Curriculum and Course Specifications
Master of Science (M.Sc.) in Laser Applications in Engineering
A. First Semester: Core Courses

Subject	Practical Hours	Theoretical Hours	Units Number
1. Laser Principles	-	3	3
2. Optics +Optics Lab	2	2	3
3. Spectroscopy	-	2	2
4. English Language	-	1	1
Total		9	

(2) (Elective)

Subject	Practical Hours	Theoretical Hours	Units Number
1. Advanced Digital Communications	-	2	2
2. Digital Signal Processing	-	2	2
3. Material Science	-	2	2
4. Heat Treatment	-	2	2
Total		4	

B. Second Semester: Core Courses

Subject	Practical Hours	Theoretical Hours	Units Number
1. Laser Applications +Laser Applications Lab.	2	2	3
2. Applied Optics	-	3	3
3. English Language	-	1	1
4. Scientific Research Methodology	-	2	2
Total		9	

5. Scientific Research Methodology	-	2	2
6. Seminars (Laser in Engineering and Industrial)	-	2	2
Total	10		

Total Credit Units for the Preparatory Year: 20
Thesis Credit Units: 6
Total Program Credit Units: 26

Curriculum and Course Specifications

Master of Science (M.Sc.) in Laser Applications in Science

A. First Semester: Core Courses

Subject	Practical Hours	Theoretical Hours	Units Number
1. Laser Principles	-	3	3
2. Optics + Optics Lab	2	2	3
3. Spectroscopy	-	2	2
4. English Language	-	1	1
Total	9		

Elective Courses

Students are required to select at least two (2) elective courses.

Subject	Practical Hours	Theoretical Hours	Units Number
1. Optical Materials	-	2	2
2. Material Science	-	2	2
3. Polymers	-	2	2
4. Physical Chemistry	-	2	2
Total	4		

B. Second Semester: Core Courses

Subject	Practical Hours	Theoretical Hours	Units Number	ت

Total Credit Units for the Preparatory Year: 20
Thesis Credit Units: 6
Total Program Credit Units: 26
Curriculum and Course Specifications
Master of Science (M.Sc.) in Biological and Medical Laser Applications

A. First Semester: Core Courses

Subject	Practical Hours	Theoretical Hours	Units Number
1. Laser Principles	-	3	3
2. Optics +Optics Lab	2	2	3
3. Spectroscopy	-	2	2
4. English Language	-	1	1
Total	9		

First Semester: Elective Courses

Students are required to select at least two (2) elective courses.

Subject	Practical Hours	Theoretical Hours	Units Number
1. Oral Medicine	-	2	2
2. Optical Properties of Tissue	-	2	2
3. Laser Tissue Interaction	-	2	2
4. Total	4		

B. Second Semester: Core Courses

Subject	Practical Hours	Theoretical Hours	Units Number
1. Laser Applications in Dentistry + Laser Applications Lab.	2	2	3

2. Applied Optics	-	3	3
3. English Language	-	1	1
4. Scientific Research Methodology	-	2	2
Total	9		

Second Semester: Elective Courses

Students are required to select at least two (2) elective courses.

Subject	Practical Hours	Theoretical Hours	Units Number
1. Oral Surgery	-	2	2
2. Biostatistics	-	2	2
3. Advanced Microbiology	-	2	2
Total	4		

Total Credit Units for the Preparatory Year: 26
Thesis Credit Units: 10
Total Program Credit Units: 36