The Creighton Medical Curriculum

2015-2016

Creighton University
School of Medicine

Approved by MEMT 5.19.15, EPC 06.23.15 & Medical Executive 07.10.15
Office of Medical Education

Our Office is dedicated to ensuring that our curriculum is delivered effectively to prepare our students to enter their residency of choice. Our team supports the faculty and course directors in:

- course planning
- identifying educational resources, including computer-based and simulation educational technologies
- coordinating curricular activities
- student assessment
- faculty development
- development and conduct of educational research
- curriculum evaluation

Please feel free to contact us with questions or suggestions.

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CREIGHTON UNIVERSITY  
School of Medicine  

Curriculum Goals and Objectives

Goals

The goal of the curriculum is to develop competent, caring physicians during graduate training and practice. Our students will acquire a strong foundation in the basic and clinical sciences. In addition, they will acquire a strong foundation in the humanities, social and behavioral sciences that are relevant to the well-being of both the physician and the patient.

Objectives

To attain the Doctor of Medicine degree, the Creighton graduate must fulfill the following in the Six Competencies of Medical Education:

PATIENT CARE

- Conduct an organized medical interview and obtain a pertinent medical history.
- Identify bio psychosocial needs of the patient.
- Perform an appropriate comprehensive physical examination.
- Present information verbally in a concise, complete and organized manner.
- Record information in a concise, complete and organized manner.
- Develop a differential diagnosis for each patient seen.
- Demonstrate effective clinical reasoning and judgment to determine an accurate diagnosis.
- Develop an appropriate treatment plan for each patient seen.
- Perform health maintenance exams.

MEDICAL KNOWLEDGE

- Describe the normal structure and function of the human body at the whole body, organ, cellular, and molecular levels.
- Describe the pathophysiology, signs, symptoms, risk factors, diagnostic tests, and treatment of common illnesses.
- Describe the current evidence-based clinical practice guidelines for treatment of common illnesses.
- Describe the current evidence-based preventive health care strategies and recommendations.

PRACTICE-BASED LEARNING AND IMPROVEMENT

- Demonstrate the ability to critically assess the medical literature and the research methods used to investigate the management of health problems.

INTERPERSONAL AND COMMUNICATION SKILLS

- Counsel and educate patients regarding their illness and treatment plans in an effective, concise and understandable manner.
- Communicate effectively with all members of the healthcare team.

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PROFESSIONALISM

- Actively participate on rounds, clinic sessions, small group sessions and labs.
- Demonstrate punctuality and availability for all duties and professional obligations.
- Demonstrate honesty and integrity with all student responsibilities.
- Demonstrate compassion and empathy in the care of patients.
- Demonstrate respect, sensitivity, and responsiveness to diversity of culture, age, race/ethnicity, gender, sexual orientation and disability.
- Identify and propose solutions to moral, ethical and legal problems in medical practice.

SYSTEM-BASED KNOWLEDGE

- Use a team approach to provide comprehensive care.
- Organize patient care plans that incorporate referrals to other healthcare providers and/or community agencies and resources.
- Demonstrate an awareness of the relative cost benefit of different therapeutic options.

The School of Medicine requires successful completion of all components in each of the four years of study before the Doctor of Medicine is awarded.
The Curriculum

The educational program is divided into four components. Components I and II are the foundation of the educational program and present basic science information in a clinically relevant context. Initial discipline-based courses are followed by a series of organ system-based courses. Component III consists of core clerkships emphasizing basic medical principles, primary care, and preventive medicine. Component IV provides students with additional responsibilities for patient care including critical care medicine, and elective opportunities. Clinical experience is a prominent part of the curriculum in all components, beginning with physical diagnosis instruction in the first year and continuing with participation in longitudinal primary care clinic in the second year. The curriculum integrates ethical and societal issues into all four components.

Component I - First Year

The goal of the first year is to provide a strong foundation in basic biomedical science to prepare students for detailed basic science content that occurs within the clinically oriented system courses that begin in the second year. Students are also introduced to ethical and behavioral science principles in Ethics and Legal Topics in Clinical Medicine and Behavioral Medicine I courses and learn the fundamentals of physical assessment and interviewing techniques. An additional (non-curricular) requirement of advancement to Component II is the completion of certification in basic cardiac life support. Below are brief descriptions of the Component I courses.

Required M1 Courses

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Description</th>
<th>Credit Hrs.</th>
<th>Wks of Instruct.</th>
<th>Lecture Hrs.</th>
<th>Small Group</th>
<th>Labs</th>
<th>Other*</th>
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</table>

*Other includes: IDC 101 student genetic presentations; IDC 103 CT and MRI scans, team-based learning formal classroom and laboratory hours, and lightning lab rounds; IDC 111 grand rounds patient contact and neuroanatomy workshops; IDC 136 Clinical Skills Examination (CSE), Focused Observed Clinical Interviews (FOCI), patient panels, ultrasound workshop, M4 team learning, and eye exam session, IDC 142 vital signs fall activity. Not included are online quizzes or essays, or mandatory spring lectures on Infection Control, Prescription Workshop, and Health Maintenance (4 hrs).

Approved by MEMT 5.19.15, EPC 06.23.15 & Medical Executive 07.10.15
IDC 101 Molecular and Cell Biology (9 credit hours)

Dr. Joseph Knezetic

The overall goal of this course is to provide the student with a comprehensive understanding of the fundamentals of molecular and cellular biology that serve as the foundation of modern medicine.

