

American University of Beirut
Faculty of Health Sciences
Medical Imaging Sciences
MIMG 207
(Principle of Imaging II)
Fall Semester

Name: Miss Hanane Merhi
Office Hours: 7:30-16:00
Office Location: AUBMC SB09
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Meeting Location: Classroom Room #: SB21
Meeting Time: TF: 8:00-8:50, W: 14:00-14:50

COURSE DESCRIPTION:

An overview of contrast materials used in imaging. This course also provides a study of imaging procedures related to gastrointestinal, hepato-biliary, genito-urinary and respiratory systems.

Breast imaging techniques, angiographic and vascular and non-vascular interventional procedures related to different systems are discussed.

Course Objectives:

- At the end of this course the student will be able:
 - o To provide the student radiographer with thorough knowledge in the specialized radiological procedures including patient and equipment preparation, projections taken for each study, use of contrast, after care of patients and radiographic appearances of different body systems.
 - o To introduce student radiographers to diagnostic imaging procedures used in evaluating different body structures.

Credits Allocated: 3

Prerequisites: MIMG 206, Principle of Imaging I

Assignments:
written assignments

Student Assessment / Basis of Grade determination

Grades for this course will be based on the following criteria:

Tests 100%

N.B.: The passing grade for the course is 70

COURSE SYLLABUS

- I- Contrast Media
 - 1- Purpose / definition
 - 2- Classification of contrast agents
 - 3- Pharmacological profile of contrast agents
 - 4- Dosage
 - 5- Preparation
- II- General Pharmacologic Principles
- III- Positioning principles
- IV- Radiological procedures of the gastrointestinal tract
 - 1- Abdominal plain radiograph (KUB)
 - 2- Barium swallow examination / esophogram
 - 3- Upper GI series procedure
 - 4- Small intestinal procedure
 - 5- Barium enema procedure
 - 6- Sialography
- V- Radiological procedures of the biliary system
 - 1- Percutaneous Transhepatic cholangiography (PTC)
 - 2- T - tube cholangiography
 - 3- Endoscopic retrograde cholangiopancreatography (ERCP)
 - 4- Operative cholangiogram
- VI- Radiological procedures of the genitourinary system
 - 1- Radiographic anatomy
 - 2- Intravenous pyelography (IVP)
 - 3- Retrograde pyelography
 - 4- Voiding cystourethrography
 - 5- Retrograde urethrogram
 - 6- Percutaneous nephrostomy
 - 7- Hysterosalpingography
- VII- Breast Imaging
 - 1- Mammography
 - 2- Diagnostic procedures
- VIII- Angiography
 - 1- Definition and purpose
 - 2- Patient preparation
 - 3- Vascular access
 - 4- Complications
 - 5- Drugs used in interventional radiology
 - 6- Sterile technique
 - 7- Equipment for angiography
 - 8- Diagnostic angiography procedures
- IX- Interventional radiology
 - 1- Vascular intervention
 - 2- Nonvascular intervention

Bibliography / References

- Kessel, D. and Robertson, I. (2005). *Interventional Radiology – A Survival Guide*. (2nd ed.) Elsevier.
- Valji, K. (2006) *Vascular and Interventional Radiology*. (2nd ed.). Elsevier
- Carver, E. and Carver, B. (2006) *Medical Imaging- Techniques, Reflection and Evaluation*. Elsevier.
- Bakal, C.W., Silberzweig, J.E., Cynamom, J. and Sprayregen, S. (2002) *Vascular and Interventional Radiology – Principles and Practice*. Thieme.
- Peart, O. (2005) *Mammography and Breast Imaging – Just the facts*. McGraw Hill

Author (s) of Syllabus and resume (s)

- Miss Hanane Merhi

COURSE POLICY

1. **Attendance:** you are expected to attend all classes and participate in class activities. If you miss a class, it is your responsibility to make up for the material missed, and inquire about any announcements made. If you miss more than one fifth of class sessions, you are subject to withdrawing from the course with a-w-grade. **Please refer to the AUB catalogue.**
2. **Exams:** Examinations must be taken as scheduled. Make up exams will not be given unless a valid excuse is given. Only authorized medical reports will be accepted. (AUBMC/ Infirmary)
3. **Withdrawal date:** Please observe withdrawal dates set by the Registrar's Office.
4. **E-mail communication:** Students will be e – mailed on regular basis throughout the semester.
5. **Moodle:** The course material and assignments are posted on Moodle. Students are held accountable for checking the Moodle course on regular basis.
6. **Academic integrity:** Cheating and plagiarism will not be tolerated. Students must review the Student Code of Conduct in their handbook and familiarize themselves with definitions and penalties. If the student is in doubt about what constitutes plagiarism, he / she should ask their instructor (s) because it is *their* responsibility to know. The American University of Beirut has a strict anti-cheating policy. Penalties include failing marks on the assignment in question, suspension or expulsion from University and a permanent mention of the disciplinary action in the student's records.