



# Faculty of Dentistry

# Courses Description

Preclinical Stage; First Semester  
Course Outline

<b>Course Code:</b> SGS 111	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Inorganic Chemistry	
<b>Department:</b> Department of Chemistry, MSA	
<b>Course Coordinator:</b> Dr Ahmad Fahmy	
<b>Level:</b> 1	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> None	

### AIMS

The inorganic chemistry course provides an overview of the atomic structure, past and present views. The electron configurations of the elements and their position in the periodic table are elaborated. The course sets major concepts in chemical stoichiometry with a discussion of the theories and models related to chemical bonding.

### SYLLABUS

Topics
General Chemistry: Classical theory of structures; Bohr's model of the Hydrogen atom; Quantum theory basic concepts; Electronic configuration of elements; General trends in the periodic table; Chemical bonding and molecular structure; Chemistry of the atmosphere; Chemistry of water.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basics of general chemistry.
- Understand basic general chemistry in relation to dentistry.

#### Skills

- Ability to conduct simple chemical experiments.
- Ability to handle chemicals with care.

#### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Websites:** [www.wikipedia.com](http://www.wikipedia.com)

#### Reference Text

Author	Date	Title	Publisher
James E. Huheey, Ellen A. Keiter, Richard L. Keiter	1997	Inorganic Chemistry: Principles of Structure and Reactivity, 4 <sup>th</sup> ed	Benjamin Cummings

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous assessment.

Lab exam to test their ability to perform chemical experiments.

Three hours final exam to test their grasp of theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes:	10%
Midterm Exam	10%
Practical Exam	30%
End of Semester Written Exam	50%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures: 2 hrs

Lab: 2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

## Preclinical Stage; First Semester Course Outline

<b>Course Code:</b> SGS 112	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Physical Chemistry	
<b>Department:</b> Department of Chemistry, MSA	
<b>Course Coordinator:</b> Dr Khaled Awwad	
<b>Level:</b> 1	<b>Credit Hours:</b> 2
<b>Prerequisites:</b> None	

### AIMS

The physical chemistry course introduces the dental student to the units of measurement, structure of matter, atomic bonding and basic chemical principles. It also includes subjects such as gases, liquids and solids and change of state, thermochemistry and chemical equilibrium.

### SYLLABUS

Topics
The gaseous state, the liquid state, the solid state; Changes of state; Solution; Thermodynamics and electrochemistry; Nuclear Chemistry.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basics of physical chemistry.
- Understand basic physical chemistry in relation to dentistry.

#### Skills

- Ability to differentiate between the states of matter and understand their basic properties..

### Teaching / Learning strategies

- Lectures to explain underlying principles.

**Websites:** [www.wikipedio.com](http://www.wikipedio.com)

### Reference Text

Author	Date	Title	Publisher
Ignacio Tinoco, Kenneth Sauer, James C. Wang, Joseph D. Puglisi	2001	Physical Chemistry: Principles and Applications in Biological Sciences, 4 <sup>th</sup> ed	Prentice Hall

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

### Assessment Scheme:

Written quizzes/tests, multiple choice exams for continuous assessment.

Three hours final exam to test their grasp of theoretical knowledge.

### Assessment Pattern:

In Course Tests and Quizzes:	20%
Midterm Exam	10%
End of Semester Written Exam	70%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures: 2 hrs

Lab: - hrs

Total class contact hours per semester: 30

Total other study hours per semester: -

Total study hours per semester: 30

Preclinical Stage; First Semester  
Course Outline

<b>Course Code:</b> SGS 113	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Physics	
<b>Department:</b> Department of Physics, Faculty of Engineering, MSA	
<b>Course Coordinator:</b> Professor Abdel Nasser Abul Fotouh	
<b>Level:</b> 1	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> None	

### AIMS

This course is designed to give first semester students the basics of electricity, fluid mechanics, magnetism, waves, sound and light, and physics of radiation. Special emphasis will be placed on physics in relation to dentistry. A course of biophysics comprising effects of ionizing radiation on living cells and tissues as well as types of lasers and their effects and applications is also included.