This course is one of the fundamental building blocks of the medical school curriculum. The curriculum is based in large part on the organ systems approach which will begin in the second half of the spring semester and continue through the second year. This will lead to clinical experiences in the third and fourth academic years in which students will need a solid foundation in the biomedical sciences. Knowledge of basic molecular and cell biology as it relates to cell, tissue and organ structure and function is a prerequisite for both the other basic science courses, and the more clinical subjects that comprise the medical curriculum.

The course faculty come from different disciplines and were brought together to present a coherent introduction to the cellular processes at the foundation of medicine. We want the course to provide the information necessary for a clear understanding of the following general subject areas:

- Cell and tissue structure
- Cell function
- Genetic information flow
- Protein structure and function
- Fuel metabolism
- Metabolic building blocks
- Cellular mechanisms in response to cell death and disease
- Inflammation and cellular repair
- Human genetics and developmental biology
- Neoplasia
- Hemodynamic derangements and shock

Historically, these were very different subject areas; but they now have so much in common that it is desirable and logical to present them in a single course. For administrative purposes, the course has been divided into four sections:

- Unit I Histology and Proteins/Enzymes
- Unit II Molecular and Cell Biology
- Unit III Metabolism
- Unit IV Molecular and Cellular Pathology

IDC 103 Anatomy (6 credit hours)

Dr. Diane Cullen

Successful completion of the Medical Gross Anatomy course results in a firm knowledge of human anatomy that is based on correlation with current medical practice (medical knowledge). The process of gaining the didactic information and integrating it with eventual patient care is accomplished largely in the anatomical laboratory. Students who have worked in small groups with their “first patient” will have honed aspects of professionalism, interpersonal, written and verbal communication skills as well as the manual and perceptual skills necessary for many medical examination and procedural skills. Ethical and sensitive treatment of the bodies, the information gleaned from them, and the families of the donors will further incorporate the Ignatian values that are summarized in the phrase “men and women for and with others”.

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This course focuses on the structure of the human body and anatomic principles which provide the basis for physical examination and much of the diagnosis and therapy used in clinical practice. Nearly one third of the allotted course time is spent in lectures which have a strong audiovisual component. The balance of the time is shared between cadaver dissection and clinical correlations. The course incorporates basic organogenesis (development of organs) exclusive of the central nervous system. Radiological components stress three-dimensional aspects of clinical anatomy. At the end of the dissection experience students are responsible for a report summarizing general pathological findings.

**IDC 105  Principles of Pharmacology** (1 credit hour)

Dr. Janee Gelineau-van Waes

The goal of Principles of Pharmacology is to facilitate student learning of principles that are fundamental to understanding drug action and the development of new drug therapy.

The overall goal of Principles of Pharmacology is to introduce students to the principles of pharmacokinetics, pharmacodynamics, drug metabolism, and factors that influence drug response, and principles in the development/evaluation/control of various therapeutic agents. This course will provide the foundations for a more detailed discussion of individual drugs in drug classes during the individual systems courses. The course is presented using didactic lectures, small group discussion sessions workshop sessions.

**IDC 107  Principles of Microbiology** (1 credit hour)

Dr. Richard Goering

At the end of this course the student will have been provided with the information for a clear understanding of the following general areas: microbial cell structure and function including bacteria, fungi, and protozoa of clinical importance, bacterial genetics and regulation, viral structure, multiplication and genetics, basic concepts in pathogenesis.

This is an introductory course for first year medical students to learn the principles of microbiology. The course is an introduction to the fascinating world of micro-organisms and prepares students for a lifetime of learning microbiology in relation to medicine and infectious diseases. In the recent past major advances have been made in understanding the structure, physiology, and genetics of microbes. It is this understanding that allows us insight into the processes whereby microbial pathogens cause disease in humans.

**IDC 109  Host Defense** (3 credit hours)

Dr. Kristen Drescher

The goal of the course is to develop an understanding of antigen recognition, development of B and T cells, constitutive host defenses, immunopathology, inflammation, transplantation, allergy, and tumor immunology. This will be accomplished using a mixture of lecture presentations, various interactive learning strategies including computer-aided-instruction and case-based discussions.

This is an introductory course for first year medical students to learn the principles of medical microbiology and immunology. This course will emphasize the relationship of immunology and human disease as well as the biological mechanisms utilized by the immune system. The course is composed of lectures, tutorials, computer-based cases, multidisciplinary quizzes and a final exam.
IDC 111  Neuroscience (7 credit hours)

Dr. Laura Bruce

The goal of the course is to help you develop an understanding of normal neurological function (using neuroanatomy, neurophysiology, neuropathology, and clinical neurology) and then to be able to use a patient’s symptoms to locate the source of a problem within the nervous system.

Perhaps the most complex and intimidating area of medicine is that of the human brain and nervous system. Neuroanatomy has been traditionally a course with an incredible amount of memorization which is easily forgotten as time passes. The key to retention is understanding the relevance of what you have learned and using that information as a physician uses that information. The heart of this course in Neuroscience is to structure the learning of the material around the neurological clinical method of regional anatomical diagnosis. Not only will you learn the factual material, but you will use it as you learn how to think as a neurologist in approaching clinical problems. The course will integrate basic science and clinical science. Your mentors will be clinical and basic scientists who will teach in both realms. Neuroanatomy, neurophysiology, neuropathology, neuropharmacology, and neurology have been integrated as much as possible and will be interwoven with each other throughout the course.

