

Department of Medical Imaging Sciences
Faculty of Health Sciences
American University of Beirut

Course number: MIMG206
Course Name: Principle of Imaging I
Spring Semester AY 2019 - 2020

Course Administration

Course Instructor:

Name: Hanane Merhi
Office: AUBMC - Phase I - SB: 09 - Room #: 17
Phone: 5075
Email: hm14@aub.edu.lb
Office hours: By appointment

Class Time and Location

Classes:

M 13:00 – 14:15
W 13:00 – 14:15

Classroom: X-Ray School, AUBMC- Phase I- Floor: SB- Room #: SB21

Course Description

The MIMG206 course consists of a series of lectures and complementary lab sessions. After covering preliminary steps in radiography, radiographic nomenclature, positioning aids and accessory equipment, this course teaches radiographic anatomy and positioning by providing students with a description of radiographic procedures pertaining to upper and lower extremity, shoulder girdle, pelvis, thorax, vertebral column and cranial bones.

The theory and application of positioning, radiation protection techniques, and basic radiographic exposure, along with associated image critiques are covered in this course. The practical instruction and application in the laboratory class will emphasize on patient positioning and protection, technique selection, and equipment manipulation.

Course Learning Objectives

By the end of the course, students will be able to:

1. Apply patient care considerations relevant to all radiographic procedures.
2. Be familiar with the basic medical terminologies commonly used in radiography.
3. Classify and identify the most common fractures affecting the skeletal system on both diagrams and radiographs.

4. Describe the positioning techniques employed to complete radiographic procedures that are utilized to demonstrate specific anatomical structures for each body part.
5. State specific projections required for each radiographic examination.
6. Perform positioning skills.
7. Develop knowledge in patient care and apply the principles of radiation protection.
8. Identify major anatomical structures and positioning landmarks of the part being radiographed.
9. Produce and evaluate images for positioning, centering, appropriate anatomy and overall image quality and presence of artifact.
10. Identify anatomic structures on both diagrams and radiographs of the whole skeletal system.

References - Required Readings

Notes:

All lectures, reading materials and exercises will be uploaded on Moodle (via the MIMG206 Moodle Site).

Books:

Bontrager, K.L. and Lampignani, J. P. (2010). *Textbook of Radiographic Positioning and Related Anatomy*. 7th Edition. St. Louis, Missouri, Elsevier Mosby.

Long, B.W., Rollins J. H. & Smith, B. J. (2016). *Merrill's Atlas of Radiographic Positioning and Procedures (Volumes 1, 2 and 3)*. 13th Edition. St. Louis, Missouri, Elsevier Mosby.

Martensen, K.M. (2011). *Radiographic Image Analysis (Textbook and Workbook)*. 3rd Edition. St. Louis, Missouri, Saunders Elsevier..

The reference books are available in the X-Ray School library.

Useful Websites:

Website: <http://www.wikiradiography.net>

Course Requirements and Student Evaluations

	Assessment	Percent	Linked to which objectives?
A.	Attendance and Class Contribution	5%	All learning objectives
B.	Test 1: Fractures and Dislocations	5%	All learning objectives
C.	Test 2: Upper and Lower Extremities Radiography	40%	All learning objectives
E.	Test 3: Spine and Abdomen Radiography	25%	All learning objectives
F.	Test 5: Bony Thorax, Thoracic Viscera and Skull Radiography	25%	All learning objectives

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

Credits Allocated

3

Prerequisites

MIMG201 and HUMR246

AUB/FHS Policies

✓ *Attendance*

Attendance is mandatory, and attendance will be taken in each lecture. You are expected to attend all classes punctually and participate in classroom activities. You are required to co-operate with the signing-in procedure. If you miss a class, it is your responsibility to make up for the material missed and inquire about any announcements made. Persistent absence without a valid cause for a significant number of teaching sessions will lead to an interview with the course advisor to explain the absence and may lead to a decision that the student leaves the course. As per AUB General Regulations, students who miss more than one-fifth of the sessions of any course in the first ten weeks of the semester (five weeks in the case of the summer term) are dropped from the course.

✓ *Academic Integrity*

Education is demanding, and time management is essential. Do not hesitate to use the resources around you but do not cut corners. Cheating and plagiarism will not be tolerated. Please review the Student Code of Conduct in your handbook available on the following web page:

<https://www.aub.edu.lb/sao/Documents/Student%20Handbook%202016-2017.pdf> and familiarize yourself with definitions and penalties (p. 33).

If you're in doubt about what constitutes plagiarism, ask your instructor because it is your responsibility to know. The American University of Beirut has a strict anti-cheating and anti-plagiarism 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.

✓ *Tests*

All tests must be completed within the time period specified; zero points will be given for a test if the student does not adhere to the time guidelines.

If for any reason a test is rescheduled, a petition should be signed by the students.

✓ *Make-up Tests*

Having several episodes of minor illness during the term should not affect your ability to sit for a test or to submit a coursework.

Students should not seek medical report for minor illnesses, particularly after they have recovered.

Make-up tests are only allowed whenever a student is prevented by severe illness from attending the examination and/or whenever the excuse presented by the student deemed valid by the course instructor such as death in the family, and personal/family emergency.

