This is a year-long course with the grade being given at the end of the spring semester.

PSYC 7340M
CLINICAL PSYCHIATRY

Rachel Shmuts, D.O.
Course Director

The Clinical Psychiatry course is designed to introduce the basic knowledge required by physicians for the examination of the psychiatric patient. The experience will teach the student the criteria for psychiatric disorders and appropriate treatments for those illnesses. This is a two week long course spanning the Thanksgiving holiday and the fall semester.

OST 741AM
DEATH AND DYING SEMINAR

Paul Bryman, D.O.
Course Director

This course is designed to provide medical students with fundamental knowledge about the dying process and to introduce them to the clinical challenges and ethical dilemmas common in end of life decision making. The course includes presentations on the physiological changes and psychological stages experienced during the dying process. Strategies to effectively communicate bad news to patients and families are presented through the use of video vignettes and demonstration of practical techniques. Small group panel discussions are also offered to provide students an opportunity to share their thoughts and gain insight into the ethical dilemmas, clinical challenges and cultural and spiritual beliefs often confronted when caring for patients at the end of life. Students also gain an appreciation for the diverse needs of the dying through direct interaction with a patient at the end of life. The role of the physician in caring for the dying and bereaved and in the importance of empathy in physician/patient communication is instilled during this seminar.

GERI 7121M
GERIATRIC MEDICINE

Kevin Overbeck, D.O.
Course Director

Geriatric Medicine is a specialty that has emerged in the medical profession as a result of changing U.S. demographics and the need for skilled practitioners to care for our aging population. Osteopathic physicians, with their special commitment to primary care and their holistic approach to a patient's health in a unique position to respond to the health care needs of the older adult. The physicians of today (and many decades to come) need to be well-grounded in the principles of geriatric medicine.

The aging process is explored from the physiological, clinical and psychological viewpoints with a particular emphasis on optimizing health and function successfully in the elderly through application of geriatric principles. Common geriatric syndromes such as poly-pharmacy, falls, pressure ulcers, urinary incontinence, delirium, dementia, depression and iatrogenesis are likewise presented.

Didactic lecture infused with authentic case studies and vignettes are offered by an interdisciplinary faculty and features experts in geriatric medicine, geriatric psychiatry, and neurology. The learners are immersed into an interactive educational environment utilizing simulated patient assessments, team-based learning sessions, and audience response technology to self-evaluate their progress toward acquisition of knowledge and clinical skills.

FMED 7260M
ON DOCTORING II

Rebecca Moore, D.O.
Course Director
J. Niel Rosen, J.D., Ph.D.
Ethics Director

On Doctoring II in the second year curriculum, a continuation of clinical skills from On Doctoring I in the first year, will teach students the basics of the “Art of Medicine.” The “Art of Medicine” is a concept that is a well-known and respected aspect of clinical medicine. This course aims to provide a foundation for students to learn how to perform a thorough and effective examination, treat patients with respect, professionalism, ethics, and good bedside manner, and to learn important aspects of effective communication and interview skills and be able to apply this knowledge to all patient encounters. This will be done via lectures, panel discussions, standardized patient labs, didactic and small group hands on learning sessions, improvisation, debate, reflection papers and Preceptorship. This is a year-long course with the grade being given at the end of the spring semester.

OSCI 7272M
OSTEOPATHIC MANIPULATIVE MEDICINE II

Danielle Cooley, D.O.
Catharine M. Fusco, D.O.
Course Director

Osteopathic Medicine Clinical Skills focuses on the clinical application of the fundamental physiology, general anatomy and osteopathic manipulative medicine involved in the practice of Osteopathic Practices and Principles. It complements and parallels the clinical medicine, pathology and pharmacology courses. In the second year course of OMM, osteopathic students will learn how to begin to integrate the basic techniques learned in the first year, into the care of patients in a primary care practice, particularly in an outpatient setting. Upon completion of the second year OMM course, the student should be able to appropriately include somatic dysfunction into any differential diagnosis for primary care, treat both the axial and appendicular skeletal system as well as discuss indications and contraindications for the use of osteopathic manipulative treatment (OMT). This is a year-long course with the grade being given at the end of the spring semester.

