Course Catalog Foundational Curriculum

Course Number	FMS-1000
Course Name	Fundamentals of Medical Science
Faculty	Block Director: M. Kristy Subik, MD Associate Block Directors: James Drake, PhD; Roman Ginnan, PhD; Kevin Pumiglia, PhD; Debra Tristram, MD
Curriculum Year	Year 1
Length	13 weeks (13 credits)
Prerequisites	Matriculation in Albany Medical College
Course Description	The overall goal of the Fundamentals of Medical Science block is to provide the student with a solid foundation in concepts of cellular physiology, basic histological tissue types, basic pathology, basic pharmacology, hemostasis, immunology and microbiology.
Educational Objectives	List and describe the intricacies of human cellular biology-DNA and RNA replication, protein structures and functions, transmigration, and motility. Identify clinical and pathological images and correlate between basic science and human disease processes. List basic principles of pharmacology and how to apply those in clinical scenarios. List and describe microbes and apply to their role in health and disease. Describe the development and function of the immune system and how it protects as well as harms the host. List and describe the underlying defects in [cellular function] that allow for the development of cancer, hypersensitivity, immunodeficiencies, autoimmunity and chromosomal syndromes. List and describe the basics of the autonomic nervous system and muscle physiology. List and describe the basics of hematopoiesis, hemostasis, and hematologic disease. Integrate global climate change, nutrition, and disability medicine into topics.
Types of Clinical Sessions	Patient Presentation, Clinical Correlations
Teaching Sessions/ Conferences	Case-Based Instruction; Small Group Discussion; Conference; Large Group Discussion; Patient Presentation; Self-Directed Learning
Resources/Readings	REQUIRED: Histology, A Text and Atlas, 7th ed, Wojciech Pawlina, 2016 The Immune System, 4th Ed, Parham Basic and Clinical Pharmacology, Katzung, 2018 Medical Microbiology, Jawetz, Melnick & Adelberg Pathologic Basis of Disease, Robbins & Cotran, 9th ed, 2015 Atlas of Histology with Functional & Clinical Correlations, D. Cui, 2011 RECOMMENDED: Molecular Biology of the Cell, 6th ed, Alberts, 2016 or Molecular Cell Biology, 7th ed, Lodish, et al, 2013 Elsevier's Integrated Review: Genetics, 2nd ed, Adkison, Linda, 2012
Evaluation Method(s)	Final Grade will be determined by performance on Exams, quizzes, and participation. Formative quizzes are available as formative assessment.
Contact Information	M. Kristy Subik, MD Rebecca Keller, PhD
Last Updated	02/28/22

Course Number	HSTRUCT-1000
Course Name	Human Structure
Faculty	Block Director: Michael Smith, PhD Associate Block Director: Amanda Khan, PhD
Curriculum Year	Year 1
Length	10 weeks (10 credits)
Prerequisites	Matriculation in AMC Medical School
Course Description	The overall goal of the Human Structure Block is to provide the student with a solid foundation of anatomy, embryology, and histology of the body
Educational Objectives	Define and employ appropriate anatomical terminology Identify and describe the normal function of the anatomical structures discussed in each of the following regions: back and limbs, head and neck, thorax, abdomen, and pelvis/perineum. Visualize and describe the 3-dimensional relationships between the major skeletal, muscular, vascular, and nervous structures in the anatomical structures covered in the block. Apply anatomical knowledge to identify normal anatomical structures on 2-dimensional radiological images such as plain film x-ray, CT scans, MRI scans, and ultrasound. Define and explain the anatomical basis of embryological development of the various components and systems of the human body. Identify the normal histology of the tissues and organs of the regions of the body covered in the block. Recognize anatomical variation and how it may be relevant to clinical practice. Demonstrate professionalism by acting in a manner that is respectful and courteous towards the human donor and anatomical specimens. Integrate global climate change, nutrition, and disability medicine into topics.
Types of Clinical Sessions	Clinical Correlations
Teaching Sessions/ Conferences	Case-Based; Conference; Small Group Discussion; Laboratory; Self-Directed Learning
Resources/Readings	REQUIRED: Gray's Anatomy for Students, 4th Edition (2020), Elsevier Larsen's Embryology 4th edition Atlas of Histology with Functional & Clinical Correlations, D. Cui, 2011 ONE REQUIRED Atlas: Grant's Atlas of Anatomy, 14th Edition (2016) A. M. R. Agur and A.F. Dalley, Lippincott Williams & Wilkins. Atlas of Human Anatomy, 6th Edition (2014) F.H. Netter, Elsevier/Mosby Atlas of Anatomy, 3rd edition (2016) A.M.Gilroy, B.R. MacPherson & L.M. Ross, Thieme Publishers McMinn's Clinical Atlas of Human Anatomy, 7th Edition (2013) P.H. Abrahams, S.C. Marks, R.T. Hutchings, Elsevier/Mosby Publishers Atlas of Anatomy, 1st Edition (2009) P.T. Tank and T.R. Gest, Lippincott Williams & Wilkins
Evaluation Method(s)	The Final Grade in the is based on Exams and Anatomy/Histology Practical exams. Formative quizzes are available as formative assessment.
Contact Information	Michael Smith, PhD Rebecca Keller, PhD
Last Updated	02/28/22