### SYLLABUS

Topics
Basic principles of Physics
Electricity
Fluid mechanics
Magnetism
Waves
Sound and light
Physics of Radiation
Light curing
Laser

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basics of physics.
- Understand the basics of physics in relation to dentistry.

#### Skills

- Ability to use the physics lab.
- Ability to conduct simple physics experiments.

### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Desmond M Burns	1975	Physics for Biology and Pre-Medical Students	Addison-Wesley Publishers
Rodney M. J. Cotterill	2002	Biophysics : An Introduction	John Wiley & Sons

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

- Written quizzes/tests, multiple choice exams for continuous in-course assessment.
- Lab exam to test their ability to perform physics experiments.
- Three hours final unseen written exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes:	10%
Midterm Exam	10%
Practical Exam	30%
End of Semester Written Exam	50%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures: 2 hrs

Lab: 2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

## Preclinical Stage; First Semester Course Outline

<b>Course Code:</b> SGS 114	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Zoology	
<b>Department:</b> Department of Zoology, Faculty of Science, Cairo University	
<b>Course Coordinator:</b> Professor Ragia Ali Sharmy	
<b>Level:</b> 1	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> None	

### AIMS

This course provides a review of the animal cell biology and histology, particularly those subjects relevant to the practice of dentistry. The course includes microscopic structure of animal cell and functions of its various integral parts. The practical course includes microscopic slides to help the student to appreciate the structure of animal tissues, as well as the anatomy of a laboratory animal as an example.

### SYLLABUS

Topics
Types and functions of tissues.
Embryologic development.
Taxonomy (basics and examples).
Phylogeny of the human body.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basics of human biology.
- Understand basic cell contents and functions in relation to dentistry.

#### Skills

- Ability to conduct simple biological experiments, e.g. dissection.
- Ability to use the biology lab.

### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

### Reference Text

Author	Date	Title	Publisher
Gartner, L. P.; Hiatt, J. L.	2001	Color Textbook of Histology	W.B. Saunders Co.
Kierszenbaum, A.L.	2002	Histology and Cell Biology	C.V. Mosby
Wolpert, L.; Beddington, R.; Brockes, J.; Jessel, T.; Lawrence, P.; Meyerowitz, E.	1998	Principles of Development	Oxford University Press

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous assessment.

Lab exam to test their ability to perform simple experiments and to identify certain animal structures morphologically and histologically.

Three hours final exam to test their grasp of theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes:	10%
Midterm Exam	10%
Practical Exam	30%
End of Semester Written Exam	50%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Lab:	2 hrs

Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

Preclinical Stage; First Semester  
Course Outline

<b>Course Code:</b> SGS 115	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Botany	
<b>Department:</b> Department of Botany, Faculty of Science, Cairo University	
<b>Course Coordinator:</b> Professor El-Sayed Tarek Abdel-Salam Sayed	
<b>Level:</b> 1	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> None	

### AIMS

This course provides a review of the plant structure, function, classification and physiology. The course includes morphology, anatomy, physiology and microscopic structure of plant cell and functions of its various integral parts. The practical course includes studies regarding external features and internal structure of plants, as well as microscopic slides to help the student appreciate the structure of plant tissues. Some physiological experiments will be performed to elucidate some phenomena found in plants.

### SYLLABUS

Topics
<p><b>Morphology:</b> Seeds and Germination. Dicot Seeds. Monocot Seeds.</p> <p><b>Anatomy:</b> Plant Cell vs Animal Cell. Living Components. Non-Living Components. Cell Wall.</p> <p><b>Systematic:</b> Procaryotes, Eucaryotes. Viruses. Bacteria. Yeasts and Fungi.</p> <p><b>Physiology:</b> Colloids. Osmosis. Enzymes. Respiration.</p>

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basics of plant biology.
- Understand the basics of plant cell contents and plant tissues and their functions.
- Have a basic knowledge of some viral, bacterial and fungal diseases.
- Have a basic understanding of many physiological processes.

**Skills**

- Ability to use the microscope and examine microscopic specimens.
- Ability to conduct simple biological experiments.
- Ability to use the biology lab.

