

Element 6.2-1 Programmatic Level Educational Objectives

A COM must define and make all programmatic level educational objectives known to students, faculty, and others with responsibility for student education and assessment.

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.

Curricular Descriptions for System Blocks / Intersessions / Courses

Synergistic Learning (SGL) Track

RowanSOM's traditional curriculum will evolve from a double-pass organ-based format (with basic sciences in the first year and clinical sciences in the second year) to a single-pass, system-based design. In this new format, organ systems have been recombined into blocks that reflect a more intuitive progression of learning. Each block repeats a cyclical process that presents ideal, normal human structure and function then describes the progression of diseases, their diagnosis and treatments. For example, basic sciences sessions centered on normal regulation of blood pressure are followed by clinical sessions centered on evaluation and management of hypertension. This will allow the relevance of basic sciences to be immediately apparent to the learner, allow for more team teaching by clinical and basic science faculty and reduce redundancy.

The Problem Based Learning (PBL) Track

PBL is valued by its students and facilitators for its independent learning format. In the new curriculum, PBL students will continue with the double-pass systems-based model, which will allow them to develop learning issues including both the basic and clinical sciences over two years. For both tracks the curriculum will be comprised of:

- System blocks
- Intersessions
- Pre-clerkship courses
- Longitudinal courses

SGL Track: Systems Blocks

Immersion Anatomy

The Immersion Anatomy course takes a regional approach in studying the structure of the human body. This approach offers the advantage of understanding how different systems are organized in the major regions of the human body. Students will begin to use anatomical terminology and the language of medicine in communication with their peers and faculty. It is hoped that the process of learning human anatomy through dissection labs and lectures will help students gain respect for the patient and the patient's family and the wonder of human life, as well as an appreciation of the importance of teamwork.

Biomedical Foundations

The goal of this block is to provide students with a fundamental understanding of the biochemical basics of life processes on a molecular level. This block introduces students to basic concepts of biochemistry, immunology, microbiology and infectious disease. It begins with a foundational introduction to biochemistry, and moves on to focus on the immune system and its involvement in health and disease. Next, 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, prevalence and prevention of infectious diseases.

Rheumatology and Dermatology

The goal of the Rheumatology and Dermatology Block is to provide students with a broad-based education; cycling through the normal structure and function of the musculoskeletal and dermatological systems to pathology, diagnosis and treatment of diseases in those system. With regard to the musculoskeletal system, the focus will be on inflammatory diseases. This block addresses the evaluation, management and treatment of rheumatological and dermatological medical problems. This incorporates the comprehensive services of disease prevention, early detection and health promotion.

Brain and Behavior

The Brain and Behavior Block is a combination of neuroscience, neurology, psychiatry and pain management, providing students with a broad-based education in these areas. Content will cycle through the normal structure and function of the neurological system to pathology diagnosis and treatment of disease. This block also incorporates the evaluation, management and treatment of neurological and mental health diseases. This incorporates the comprehensive services of disease prevention, early detection and health promotion.

Cardiology

The goal of the Cardiology Block is to provide students with a broad-based education in cardiovascular medicine; cycling through the normal structure and function of the cardiovascular system to pathology diagnosis and treatment of disease. Students will apply their basic science knowledge to the practical clinical skills of caring for patients with cardiovascular diseases including coronary artery disease, vascular heart disease and hypertension. Students will be expected to be able to make appropriate decision making; diagnosing, evaluating and treating patients with cardiovascular disease utilizing standard techniques. This incorporates the comprehensive services of disease prevention, early detection and health promotion.

Hematology, Pulmonology, and Nephrology

The goal of this block is to provide students with a broad-based education in clinical medicine related to the hematologic, respiratory and renal organ systems. Relative to these systems, this block will cycle through normal structure and function to pathology, diagnosis and treatment of disease. This block also incorporates the evaluation, management and treatment of hematologic, respiratory and renal diseases. This incorporates the comprehensive services of disease prevention, early detection and health promotion.

Endocrinology and Reproduction

This block will provide students with a broad-based education in endocrinology and reproductive health and disease. Students will learn about the endocrine glands and hormones of the body cycling through the normal structure and function of these systems to pathology, diagnosis and treatment of disease. Content will address general systemic diseases such as diabetes and thyroid disorders, as well as, male and female reproductive health. This incorporates the comprehensive services of disease prevention, early detection and health promotion.

Gastroenterology and Nutrition

This block will provide students with a broad-based education in the gastrointestinal (GI) system and the foundation of nutrition. The content will cycle through the normal structure and function of the GI systems to pathology, diagnosis and treatment of disease. In corollary, students will be introduced to the foundation of appropriate nutrition and the consequences of poor nutrition. This block also incorporates the evaluation, management and treatment GI and nutritional diseases. This incorporates the comprehensive services of disease prevention, early detection and health promotion.