OST 7421M
PAIN SEMINAR

Richard Jermyn, D.O.
Course Director

This seminar exposes students to types of pain (acute, chronic and terminal), impact of pain on well-being, the subjective meaning of pain and multiple ways of assessing and treating it. Lecture and interactive formats are used to help students understand the physical and emotional attributes of pain.

The seminar is designed to provide students with information that a primary care physician uses in caring for patients suffering from different types of pain. It prepares students to recognize the various types of pain, collect the information necessary to make correct assessments, and manage the care of the patient and the family.

PATH 7290M

PATHOLOGY

Vincent DeRisio, D.O.

Course Director

Pathology serves as the bridge between basic science disciplines and the clinical courses studied in the third and fourth years. Issues of molecular and cell biology become more explicable when correlated with the gross and microscopic changes observed in diseased tissues. In modern practice, gross pathology is often represented by the contrasting densities observed on various imaging (X-ray, CAT scan, nuclear scan, etc.) studies. Consequently, we correlate gross and microscopic pathology with their radiographic reflections. Indirect evidence of pathologic physiology also can be obtained from analyzing abnormalities of clinical laboratory studies (serum electrolytes, serum aldosterone, etc.). During the study of each disease, the expected clinical laboratory abnormalities are examined.

During this course, the basis of tissue abnormalities and predictions of the various signs and symptoms which result from those diseases, are studied. During the remaining portion of undergraduate and postgraduate clinical education, students are required to think in reverse; i.e., they attempt to predict the tissue lesion that would best explain a patient's signs and symptoms.

The first five weeks are devoted to generic issues such as cell injury, inflammation, immunopathology and a general overview of oncologic pathology. The remaining content of the course is synchronized with the information of the "module" being presented in Clinical Medicine. This is a year-long course with the grade being given at the end of the spring semester.

PEDS 7301M

PEDIATRIC MEDICINE

Jacqueline Kaari, D.O.

Course Director

Osteopathic physicians, with their special commitment to primary care and their holistic approach to patient care, are in a unique position to respond to the health care needs of children. The primary care and specialty physician need to be well-rounded in the principles and practice of pediatric medicine. The goal of this course is to familiarize the student with the basic concepts of the principles and practice of pediatric medicine and to introduce students to the unique problems of infants and children. This course is designed to serve as a foundation for continued acquisition of knowledge of pediatrics in the forthcoming clinical rotations. The course emphasizes the unique problems and comprehensive assessment of newborns, toddlers, school age children and adolescents. Students learn and use the tools and skills necessary to assess the pediatric patient. Unique aspects of health maintenance and disease prevention, including childhood immunizations, are introduced. Disorders of growth and development from birth through adolescence are also presented. Common problems of childhood, such as abuse, pediatric dermatology, cardiology, pulmonology and infectious diseases, will be covered.

CBIO 7310M
PHARMACOLOGY

Bernd Spur, Ph.D.
Kingsley Yin, Ph.D.
Course Co-Directors

Pharmacology is designed to encompass the rational use of drugs in the prevention, diagnosis and treatment of human diseases and also deals with environmental agents which may be toxic or carcinogenic. The growing problem of drug abuse also necessitates some consideration of this sociological problem within the discipline of pharmacology.

The basic pharmacological principles provided in this course will draw upon those concepts introduced in Physiology, Biochemistry, Microbiology and Genetics. The emphasis of the course is on mechanisms of drug action, pharmacodynamics, pharmacokinetics, and therapeutic indications, including specific disease states, adverse effects, contraindications and drug interactions.

The overall mission of the course is to produce practicing physicians who understand the basic principles of pharmacology and are able to apply them in a clinical setting. This is a year-long course with the grade being given at the end of the spring semester.

