Title of Clerkship:	**Radiology/Pathology Clerkship UTMC**
Required:	3rd year
Departments:	Radiology and Pathology
Type of Clerkship:	Clinical x Non-Clinical/Research _____ Basic Science _____
Clerkship Site:	The University of Toledo Medical Center
Course Number:	PATH, RADI
Blocks Available:	All blocks
Number of Students/ Block:	18
Faculty	Robert Booth, MD, Richard Cantley, MD, Cara Gatto-Weis, MD, Amira Gohara, MD, William Gunning, PhD, Jennifer Hipp, MD, Robert Mrak, MD, PhD, Mary R. Smith, MD, Hongliu Sun, MD, Jacob Bieszczad, MD, Mark Buehler, MD, Robert Coombs, MD, Haitham Elsamaloty, MD, Terrence Lewis, MD, Hassan Semaan, MD, Lee Woldenberg, MD, Jacob Zeiss, MD
Elective Description/ Requirements:	Students will spend 2 weeks in the Department of Radiology and 2 weeks in the Department of Pathology. The overall course will bridge radiology and pathology subspecialties to prepare students to best utilize departmental resources (i.e. testing, consultation, procedures) as they transition into clinical practice. Students will participate in a plethora of clinical activities in the Department of Radiology including ½ day subspecialty assignments in Cardiothoracic, Gastrointestinal, Genitourinary, Musculoskeletal, and Neuroradiology as well as ½ day modality based experiences in diagnostic radiography/mammography, CT, MRI, ultrasound and nuclear medicine. While in Pathology students will participate in all anatomic and clinical activities in the Department of Pathology including surgical pathology, cytology, hematology, chemistry, immunology, microbiology, molecular pathology, genomics & transplant immunology. Students will attend all radiology and pathology departmental case conferences provided during the rotation and various interdisciplinary conferences when available.
Length of Clerkship:	4 weeks
Links to Core Competencies:	Educational Course Objectives:

MK-1	1.	Knowledge of the normal structure and function of all organ systems
MK-2	2.	Knowledge of the molecular, biochemical and cellular mechanisms related to normal and abnormal function
MK-3	3.	Knowledge of underlying causes of common disorders and their pathogenesis
MK-4	4.	Knowledge of altered structure and function (pathology and pathophysiology)associated with various diseases
MK-5	5.	Knowledge of clinical manifestations of common diseases
MK-7	6.	Knowledge of scientific principles required to practice evidence-based medicine
MK-9	7.	Knowledge of ethical principles that govern decision making in medicine
MK-10	8.	Knowledge of normal and abnormal human behavior
MK-11	9.	Knowledge of the manner in which people of diverse cultures and belief systems perceive health/illness and respond to symptoms, diseases and related treatments
MK-12	10.	Knowledge of the non-biological determinants of health and the economic, psychological, social and cultural factors that contribute to health and disease
MK-13	11.	Knowledge of gender, cultural and other biases that impact delivery of health care
MK-14	12.	Knowledge of fundamentals of medical professionalism
MK-15	13.	Knowledge of fundamental principles of preventive medicine and population/public health
MK-16	14.	Knowledge of fundamental principles of patient centered and team based care, patient safety as well as quality improvement in health care delivery
PC-1	15.	The ability to obtain an accurate, relevant focused history that covers all essential aspects of the history
PC-3	16.	The ability to conduct accurate, relevant focused history and physical in appropriate clinical situations
PC-7	17.	The ability to use knowledge of the most frequent clinical, laboratory, radiographic and pathological manifestations to interpret the results of commonly used diagnostic procedures
PC-8	18.	The ability to construct appropriate common diagnostic and therapeutic strategies for patients with common conditions, both acute and chronic
PC-10	19.	The ability to retrieve (from electronic databases and other resources), manage, and utilize biomedical information to deliver safe and effective clinical care
PC-11	20.	The ability to deliver care in interprofessional teams
PB-1	21.	Ethical, responsible, reliable and dependable behavior in all aspects of their professional lives and a commitment to patients, society and the profession