Life Span/ Pediatrics and Geriatrics

This block address the growth, development and aging of patients. It introduces students to the basic knowledge of both the pediatric and geriatric history and physical exam. It explores normal growth and development, as well as, the common problems in the pediatric population. The geriatrics component provides an overview of the aging process and the application of these principles to patient care and medical decision making. The physiology of aging, comprehensive geriatric assessment, and common geriatric problems serve as a foundation for the course. This block incorporates the comprehensive services of disease prevention, early detection and health promotion.

PBL Track: Systems Blocks

Pulmonology

In this block, students will learn to use anatomical terminology and the language of medicine in communication with their peers and faculty. This process of learning human anatomy through dissection labs, lectures, and self-directed study will be integrated in the block with an organ system regional approach.

The goal of the pulmonary block is to provide students with a broad-based education in pulmonary medicine including the normal structure, physiology, and function of the respiratory system as well as the pathologic basis, diagnosis, and treatment of pulmonary disease including, but not limited to, asthma, bronchitis, COPD, Cystic Fibrosis, Sarcoidosis, pneumonia, lung infections, lung malignancies, and pneumoconiosis. Comprehensive services of disease prevention, early detection, and health promotion are incorporated as appropriate to the clinical case reviewed.

Cardiology/Nephrology

In this block, students will learn to use anatomical terminology and the language of medicine in communication with their peers and faculty. This process of learning human anatomy through dissection labs, lectures, and self-directed study will be integrated in the block with an organ system, regional approach.

The goal of the Cardiology/ Nephrology Block is to provide students with a broad-based education in cardiovascular medicine including the normal structure, physiology, and function as well as the pathologic basis, diagnosis, and treatment of patient with congenital heart anomalies, coronary artery disease, heart failure, valvular lesions, pericardial heart disease, and hypertension. The second half of the block will cover normal structure, histology, physiology, and function of the kidneys, bladder and ureters as well as pathogenesis, diagnosis and treatment of renal failure, reno-vascular hypertension, acid base disorders, electrolyte disorders, malignancies of the urogenital tract, nephritis, nephrosis, renal calculi and vasculitis, etc. Comprehensive services of disease prevention, early detection, and health promotion are incorporated as appropriate to the clinical case reviewed.

Gastroenterology/Nutrition

In this block, students will learn to use anatomical terminology and the language of medicine in communication with their peers and faculty. This process of learning human anatomy through dissection labs, lectures, and self -directed study will be integrated in the block with an organ system, regional approach.

This block will provide students with a broad-based education in gastroenterology. Students will learn normal structure, physiology, histology, and function of the gastrointestinal tract and the pathogenesis, diagnosis and treatment of diseases such as Peptic Ulcer Disease, GERD, Inflammatory Bowel Disease, diverticulitis, gall bladder disease, Alcoholic and Non- Alcoholic Liver Disease, Hepatitis, malignancies of the GI Tract, pancreatitis, bowel obstruction, and Malabsorption Syndromes. In addition students will be introduced to the foundation of appropriate nutrition and the consequences of poor nutrition. Comprehensive services of disease prevention, early detection, and health promotion are incorporated as appropriate to the clinical case reviewed.

Endocrinology/Reproduction Medicine

In this block, students will learn to use anatomical terminology and the language of medicine in communication with their peers and faculty. This process of learning human anatomy through dissection labs, lectures, and self -directed study will be integrated in the block with an organ system, regional approach. This block will provide students with a broad-based education in endocrinology, reproductive health, and disease. Students will learn normal structure, physiology, histology, and function of the endocrine system and the pathogenesis, diagnosis and treatment of diseases such as diabetes, thyroid disorders, adrenal glands, pituitary glands, menopause, as well as, male and female infertility. Comprehensive services of disease prevention, early detection, and health promotion are incorporated as appropriate to the clinical case reviewed.

Neurology/Psychiatry

In this block, students will learn to use anatomical terminology and the language of medicine in communication with their peers and faculty. This process of learning human anatomy through dissection labs, lectures, and self -directed study will be integrated in the block with an organ system, regional approach. A brain/brainstem dissection lab will be taught by neuro-anatomist to emphasize structure and function. The Neurology/ Psychiatry Block will provide PBL students with a broad-based education in neuroscience, neurologic disease states, and basic psychiatric disorders, as well as diagnosis and treatment.

Content will cover the normal structure, physiology, histology, and function of the neurological system and the pathogenesis, diagnosis, and treatment of neurologic disease states such as stroke, movement disorders, demyelinating diseases, seizures, headache, Brain tumors, CNS infection, Vasculitis, and Dementia, etc. as well as common anxiety, depression, and psychosis. The comprehensive services of disease prevention, early detection and health promotion is incorporated as the case studies inherently create opportunity to learn and explore the topic.

