Course Title	Interventional Radiology				
Course Code	MED606				
Course Type	Major Elective				
Level	Doctor of Medicine (MD)				
Year / Semester	6th Year / 12th Semester				
Teacher's Name	TBA				
ECTS	6	Lectures / week	3 hours	Laboratories / week	1 hour
Course Purpose and Objectives	**Objective:** Modern imaging modalities (CT, MRI, Ultrasound, PET/CT and x-rays) have become the mainstay of diagnosis. In addition, these modalities offer guidance for novel minimally-invasive treatment options. The objective of this course is to provide an introductory but comprehensive review of the imaging findings of the most common anatomic pathologies in an organ based approach and describe the minimally-invasive treatment options.				
Learning Outcomes	Upon successful completion of this course students should be able to: • Define the basic biophysics of imaging modalities (MRI, CT, Ultrasound, PET/CT and X-ray systems), as they apply to every-day clinical practice. • Recognize and describe the relevant imaging findings, formulate a differential diagnosis and specify an investigational approach towards the final diagnosis. • Describe the diagnosis, epidemiology, pathophysiology, and treatment options of each disease covered. • Describe the novel, minimally-invasive treatment options available for each disease.				
Prerequisites	MED123, MED124	Co-requisites	None		
Course Content	The course will begin with an introduction to the fundamentals of imaging physics, and will include references to plain xray films, computed tomography, magnetic resonance imaging, ultrasound and nuclear imaging. Emphasis will be given to aspects that will enable the students to improve their image interpretation skills. The course will continue with a series of topics during which the normal anatomy/physiology will be presented. Relevant pathophysiology will then be taught to the students, followed by presentation of the available minimally invasive treatment option, as well as comparison with traditional treatment options. Topics will include: a. Liver cancer. During this section we shall present normal hepatic anatomy and function, the pathophysiology of hepatocellular carcinoma				

	and the option of transarterial chemoembolization. b. Gastrointestinal hemorrhage. We shall review the causes of GI hemorrhage, present the medical, surgical and minimally invasive options to address such hemorrhage and showcase the tools of the trade (catheters, coils, microspheres etc) c. Liver cirrhosis: The students will learn the pathophysiology of liver cirrhosis, its consequences (hepatocellular carcinoma, portal hypertension) and treatment options for the latter (i.e. TIPSS) A similar structure will followed for other topics and will include aortic/arterial disease, cerebrovascular disease, renal cancer, hepatico-pancreatico-biliary disease and other specialty intervnetions. In addition to the above, the students will be given a basic introduction to medical research and relevant statistical methodology; they will develop the basic critical skill of judging scientific papers and present a paper of their choice.
Teaching Methodology	Face-to-face
Bibliography	Medical Imaging of Normal and Pathologic Anatomy Joel Vilensky, Edward Weber, Thomas Serosi and Stephen Carmichael **Pages**: 192 **Trim Size**: 152 X 229 mm **Imprint**: Saunders **ISBN**: 9781437706345 **Copyright**: 2011 (http://www.eu.elsevierhealth.com/product.jsp?isbn=9781437706345&sgCountry=CY&isbn=9781437706345)
Assessment	Mid-Term Examination 30% Final Examination 40% Assignment /Lab 20% Class Participation 10% 100%
Language	English