



ATTACHMENT 6.

T5. COURSE REPORT (CR)

Course title: Physics of Medical Ultrasound
Course code: (4033290-2)
Second Semester
Academic Year 1439-1440 H & 2018-2019

Associate Prof. Dr. Hosam Salaheldin Ibrahim
Associate Professor of Bio-medical biophysics
College of Applied Sciences
<http://uqu.edu.sa/staff/ar/4320091>
hsibrahim@uqu.edu.sa
PO Box 715
Makkah 21955
Kingdom of Saudi Arabia

A separate Course Report (CR) should be submitted for every course and for each section or campus location where the course is taught, even if the course is taught by the same person. Each CR is to be completed by the course instructor at the end of each course and given to the program coordinator

A combined, comprehensive CR should be prepared by the course coordinator and the separate location reports are to be attached.

Course Report

For guidance on the completion of this template refer to the EEC-HES handbooks.

Institution	Umm Al-Qura University	Date of CR	5-9-1439
College/ Department	College of Applied Sciences/Physics		

A Course Identification and General Information

1. Course title: Physics of Medical Ultrasound		Code # 4033290-2		Section # 2			
2. Name of course instructor : Dr. Hosam Salaheldin Ibrahim		Location Abdeia/Mekka					
3. Year and semester to which this report applies: 3rd year/ 1st semester							
4. Number of students starting the course? 10		Students completing the course? 10					
5. Course components (actual total contact hours and credits per semester):							
		Lecture	Tutorial	Laboratory/ Studio	Practical	Other:	Total
Contact Hours	Planned	2	0	0	0	0	30
	Actual	2	0	0	0	0	30
Credit	Planned	2	0	0	0	0	30
	Actual	2	0	0	0	0	30

B- Course Delivery

1. Coverage of Planned Program			
Topics Covered	Planned Contact Hours	Actual Contact Hours	Reason for Variations if there is a difference of more than 25% of the hours planned



<p>Ultrasound Waves:</p> <ul style="list-style-type: none">• Wave Motion• Wave Characteristics• Velocity of Ultrasound• Ultrasound Intensity• Acoustic Impedance• Ultrasound Wavefront• Attenuation of Ultrasound <p>SOLVED PROBLEMS & EXERCISES</p>	6 hrs	6 hrs	
<p>Ultrasound Transducers:</p> <ul style="list-style-type: none">• Piezoelectric Effect.• Transducer Design.• Frequency response of a transducer.• Focused Transducer.• Ophthalmic and Doppler Probes. <p>SOLVED PROBLEMS & EXERCISES</p> <p>1st Class Test</p>	8 hrs	8 hrs	
<p>Ultrasound Display System:</p> <ul style="list-style-type: none">• A-Mode Presentation.• Echoencephalography.• B-Mode Presentation.• Two-dimensional Display of Internal Organs.• M-Mode Presentation.• Detection of Heart Movement and Fetus Health State.	10 hrs	10 hrs	
<p>The Doppler Effect:</p> <ul style="list-style-type: none">• Measurement of the frequency shift.• Measurement of Reflection from Media of Different Acoustic Impedances. <p>SOLVED PROBLEMS & EXERCISES</p> <p>2nd Class Test</p>	6 hrs	6 hrs	
<p>Total</p>	30 hr	30 hr	

2. Consequences of Non Coverage of Topics

For any topics where the topic was not taught or practically delivered, comment on how significant you believe the lack of coverage is for the course learning outcomes or for later courses in the program. Suggest possible compensating action.

Topics (if any) not Fully Covered	Effectuated Learning Outcomes	Possible Compensating Action
Non	Non	Non

3. Course learning outcome assessment.

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge <i>At the end of this course the student should be able to:</i>		
1.1	Learn fundamentals of ultrasound and wave physics.	- Classroom lectures - Tutorials and independent study assignments	- Graded homework. - Assignments. - Quizzes.
1.2	Understand the design of ultrasonic transducer and their applications mentioned in the text.	- Individually hand written assignments required use of library reference material and web sites to identify the information required to complete tasks.	- Oral Group Discussion. - Class tests (e.g. 15 minute multiple choice test on content on completion of each topic) with a defined ratio of the final assessment of the course.
1.3	Improve logical thinking.		Multiple choice knowledge item on final exam.
1.4	To use mathematical formulation to describe the physical principle of different imaging modes	- E-learning through the university website.	
2.0	Cognitive Skills <i>At the end of this course the student should be able to:</i>		
2.1	- Summarize the different types of ultrasound imaging transducer and modes.	- Preparing main outlines for teaching - Following some proofs - Define duties for each chapter - Home work assignments	- Graded homework. - Class exams. - Final Exam.
2.2	- Analyze the physical meaning of the obtained ultrasonic images.	- Encourage the student to look for the information in different references - Ask the student to attend lectures for practice solving problem.	- Group and individual assignments require application of analytical tools in problem solving tasks.