Immunology

In this block, students will learn to use anatomical terminology and the language of medicine in communication with their peers and faculty. This process of learning human anatomy through dissection labs, lectures, and self -directed study will be integrated in the block with an organ system, regional approach.

The overarching goal of this block is to provide students with a broad-based educational exposure to normal structure, physiology, histology and function related to the immune systems forming the basis to appreciate the pathogenesis, diagnosis and treatment of immune disorders such as HIV, Anaphylaxis, autoimmune diseases, immune deficiencies, transplant complications, and humoral response to viral, bacterial, and parasite infection. Comprehensive discussion of disease prevention, early detection, and health promotion are incorporated as appropriate to the clinical case reviewed.

In this block, students will learn to use anatomical terminology and the language of medicine in communication with their peers and faculty. This process of learning human anatomy through dissection labs, lectures, and self -directed study will be integrated in the block with an organ system, regional approach. The goal of this block is to provide students with a broad-based educational exposure to normal structure, physiology, histology and function related to immune systems forming the basis to appreciate the pathogenesis, diagnosis and treatment of immune disorders such as HIV, Anaphylaxis, autoimmune diseases, immune deficiencies, transplant complications, and humoral response to viral, bacterial, and parasite infection.

Hematology/Oncology

In this block, students will learn to use anatomical terminology and the language of medicine in communication with their peers and faculty. This process of learning human anatomy through dissection labs, lectures, and self-directed study will be integrated in the block with an organ system, regional approach. The goal of this block is to provide students with a broad-based educational exposure to the normal structure, physiology, histology and function related to hematologic disorders and malignancies. Forming the basis to appreciate the pathogenesis, diagnosis and treatment of hematologic and oncologic disorders such as solid tumors, leukemia, and lymphoma. In addition, this block reviews the relevant microbiology of infection and pharmacology of treatment. Comprehensive services of disease prevention, early detection, and health promotion are incorporated as appropriate to the clinical case reviewed.

Cardiology/Nephrology/Pulmonology

In this block, students will learn to use anatomical terminology and the language of medicine in communication with their peers and faculty. This process of learning human anatomy through dissection labs, lectures, and self-directed study will be integrated in the block with an organ system, regional approach. The goal of the Cardiology/ Nephrology Block is to provide students with a broad-based education in cardiovascular medicine including the normal structure, physiology, and function as well as the pathologic basis, diagnosis, and treatment of patients with, congenital heart anomalies, coronary artery disease, heart failure, valvular lesions, pericardial heart disease, and hypertension. The second half of the block will cover normal structure, histology, physiology, and function of the kidneys, bladder and ureters as well as pathogenesis, diagnosis and treatment of renal failure, acid base disorders, electrolyte disorders, malignancies of the urogenital tract, nephritis, nephrosis, and vasculitis, etc.

Students will be expected to be able to make more detailed decision making; diagnosing, evaluating and treating patients with cardiovascular and renal disease utilizing standard techniques. Pulmonary inclusion in this block is review in scope.

Comprehensive services of disease prevention, early detection, and health promotion are incorporated as appropriate to the clinical case reviewed.

Gastroenterology / Endocrinology / Reproductive Medicine

In this block, students will learn to use anatomical terminology and the language of medicine in communication with their peers and faculty. This process of learning human anatomy through dissection labs, lectures, and self-directed study will be integrated in the block with an organ system, regional approach.

This block will provide students with a broad-based education in gastroenterology, Students will review normal structure, physiology, histology, and function of the gastrointestinal tract and go deeper into the pathogenesis, diagnosis and treatment of diseases such as Peptic Ulcer Disease, GERD, Inflammatory Bowel Disease, Diverticulitis, Gall bladder disease, alcoholic and Non-alcoholic Liver Disease, Hepatitis, Malignancies of the GI Tract, Pancreatitis, bowel obstruction, and malabsorption syndromes. In addition students will be introduced to the foundation of appropriate nutrition and the consequences of poor nutrition.

The second half of this block will provide students with a broad-based education in endocrinology, reproductive health, and disease. Students will review normal structure, physiology, histology, and function of the endocrine system and go deeper into the pathogenesis, diagnosis and treatment of diabetes, thyroid disorders, adrenal and pituitary gland disorders, menopause, as well as, male and female infertility. Comprehensive services of disease prevention, early detection, and health promotion are incorporated as appropriate to the clinical case reviewed.

Neurology/ Psychiatry /Musculoskeletal

In this block, students will learn to use anatomical terminology and the language of medicine in communication with their peers and faculty. This process of learning human anatomy through dissection labs, lectures, and self-directed study will be integrated in the block with an organ system, regional approach

This block is a combination of Neurology, Psychiatry, and Musculoskeletal disease providing students with a broad-based education in these areas. The Neurology portion will provide PBL students with a broad-based education in neuroscience and neurologic disease states.