Course Number	CPR - 1000
Course Name	Cardiovascular, Pulmonary, Renal Systems
Faculty	Block Director: Peter Vincent, PhD Associate Block Directors: David Jourd'heuil, PhD; James Listman, MD; Anupama Tiwari, MD
Curriculum Year	Year 1
Length	12 weeks (12 credits)
Prerequisites	Completion of FMS, HSTRUCT (or approval of Asst Dean of Med Ed Foundational Curriculum)
Course Description	The overall goal of the CPR Block is to provide the student with a solid foundation of cardiovascular, pulmonary and renal physiological and pathological mechanisms of disease process along with treatment modalities. This block will integrate the cardiovascular, pulmonary, and renal systems in clinical scenarios.
Educational Objectives	Describe the normal development and physiological processes of the human cardiovascular, renal, and respiratory systems, emphasizing how the molecular, biochemical, and cellular mechanisms as well as the physiological integration of these three systems maintain health, wellness, and homeostasis. Identify key structures in the cardiovascular, renal, and respiratory systems anatomically, histologically, and radiographically and utilize that knowledge to describe the relevant pathology that underlies specific manifestations of cardiac, vascular, renal, and pulmonary diseases. Describe the normal processes that govern cell function within the cardiovascular, renal, and respiratory systems and apply that knowledge to the pharmacologic principles utilized in the treatment of cardiac, vascular, renal, and pulmonary diseases. Describe, compare, and contrast the distinguishing characteristics and diagnostic criteria of cardiac, vascular, renal, and pulmonary diseases. Describe epidemiological principles that impact the respiratory, renal, and cardiovascular health of individuals and diverse patient populations, including biological and biopsychosocial factors. Integrate global climate change, ultrasound, nutrition, and disability medicine in the cardiac, vascular, renal, and pulmonary diseases.
Types of Clinical Session	Clinical correlations
Teaching Sessions/ Conferences	Case-Based; Conference; Large Group Discussion; Laboratory; Problem-Base Learning; Self-Directed Learning; Small Group Discussion
Resources/Readings	REQUIRED: Medical Physiology: A Systems Approach, Raff and Levitzky, 2011 Pathophysiology of Heart Disease, Lilly Principles of Pulmonary Medicine, Weinberger, Cockrill, Mandel Renal Pathophysiology: The Essentials, Rennke and Denker Basic and Clinical Pharmacology, Katzung, 2018 RECOMMENDED: Cardiovascular Physiology, 8th edition, 2014, David E. Mohrman, Lois Jane Heller Levitzky Pulmonary Physiology, 7th edition
Evaluation Method(s)	Final Grade will be determined by performance on Exams, quizzes, and participation. Formative quizzes are available as formative assessment.
Contact Information	Peter Vincent, PhD Rebecca Keller, PhD
Last Updated	03/25/22

Course Number	MGER - 1000
Course Name	Metabolism, Gastrointestinal, Endocrinology and Reproductive Systems
Faculty	Block Director: Matt Leinung, MD Associate Block Directors: Natasha Lowry, MD PhD; Sylvia Sossner, MD; Micheal Tadros, MD MPH FACG
Curriculum Year	Year 1
Length	9 weeks (9 credits)
Prerequisites	Completion of FMS, HSTRUCT, CPR (or approval of Asst Dean of Med Ed Foundational Curriculum)
Course Description	The overall goal of the Metabolism, Gastrointestinal, Endocrinology and Reproductive Systems Block is to provide the student with a solid foundation of metabolism, gastrointestinal, endocrine, and reproductive systems to enable the student to critically reason through clinical vignettes.
Educational Objectives	Describe the normal metabolic pathways required for health, wellness, and homeostasis. Identify key structures in the gastrointestinal, endocrine, and reproductive systems anatomically, histologically, and radiographically and utilize that knowledge to describe the relevant pathology that underlies specific manifestations of disease. List the pharmacologic treatments utilized in the treatment of gastrointestinal, endocrine, and reproductive diseases regarding mechanism of action, contraindications, and side effects. Describe, compare, and contrast the distinguishing characteristics and diagnostic criteria of gastrointestinal, endocrine, and reproductive diseases. Describe epidemiological principles that impact individuals and diverse patient populations, including biological and biopsychosocial factors. Integrate global climate change, ultrasound, nutrition, and disability medicine in the diseases.
Types of Clinical Sessions	Clinical Correlations
Teaching Sessions/ Conferences	Case-Based; Conference; Demonstration; Large Group Discussion; Small Group Discussion; Self-Directed Learning; Problem solving sessions
Resources/Readings	REQUIRED: Medical Physiology: A Systems Approach, Raff and Levitzky, 2011 Endocrine Physiology, 4th ed, 2013, PE Molina Obstetrics and Gynecology, Beckmann, Ling, Smith, Barzansky, 2010 Pathologic Basis of Disease, Robbins & Cotran, 9th ed, 2015 Basic and Clinical Pharmacology, Katzung, 2018 RECOMMENDED: Handbook of Diabetes, 4th ed, 2010 Gastrointestinal Physiology 2nd ed - Barrett (2014)
Evaluation Method(s)	The Final Grade based on Exams, Quizzes and participation. Formative quizzes are available as formative assessment.
Contact Information	Matthew Leinung, MD Rebecca Keller, PhD
Last Updated	03/28/22