IDC 135  Ethics and Legal Topics in Clinical Medicine (3 credit hours)

Dr. Eugene Barone

The ultimate motivation for all physicians must be the welfare of each patient. Jesuit teaching holds that clinical decision-making must not be based upon medical factors alone, but on ethical standards as well. Each physician must develop well-grounded, practical ethical standards to guide their decision-making.

This course recognizes that each student brings values and beliefs from his/her family upbringing, religion, culture, education, and personal experience. During the semester, students will evaluate and augment these beliefs.

The Course will provide a background of basic ethical and legal principles within a framework of clinical problems which commonly confront practitioners on a day to day basis. Students will gain knowledge and skills in the evaluation of ethical issues consistent with prudent ethical and legal guidelines. Students will accomplish these goals through didactic lectures, small group discussions, independent study (readings), and scholarly writing.

This course introduces students to the basic constraints and methods of ethical analysis and moral reasoning, with emphasis on their application to key ethical issues in health care practice and policy. Special attention is given to the role of the physician and the opportunities and challenges to the ethical practice of medicine in today’s society.

IDC 136  Introduction to Clinical Skills (4 credit hours)

Dr. Robert Coleman and Dr. Anna Maio

This course is designed to introduce the M1 student to the art of interviewing and examining a patient. We will begin with basic concepts and add more advanced concepts as the foundation of medical knowledge develops. After completing this year of training, the M1 student should feel comfortable gathering basic information from a patient through history-taking and physical examination and competently examining a patient from head to toe.

The Introduction to Clinical Skills course is a two-semester offering which introduces the first-year medical student to the medical interview and the physical examination of patients.

Students will gain competency in these fundamental clinical skills through a variety of educational media---readings, lectures, demonstrations, films, and practice in both interviewing and physical exam skills. Practice sessions will enable students to learn and improve their skills with fellow students, with patient simulator models, and with Standardized
Patients, that is, persons who are trained to play the role of patients with physical and psychiatric illnesses and medical histories.

**IDC 138 Evidence Based Medicine** (1 credit hour)

Dr. Bruce Houghton

The goal of the course is to start the student on the process of incorporating Evidence Based Medicine into their clinical decision-making and in preparation for USMLE Step.

This is an introductory course for first year medical students to develop an understanding of and skills in the use of Evidence Based Medicine. It is composed of lectures, a computer lab, small group sessions, quizzes and a final exam.

**IDC 140 Behavioral Medicine I** (3 credit hours)

Dr. Terence Zach and Dr. Robert Coleman

The Behavioral Medicine I course presents an introduction to a variety of concept areas in the behavioral sciences and behavioral medicine. The course’s purpose is to provide students with an understanding of:

- The course of human development, including the stages of growth and change in many domains of human functioning;
- Normal human behavior in health, in illness, and in situations of challenges and difficulty;
- The challenges and pressures of work as a medical student and physician, and recommendations for methods of coping, succeeding, and flourishing in one’s training and one’s career as a physician.

These understandings will serve as a foundation of knowledge for the students as they move from education and training in medicine to:

- Interacting with patients in the doctor-patient relationship;
- Diagnosing and treating diverse individuals with sensitivity and concern in a variety of serious contacts with persons seeking medical and psychiatric help for themselves and their family members;
- Recognizing the difficult challenges that patients face, which can enable them to work with patients in partnership, helping them to cope with and adapt to the vicissitudes of medical treatment and recovery.

Four major themes in the Behavioral Medicine I course will provide students with a perspective that will enable them to accomplish the course purposes and integrate them into their own perspectives:

- Theories of development, including the bio psychosocial dynamic
- Stages and domains of normal growth and development
- The individual’s psychological, emotional, and behavioral reactions to challenges and problems that occur during the life cycle.
- The threat of violence and abuse in the lives of individuals and families.

**IDC 142 Physicians Lifestyle Management** (1 credit hour)

Dr. Michael Kavan

By participating in classes and activities, students will have the opportunity to learn about and develop in various areas of lifestyle management that contribute to becoming a successful physician, including; self-knowledge, study skills, career development, financial management, professionalism and leadership.

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M1s will participate in the following:

- Myers-Briggs Administration and Interpretation
- Productivity and Environmental Survey Preferences Administration and Interpretation
- Vital Signs Mentoring Program Kick-off
- Vital Signs Group Meeting
- Vital Signs 1:1 Meeting (2X)
- Careers in Medicine Introduction
- Wellness Lecture
- Financial Advising
- Professionalism Lecture

The Physician Lifestyle Management is a year-long course combines a number of mandatory events, lectures and experiences into a course that is focused on the professional development of medical students. Four specific areas of development will be explored within the course content; 1) Professionalism, 2) Career Development, 3) Personal Growth and 4) Leadership Development. Students will participate in educational experiences in each of these four areas.

**IPE 400 Introduction to Collaborative Care (0.5 credit hours)**

This course is an introduction to the concepts of interprofessional collaborative practice preparing students across the health sciences to engage in interprofessional education and practice activities during their tenure at Creighton and beyond. In this course health sciences students will gain knowledge in the Core Competencies for Interprofessional Collaborative Practice, versed in the basics of team work in the context of health care and begin to develop skills in team-based clinical reasoning.

This course is to be completed by the M1 students no later than March 13, 2016 [https://blueline.instructure.com](https://blueline.instructure.com).