OBG 7252M
WOMEN'S HEALTH

Karen Krieg, D.O.
Course Director

Women's Health is a course is based on the curriculum set in the Association of Professors of Gynecology and Obstetrics (APGO) Educational Objectives for Medical Students. The course is designed to provide medical students with the foundation of knowledge required to provide care to the female population. By the end of the course, the student should be well versed in the primary care needs of women through the teenage, reproductive, and menopausal years.

Women's Health topics, such as abnormal uterine bleeding and menstrual abnormalities, cervical cancer screening, contraceptive management, obstetrical care, will be explored in detail. In addition, students will be introduced to the subspecialties of Gynecologic Oncology, Reproductive Endocrinology, Maternal/Fetal medicine and Urogynecology.

The course objectives will be achieved through a combination of didactic lectures with audience response technology, student directed learning via case studies in small group settings, and assigned readings. At the conclusion of the course, the student should be prepared to participate fully in the third year Obstetrics and Gynecology Clerkship.

Third-Year Course Descriptions

FMED 8101M

COMMUNITY SERVICE LEARNING

Xitlalichomiha O'Dell, D.O.

Course Director

The Community Service Learning Course aims to expose medical students to vulnerable patients in medically underserved areas of New Jersey and to appreciate the variety of psychosocial issues that can impact the delivery of healthcare to these patients through a process that looks at community needs, health risks and disparities.

During the two-week course, students will receive online lectures on inter-professional education, social determinants of health, behavioral health integration, cultural competency, practice transformation, population health and emerging health issues impacting vulnerable populations. The students will also participate in activities in community-based organizations throughout New Jersey. These activities may or may not require the use of clinical skills, as the focus of the activities is for the students is to learn how psychosocial issues in underserved populations impact patients' health.

The course will end with a final exam covering the lecture topics and with a debriefing session about the students' experiences.

FMED 8102M

FAMILY MEDICINE

Jennifer Caudle, D.O.

Philip Collins, D.O.

Clerkship Co-Directors

For one day of the Family Medicine Clerkship, students will participate in "Principles and Practice of Interdisciplinary Health Care Delivery." This course prepares graduate level health professions students and other practitioners to work in concert with each other and the community to address the complex needs of diverse and changing populations. Course participants explore both traditional methods and new strategies for the delivery of health care based on an interdisciplinary model of practice.

Participants will develop basic skills in personality awareness, team development, team collaboration, communication, leadership, cultural competence, professionalism, decision-making preferences, problem solving, negotiation and conflict resolution. Participants will deliberate ethical and legal issues in the context of team based practice.

Graduate level students and licensed practitioners of all health and related professional disciplines (Medicine, Dentistry, Nursing, Physical/Occupational Therapists, Social Work, Allied Health, Pharmacy, Public Health and Health Administration Educators, Clergy) are eligible to participate in this course.

For two weeks of the Family Medicine Clerkship, students will participate in a community service rotation in a medically underserved community.

During the remaining eight weeks of the Family Medicine Clerkship, students will be placed in an ambulatory setting such as a family practice office or health center. The student works with a physician, taking part in patient interviews, examinations and treatment planning. In this setting, the student obtains hands-on experience as physician of first contact and evaluator of the patient's total health care needs within the context of his/her environment and the osteopathic point of view. A student learns to coordinate comprehensive and continuous health care for the patient and serve as provider of resource information and referral to available health care in the community. They experience the management and administrative aspects of providing health care.

MED 8202M

GENERAL INTERNAL MEDICINE

Elizabeth Helfer, M.D.

Clerkship Director

General Internal Medicine is an introduction to clinical medicine. The patients have a kaleidoscopic array of common and uncommon medical problems. The resident-student-attending team examines the patient daily, analyzing X-rays, laboratory data and consultation with the goal of providing comprehensive medical care in an empathetic environment.

The rotation is six weeks in length in acute care settings at our core hospitals and at local ambulatory sites. There are a number of required self-study items, on-call duties, lectures, and tests, all aimed at providing a complete educational experience in Internal Medicine. The major foci of the rotation are to advance the student's thinking skills regarding key medical and ethical components of providing medical care for patients and to teach the major clinical entities, differential diagnosis and mechanisms and management of disease processes.