Course Number	SMBJ - 2000
Course Name	Skin, Muscle, Bone, Joint
Faculty	Block Director: Hamish Kerr, MD Associate Block Director: Michael Smith, PhD; Maricamen Lopez-Pena, MD
Curriculum Year	Year 2
Length	6 weeks (6 credits)
Prerequisites	Completion of FMS, HSTRUCT, CPR, MGER (or approval of Asst Dean of Med Ed FoundationalCurriculum)
Course Description	The overall goal of the Rheumatology, Dermatology and Sports Medicine Block is to provide the student with a solid foundation of rheumatologic, dermatologic and sports medicine to enable the student to critically reason through clinical vignettes.
Educational Objectives	Describe the normal and abnormal characteristics of muscle physiology, bone and cartilage formation, gait, and wound healing. Identify key structures in the musculoskeletal and integumentary systems anatomically, histologically, and radiographically and utilize that knowledge to describe the relevant pathology that underlies specific manifestations of disease. List the pharmacologic treatments utilized in the treatment of rheumatologic, dermatologic, and musculoskeletal diseases regarding mechanism of action, contraindications and side effects. Describe, compare, and contrast the distinguishing characteristics and diagnostic criteria rheumatologic, dermatologic, and orthopedic diseases. Describe epidemiological principles that impact individuals and diverse patient populations, including biological and biopsychosocial factors. Integrate global climate change, ultrasound, nutrition, and disability medicine in the diseases.
Types of Clinical Sessions	Clinical Correlations
Teaching Sessions/ Conferences	Case-Based; Conference; Demonstration; Large Group Discussion; Small Group Discussion; Self-Directed Learning; Problem solving sessions
Resources/Readings	REQUIRED: Pathologic Basis of Disease, Robbins & Cotran, 9th ed, 2015 RECOMMENDED:
Evaluation Method(s)	The Final Grade based on Exams, Quizzes, and participation. Formative quizzes are available as formative assessment.
Contact Information	Hamish Kerr, MD Rebecca Keller, PhD
Last Updated	03/28/22

Course Number	MBB - 2000
Course Name	Mind, Brain, and Behavior
Faculty	Block Director: John Pugh, MD PhD and Tara Lindsley, PhD Associate Block Director: Angelo Potenciano, MD
Curriculum Year	Year 2
Length	9 weeks (9 credits)
Prerequisites	Completion of FMS, HSTRUCT, CPR, MGER, RDSMED (or approval of Asst Dean of Med Ed Foundational Curriculum)
Course Description	The goal of the Mind, Brain, Behavior Block is to provide students with a solid foundation in the structure, function, and pathology of the nervous system and behavioral health upon which they can build during their clinical rotations and throughout their career as physicians.
Educational Objectives	Describe the normal development, of the human nervous system, emphasizing the molecular, biochemical, physiological, cellular, and psychosocial mechanisms required for health, wellness, and homeostasis. Identify key structures in the nervous system anatomically, histologically, and radiographically and utilize that knowledge to describe the relevant neuropathology that underlies specific manifestations of psychiatric and neurologic disease. Describe the normal processes that govern cellular communication within the nervous system and apply that knowledge to the pharmacologic principles utilized in the treatment of neurologic and psychiatric disease. Describe, compare, and contrast the distinguishing characteristics and diagnostic criteria of neurologic and psychiatric diseases. Describe epidemiological principles that impact the neurologic and mental health of individuals and diverse patient populations, including biological and biopsychosocial factors. Integrate global climate change, ultrasound, nutrition, and disability medicine in the neurologic and psychiatric diseases.
Types of Clinical Sessions	Clinical Correlations; Neuroclinics
Teaching Sessions/ Conferences	Case-Based; Conference; Demonstration; Large Group Discussion; Small Group Discussion; Games; Laboratory; Self-Directed Learning; Problem solving sessions
Resources/Readings	REQUIRED: Brain and Weigert Atlas Haines, D.E., (9th ed, 2015) Neuroanatomy: An Atlas of Structure, Sections and Systems Lippincott Williams & Wilkins, Baltimore, MD. Basic and Clinical Pharmacology, Katzung, 2018 Pathologic Basis of Disease, Robbins & Cotran, 9th ed, 2015 Kaplan and Sadock's Concise Textbook of Psychiatry Janis Cutler Psychiatry Textbook – Students choose one. Some students get both. Blumenfeld, H. (2nd ed, 2010) Neuroanatomy through Clinical Cases, Sinauer Associates, NC., Sunderland, MA., Purves, D., Augustine, G.J., Fitzpatrick, D. Hall, W.C., LaMantia A.-S., McNamara., Williams, S.M. (2012) Neuroscience 5th edition., Sinauer Associates, Inc., Sunderland, MA. RECOMMENDED:
Evaluation Method(s)	The Final Grade based on Exams, Quizzes, and participation. Formative quizzes are available as formative assessment.
Contact Information	John Pugh, MD, PhD Tara Lindsley, PhD Rebecca Keller, PhD
Last Updated	02/28/22