**IDC 183 Healer’s Art (Elective) (1 credit hour)**

Dr. Amy McGaha

The Healer’s Art Course is a medical school curriculum designed by Rachel Remen, M.D. The course’s innovative educational strategy is based on a discovery model. The Healer’s Art Course addresses one of the hidden crises in medicine: the growing loss of meaning and commitment experienced by physicians nationwide under the stress of today’s healthcare system. The course consists of five three hour evening sessions which occur typically five weeks in a row, each divided into large-group and small group experiences.

**IDC 797 Directed Independent Research (Elective) (1 credit hour)**

Students work with a faculty research mentor during the spring semester to develop a research proposal that is typically carried out during the summer before Component II.

**FAP 480 M1-COPC Public Health Summer Endowed Research Assistantship (Elective)**

Dr. Eugene Barone

This eight-week summer assistantship will expose the student to the COPC process and improve their knowledge about health disparity issues. After the selection process, the student will be asked to either identify a research question that they have developed that fits the COPC model and seeks to research a health disparity issue in an underserved population. Instead, if the student chooses they can choose from a list of ongoing faculty COPC research projects. The student then will submit the research proposal, in conjunction with the grant faculty to the IRB for their approval. The student will participate, as part of the assistantship, in a orientation program in May at the end of their M1 year that will introduce
them to the COPC research model and be given an overview of the faculty’s expectations for this project. Once the research question is selected and approved by the IRB, the student will begin to enroll subjects into the research program. It is the expectation of this project that the student will continue to work on the research question and enrolling evaluable subjects past the 8 week assistantship on a longitudinal basis. It is also an expectation that the student will culminate their research activity by taking FAP481 in their M4 year in order to finish analyzing and writing their manuscript.

**FAP481   M4-COPC Public Health Summer (Elective)**

Dr. Eugene Barone

This is an elective that will complete the longitudinal COPC Public Health research that the student began during their M1 FAP480 summer research assistantship. The student will be able to finalize their data analysis and manuscript/abstract/poster presentation during this month. The student will work closely with their research faculty mentor in order to complete their research findings and have their work ready for a regional or national presentation. It is expected that the student will present their work to a Specialty Society National Conference, the Midwest Research Forum, the COPC Common Ground meeting.

**PDT 180   Pediatric Summer Academy (Elective) (1 credit hour)**

Dr. Terrance Zach

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

**FAP 475   M1 Summer Clerkship (Elective) (1 credit hour)**

Dr. Eugene Barone

This elective is an opportunity for medical students, in good standing, following their first year in medical school, to learn some clinical and communication skills on a one-to-one basis with a board-certified physician. It involves observing clinical ambulatory practice in Family Medicine. The level of hands-on involvement is something that will be established between you and your preceptor. This five-week clerkship is to be completed during May and June following your M1 year.

FAP 475 provides an opportunity for the student to earn credit by working with a board-certified physician in the Omaha metro area, rural locations, and perhaps your own hometown. We have a network of physicians who work with our students in both the Omaha area and a number of rural locations. Please contact the clerkship coordinator of Family Medicine to discuss the possibility of a placement at one of our established sites.

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Component II - Second Year

In the second year, students continue learning basic science along with clinical medicine. The second year is organized as a series of organ system-based courses, each presented by a multidisciplinary team of faculty members. Within each course, normal physiology and histology of the system are presented along with the pathology of common diseases, and the medical and pharmacologic approaches to diagnosis and treatment. Each course uses a variety of formats, including case presentations, lectures, small group discussions, laboratory sessions, computer-aided instruction, and independent study. In addition, in the Applied Clinical Skills course, students use small group discussions to learn clinical reasoning and are assigned to a clinic for two half days per month to reinforce history and physical examination skills.

Required M2 Courses

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<tr>
<th>Course #</th>
<th>Name</th>
<th>Cr Hrs</th>
<th>Weeks</th>
<th>Lecture</th>
<th>Small Group</th>
<th>Labs</th>
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*Includes multidisciplinary conferences, panels, review and Q&A sessions. Not included are online quizzes and essays.

IDC 201  Cardiovascular System (4 credit hours)

Dr. William Hunter

The course teaches the normal histology, embryology and physiology of the cardiovascular system, integrated with a consideration of cardiovascular abnormalities and appropriate therapy for these conditions.

This 4-semester hour interdisciplinary course surveys normal and abnormal function of the cardiovascular system. In conjunction with a discussion of the normal structure and function of the cardiovascular system, students learn the pathophysiology and pathology of the common disorders of the heart and vascular structures. Students also study the pharmacology and therapeutic principles of the common agents used in cardiovascular medicine. Clinical skill instruction includes interpretation of electrocardiograms, echocardiograms, and auscultation of the heart. Students also work through a series of clinical cases gaining experience in developing a differential diagnosis and management plan.

IDC 203  Respiratory System (3 credit hours)

Dr. Dale Bergren

The course will teach you the anatomy and physiology of the lungs and airways as well as the diagnosis and treatment of...
medical problems of the respiratory system including asthma, chronic obstructive pulmonary disease, neoplasms, thrombosis, and neonatal respiratory problems.

