

## Kingdom of Saudi Arabia

### The National Commission for Academic Accreditation & Assessment

#### T5. Course Report (CR)

**Course title: Laser in Medicine**

**Course code: 4033281**

**Prof. Mohamed M.Sabry**  
**Department of Physics**  
**College of Applied Science**  
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## Course Report

For guidance on the completion of this template refer to the NCAAAA handbooks.

Institution: <b>Umm AL – Qura University</b>	Date :
College/Department : <b>College of Applied Science – Department of Physics</b>	

### A Course Identification and General Information

1. Course title <b>Laser in Medicine</b>	Code <b>4033281-2</b>	Sections <b>1</b>				
2. Name of course instructor <b>Prof. Mohamed Sabry</b>	Location <b>Main Campus</b>					
3. Year and semester to which this report applies. <b>3<sup>rd</sup> Year / Level 5</b>						
. Number of students starting the course?	6	Students completing the course? 6				
5. Course components (actual total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory/Studio	Practical	Other:	Total
Contact Hours	<b>30</b>	0	<b>0</b>			<b>30</b>
Credit	<b>2</b>		0			

### B- Course Delivery

1 Topics to be Covered		
Topics	No of Weeks	Contact hours
<b>Laser Principles</b> <ol style="list-style-type: none"> <li>Theory of temporal and spatial coherence</li> <li>Coherence Length and Spectral Line Width</li> <li>The optical properties of Laser beam</li> <li>Electromagnetic Modes in a Cavity</li> <li>Theory of Laser Emission</li> <li>Major Types of Lasers</li> <li>Measuring Laser Power and Focusing Laser Energy</li> </ol>	<b>5</b>	<b>10</b>
<b>Optical and Thermal Response of Tissue to Laser Radiation</b> <ol style="list-style-type: none"> <li>The Optical Response Of Tissue</li> <li>Thermal Response Of Tissue</li> <li>Interaction of Laser Light With Living Systems</li> </ol>	<b>4</b>	<b>8</b>

<b>Therapeutic and Diagnostic Application of Lasers in Ophthalmology</b> 1. Basic Ocular Anatomy and Physiology and Transmission and Absorptive Properties of Ocular Tissues 2. Photothermal Laser Applications 3. Photodisruptive Laser Applications Photochemical Laser Applications: Photoablation and Photodynamic Therapy	<b>4</b>	<b>8</b>
<b>Laser Safety and classification</b>	<b>2</b>	<b>4</b>
	<b>15 weeks</b>	<b>30 hrs</b>

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.		

3. Course learning outcome assessment.

	<b>List course learning outcomes</b>	<b>List methods of assessment for each LO</b>	<b>Summary analysis of assessment results for each LO</b>
1	Recognize facts, principle and concepts of elementary Physics	a) Quizzes b) Short exams (mid- term exams) c) Long exams (final) d) Homework f) solving problems in class	Passed
2	Describe concepts,		
3	Apply the laws of physics.		
4	Solve problems in Physics by using suitable mathematical principles		
5	Express the physical phenomena mathematically.		
6	Show responsibility for self-learning to be aware with recent developments in physics	a) lab reports b) lab exam c) small group discussion d) problems with open ended answers	Passed
7	Work effectively in groups and exercise leadership when appropriate.		

Summarize any actions you recommend for improving teaching strategies as a result of evaluations in table 3 above. Usage of flipped classroom and blended learning improve the students skills in addition to their academic progress.
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4. Effectiveness of Planned Teaching Strategies for Intended 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 Methods set out in Course Specification	Were They Effective?		Difficulties Experienced (if any) in Using the Strategy and Suggested Action to Deal with.
	No	Yes	
<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Homework</li> <li>• Short quizzes</li> <li>• Two periodic exams</li> <li>• Final exam</li> <li>• Presentation</li> <li>• Small group discussion</li> </ul>		✓ ✓ ✓ ✓ ✓ ✓ ✓	

### C. Results

#### 1. Distribution of Grades

Grade	Number of Students	Student Percentage	Analysis of Distribution of Grades
95-100	0		
90-94	0		
85-89	0		
80-84	0		
75-79	2	33%	
70-74	1	17%	
65-69	1	17%	
60-64	1	17%	
< 60	1	17%	
Denied Entry	0	0%	
In Progress			
Incomplete			
Pass	5		
Fail	1		
Withdrawn			

2. Analyze special factors (if any) affecting the results	
Students level of English language is very poor.	
3. Variations from planned student assessment processes (if any) (see Course Specifications).	
a. Variations (if any) from planned assessment schedule (see Course Specifications)	
b. Variations (if any) from planned assessment processes in Domains of Learning (see Course Specifications)	

4. Student Grade Achievement Verification (eg. cross-check of grade validity by independent evaluator).	
Method(s) of Verification	Conclusion

D Resources and Facilities

1. Difficulties in access to resources or facilities (if any)	2. Consequences of any difficulties experienced for student learning in the course.
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E. Administrative Issues

1 Organizational or administrative difficulties encountered (if any)	2. Consequences of any difficulties experienced for student learning in the course.
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F Course Evaluation

1 Student evaluation of the course (Attach summary of survey results)	
Survey Attached	
a. List the most important recommendations for improvement and strengths	
<ul style="list-style-type: none"> <li>• English as a studying language has to be improved</li> <li>• Labs should be introduced for this course</li> </ul>	
b. Response of instructor or course team to this evaluation	
2. Other Evaluation (eg. by head of department, peer observations, accreditation review, other stakeholders)	
a. List the most important recommendations for improvement and strengths	
b. Response of instructor or course team to this evaluation	

### 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.			
b.			

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

3. Action Plan for Next Semester/Year				
Actions Recommended for Further Improvement	Intended Action Points (should be measurable)	Start Date	Completion Date	Person Responsible

Name of Course Instructor: \_\_\_\_\_Mohamed Sabry\_\_\_\_\_

Signature: \_\_\_\_\_*Mohamed Sabry*\_\_\_\_\_ Date Report Completed: 20/4/1440 H\_

Program Coordinator: Dr. Fahad A. Alhashmi

Signature: *Fahad A. Alhashmi* Date Received: \_\_\_\_\_