**Teaching / Learning strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Websites:** <http://www.prenhall.com/plantbio>  
<http://www.mhhe.com>

**Reference Text**

Author	Date	Title	Publisher
Graham, L.E.; Graham, J.E.; Wilcox, L.W.	2003	Plant Biology	Pearson Education Inc.

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Recommended Reading**

Author	Date	Title	Publisher
Marder, S. S.	1998	Biology	Michael D. Lange
Martha R. Taylor	1999	Student Study Guide for Biology	Benjamin-Cummings

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous assessment.

Lab exam to test their ability to identify certain plant structures morphologically and histologically.

Three hours final exam to test their grasp of theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes:	10%
Midterm Exam	10%
Practical Exam	30%
End of Semester Written Exam	50%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures: 2 hrs

Lab: 2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

## Preclinical Stage; First Semester Course Outline

**Course Code:** HPT 111

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Descriptive Dental Anatomy and Physiology

**Department:** Histopathology Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Hala S. Zaatar

**Level:** 1

**Credit Hours:** 3

**Prerequisites:** None

### AIMS

This course is designed to provide the dental student with the necessary knowledge to identify the definitions of introductory dental terminology. The course also allows the student to recognize the functions of the human teeth. The student will be able to utilize the correct names and universal code numbers of each permanent and deciduous tooth. The course also provides the student with the general and specific features of permanent teeth.

### SYLLABUS

Topics
Introduction, numbering system of teeth.
Macro and microanatomy of teeth.
Functions of teeth, surface anatomy of teeth and nomenclature
Anatomical features of the crown (Elevations and depressions).
Surface anatomy of permanent teeth, (Anterior teeth, Premolars and Molars).
The pulp cavity of permanent teeth.
Physiologic significance of the geometric crown outline.
Mandible at different ages.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Have a thorough understanding of the basic dental terminology and anatomic features of the human permanent teeth.
- Can detect the different types of tooth numbering systems and the different dentition periods.
- Can differentiate between the permanent teeth and the mandible at different ages.

#### Skills

- Ability to identify different human teeth.
- Enhance the manual dexterity and carving skills of the student enabling him to perform most of waxing up tasks in succeeding years.

### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Major M. Ash; Stanley J. Nelson	2002	Wheeler's Dental Anatomy, Physiology and Occlusion	W.B. Saunders Co.
Rickne C. Scheid, Julian B. Woelfel	2002	Dental Anatomy: Its Relevance to Dentistry, 6th ed.	Lippincott Williams & Wilkins

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical Lab exam to test their manual dexterity and carving abilities.

Oral exam to assess their communication skills and understanding of relation of form to function of the human dentition and of the principles of occlusion.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes:	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Lab:	4 hrs

Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75

Preclinical Stage; First Semester  
Course Outline

<b>Course Code:</b> ENG 101	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> English Language	
<b>Department:</b> Faculty of Languages, MSA	
<b>Course Coordinator:</b> Professor Aziza Hafez	
<b>Level:</b> 1	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> None	

### AIMS

The aims of the course are:

- To help students in effectively writing academic essays and avoiding common errors.
- To teach students how to read comprehension passages, to learn style and organization patterns, to do summary writing and understand vocabulary in context.
- To introduce specialized vocabulary items pertaining to Medical and Dental Sciences.