This three credit interdisciplinary course surveys normal and abnormal function of the respiratory system. After a discussion of the embryology and the normal structure and function of the upper and lower respiratory system, you will study the pathology and pathophysiology and the common disorders of the respiratory system and the pharmacology and therapeutic principles of the common agents used in respiratory medicine. The course includes an introduction to environmental respiratory diseases. Clinical skill instruction includes pulmonary function measurement. Through study of clinical cases, you'll gain experience in developing a differential diagnosis and management plan.

**IDC 205 Renal-Urinary System** (3 credit hours)

Dr. William Hunter

The course teaches the anatomy and physiology of the kidney and urinary systems and the physiology of body fluid and electrolyte homeostasis. Additionally, it introduces the diagnosis and treatment of medical problems of the renal and urinary system including fluid and electrolyte disorders, glomerular and non-glomerular kidney disorders, acid-base disorders, chronic renal failure, renal and urinary tract neoplasms, voiding disorders, and renal stone disease.

This three credit interdisciplinary course surveys the normal functions and diseases of the kidney and urinary bladder.

- **Phase 1** focuses on core concepts related to body fluids and normal human renal anatomy, histology, embryology and physiology.
- **Phase 2** then builds upon this core knowledge by discussing renal pathophysiology, the tools utilized for clinical diagnosis of renal disease, the structural and functional manifestations of prevalent causes of renal disease, and the therapeutic strategies and pharmaceutical agents used by clinical nephrologists to treat renal diseases.
- **Phase 3** switches the focus to the anatomy, structure, function, pathologies, and dysfunction of the urinary tract, and the therapeutic strategies and pharmaceutical agents used by clinical urologists to treat these diseases.

**IDC 207 Hematology-Oncology** (3 credit hours)

Dr. Michael Petzar

The course goal is to develop a basic understanding of the normal structure and function of the components of the hematopoietic system including red blood cells, white blood cells and platelets. The course surveys the neoplastic and non-neoplastic disorders of the red blood cells, white blood cells and platelets and the basic principles of common laboratory techniques used in diagnosing hematopoietic disorders. Additionally, the course discusses the molecular basis of neoplasia, and the indications for and toxicity of chemotherapeutic agents used in oncology.

This 3-semester hour course covers the normal and abnormal aspects of the hematopoietic system including anatomy, physiology, pathology, and clinical disorders of blood cells, bone marrow, lymph nodes, spleen and other lymphoid tissues. Other topics covered include hemostasis, thrombosis, cancer chemotherapy, and transfusion medicine and an introduction to the discipline of oncology. The course is divided into 4 blocks:

**BLOCK 1: RBC & ANEMIA:** This block includes a phlebotomy lab and an histology lab.

**BLOCK 2: PLATELETS & COAGULATION:** This block includes a microscope session and review of peripheral blood smear.

**BLOCK 3: WBC/LEUKEMIA/LYMPHOMA & ONCOLOGY:** This block includes an histology lab.

**BLOCK 4: CANCER CHEMOTHERAPY & TRANSFUSION MEDICINE:** This block includes an histopathology lab.

Approved by MEMT 5.19.15, EPC 06.23.15 & Medical Executive 07.10.15
IDC 209  **Gastrointestinal System** (3 credit hours)
Dr. Roger Reidelberger

The course teaches the normal histology, embryology and physiology of the gastrointestinal system, integrated with a consideration of gastrointestinal system abnormalities and appropriate therapy for these conditions.

This three week interdisciplinary course consists of lectures, laboratories, small group discussions and a multidisciplinary conference that provide learning experiences on the anatomy, histology, physiology, pathology and basic clinical medicine of the gastrointestinal system. It begins with embryology of the gastrointestinal system and progresses from the oral cavity distally through the gastrointestinal tract, combining basic sciences with relevant clinical material.

IDC 211  **Musculoskeletal-Integument System** (2 credit hours)
Dr. Diane Cullen

The course teaches the normal histology, embryology and physiology of the musculo-skeletal-integument systems, integrated with a consideration of musculo-skeletal-integument abnormalities and appropriate therapy for these conditions.

This is a two-semester hour course in the second year of the medical curriculum containing instruction in the normal functions and diseases of the musculoskeletal and integumentary systems. The course will cover the normal histology, embryology and function of the two systems integrated with a consideration of musculoskeletal/integumentary abnormalities and appropriate therapy for these conditions. The course will consist of didactic instruction, clinical discussion, small group discussions, and a multidisciplinary conference. Reading assignments are meant as preparation for lectures and should be completed before class. Additional reading may be assigned at the beginning of each lecture.

IDC 216  **Endocrine-Reproductive Systems** (4 credit hours)
Dr. Peter Abel

The course teaches the normal histology, embryology and physiology of the endocrine and reproductive systems, integrated with a consideration of endocrine/reproductive abnormalities and appropriate therapy for these conditions.

This four week interdisciplinary course consists of lectures, laboratories, small group discussions and multi-disciplinary conferences that provide learning experiences on the anatomy, histology, physiology, pathology, pharmacology and basic clinical medicine of the endocrine and reproductive systems. The first seven days focus on endocrine systems, beginning with the hypothalamic/pituitary axis, and continuing with the adrenal gland, calcium homeostasis, thyroid gland, the endocrine pancreas and homeostatic control of metabolism. Then the focus shifts to male and female reproductive systems, including normal pregnancy and delivery and diseases of reproductive organs.

IDC 222  **Physicians Lifestyle Management Course** (1 credit hour)
Dr. Michael Kavan

By participating in classes and activities, students will have the opportunity to learn about and develop in various areas of lifestyle management that contribute to becoming a successful physician, including; self-knowledge, study skills, career development, financial management, professionalism and leadership.

