Syllabus

Internship in Medical Imaging (1)

(1905081351)Second Semester 2021 /2022

COURSE INFORMATION	
Course Name: Internship in Medical Imaging (1)Imaging **Semester:** Second **Department:** Department of Medical Imaging **Faculty:** Applied Medical Sciences	**Course Code:** 140508111 **Section:** Internship in Medical Imaging Applications **Core Curriculum**: Radiological and Medical Imaging
Day(s) and Time(s): Monday: 8:00-2:00 **Classroom:** Hospitals	**Credit Hours:** 3 **Prerequisites**: 140508322

COURSE DESCRIPTION

The internship in Medical Imaging offers the medical imaging students the chance to practice performing different radiographic procedures that have been learned theoretically in class. Furthermore, students will also be given the chance to practice some advanced imaging procedures for different body parts using the magnetic resonance imaging (MRI) and computed tomography (CT).

necessity and emerge of medical imaging science is introduced. The course starts with introducing the basics

- Internship and clinical training in department of medical imaging at different hospitals.

FACULTY INFORMATION

Name	*Ammar Anwar Khaled Oglat*
Academic Title:	*Assistant Professor*
Office Location:	*Applied Medical Sciences /Chairman Office of Medical Imaging Department* 3158
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Office Hours:	*Sunday: 11:00-12:00* *Tuesday: 11:00-12:00* *Thursday (online): 11:00-12:00* *Please send an e-mail (ammar.oglat@yahoo.com) to meet at any other time*.

REFERENCES AND LEARNING RESOURCES

Required Textbook:

There is no required textbook for purchase.

All compulsory weekly readings are available electronically on Microsoft Teams and Teaching files”on Facebook group.

Suggested textbook for reading:
All previous text books that used during the first three years in medical imaging (Position 1, Position 2, Fundamental in medical imaging, radiobiology, quality assurance, and image processing) are required.

STUDENT LEARNING OUTCOMES MATRIX*

Core Curriculum Learning Outcomes	Program Learning Outcomes	Course Objectives	Course Student Learning Outcomes	Assessment Method
. Explanation and communication with patient. . Patient care and safety. . Correct equipment selection and use. . Correct radiographic positioning and Centering. . Correct slice planning.	. Efficiency use of time and energy . Student evaluation of images.	1. Apply the radiographic positioning skills to perform different radiographic procedures for the skull, spine, chest, abdomen, and pelvis, upper and lower extremities in addition to the contrast media-based radiographic procedures. 2. Demonstrate effective presentation skills and written communication skills. 3. Adjust all necessary elements to perform non-routine exams. 4. Demonstrate professional behavior.	1. Correct selection of technical factors. 2. Correct patient markers and identification. 3. General radiation protection and MRI Safety. . Efficiency use of time and energy 4. Student evaluation of images.	• Theoretical Exams • Quizzes with no marks just to give chance to the students to revise the course. • Evaluations at hospitals • Clinical Exams.
		5. Use the MRI and CT scanners professionally and efficiently.	. Explain all medical imaging modalities in brief (X-Ray Imaging Systems, X-Ray Computed . Tomography CT, Nuclear Medicine Imaging, Magnetic Resonance Imaging MRI, and Ultrasound Imaging).	. Theoretical Exams . Quizzes with no marks just to give chance to the students to revise the course. . Evaluations at hospitals . Clinical Exams.

			. Know the attenuation and enetration phenomena. . Explain the attenuation of ifferent densities.	.
		6. Select the technical factors for different radiographic, CT and MRI procedures. 7. Adhere to the MRI safety. 8. Use effective communication skills with healthcare professionals and patients . 9. Appropriately evaluate x-ray, CT and MR images.		• . Theoretical Exams • Quizzes with no marks just to give chance to the students to revise the course. • Evaluations at hospitals • Clinical Exams.
		10. Demonstrate appropriate use of conventional and digital medical imaging equipment's		. Theoretical Exams . Quizzes with no marks just to give chance to the students to revise the course. . Evaluations at hospitals . Clinical Exams. .
		11. Practice radiation protection.		• Theoretical Exams • Quizzes with no marks just to give chance to the students to revise the course. • Evaluations at hospitals • Clinical Exams.

			Spatial resolution, and Temporal resolution.	