Course Number	INTRMED-1444
Course Name	Introduction to Medicine
Faculty	Block Leader: Katherine Wagner, MD Associate Block Leader: Annette Grajny, MD
Curriculum Year	Year 1
Length	1 week (1 credit)
Prerequisites	Matriculation in Albany Medical College
Course Description	The overall goal of Introduction to Medicine is to provide students a guide to the approach to patients, professionalism and to certify in BLS training.
Educational Objectives	Define professionalism in the practice of medicine Describe elements of basic life-saving practices
Types of Clinical Sessions	Clinical Correlations
Teaching Sessions/ Conferences	Case-Based; Conference; Demonstration; Small Group Discussion; Problem-Based; Self-Directed Learning
Resources/Readings	REQUIRED: RECOMMENDED:
Evaluation Method(s)	The final grade is based on participation in small group activities and certification in BSL
Contact Information	Katherine Wagner, MD Rebecca Keller, PhD
Last Updated	03/28/31

Course Number	LCLERK-1444, LCLERK-2444
Course Name	Longitudinal Clerkship
Faculty	Block Leader: Gary Schynoll, MD
Curriculum Year	Year 1 / Year 2
Length	1/2 day per week (1 credit for each course)
Prerequisites	Matriculation in Albany Medical College
Course Description	The overall goal of the Longitudinal Clerkship is to provide students with clinical experience in a primary care setting.
Educational Objectives	Apply history and physical exam skills in a primary care setting Create a written patient note Present a history and physical findings of a patient
Types of Clinical Sessions	Patient presentation
Teaching Sessions/ Conferences	Rounds, Oral presentation
Resources/Readings	REQUIRED: Bates' Guide to Physical Examination and History Taking, 13th ed, 2021 RECOMMENDED:
Evaluation Method(s)	The final grade is based on participation, written and oral presentations
Contact Information	Gary Schynoll, MD Rebecca Keller, PhD
Last Updated	03/28/31

Course Number	LEBHC-1444, LEBHC-2444
Course Name	LaGrange Evidence Based Health Care
Faculty	Block Director: Elizabeth Irish, MLS Associate Block Leader: Traci Tosh MSIS, Michael Waxman, MD, MPH
Curriculum Year	Year 1 / Year 2
Length	1 hour small group every other week (1 credit hour per course)
Prerequisites	Matriculation in Albany Medical College
Course Description	The overall goal of this course is aid students in developing skills on information gathering, application and use.
Educational Objectives	Develop skills to search databases for clinical and research studies. Identify how health information and health literacy issues can impact patient care Describe the current health care system including the quadruple aim, cost-effectiveness, insurance models, reimbursement strategies, and health care policy Define the health care team and benefits for the patient. Interpret and utilize peer-reviewed medical literature to benefit patient outcomes. Utilize intervention, therapy, and exposure studies to inform clinical decision making Utilize systemic reviews, best practices, and clinical guidelines in clinical practice.
Types of Clinical Sessions	Clinical research studies
Teaching Sessions/ Conferences	Online Modules, Small group discussion
Resources/Readings	REQUIRED: Clinical Information Sciences (online modules) Essential Evidence-Based Medicine, 2nd ed, Mayer Understanding Health Policy: A Clinical Approach, 8th ed (ebook in the library)
Evaluation Method(s)	The final grade is based on participation in small groups, module quizzes and final project
Contact Information	Elizabeth Irish, MLS Rebecca Keller, PhD
Last Updated	03/28/31