✓ *Students with Disabilities:*

AUB strives to make learning experiences accessible for all. If you anticipate or experience academic barriers due to a disability (such as ADHD, learning difficulties, mental health conditions, chronic or temporary medical conditions), please do not hesitate to inform the Accessible Education Office. In order to ensure that you receive the support you need and to facilitate a smooth accommodations process, you must register with the Accessible Education Office (AEO) as soon as possible: accessibility@aub.edu.lb; +961-1-350000, x3246; West Hall, 314.

✓ *Non-Discrimination – Title IX – AUB*

AUB is committed to facilitating a campus free of all forms of discrimination including sex/gender-based harassment prohibited by Title IX. The University's non-discrimination policy applies to, and protects, all students, faculty, and staff. If you think you have experienced discrimination or harassment, including sexual misconduct, we encourage you to tell someone promptly. If you speak to a faculty or staff member about an issue such as harassment, sexual violence, or discrimination, the information will be kept as private as possible, however, faculty and designated staff are required to bring it to the attention of the University's Title IX Coordinator. Faculty can refer you to fully confidential resources, and you can find information and contacts at www.aub.edu.lb/titleix. **To report an incident**, contact the University's Title IX Coordinator Trudi Hodges at 01-350000 ext. 2514, or titleix@aub.edu.lb. An anonymous report may be submitted online via Ethics Point at www.aub.ethicspoint.com.

✓ *MIMG206 Class Rules and Regulations*

• *Cell Phones*

The use of cell phones is prohibited in the classroom, even when set to vibrate. Cell phones are extremely disruptive to your classmates and to the instructor. Please make a point to turn off your cell phone before entering class and keep them off of desktops during classes.

• *Eating and Drinking*

Bottled water and other drinks i.e. coffee, juice is allowed during classes; eating is not allowed.

• *Holidays*

Sessions falling on holidays will be compensated during the spring term 2019-2020.

• *Arriving Late*

Arriving late for lectures can be very disruptive to the learning process of others. If you do arrive late at a class for 15 minutes, the instructor has the right to refuse admission to those who arrive late.

- *Grades*

Tests will be provided to students for revision whenever corrected.

Grades will be posted on Moodle as percentages after each test.

Percentage for each test is available in the table (page 2).

Averages are calculated from the percentage values of the tests.

- *Students' sick reports (University Health Services)*

<http://www.aubmc.org.lb/clinical/FM/Pages/main/UHS.aspx>

Students who present to UHS for an acute sickness may ask for a medical report.

In the case of students who present to ED for an emergency case, the resident in charge issues a sick leave form that needs to be signed by the ED attending physician.

The concerned student will submit the sick leave to the UHS attending physician for approval.

Students who submit a sick report from a physician outside AUBMC are not re-examined by a UHS doctor. The sick report is reviewed by the UHS Director, and the final decision is left to the student's professor.

N.B.: Students are given a medical report that they might use to justify missing classes or exams.

Detailed Course Outline

Please note this is a tentative schedule. Any changes may be made at the instructor's discretion.

Date	Number of sessions	Topic	Reading	Course Objectives
27/1 – 29/1	2	Preliminary steps in Radiography Fractures and Dislocations	PP presentation and PDF files on Moodle	LO#: 1, 2 & 3
3/2 – 19/2	6	Revision of osteology of Upper Extremity Upper Extremity Radiography	PP presentation and PDF files on Moodle	All learning objectives
24/2 – 9/3	5	Revision of osteology of Lower Extremity Lower Extremity Radiography	PP presentation and PDF files on Moodle	All learning objectives
11/3 – 25/3	5	Revision of Osteology of Spine Spine Radiography	PP presentation and PDF files on Moodle	All learning objectives
30/3 – 6/4	3	Revision of Abdominal Anatomy Abdomen Radiography	PP presentation and PDF files on Moodle	All learning objectives
8/4 – 22/4	5	Revision of Osteology of Bony Thorax and Thoracic Viscera Bony Thorax and Thoracic Viscera Radiography	PP presentation and PDF files on Moodle	All learning objectives
27/4 – 29/4	2	Skull Radiography Revision of Osteology of Skull	PP presentation and PDF files on Moodle	All learning objectives

N.B: 4 missing sessions.

Compensatory sessions will be scheduled during the spring term on Wednesday from 14:30 to 15:45 rr Friday from 13:00 to 14:15.

Tests:

Test #	Material	Date	Time
Test 1	Fractures and Dislocations	Wednesday February 5, 2020	14:30 – 15:45
Test 2	Upper and Lower Extremities Radiography Radiographic Anatomy of the Upper and Lower Extremities	Wednesday March 18, 2020	14:30 – 15:45
Test 3	Spine and Abdomen Radiography Radiographic Anatomy of the Spine and Abdomen	Wednesday April 15, 2020	14:30 – 15:45
Test 4	Bony Thorax and Thoracic Viscera Radiography Radiographic Anatomy of the Thorax	Wednesday April 29, 2020	14:30 – 15:45

Holidays

St. Maroun's Day: Sunday February 9, 2020

Annunciation Day: Wednesday March 25, 2020

Easter Vacation – Latin: Friday April 10, 2020 – Monday April 13, 2020

Easter Vacation – Greek Orthodox: Friday April 17, 2020 – Monday April 20, 2020

Labor Day: Friday May 1, 2020