ACADEMIC SUPPORT

It is The Hashemite University policy to provide educational opportunities that ensure fair, appropriate and reasonable accommodation to students who have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities are encouraged to contact their Instructor to ensure that their individual needs are met. The University through its Special Need section will exert all efforts to accommodate for individual's needs.

COURSE REGULATIONS

Participation

Class participation and attendance are important elements of every student's learning experience at The Hashemite University, and the student is expected to attend all classes. A student should not miss more than 15% of the classes during a semester. *Those exceeding this limit of 15% will receive a failing grade regardless of their performance*. It is a student's responsibility to monitor the frequency of their own absences. **Attendance record begins on the first day of class irrespective of the period allotted to drop/add and late registration. It is a student's responsibility to sign-in; failure to do so will result in a non-attendance being recorded.**

In exceptional cases, the student, with the instructor's prior permission, could be exempted from attending a class provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the acceptability of an absence for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent will be allowed to withdraw from the course.

Plagiarism

Plagiarism is considered a serious academic offence and can result in your work losing marks or being failed. HU expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, and the wider University community. As such, a student is expected not to engage in behaviors that compromise his/her own integrity as well as that of the Hashemite University.

Plagiarism includes the following examples and it applies to all student assignments or submitted work:

- **Use of the work, ideas, images or words of someone else without his/her permission or reference to them.**
- **Use of someone else's wording, name, phrase, sentence, paragraph or essay without using quotation marks.**
- **Misrepresentation of the sources that were used.**

The instructor has the right to fail the coursework or deduct marks where plagiarism is detected

Late or Missed Assignments

In all cases of assessment, students who fails to attend an exam, class project or deliver a presentation on the scheduled date without prior permission, and/or are unable to provide a medical note, will automatically receive a fail grade for this part of the assessment.

- Submitting a term paper on time is a key part of the assessment process. Students who fail to submit their work by the deadline specified will automatically receive a 10% penalty. Assignments handed in more than 24 hours late will receive a further 10% penalty. Each subsequent 24 hours will result in a further 10% penalty.

- In cases where a student misses an assessment on account of a medical reason or with prior permission; in line with University regulations an incomplete grade for the specific assessment will be awarded and an alternative assessment or extension can be arranged.

Student Complaints Policy

Students at The Hashemite University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-academic. For more information about the policy and processes related to this policy, you may refer to the students' handbook.

COURSE ASSESSMENT

Course Calendar and Assessment

Students will be graded through the following means of assessment and their final grade will be calculated from the forms of assessment as listed below with their grade weighting taken into account. The criteria for grading are listed at the end of the syllabus

Assessment	Grade Weighting	Deadline Assessment
Exam 1	15%	11/4/2022 9:30-10:30
Exam 2	15%	16/5/2022 9:30-10:30
Evaluation	20%	During the semester
Final Comprehensive theoretical Exam	35%	To be arranged by the registration office
Final Comprehensive Clinical Exam	15%	At the last week of internship (At week 11)

Description of Exams

Test questions will predominately come from material presented in the lectures of v courses. Semester exams will be conducteddduring the regularly scheduled lecture period. Exam will consist of a combination of multiple choice, short answer, match, true and false and/or descriptive questions.

Homework:

Will be given for the students by the technicians at the hospitals.

Quizzes:

Unannounced quizzes will be given during or/and at the end of each chapter based upon the previous lectures. It will enforce that you come prepared to the class.

No make-up exams, homework or quizzes will be given. Only documented absences will be considered as per HU guidelines.

Grades are not negotiable and are awarded according to the following criteria*:

Letter Grade	Description	Grade Points
A+	Excellent	4.00
A		3.75
A-		3.50
B+	Very Good	3.25
B		3.00

B-		2.75
C+	Good	2.50
C		2.25
C-		2.00

D+	Pass	1.75
D	Pass	1.50
F	Fail	0.00
I	Incomplete	-

WEEKLY LECTURE SCHEDULE AND CONTENT DISTRIBUTION

"Lecture hours and weeks are approximate and may change as needed"

Part One 1	**Training at Hospitals**	**Week 1- 11**
1.1	Introduction and instructions about how to start training at hospitals	
1.2	Ethical statement	
1.3	Distributes students as a group for training at department of medical imaging.	
1.4	Frequent evaluation with fair marks.	
1.5	Frequent rotation at medical imaging modalities to give a good chance for the students to get more knowledge of these devices	
1.6 Answer the students questions related to their training.		
1.7 Comprehensive theoretical and clinical exams.		