			- Class participation.
3.0	Interpersonal Skills & Responsibility <i>At the end of this course the student should be able to:</i>		
3.1	- Work effectively in groups as well as individuals.	- Discuss with students. - Group presentation. - Group assignment (the instructor should meet with each group part way through project to discuss and advise on approach to the tasks).	- Evaluation of group reports and individual contribution within the group.
3.2	- Justify a short report in a written form and/or orally using appropriate scientific language.	- Individual student assignment or report carries out using the internet and/or library as a source of search.	- Peer or self assessment. - Evaluation of the capacity for independent study which could be assessed in individual assignments.
4.0	Communication, Information Technology, Numerical <i>At the end of this course the student should be able to:</i>		
- 4.1	- Illustrate information technology and modern computer tools to locate and retrieve scientific information.	- Essay questions - Group presentation - Encouraging essays, reports and presentations. - Encourage the student to use the modern Information and Communication Technology (ICT) tools to prepare the required essays, reports, and/or projects.	- Assessments of student's assignments. - Evaluation of group reports and individual contribution within the group.
- 4.2	- Appraise the cooperation through teamwork to assess and criticize various emergent problems.	- Also, the students should conduct the ideal proper style and referencing format as specified in college style manual.	- Reports and presentations. - Instructor's feedback
- 4.3			- Final and class test exams include different problems which need numerical and technical skills.
- 5.0	- Psychomotor		
- 5.1	- Not applicable (N/A)	- N/A	- N/A



Note: In order to analyze the assessment of student achievement for each course learning outcome, student performance results can be measured and assessed using a KPI, a rubric, or some grading system that aligns student work, exam scores, or other demonstration of successful learning.

Summarize any actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

4. Effectiveness of used Teaching Strategies for Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)			
List Teaching Strategies set out in Course Specification	Were They Effective?		Difficulties Experienced (if any) in Using the Strategy and Suggested Action to Deal with Those Difficulties.
	No	Yes	
Seminar presentation by the students and web-interactions. Then, students will be divided into groups for seminar presentation on important areas of the course to assess their understanding and comprehension of the course.		Yes	
Encouraging students to collect the new information about what the new in the physics radiation effects course to make a poster.		Yes	

C. Results

1. Distribution of Grades

Letter Grade	Number of Students	Student Percentage	Analysis of Distribution of Grades
A ⁺	-		Success percentage for Group1 = 100 %
A	-		
B ⁺	2	20%	
B	-		
C ⁺	2	20%	
C	3	30%	
D ⁺	-		
D	2	20%	
F	1	10%	
Denied Entry	0		
In Progress	0		
Incomplete	0		
Pass	9		
Fail	1		
Withdrawn	0		

2. Analyze special factors (if any) affecting the results

3. Variations from planned student assessment processes (if any) (see Course Specifications).	
Variations (if any) from planned assessment schedule (see Course Specifications)	
Variation	Reason
Non	Non

4. Student Grade Achievement Verification (eg. cross-check of grade validity by independent evaluator).	
Method(s) of Verification	Conclusion
The exam is evaluated by independent staff member	The exam evaluation is attached within the accreditation room within the appropriate file.

D Resources and Facilities

1. Difficulties in access to resources or facilities (if any) The number of textbooks is required to increase.	2. Consequences of any difficulties experienced for student learning in the course, and proposed action to overcome it. The textbooks are required from the deanship of the library affairs.
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E. Administrative Issues

1. Organizational or administrative difficulties encountered (if any) Non	2. Consequences of any difficulties experienced for student learning in the course, and proposed action to overcome it. Non
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F Course Evaluation