Content will again review the normal structure and function of the neurological system and go deeper into the pathogenesis, diagnosis, and treatment of neurologic disease states such as stroke, movement disorders, demyelinating diseases, seizures, headache, Brain tumors, myasthenia gravis, CNS infection, Vasculitis, and Dementia, etc.

Musculoskeletal disease is briefly covered with trauma and neurovascular compromise and mental health illness is added to this Block with selected clinical cases of psychosis, depression. Comprehensive services of disease prevention, early detection, and health promotion are incorporated as appropriate to the clinical cases reviewed.

Longitudinal Course

Osteopathic Clinical Skills

Osteopathic Clinical Skills (I & II)

Osteopathic Clinical Skills is a restructuring of core content. It is a skills and procedure based course that focuses on the development of students' abilities in history taking, physical/structural exam performance, osteopathic manipulative treatment and core RowanSOM procedures, such as Basic Life Support Certification, intravenous placement and point-of-care ultrasound. This course is synchronized with the sequence of the pre-clerkship system blocks for best integration.

Longitudinal Project-Based Courses

Community Service Learning and Leadership (I, II, & III)

In keeping with the Mission of RowanSOM to develop clinically skillful, culturally competent community leaders, curricula was developed to address the core skills of leadership and service. With these core values and aspirations, a longitudinal course was designed to both explicitly teach the skills of leadership, as well as, practice those skills while in the service of our surrounding community. Ethics, professionalism and population health are also integrated into this course. This program will have two complementary parts: an interactive leadership skills curriculum and a Community Service Learning (CSL) program with a service project.

The leadership component provides medical students with a guided analysis of the most significant leadership qualities and skills when serving the community as future physicians. This integrative curriculum is designed as a complement to the CSL experience. Students are given the opportunity to practice and embed the leadership knowledge they have gained progressively over first and second years. The CSL experience begins during first year and continues into the third year, to provide students with ample time to accomplish the program goals and objectives and identify, develop and implement a health promotion project that addresses community needs. The fourth year will be voluntary to complete and will be the evaluation of the project in the community. The Area Health Education Center (AHEC) site coordinators will assist student teams in identifying community-based agencies and suggested health promotion projects that can be implemented within the required time frame and reflects the CDC and USPSTF recommendations.

Medical Scholarship (I, II, III, & IV)

This will be a 4-year longitudinal curriculum dedicated to the fundamentals of research in medicine, evidence-based practice and quality improvement. The course includes didactics on biostatistics, epidemiology, research design and implementation. It will also introduce compliance training, research communication, and scholarly presentation. This course will include a one-week intensive for medical scholarship which will introduce core terminology and concepts for research in medicine, evidence-based practice, biostatistics, epidemiology, research design and implementation. This foundation will be built upon over the longitudinal course culminating in a required scholarly work.

Intersessions

Health Systems Sciences (I & II)

This two-part curriculum will provide a fundamental understanding of how health care is delivered at an individual and system level, as well as, how the health system can improve patient care and health care delivery. Health Systems Science (HSS) has an emphasis on understanding the role of human factors, systems engineering, leadership, and patient improvement strategies that will help transform the future of health care and ensure greater patient safety. Topics addressed will include: health care delivery systems, value-based health care, patient safety and quality improvement, clinical informatics, population health, socio-ecological determinants of health.

Human Sexuality

This intersession will provide a comprehensive and concentrated opportunity for students to become knowledgeable and comfortable in dealing with the important and sensitive aspect of human health- sexuality. Goals of this curriculum include;

- Addressing misinformation, controversy and prejudice, including the students' personal biases;
- Promoting increased knowledge, comfort, empathy, and respect for individuals regardless of gender identity, gender expression, sexual orientation, or sex assigned at birth

End of Life Care

This intersession is an expansion of its predecessor *Death and Dying*. It 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. It also introduces concepts including, but not limited to: end of life care decisions including medical directives, palliative care and hospice care, the role of the physician in caring for the dying and bereaved and the importance of empathy in physician/patient communication.

Other Courses

Clerkship Clinical Skills

The Clerkship Clinical Skills Course is held just prior to students starting their clerkships. It's an interactive course that uses a combination of didactic presentations, small group discussions, role-playing, facilitated debriefing, and simulation-based education in order to target more skills necessary for practice on the wards. This includes but is not limited to; simple suturing, gowning and gloving, hand hygiene and injections.

Residency Clinical Skills

The Residency Clinical Skills Course is held just prior to graduation. It's an interactive course that uses a combination of didactic presentations, small group discussions, role-playing, facilitated debriefing, and simulation-based education in order to target more advanced skills necessary for an internship.