PB-2	22.	Honesty and integrity in all interactions with patients, families, staff, colleagues and others with whom students interact in their professional life
PB-3	23.	Professionalism in dress, grooming, manner of speech and personal interactions with patients, families, staff, colleagues and others with whom students interact in their professional life
PB-4	24.	Respect for the privacy and dignity of patients and their families
PB-5	25.	Compassionate treatment of patients
PB-6	26.	Knowledge of, and respect for other health care professionals, and of the need to collaborate with others in caring for patients as well as promoting population health
PB-7	27.	Knowledge of key principles required for delivery of culturally competent care
PB-8	28.	Professional maturity by appropriately managing conflicts, coping with personal and professional stress and showing flexibility in potentially ambiguous situations
IPC-1	29.	The ability to communicate effectively in a timely manner, both verbally and in writing, with patients, patients' families, colleagues, and others
IPC-2	30.	The ability to communicate effectively with colleagues within one's discipline as well as other health professionals in a respectful, professional and timely manner with patients, families and community at large
IPC-3	31.	The ability to communicate in a culturally competent manner with patients, families and community at large
IPC-4	32.	The ability to apply principles of cultural competencies to all aspects of health care delivery
PBL-3	33.	The ability to incorporate all forms of feedback in identifying gaps in knowledge, skills and professionalism and implement remediation plans
PBL-4	34.	The ability to utilize information technology in improving medical knowledge and delivering care to patients and populations
PBL-7	35.	The ability to apply fundamentals of basic sciences to clinical problems
SBP-4	36.	The ability to identify and report systems error as well as identify solutions
SBP-5	37.	The ability to participate effectively in and deliver care in an interprofessional team

Professionalism: UT/COM students will meet or exceed the institutional standards for professionalism as stated in the current Educational Program Objectives and the current Educational Course Objectives for the Sponsoring Department.

Instructional Methods:

-Problem-solving exercises (web-based case modules)
-Small-group, Clinical skills and Didactic Sessions
-Lecture/Didactic sessions (web-based)
-Independent study
-Observation of technologies used in lab medicine to include but not limited to microbiology, transfusion medicine, immunology, clinical chemistry, hematology and molecular
-Observation of and participation in daily radiology cases
-Observation of image guided procedures
-Observation of and participation of technologies used in radiology including but not limited to CT, MRI, US, DR, and DM.
-Observation of and participation in surgical pathology and post-mortem examination
-Observation of and participation in fine needle aspiration and cytopathology
-Case discussions and clinical pathological correlation with individual faculty
-Didactic sessions to include but not limited to neuropathology, hematopathology, molecular pathology, cytopathology and genomics.
-Review of teaching slides and discussion with faculty (scope time)
-Case discussions with radiology and pathology correlation
-Didactic sessions to include but not limited to subspecialty radiology in emergency, neuroradiology, GI/GU, musculoskeletal, cardiothoracic, interventional, and vascular.
-Review of teaching cases and discussion with faculty (PACS time)

Evaluation Methods:

1. Attendance
2. Evaluation of participation in small-group discussion during case conferences
3. Faculty/resident observation and assessment of clinical skills
4. 360-degree evaluations of communication skills and behavior on modality rotations by technologists
5. Professionalism assessment module Alliance of Medical Student Educators in Radiology (AMSER)
6. End of rotation AMSER shelf-exam
7. Test skills with unknown slides and clinical cases

Prerequisites: Successful completion of blocks 1-7

Clerkship Directors: Amira Gohara, MD, Jacob Bieszczad, MD

Clerkship Coordinators: Radiology - Mary Carroll
Phone Number: 419-383-3428
Email: Mary.Carroll@utoledo.edu

Pathology - Jennifer Reynolds
419-383-3477
Jennifer.Reynolds4@utoledo.edu

Special Requirements:	None
AAMC Hot Topics Addressed in this Elective Clerkship: *(please make selection from attached Hot Topic list)*	Clinical Pathology Clinical problem solving/decision making Communication skills Diagnostic Imaging Evidence Based Medicine Health Care Quality Improvements Health Care Systems Medical ethics Medical Jurisprudence Medical Socioeconomics Practice Management Women's Health