Department of Medical Imaging Sciences

Faculty of Health Sciences

American University of Beirut

Course number: MIMG205

Course name: Introduction to Principles of Diseases

Spring semester AY 2019 - 2020

Course Administration

Instructor: Dr. Charbel Saade (Assistant Professor)
Office: 3rd Floor, Van Dyck - Room 329
Phone: 2964
Office hours: by appointment
Email: cs39@aub.edu.lb

Class Time and Location

Monday: 08:00 – 09:15 – Room 103 – Van Dyck

Wednesday: 12:30 – 13:45 – Room 103 – Van Dyck

Course Description

An introduction to pathology covering the disease processes most frequently diagnosed with medical imaging. This course covers various diseases by body system, with description of their main imaging findings.

Course Objectives

At the end of this course the student will be provided with knowledge of the principles of the medical and surgical diseases of all systems of the human body with exposure to the imaging modalities used for the diagnosis of these diseases and their main radiological findings.

Required Readings

Notes: All lectures and reading materials and exercises will be uploaded on Moodle / emailed.

1. Eisenberg, R. L., & Johnson, N. M. (2015). *Comprehensive Radiographic Pathology*. Elsevier Health Sciences.
2. Kowalczyk, N. (2014). *Radiographic Pathology for Technologists*. Elsevier Health Sciences.

Course Requirements and Student Evaluations

	Assessment	Objectives	Percent
A.	Attendance and Class Contribution		5%
B.	Case Study 1 (Appendix 1)	Respiratory Pathology	30 %
C.	Case Study 2 (Appendix 2)	Hepatobiliary Pathology	30 %
D.	Case Study 3 (Appendix 3)	Neuro-oncology Pathology	35 %

N.B .: The passing grade for the course is 65/100

See Appendix 1 for Assignment Outline and Marking Criteria)

Credits Allocated

3

Prerequisites

PHYL246: Physiology for Nursing Degree Students

General Education Knowledge Goals and Skills

General Education Knowledge Goals

1. Communication: Students will communicate effectively in both speech and writing.
2. Technology: Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.
3. Diversity: Students will understand the importance of a global perspective and culturally diverse peoples.
4. Ethical Reasoning and Action: Students will understand ethical issues and situations.

General Education Knowledge Skills

1. Written and Oral Communication in English: Students will communicate effectively in speech and writing, and demonstrate proficiency in reading.
2. Critical Thinking and Problem-solving: Students will use critical thinking and problem-solving skills in analyzing information.

3. Ethical Decision-Making: Students will recognize, analyze and assess ethical issues and situations.
4. Computer Literacy: Students will use computers to access, analyze or present information, solve problems, and communicate with others.
5. Collaboration and Cooperation: Students will develop the interpersonal skills required for effective performance in group situations.
6. Intra-Cultural and Inter-Cultural Responsibility: Students will demonstrate an awareness of the responsibilities of intelligent citizenship in a diverse and pluralistic society, and will demonstrate cultural, global, and environmental awareness.

Detailed Course Outline

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

Date	Topic	Reading	Course Objectives
22/01/20	Introduction to Pathology	Eisenberg, R. L., & Johnson, N. M. (2015). Comprehensive Radiographic Pathology. Elsevier Health Sciences. Kowalczyk, N. (2014). Radiographic Pathology for Technologists. Elsevier Health Sciences.	
27/1/20			
29/1/20	Respiratory System		
3/2/20			
5/2/20	Skeletal System		
10/2/19			
12/2/20	Gastrointestinal System		
12/2/20			
17/2/20	Hepatobiliary System		
19/2/20			
24/2/20	Pancreatic and Splenic System		
26/2/20			
2/3/20	Urinary System		
4/3/20			
9/3/20	Cardiovascular System		
11/3/20			
16/3/20	Nervous System - Head		
18/3/20			
23/3/20	Nervous System - Spine		
25/3/20			
30/3/20	Hematopoietic System		

1/4/20			
6/4/20	Endocrine System		
8/4/20			
13/4/20	Male Pelvis – Reproductive System		
15/4/20		Eisenberg, R. L., & Johnson, N. M. (2015). Comprehensive Radiographic Pathology. Elsevier Health Sciences. Kowalczyk, N. (2014). Radiographic Pathology for Technologists. Elsevier Health Sciences.	
20/4/20	Female Pelvis – Reproductive System		

Bibliography / References

- Eisenberg, R. L., & Johnson, N. M. (2015). Comprehensive Radiographic Pathology. Elsevier Health Sciences.
- Kowalczyk, N. (2014). Radiographic Pathology for Technologists. Elsevier Health Sciences.
- Website: https://web.stanford.edu/dept/radiology/radiologysite/index.html
- Website: www.MDCT.com.au

Course Policy

1. **Attendance:** Attendance is mandatory and attendance will be taken in each lecture and lab session. You are expected to attend all classes and participate in classroom activities. If you miss a class, it is your responsibility to make up for the material missed and inquire about any announcements made. 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.

2. **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.

3. Missed tests: All tests must be completed within the time period specified; zero points will be given for an exam if the student does not adhere to the time guidelines. The only delays for the final exam that will be considered by the instructor are for documented illness, death in the family, and personal/family emergency.

4. 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.

5. 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 EthicsPoint at www.aub.ethicspoint.com.