MED 8122M

GERIATRICS

Zinnat Chowdhury, M.D.

Christian White, D.O.

Clerkship Co-Directors

Geriatrics serves as an introduction to concepts of the aging process. Students obtain a foundation in geriatric medicine and a broad exposure to comprehensive geriatric assessment across the health care continuum. A holistic approach using the multidisciplinary team is highlighted, with students gaining experience in primary and consultative care in the hospital, ambulatory and long-term care settings.

Students learn to perform a comprehensive geriatric assessment including history and physical exam, functional assessment, mental status exam, and psychosocial evaluation on elderly patients in each clinical setting. They practice the appropriate use and interpretation of specific assessment tools (e.g. Folstein's Mini Mental Status Exam, Beck Depression Inventory and Katz Physical Self Maintenance Scale) and diagnostic and laboratory tests; create differential diagnoses based on identified problems; and outline a plan of care which is appropriate and optimizes patient function. They learn to adapt communication techniques to compensate for specific needs and/or deficits of the elderly patient.

Students learn effective management strategies for common geriatric problems and develop specialized medical knowledge in caring for the elderly. They work as members of a multidisciplinary health care team and participate in treatment planning and family meetings. Students also participate in weekly educational sessions including systems-based practice case study, ethical issues in advance care planning, OMM in the elderly, interdisciplinary team conferences, geriatric grand rounds and student-led presentations on common geriatric problems. Learning is reinforced through an end-of-rotation geriatric OSCE, peer review and faculty debriefing session.

OST 8420M

NEUROMUSCULAR MEDICINE AND PAIN MANAGEMENT

Richard Jermyn, D.O.
Clerkship Director

During this two-week rotation, students continue to build on their medical knowledge and skills, with particular focus on critical area of chronic pain.

Per the Institute of Medicine Report, "Chronic pain is among the top complaints presented to primary care physicians, and opioids and non-narcotic pain medications are among the top prescriptions written at office visits. Yet physicians are often uncomfortable and lack adequate knowledgeable about the treatment of chronic pain." By working with the clinicians in the NeuroMusculoskeletal Institute, students will be exposed to learning opportunities related to the diagnosis, palliation and treatment of chronic non-malignant pain with emphasis on proper opioid and adjuvant pain treatments.

OBG 8252M

OBSTETRICS AND GYNECOLOGY

Ronald Ayres, D.O.
Clerkship Director

Obstetrics and Gynecology provides instruction in the physiology, health maintenance and common problems encountered by women. The curriculum stresses 7310 (not reproduction) with a special emphasis on ambulatory care. Special attention is devoted to the recognition and management of the common problems typically seen by primary care physicians. Students perform breast and pelvic examinations in out-patient and in-patient facilities. Students have the opportunity to be present in the operating room and to assist in major and minor gynecological surgical procedures. They participate in vaginal and cesarean births.

Every student will be assigned to both hospital and ambulatory sites. Students attend all departmental educational activities. The student is graded using a number of tools, including, but not limited to, clinical evaluation forms and written examinations. A final grade is determined by the Clerkship Director. An OSCE must be completed by the student at an assigned date at the end of the rotation.

OSCI 8270M**OSTEOPATHIC MANIPULATIVE MEDICINE III**

Danielle Cooley, D.O.

Clerkship Director

Osteopathic Manipulative Medicine Clerkship serves as hands on treatment rotation for the students. The students will learn how to begin to integrate the basic treatment techniques learned in the first two years, into the care of patients in primary care practice and musculoskeletal specialty practices. During this rotation, the student will serve with the members of the Department of Osteopathic Manipulative Medicine and private OMM physicians for consultations and treatment of the musculoskeletal component of medical and surgical disorders. Students will become familiar with all aspects of the cases; and, following satisfactory demonstration of proficiency in osteopathic manipulation, the student will be responsible for treatment of selected patients. Students' skills are evaluated on the first day of the rotation when they complete a techniques exam and receive immediate feedback from the faculty following their treatments. The students are also required to integrate OMT techniques into their family practice Preceptor experience and are required to complete a log of 20 techniques. Students also participate in a 5 minute OMT case presentation which gets evaluated through peer evaluation. Learning is reinforced through an end of the rotation electronic examination and OSCE, at which the students receive specific feedback from the faculty graders.