The Physician Lifestyle Management is a year-long course that combines a number of mandatory events, lectures and experiences into a course that is focused on the professional development of medical students. Four specific areas of development will be explored within the course content; 1) Professionalism, 2) Career Development, 3) Personal Growth and 4) Leadership Development. Students will participate in educational experiences in each of these four areas.
IDC 233  Infectious Diseases (4 credit hours)
Dr. Laurel Preheim and Dr. Richard Goering

Worldwide, infections cause more morbidity and mortality than any other disease, and increases in world travel now result in the transport of patients with exotic infections to our clinic doorstep. This course will help students understand the structures of individual organisms, their pathogenic potential, and diagnosis and treatment of the diseases they cause. It is also meant to set the stage and serve as a basis for understanding the infections taught in subsequent M2 system courses and encountered during clinical rotations.

This unit on Infectious Diseases is one of the first courses for second year medical students. The course uses lectures, laboratory exercises, and small group cases to help the students become familiar with the pathogenesis, epidemiology, diagnosis, treatment, and prevention of important bacterial, viral, fungal, and parasitic infectious diseases.

IDC 243  Behavioral Medicine II (3 credit hours)
Dr. Robert Coleman and Dr. Praveen Fernandes

The course goals are to enable students to gain a foundation of knowledge of DSM-5 psychiatric disorders for interacting with, assessing, diagnosing, and treating patients with psychiatric illnesses; and to increase student understanding of, and ability to manage, the emotional, behavioral, psychiatric, and communications aspects of the clinical encounter with patients, and thereby prepare students for their clinical clerkships.

The course Behavioral Medicine II presents a series of lectures along with Problem-Based Learning cases and required reading. The central purpose of the course is to enable students to understand the biological and psychosocial origins of psychiatric syndromes, their definitions and symptom features, and diagnostic criteria, as delineated in the Diagnostic and Statistical Manual of Mental Disorders - 5th edition, (DSM-5). Students will gain an understanding of the role of genetics, growth and development, environmental and psychosocial risk factors, dynamic experiential factors, and personality as parts of the complex process that eventuates in psychiatric disorder in some individuals. Students will gain a foundation of knowledge for assessing patients for psychiatric illness, interacting with them comfortably, diagnosing psychiatric illness, and making recommendations for pharmacological treatment and psychological therapies.

In addition to lectures, Behavioral Medicine II will focus on two Problem-Based Learning cases to present a virtual patient for assessment, diagnosis, and treatment, with each case meeting for two sessions. In addition, there will be a small group discussion of a notable short memoir of psychiatric illness, Darkness Visible, written by the late novelist, William Styron.

The Behavioral Medicine II course allows students to apply knowledge gained in the first year in the Behavioral Medicine I course – the bio psychosocial systems perspective, human development, cognitive and emotional functioning, and normal human behavior. The readings and Problem-Based-Learning (PBL) cases assume knowledge in those areas, and increase the ability to integrate knowledge of normal human development with psychopathology and psychiatric syndromes.

IDC 244  Behavioral Medicine III (3 Credit Hours)
Dr. Robert Coleman and Dr. Thomas Pisarri

The focus of the first part of the course is sleep and circadian rhythms, exercise, and environmental toxins, including alcohol. The next unit focuses on the medical implications of social marginalization. You will visit agencies that provide services to socially marginalized members of our community. In preparation for the site visits, you will research the populations served by the agencies. The third focus is application of behavioral and physical medicine to a variety of medical challenges, including chronic illness, chronic stress, brain injury, pain, and aging. The course ends with a special focus on Aging, organized by Dr. Viselav Drinčić from the Department of Medicine.

The Behavioral Medicine III course focuses on important and timely topics of medical concern:

- Multisystem health challenges whose effects can be ameliorated by behavioral change, including sleep disorders, sedentary lifestyle, and exposure to toxins, including alcohol.

Approved by MEMT 5.19.15, EPC 06.23.15 & Medical Executive 07.10.15
• The diverse social factors that should be considered in the provision of health care, including cultural diversity, socioeconomic status (SES), poverty, and stigmatizing conditions that marginalize members of our society and predispose them to special challenges in maintaining health and receiving care.
• Coping with stress and chronic illness.
• An introduction to care of the aging.

IDC 279  Case Studies in Medicine (2 credit hours)
Dr. William Hunter

The course helps the student develop the analytical skills to assess patients’ conditions and use clinical laboratory data to develop a differential diagnosis and treatment plan. Working as a group, students learn to work through a case from diagnosis to therapy to expected outcomes.

Case Studies in Medicine is a longitudinal course (meaning that it runs concurrently with the system courses) during the second year curriculum. It consists of a series of small group case exercises and multidisciplinary conferences. The content will follow the systems courses and in that sense this course is also vertical. The students are continually assessed throughout the year.

IDC 290  Applied Clinical Skills (3 credit hours)
Dr. Anna Maio and Dr. Robert Coleman

This course is designed to prepare the M2 student for the 3rd year of medical school, by developing his or her history taking, interviewing, physical exam and clinical reasoning skills.