1. Student evaluation of the course (Attach summary of survey results)

ملخص لتقرير المقرر

المتوسط	موافق بشدة (5)	موافق (4)	محايد (3)	غير موافق (2)	غير موافق بشدة (1)	اسئلة الاستبيان
3.4	3	3	0	1	2	الأهداف الأساسية للمقرر (بما في ذلك المعلومات والمهارات التي صمم المقرر لتنميتها) واضحة بالنسبة لي
3.4	3	3	0	1	2	متطلبات النجاح في المقرر (بما في ذلك الواجبات التي يتم التقييم بناء عليها ومحكات التقييم) واضحة بالنسبة لي
3.8	4	3	0	0	2	مصادر مساعدي في المقرر (بما في ذلك الساعات المكتبية لعضو هيئة التدريس والمراجع) واضحة بالنسبة لي
3.7	3	4	0	0	2	تنفيذ المقرر والأهداف التي طلب مني أدائها متسقة مع الأهداف الأساسية للمقرر
3.7	3	4	0	0	2	التزام عضو هيئة التدريس بأعطاء المقرر بشكل كامل (مثل : بدء المحاضرة , تواجده الأستاذ , التحضير ...)
3.7	3	4	0	0	2	لدى عضو هيئة التدريس إلمام كامل بمحتوى المقرر الذي يقدمه
3.7	3	4	0	0	2	عضو هيئة التدريس موجود للمساعدة خلال الساعات المكتبية
3.5	2	4	0	0	2	عضو هيئة التدريس متحمس لما يقوم بتدريسه
3.3	2	3	0	1	2	عضو هيئة التدريس مهتم بمدى تفهمي الدراسي وكان معينا لي
3.2	2	3	1	1	2	كل ما يقدم في المقرر حديث ومفيد (النصوص المقررة , التلخيصات , المراجع , وما شابهها)
3.3	2	3	0	1	2	مصادر التعلم التي احتجتها في هذا المقرر متوافرة كلما احتجت إليها
3.3	3	3	0	0	3	تم استخدام الفعال للتقنية لدعم تعليمي في هذا المقرر
3.3	3	2	0	0	3	وجدت تشجيعا لإلقاء الأسئلة وتطوير أفكارتي الخاصة في هذا المقرر
3.2	2	4	0	0	3	هجمعت في هذا المقرر على تقديم أفضل ما عندي
3.3	2	4	0	1	2	ساعات الأهمية التي طلبت مني في هذا المقرر في تطوير معرفتي ومهاراتي التي يهدف المقرر لتعليمها
3.7	3	4	0	0	2	كانت كمية العمل في هذا المقرر متناسبة مع عدد الساعات المخصصة للمقرر
3.3	2	4	0	1	2	قدمت لي درجات الواجبات والاختبارات في هذا المقرر خلال وقت معقول
3.6	3	3	1	0	2	كان تصحيح واجباتي واختباراتي عادلا ومناسبا
3.3	2	4	0	1	2	وضحت لي الصلة بين هذا المقرر والمقررات الأخرى بالبرنامج (القسم)
3.7	3	4	0	0	2	ما تعلمته في هذا المقرر مهم وسيفيدني مستقبلا
3.3	2	3	2	0	2	ساعدني هذا المقرر على تحسين قدرتي على التفكير وحل المشكلات بدلا من حفظ المعلومات فقط
3.2	2	4	0	0	3	ساعدني هذا المقرر على تحسين مهاراتي في العمل كفريق
3.2	2	4	0	0	3	ساعدني هذا المقرر على تحسين مهارات الاتصال بفاعلية
3.4	2	4	1	0	2	أشعر بالرضا بشكل عام عن مستوى جودة هذا المقرر
3.4						المتوسط العام للتقييم

Note:

The copy of the survey is attached at the end of the course report **Section #A**

a. List the most important recommendations for improvement and strengths

Non

b. Response of instructor or course team to this evaluation

The course instructor is satisfied with the survey evaluation results.

2. Other Evaluation (eg. by head of department, peer observations, accreditation review, other stakeholders)

It was evaluated by international accreditation foundation "ASIIN"

a. List the most important recommendations for improvement and strengths

Non

b. Response of instructor or course team to this evaluation

Non

G Planning for Improvement

1. Progress on actions proposed for improving the course in previous course reports (if any).

Actions recommended from the most recent course report(s)	Actions Taken	Action Results	Action Analysis
a. The number of textbooks is required to increase.	The textbooks are required from the deanship of the library affaires.	In progress	Will be followed
b.			
c.			
d.			

2. List what other actions have been taken to improve the course (based on previous CR, surveys, independent opinion, or course evaluation).

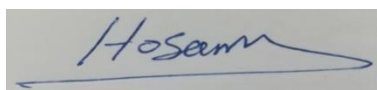
Non

3. Action Plan for Next Semester/Year

Actions Recommended for Further Improvement	Intended Action Points (should be measurable)	Person Responsible
a. The number of textbooks is required to increase.	The textbooks are required from the deanship of the library affaires.	Head of the physics department
b.		

Name of Course Instructor: **Physics of Medical Ultrasound**

Signature:



Date Report Completed: 5-5-1439

Program Coordinator: Dr. Fahad A. Alhashmi

Signature: *Fahad A. Alhashmi*

Date Received: _____