PEDS 8302M**PEDIATRICS**

Tanya Kadrmas-Iannuzzi, D.O.

Clerkship Director

Pediatrics is a four-week, third-year rotation in the hospital and outpatient settings and is designed to provide students with an understanding of primary pediatric care, to expand students' fund of pediatrics knowledge and to allow each student to competently apply that knowledge within the clinical setting. Students rotate at a hospital and in ambulatory pediatrics (various sites). Core lectures are presented by faculty and there are service lecture rounds, specialty conferences, and library activities that reinforce the core lectures. The student is graded on both clinical and didactic knowledge based on a written test, case presentation and evaluations by attending physicians.

PSYC 8342M**PSYCHIATRY**

Jeffrey Aronowitz, D.O.

Clerkship Director

Psychiatry provides instruction in various aspects of psychiatry that are useful for both general practitioners and specialists. Instruction takes place at several locations, where students have opportunities to participate in psychiatric care in its various forms and observe different treatment methods. The rotation is four weeks in length. Treatment facilities include Jefferson Health, Cherry Hill, the RowanSOM outpatient facilities, Our Lady of Lourdes Medical Center, Camden County Health Services Center (Lakeland), Ancora Psychiatric Hospital, Morristown Hospital, Overlook Hospital and Care Point Christ Hospital.

Students become familiar with the major diagnostic categories, psychotropic medications, and psychosocial treatment modalities. Clinical work with lectures, diagnostic case conferences, and participation in treatment programs are essential components of the rotation.

Students learn to perform mental status examinations and diagnostic assessments, to use both biological and psychosocial treatments, and to gain an understanding of psychiatric emergencies. In addition, students develop an understanding of the interface and overlap existing between psychiatric and other medical illnesses (consultation liaison and inpatient experience); increase their awareness of the issue of counter transference in dealing with psychiatric and/or medical patients; work with the inpatient, outpatient, and consultation management of basic psychiatric problems; recognize the proper use of psychotropic medications; and apply the biopsychosocial approach to patients in keeping with the ideas of osteopathic philosophy.

SURG 8382M

SURGERY / ANESTHESIOLOGY

Adeshola Fakulujo, M.D.

Clerkship Director

Surgery in the third year reflects commitment to produce qualified, competent, and well-rounded physicians. The rotation is not designed to produce a surgeon but to instill in the student physician an awareness of surgical methods and an ability to recognize when there is a need for surgical care. The clinical rotation in surgery enables the student to recognize surgical disease and to be prepared to make a proper diagnosis and secure proper treatment.

Students develop certain cognitive, manipulative and attitudinal skills as part of their continuing education in surgery. They develop competence in eliciting a history, performing a physical examination, conducting and evaluating common laboratory and X-ray tests; demonstrate a proper, systematic approach to clinical diagnosis, practical knowledge of surgical principles, techniques, and operative skills, including knowledge of patient care in such conditions as shock, trauma, fluid and electrolyte imbalance, and musculoskeletal disease, skills in clinical judgment regarding surgical diagnosis and the concept of total patient care, and apply osteopathic principles and techniques to the diagnosis and management of surgical illness. Students are expected to demonstrate a healthy professional attitude in establishing meaningful interpersonal relationships with patients and their families and to show evidence of understanding and appreciating professional and ethical principles.

Fourth-Year Course Descriptions

EMED 9082M

EMERGENCY MEDICINE

Victoria Parikh, D.O.

Kishan Patel, D.O.