At the conclusion of this course, the student is expected to be proficient in the basic components of clinical reasoning and decision making, which include:

• Gathering clinical data, including conducting a patient interview
• Organizing clinical data
• Interpreting basic clinical data
• Hypothesis generation and testing
• Critical evaluation of alternative diagnostic and treatment strategies
• Engaging a patient in a therapeutic alliance
• Oral and written case presentations, which are important expressions of clinical reasoning skills

A clinical skill is a discrete and observable act of medical care. Clinical reasoning, as a clinical skill, is the process of making sense of a clinical encounter. Compare it to the job of a detective. When investigating a crime, the detective must pick up on clues and determine which ones are important (and which ones are not). The ability to discriminate between the two can be difficult. The best way to make this choice is through a combination of subject knowledge and experience. The mastery of good communication techniques is essential. This course is designed to introduce and reinforce the knowledge base needed to make clinical decisions and provide an opportunity to use clinical skills through interaction with experienced clinicians.
Component III - Third Year
(52 credit hours)

The third year comprises the core clinical clerkships (48 credit hours). Students are scheduled into one of six groups that rotate through clerkships in:

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*These courses run throughout the third year.

IDC 301  Ambulatory Primary Care

This eight-week clerkship is divided into two four-week components:

  Ambulatory Family Medicine Component (4 credit hours)

  Ambulatory Internal Medicine Component (4 credit hours)

Students are divided into groups for each four-week component. Approximately half will complete Ambulatory Family Medicine first, then Ambulatory Internal Medicine. The other half will complete Ambulatory Internal Medicine first, then Ambulatory Family Medicine. This placement is predetermined and the student does not have the option of choosing the order of their two components.

Students have the option to work with a Family Medicine preceptor during your Ambulatory Internal Medicine Component. This option is only for those students who want the opportunity to work at both an urban and a rural family medicine clinic site. The student works with a rural Family Medicine preceptor during the Ambulatory Family Medicine Component and with an urban Family Medicine preceptor during the Ambulatory Internal Medicine Component.

MED 301  Inpatient Medicine (8 credit hours)

The Internal Medicine Clerkship is a required eight-week clinical rotation in the third year of medical school. It is composed of two four-week sessions. You will care for some very complex patients with multiple chronic and acute medical problems. You will also have the opportunity to see some esoteric and complicated tertiary care patients.

The Department of Medicine views this Clerkship as integral to your development as a physician. We believe that what you will learn over the next eight weeks will be of use to you no matter what field of Medicine you ultimately choose.

Approved by MEMT 5.19.15, EPC 06.23.15 & Medical Executive 07.10.15
The scope of Internal Medicine can be daunting. We have designed the Clerkship to promote self-directed, reflective learning habits that should serve you well throughout your career. You are expected to take the initiative in all aspects of your learning. This includes actively seeking feedback, participating in discussions, sharing your knowledge with others, and of course, spending time with your patients.

**OBG 301  Obstetrics and Gynecology** (8 credit hours)

During your eight-week clerkship, you will be exposed to normal and high-risk obstetrics, as well as office and surgical gynecology. Conferences have been designed to build upon the core lectures you received during your second year.

You will spend half of the eight-week clerkship at Creighton University Medical Center and the other half at Bergan Mercy Medical Center if you are in Omaha. In Phoenix, your entire experience will be at St. Joseph’s Hospital and Medical Center. The curriculum is designed to acquaint you with all aspects of Obstetrics and Gynecology in private and institutional medicine.

**PDT301  Pediatrics** (8 credit hours)

PDT 301 is a two-month Pediatric Clerkship. One month of the Clerkship serves as the inpatient experience. During this experience, the students spend three weeks in on an Inpatient Service. One week of the inpatient experience will also be spent in the Neonatal Intensive Care Unit. Students will participate in the daily rounds and attend high-risk deliveries with the NICU team.

For the second half of the clerkship, three weeks will be spent in a community based Pediatric Outpatient setting. There students will see patients and present directly to the attending. Each student will also spend one week of mornings in the Normal Newborn Nursery where they will also see patients and present them to the newborn nursery attending.

The clerkship also involves several scheduled learning sessions ranging from didactic lectures, hands-on learning opportunities and web-based simulated patient encounters (CLIPP cases). Students take a mid-term exam as well as the CLIPP case exam during the clerkship to help them track their acquisition of knowledge.

**PBS 301  Psychiatry** (8 credit hours)

Psychiatry is an essential component of general medical practice in five primary ways:

- Common disorders: 40-50% of primary care patients have active psychiatric illness.
- All physical illness has some overlay of psychological difficulty or change.
- Physical illness often presents with behavioral & psychological symptoms.
- Improving interview skills and sensitivity to psychiatric issues will help in every patient encounter.
- Psychiatric illness increases risk or physical illness (e.g., depression and MIs).

The Psychiatry Clerkship is a required eight-week clinical rotation in the third year of medical school which focuses on the development of patient care, medical and psychiatric knowledge, practice-based learning and improvement, interpersonal and communication skills, and professionalism in the treatment of the psychiatric patient. Students are supervised by psychiatry faculty in a variety of care settings.

**SUR 301  Surgery** (8 credit hours)
Our Goal is to teach the basics of procedural medicine. Students will learn surgery as a component of integrated medicine directed towards promoting health through safe and effective procedures applied through best medical evidence.

This eight-week clerkship is divided into three components: All students will participate in two 3-week general surgery rotation, and one 2-week sub-specialty rotation. During the two general surgery rotations, you will be an integral part of the surgical team.