### SYLLABUS

Topics	
<ul style="list-style-type: none"> <li>• <b>Writing: the Essay</b> <ul style="list-style-type: none"> <li>– Introduction of writing correction code</li> <li>– From Grammar to Writing: The Sentence</li> <li>– Stems and Affixes (Medical Terminology)</li> </ul> </li> <li>• <b>Reading: “Unit I”</b> <ul style="list-style-type: none"> <li>– Writing: Describing a Person</li> <li>– From Grammar to Writing: Subject/Verb agreement</li> <li>– Stems and Affixes (Medical Terminology)</li> </ul> </li> <li>• <b>Reading: “Unit II”</b> <ul style="list-style-type: none"> <li>– Writing: Describing a Place</li> <li>– From Grammar to Writing: Editing exercises</li> <li>– Specialized Vocabulary (Medical Terminology)</li> </ul> </li> <li>• <b>Reading: “Unit III”</b> <ul style="list-style-type: none"> <li>– Writing: Describing an Event</li> <li>– From Grammar to Writing: Parallelism</li> <li>– Specialized Vocabulary (Medical Terminology)</li> </ul> </li> <li>• <b>Reading: “Unit IV”</b> <ul style="list-style-type: none"> <li>– Writing: Describing a Process</li> <li>– From Grammar to Writing: Editing exercises</li> <li>– Specialized Vocabulary (Medical Terminology)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Reading “Unit VI”</b> <ul style="list-style-type: none"> <li>– Writing: Narrative Writing</li> <li>– From Grammar to Writing: Sentences and Fragments</li> <li>– Specialized Vocabulary (Medical Terminology)</li> </ul> </li> <li>• <b>Reading: “Unit VII”</b> <ul style="list-style-type: none"> <li>– Writing: Narrative Writing</li> <li>– From Grammar to Writing: Editing exercises</li> <li>– Specialized Vocabulary (Medical Terminology)</li> </ul> </li> <li>• <b>Reading: “Unit VIII”</b> <ul style="list-style-type: none"> <li>– Writing: Expository Writing (Comparison and Contrast)</li> <li>– From Grammar to Writing: Punctuation of Adjective Clauses</li> <li>– Specialized Vocabulary (Medical Terminology)</li> </ul> </li> <li>• <b>Reading: “Unit VIX”</b> <ul style="list-style-type: none"> <li>– Writing: Expository Writing (Definition and Partition)</li> <li>– From Grammar to Writing: Editing exercises</li> <li>– Specialized Vocabulary (Medical Terminology)</li> </ul> </li> <li>• <b>Reading: “Unit X”</b> <ul style="list-style-type: none"> <li>– Writing: Expository Writing (Classification)</li> <li>– From Grammar to Writing: Avoiding run-on sentences and comma splices</li> <li>– Specialized Vocabulary (Medical Terminology)</li> </ul> </li> </ul>

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• <b>Reading: “Unit V”</b> <ul style="list-style-type: none"> <li>– Writing: Distinguishing facts from opinions</li> <li>– Specialized Vocabulary (Medical Terminology)</li> </ul> </li> <li>• <b>Wring: Directed Free Writing/Editing</b> <ul style="list-style-type: none"> <li>– From: Grammar to Writing: Parallelism of Gerunds and Infinitives</li> <li>– Specialized Vocabulary (Medical Terminology)</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• <b>Reading: “Unit XI”</b> <ul style="list-style-type: none"> <li>– Writing: Practice – Summary Writing</li> <li>– From Grammar to Writing: Editing exercises</li> </ul> </li> </ul> |
|--|--|

## Learning Outcomes

### Knowledge

Upon completing this course, students will be able to:

- Demonstrate in their writing, a clear knowledge of the subject, awareness of the reader, appropriate organization, and correct use of punctuation, style and coherence.
- Analyze and criticize the style and organization of different texts.
- Show an understanding of specialized vocabulary in context.

### Skills

- Write effective five-paragraph essays.
- Apply multi-draft writing which involves revision and editing of their essays.
- Correct their earlier drafts using the feedback and the correction codes provided by the instructor.
- Master writing effective summaries focusing on main ideas.
- Master specialized vocabulary pertaining to pharmaceutical sciences.

### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Language lab to practice what has been taught in lectures.

### Reference Text

Author	Date	Title	Publisher
Anderson, J.; Poole, M	2002	Assignment and Thesis Writing, 4 <sup>th</sup> ed	John Wiley and Sons
Silyn-Roberts, H	1996	Writing for Science	Longman
Alice Oshima; Ann Hogue	1998	Writing Academic English	Addison Wesley

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

### Assessment Scheme:

Assessment of the students' knowledge about:

- Grammatical strategies and editing.
- Expository and narrative discourse.
- Standards of scientific literature analysis and evaluation.
- Specialized Pharmaceutical vocabulary items.

Assessment of the students' ability to:

- Use description, narration and exposition for expressive, referential or persuasive ends.
- Pair editing and grammatical strategies.
- Evaluate different kinds of writing.