Co-Clerkship Directors

Emergency Medicine is an integrated four-week clinical and didactic experience through a collaborative effort of full-time clinical faculty of RowanSOM affiliates. Students are assigned to the Emergency Medicine Department and given the opportunity to evaluate and participate in the management of emergency patients.

All students receive didactic instruction in core curriculum topics, including abdominal pain, airway management, altered mental status, chest pain, eye emergencies, facial and oral/dental trauma, multiple trauma, pediatric emergencies, respiratory emergencies, toxicology, and wound management. Students are required to complete a written exam at the end of the rotation.

Student clinical knowledge and competence are assessed in Advanced Cardiac Life Support, Advanced Trauma Life Support; airway techniques including oral and nasal intubation; arterial blood gas—performance and interpretation; burn care and dressings; cervical spine immobilization; ECG—performance and interpretation, fracture immobilization; intravenous lines—central and peripheral; oxygen delivery systems; physical assessment; slit lamp use; wound preparation; and suturing techniques.

MEDICINE CORES AND SUBSPECIALTIES

The Medicine Core rotation includes components in humanities, social science and medicine which are designed to expand students' understanding of science. Students select, research, and present a topic in which the context and materials of the humanities or social sciences are applied to aspects of medicine (ICU, Cardiology and Pulmonology). Students must complete one in-system Medicine Core rotation, either in ICU, Cardiology or Pulmonology. They provide fourth-year students with clinical situations where they can advance their skills of history-taking, physical diagnosis and patient care. Students expand their knowledge of disease pathophysiology and develop confidence in their abilities as physicians.

MED 8054M/9054M

CARDIOLOGY

The Cardiology rotation introduces students to critically ill cardiac patients in an intensive-care setting and to patients with cardiac problems requiring workups or specific therapy. Students learn to read electrocardiographs, study non-invasive methods of diagnosis such as Holter recordings, stress testing (with and without thallium) and echocardiography. Two-dimensional echocardiography and Doppler examination are also available.

MED 9094M

ENDOCRINOLOGY

The Endocrinology rotation instructs medical students in the basics of endocrinology and metabolism as they apply to practical patient care. The student gains insight into pathophysiologic processes as they present clinically with the patient. Instruction on this rotation encourages professional reading and active participation on the part of the student.

MED 9114M

GASTROENTEROLOGY

In the Gastroenterology rotation, the student is an integral part of the team providing care to patients on service, participating in the differential diagnosis, therapeutic plan and other specific care procedures as they apply to the individual patient. Students study the complete spectrum of endoscopic evaluation and are expected to seek out information independently and to ask pertinent questions of the physicians involved with the patient's care. They learn gastrointestinal radiology and may be asked to participate in the GI conference as well as weekly GI Journal Clubs.

MED 9124M**GERIATRICS**

Interested students should contact the Department of Geriatrics for further information regarding available elective experiences (856-566-7141).

MED 9174M**INFECTIOUS DISEASES**

The Infectious Diseases rotation provides students with a basic knowledge of infectious disease principles, including history taking, physical examination, laboratory studies, diagnostic techniques and therapy. The student receives didactic lectures supplemented by bedside teaching to enrich his/her understanding of infectious diseases. A core of classic articles is provided on infectious disease topics, which the student is expected to read while on the rotation.

MED 9454M**INTENSIVE CARE UNIT**

Intensive Care Unit – The intensive care unit rotation is a fourth-year rotation designed to prepare students to care for critically ill patients. The student will apply knowledge gained in their clinical medicine courses and their internal medicine clerkship to the care of these patients. Students will round daily with the internal medicine residents and faculty. Clinical application includes expanded responsibilities in patient care and academic assignments for presentations at conferences, and discussion on teaching rounds.

MED 9224M**NEPHROLOGY**

In the Nephrology rotation, students are expected to integrate their pre-clinical knowledge of the basic sciences and core academic content into the clinical setting. The service is provided to orient the student toward further education in nephrology and general internal medicine.