The rotation is designed to introduce you to the “core” of knowledge, skills, behaviors, and attitudes regarding surgery which are fundamental to the medical practice of all physicians, whether you are considering a career in surgery, have no interest in a career in surgery, or don’t yet know. This experience will be intense as well as exhilarating; physically, mentally, and emotionally. It will challenge you to perform to the utmost of your abilities.

**DCM301 Dimensions of Clinical Medicine (3 credit hours)**

This course is designed as an experience to provide a forum to cover topics critical to the clinical practice of the art of medicine. Presentations and lectures will focus on medical concerns related to current issues such as evidence-based medicine, integrative medicine, patient safety, legal topics, and other relevant topics. Sessions for this course will be held at the end of each of the six major M3 clerkships.

**IDC342 Physician Lifestyle Management (1 credit hour)**

The Physician Lifestyle Management is a year-long course combines a number of mandatory events, lectures and experiences into a course that is focused on the professional development of medical students. Four specific areas of development will be explored within the course content; 1) Professionalism, 2) Career Development, 3) Personal Growth and 4) Leadership Development. Students will participate in educational experiences in each of these four areas.

By participating in classes and activities, students will have the opportunity to learn about and develop in various areas of lifestyle management that contribute to becoming a successful physician, including: self-knowledge, study skills, career development, financial management, professionalism and leadership.

M3s will participate in the following educational sessions:

- Success Strategies for Rotations (Emotional Intelligence)
- Meet the Specialists Program
- Navigating the Senior Year
- Residency Application Development
- Preparing for the Match
- Participation in Practice Interview Session
- Vital Signs Mentoring Program
- Careers in Medicine Sessions
- Financial Advising

Students must also satisfy the following requirements:

- Attend all Junior orientation sessions
- Be certified in Advanced Cardiac Life Support
- Satisfactorily complete the M3 Clinical Skills Exam prior to taking USMLE Step 2 CS. A student who does not satisfactorily complete the M3 CSE must follow a plan of remediation designed by the Component

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Approved by MGMT 5.19.15, EPC 06.23.15 & Medical Executive 07.10.15
Director, Course Director, and Medical Director of the Clinical Education & Simulation Center in order to be eligible to take USMLE Step 2 CS.

**Component IV - Fourth Year**

(36 credit hours)

The fourth year prepares students for residency and provides a chance to explore their own interests in specialized areas of medical practice. In the fourth year, each student selects at least 36 weeks of courses which must include:

- 1 surgical selective (4 weeks)
- 1 critical care selective (4 weeks)
- 1 primary care selective or 2nd critical care selective (4 weeks)
- An additional 24 weeks of clinical electives with no more than 8 weeks of non-clinical electives

During the fourth year a student must take and post a score for Step 2CK and Step 2CS of the USMLE prior to graduation.
### Clinical Skills and Behaviors Taught & Assessed in the Creighton Medical Curriculum

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#### Core Clinical Skills

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Approved by MEMT 5.19.15, EPC 06.23.15 & Medical Executive 07.10.15
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Assessment of Student Performance

Students are assessed in cognitive, affective, and psychomotor domains in all courses with an emphasis on formative assessment throughout the course providing frequent feedback to the student. Examinations and quizzes are coordinated in all components. Honors/Satisfactory/Unsatisfactory grading is used in all courses; written and narrative assessment of students is provided where appropriate. Students are evaluated individually against curriculum standards and are not ranked. The United States Medical License Examination (USMLE) Step 1 must be passed before progressing into Component III. Taking both parts of the USMLE Step 2 is required to complete Component IV.

Evaluation of the Curriculum

Ongoing evaluation of all elements of the curriculum is essential to maintain continuous improvement of the curriculum. Evaluation of the curriculum is performed by students, faculty and staff. The process is coordinated by the staff of the Office of Medical Education and is performed by the Evaluation Committee. The Evaluation Committee (six faculty and two students) is responsible for the evaluation of all required courses and clerkships. The Evaluation Committee reports to the Educational Policy Committee, which has overall responsibility for management of the curriculum. The Evaluation Committee conducts continuous evaluation of preclinical courses (Components I and II) and clinical courses and clerkships (Component III and IV).

For each course, clerkship, and elective students complete an evaluation of the course/clerkship in addition to faculty evaluations for lecturers, small group facilitators, and site preceptors for clinical experiences. These data are provided to course faculty, course/clerkship directors, and department chairs.

The Evaluation Committee meets monthly. The committee determines which courses or clerkships to evaluate and what data are needed, including but not limited to;

- Course or clerkship syllabus and handbook materials
- Student evaluations of a course or clerkship
- Student assessment and grading methods
- Student performance in a course or clerkship
- Interviews with faculty and staff involved with the course/clerkship
- Annual course/clerkship report (the course/clerkship director must submit a response to a series of course assessment questions within 2 months of the end of the course)

The final report is distributed to the course director and to the Educational Policy Committee at its regular monthly meeting. The Committee accepts the findings and recommendations of the Evaluation Committee or asks for a response from the course/clerkship director. After resolution of all outstanding issues, the amended report is approved by the EPC and sent to the course director for implementation of the recommendations.

The Educational Policy Committee monitors the curriculum by examining course, clerkship, elective, and component evaluations (when requested) provided by the Evaluation Committee. The Evaluation Committee performs program evaluation using data from the AAMC Graduation Questionnaire and surveys of first year residency program directors. Program evaluation is also aided by examination of USMLE Step 1 and 2 scores. Clinical skills are measured throughout the yearly components.