Classroom Participation: Assessment Criteria					
Criteria	Quality				Score
	Excellent (5 points)	Good (4 points)	Satisfactory (3 points)	Needs Improvement (2 points)	
Degree to which student integrates course readings into classroom participation	often cites from readings; uses readings to support points; - often articulates "fit" of readings with topic at hand.	-occasionally cites from readings; - sometimes uses readings to support points; -occasionally articulates "fit" of readings with topic at hand .	-rarely able to cite from readings; -rarely uses readings to support points; -rarely articulates "fit" of readings with topic at hand	-unable to cite from readings; -cannot use readings to support points; cannot articulates "fit" of readings with topic at hand .	
Interaction/ participation in classroom discussions	-always a willing participant, responds frequently to questions; - routinely volunteers point of view .	-often a willing participant, -responds occasionally to questions; -occasionally volunteers point of view .	-rarely a willing participant, -rarely able to respond to questions; - rarely volunteers point of view .	-never a willing participant., -never able to respond to questions; - never volunteers point of view .	
Interaction/participation in classroom learning activities	-always a willing participant; -acts appropriately during all role plays; -responds frequently to questions; -routinely volunteers point of view.	-often a willing participant; -acts appropriately during role plays; - responds occasionally to questions; -occasionally volunteers point of view.	-rarely a willing participant. -occasionally acts inappropriately during role plays; - rarely able to respond to direct questions; -rarely volunteers point of view .	-never a willing participant -often acts inappropriately during role plays;, -never able to respond to direct questions; - never volunteers point of view.	
Demonstration of professional attitude and demeanor	-always demonstrates commitment through thorough preparation; -always arrives on time; -often solicits instructors' perspective outside class.	rarely unprepared; rarely arrives late; - occasionally solicits instructors' perspective outside class .	-often unprepared; occasionally arrives late; - rarely solicits instructors' perspective outside class .	-rarely prepared; - often arrives late; -never solicits instructors' perspective outside class	

ASSESSMENT RUBRICS

Classroom Participation: Oral Presentation										
Element	**Excellent**			**Satisfactory**			**Needs Improvement**			**Points**
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**0**	
Organization	▪ There is a logical sequence of information. ▪ Title slide and closing slide are included appropriately.			▪ There is some logical sequence of information. ▪ Title slide and closing slides are included.			▪ There is little or no logical sequence of information. ▪ Title slide and/ or closing slides are not included.			
Slide Design (text, colors, background, illustrations, size, titles, subtitles)	▪ Presentation is attractive and appealing to viewers.			▪ Presentation is somewhat appealing to viewers.			▪ Little to no attempt has been made to make presentation appealing to viewers.			
Content	▪ Presentation covers topic completely and in depth. ▪ Information is clear, appropriate, and accurate.			▪ Presentation includes some essential information. ▪ Some information is somewhat confusing, incorrect, or flawed.			▪ Presentation includes little essential information. ▪ Information is confusing, inaccurate, or flawed.			
Language	▪ Spelling, grammar, usage, and punctuation are accurate ▪ Fluent and effective			▪ There are minor problems in spelling, grammar, usage, and/or punctuation.			▪ There are persistent errors in spelling, grammar, usage, and/or punctuation. ▪ Less or not fluent and effective.			
Delivery	▪ Ideas were communicated with enthusiasm, proper voice projection and clear delivery. ▪ There was sufficient eye contact with audience. ▪ There were sufficient use of other non-verbal communication skills. ▪ Appropriate delivery pace was used.			▪ There was some difficulty communicating ideas due to voice projection, lack of preparation, incomplete work, and/or insufficient eye contact. ▪ Insufficient use of non-verbal communication skills. ▪ Delivery pace is somewhat appropriate.			▪ There was great difficulty communicating ideas due to poor voice projection, lack of preparation, incomplete work, and/or little or no eye contact. ▪ No use of non verbal communication skills. ▪ Inappropriate delivery pace was used.			
Interaction with Audience	▪ Answers to questions are coherent and complete.			▪ Most answers to questions are coherent and complete.			▪ Answers to questions are neither coherent nor complete.			

	▪ Answers demonstrate confidence and extensive knowledge.	▪ Answers somehow demonstrate confidence and extensive knowledge.	▪ Is tentative or unclear in responses.	