MED 9234M**NEUROLOGY**

The Neurology rotation allows students the opportunity to spend some time in outpatient settings while still being responsible for hospital inpatient consultations. Students are required to make teaching rounds, reviewing and comparing their evaluation with those of the medical residents on service and with the attending neurologist. This feedback provides the most valuable resource for the student refining his/her own clinical neurologic examination. During the time spent in the outpatient setting, the students are exposed to an increased patient volume, often with very interesting disorders not always seen in the hospital setting. Although more observational, the educational discussions associated with seeing these patients are very valuable to the students. Students are also responsible for attending morning rounds and any neurology presentations that occur, morning or noon time. The basic text for the course is the Neurology Section of Harrison's Textbook of Medicine or the Cecil-Loeb Textbook of Medicine. Also frequently used is Neurology for the House Officer.

MED 8354M/9354M**PULMONOLOGY**

During the Pulmonology rotation, students are taught by the attending physician, fellow and resident staff during teaching rounds, and weekly conferences as scheduled. Students are encouraged and expected to participate actively in patient care under the supervision of the appropriate house staff

officer. Students must have basic knowledge in respiratory medicine. The clinical application of this knowledge includes expanded responsibilities in patient care and academic assignments for presentations at conferences and discussion on teaching rounds.

OST 9008M

CLINICAL SKILLS COMPETENCY EXAMINATION (CSCE)

Linda Boyd, D.O.

Course Director

During the transition period from third year to fourth-year, students must take and pass a multi-station Objective Structured Clinical Exam (OSCE). Structured like the COMLEX Level 2PE, this comprehensive summative exercise evaluates competence with history taking, physical and osteopathic examination, clinical thinking and decision making, osteopathic manipulative therapy, various procedures and diagnostic skills, and documentation. Capabilities in provider relations skills, such as showing empathy and respect for a patient, providing information and more are also evaluated. Students failing to pass the OSCE are provided with remediation activities and an opportunity to retest.

OST 9009M

MEDICAL HUMANITIES

J. Niel Rosen, J.D., Ph.D.

Course Coordinator

The Medical Humanities course focuses the attention of fourth-year students on the human experience of being ill and healing, as well as the complex arrangements that shape medical care. Using the arts, humanities or social sciences as a lens, each student carries out an independent research project on a dimension of medicine that interests him or her. The course comes to a conclusion when the students come together to share their findings with each other. In this way, the Medical Humanities course challenges students to reflect on the practice of medicine, enriches their understanding of medical practice as a human institution, and expands the resources they can bring to bear in their encounters with patients and colleagues.

OBG 9252M

OBSTETRICS/ GYNECOLOGY SUBSPECIALTY

Students may choose any subspecialty of OB/GYN to take as their Specialty selective rotation in the fourth year. Specialties include Reproductive Endocrinology and Infertility, Maternal-Fetal Medicine, Urogynecology, Gynecology Oncology and others.

PEDS 9302M

PEDIATRIC SUBSPECIALTY

Students may choose any subspecialty of Pediatrics to take as their Specialty selective rotation in the fourth year. Specialties include Pediatric Cardiology, Pediatric Emergency Medicine, Pediatric Gastroenterology, Pediatric Pulmonology, Pediatric Endocrinology, Developmental Pediatrics, Adolescent Medicine and others.

SURG 9382M
SURGERY SUBSPECIALTY

Surgery prepares students for future clinical/ surgical rotations by providing them with the basic knowledge for diagnosis and management of common surgical conditions. While on an assigned service, appropriate time will be set aside for lecture material which will be provided either in round table conferences, a prescribed program of required reading materials, or prepared videotapes on required core content. An orientation to the rotation and instructions for gowning, gloving, and suturing are provided on the first day.

The course is designed to focus attention on the physiology of surgical problems, the technical aspects of surgery and what can and cannot be accomplished by surgical means. Students gain skill in evaluating a patient with problems related to that specialty, including history taking, physical examination, and recording data; observe and acquire technical skills to manage the patient in a hospital, office, or clinic setting; and develop awareness of how the surgeon is involved in the delivery of a care plan for the patient.