Appendix 1

Case Report 1

Topic: Chose one topic from Respiratory Pathology

Word Count: 2000 words | Due Date: 14/2/2020 at 5pm

To be used as a guideline for the Case Report Assignment

Purpose

The purpose of a radiology case report is to describe the client history, clinical course, and imaging for a notable or unusual case. The case may be intended to aid other practitioners in interpretation, but frequently the oddity, rarity, and non-generalizability of cases are meant more to amuse or entertain the reader.

Structure

A case report typically contains:

Patient history and presentation		**10**
Description of the pathology and possible differential diagnosis		**15**
Imaging modalities used and why		**5**
Discuss the image parameters used and how they can be changed to improve the image quality and pathology seen for each modality		**30**
Radiographic critique of each image and modality employed		**20**
A discussion of the imaging and other relevant interventions		**20**
Total Score **Weighting factor overall 30 % of total grade**		**100**

In radiology case reports, images from multiple imaging modalities may be included, and pathology is considered an excellent addition.

Discussion

The purpose of the Discussion is to provide your interpretation of the data, by synthesizing what your data mean to the field. Remember to focus the Discussion on the interpretation of your own results. Avoid long-winded interpretations of previous studies. Also, refrain from explanations of the rationale for the study that belong in the Introduction.

You may state new ideas based on the results of your study in the discussion, but be sure to label any new idea as such. This avoids misinterpretation of new ideas as conclusions and prevents criticism by reviewers and readers. Finally, argue politely.

It is recommended to divide the discussion into six paragraphs

1. Synopsis of the most relevant results
2. Discussion synthesizes the meaning of your results - All conclusions must be supported by your data.
3. Interpretation of your data in the context of previous studies
4. State and present negative results.

Results that are discordant with previous studies may be your most interesting findings

Appendix 2

Case Report 2

Topic: Choose one topic from Hepatobiliary pathology

Word Count: 2000 words | Due Date: 13/3/2020 at 5pm

To be used as a guideline for the Case Report Assignment

Purpose

The purpose of a radiology case report is to describe the client history, clinical course, and imaging for a notable or unusual case. The case may be intended to aid other practitioners in interpretation, but frequently the oddity, rarity, and non-generalizability of cases are meant more to amuse or entertain the reader.

Structure

A case report typically contains:

Patient history and presentation		**10**
Description of the pathology and possible differential diagnosis		**15**
Imaging modalities used and why		**5**
Discuss the image parameters used and how they can be changed to improve the image quality and pathology seen for each modality		**30**
Radiographic critique of each image and modality employed		**20**
A discussion of the imaging and other relevant interventions		**20**
Total Score **Weighting factor overall 30 % of total grade**		**100**

In radiology case reports, images from multiple imaging modalities may be included, and pathology is considered an excellent addition.

Discussion

The purpose of the Discussion is to provide your interpretation of the data, by synthesizing what your data mean to the field. Remember to focus the Discussion on the interpretation of your own results. Avoid long-winded interpretations of previous studies. Also, refrain from explanations of the rationale for the study that belong in the Introduction.

You may state new ideas based on the results of your study in the discussion, but be sure to label any new idea as such. This avoids misinterpretation of new ideas as conclusions and prevents criticism by reviewers and readers. Finally, argue politely.

It is recommended to divide the discussion into six paragraphs

1. Synopsis of the most relevant results
2. Discussion synthesizes the meaning of your results - All conclusions must be supported by your data.
3. Interpretation of your data in the context of previous studies
4. State and present negative results.

Results that are discordant with previous studies may be your most interesting findings

Appendix 3

Case Report 3

Topic: Choose one topic from Neuro-oncology Imaging

Word Count: 2000 words 15/4/2020

To be used as a guideline for the Case Report Assignment

Purpose

The purpose of a radiology case report is to describe the client history, clinical course, and imaging for a notable or unusual case. The case may be intended to aid other practitioners in interpretation, but frequently the oddity, rarity, and non-generalizability of cases are meant more to amuse or entertain the reader.

Structure

A case report typically contains:

Patient history and presentation		**10**
Description of the pathology and possible differential diagnosis		**15**
Imaging modalities used and why		**5**
Discuss the image parameters used and how they can be changed to improve the image quality and pathology seen for each modality		**30**
Radiographic critique of each image and modality employed		**20**
A discussion of the imaging and other relevant interventions		**20**
Total Score **Weighting factor overall 35 % of total grade**		**100**

In radiology case reports, images from multiple imaging modalities may be included, and pathology is considered an excellent addition.

Discussion

The purpose of the Discussion is to provide your interpretation of the data, by synthesizing what your data mean to the field. Remember to focus the Discussion on the interpretation of your own results. Avoid long-winded interpretations of previous studies. Also, refrain from explanations of the rationale for the study that belong in the Introduction.

You may state new ideas based on the results of your study in the discussion, but be sure to label any new idea as such. This avoids misinterpretation of new ideas as conclusions and prevents criticism by reviewers and readers. Finally, argue politely.

It is recommended to divide the discussion into six paragraphs

1. Synopsis of the most relevant results
2. Discussion synthesizes the meaning of your results - All conclusions must be supported by your data.
3. Interpretation of your data in the context of previous studies
4. State and present negative results.

Results that are discordant with previous studies may be your most interesting findings