**Assessment Pattern:**

In Course Tests and Quizzes	40%
Mid-Semester Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures and Language lab: 3 hrs

Total class contact hours per semester: 45

Total other study hours per semester: -

Total study hours per semester: 45



**Teaching / Learning strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Computer lab sessions.

**Useful Websites:** [http\www. Prenhall.com/~longlong](http://www.Prenhall.com/~longlong)

**Reference Text**

Author	Date	Title	Publisher
J. Glenn Brookshear	2004	Computer Science: An Overview, 8 <sup>th</sup> ed.	Addison Wesley
Ruth Maran	2000	Computers Simplified, 5 <sup>th</sup> ed.	Wiley
Larry Long; Nancy Long.	1997	Computers, 5 <sup>th</sup> ed	Prentice Hall

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams.

Lab test to assess their skills in different computer applications.

Project to test their abilities in producing an integrated computer programme.

Three hours final exam to test their core knowledge about computers and their uses.

**Assessment Pattern:**

In Course Tests and Quizzes	40%
Mid-Semester Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures: 2 hrs

Lab: 2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

Preclinical Stage; Second Semester  
Course Outline

<b>Course Code:</b> SGS 121	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Organic Chemistry	
<b>Department:</b> Department of Chemistry, MSA	
<b>Course Coordinator:</b> Professor Hanaa Mostafa Rihan	
<b>Level:</b> 1	<b>Credit Hours:</b> 4
<b>Prerequisites:</b> None	

**AIMS**

The course focuses on organic chemistry subjects that are related to dentistry such as the structure of organic compounds, carbohydrates, sugars, proteins, lipids, alcohols, phenols, etc. It also provides the student with an understanding of the applications and organic principles and reactions in different biological systems.

**SYLLABUS**

Topics
Chemistry of simple aliphatic organic compounds: Hydrocarbons; Alkyl halides; Alcohols; Ethers; Aldehydes and Ketones; Carboxylic acids and their derivatives; Amines; Amino acids; Hydroxy acids; Optical and geometrical isomerism; Simple aromatic compounds; Introduction to carbohydrates, lipids and proteins.

**Learning Outcomes****Knowledge**

Upon completing this course, students will be able to:

- Understand the basics of organic chemistry.
- Understand basic organic chemistry in relation to dentistry.
- Understand the structure of organic compounds in relation to the human body.

**Skills**

- Ability to conduct simple chemical experiments.
- Ability to handle chemicals with care.
- Ability to identify organic unknown compounds from their physical and chemical properties.

**Teaching / Learning strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Websites:** [www.organicchemistry.com](http://www.organicchemistry.com)

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
T. W. Graham Solomons, Craig B. Fryhle	2003	Organic Chemistry	John Wiley & Sons

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous assessment.

Lab exam to test their ability to perform chemical experiments.

Three hours final exam to test their grasp of theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes:	10%
Midterm Exam	10%
Practical Exam	30%
End of Semester Written Exam	50%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures: 3 hrs

Lab: 2 hrs

Total class contact hours per semester: 45

Total other study hours per semester: 30

Total study hours per semester: 75

Preclinical Stage; Second Semester  
Course Outline

<b>Course Code:</b> PRS 121	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Properties of Dental Materials	
<b>Department:</b> Department of Dental Materials, MSA	
<b>Course Coordinator:</b> Professor Dina Mostafa	
<b>Level:</b> 1	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> SGS 111, SGS 112, SGS 113	

### AIMS

This course covers the chemical, physical and biological properties of dental materials as related to their applications in different branches of dentistry. Emphasis will be placed upon the types of materials available, their selection and manipulation, and the recognition of the effects of proper and improper manipulation on both the intermediate and the final products. The course also covers the properties of dental materials relative to clinical restorative and prosthetic dentistry. Emphasis is placed upon proper selection and manipulation of dental materials based on their properties and clinical performance.

### SYLLABUS

Topics
Structure of matter
Physical properties related to dental materials.
Mechanical properties related to dental materials
Biological properties related to dental materials
Principles of adhesion
Concepts of polymers
Metallurgy
Ceramics
Tarnish and Corrosion

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the physical, mechanical and biological properties of dental materials.
- Have an understanding of the basic properties of metals, alloys, polymers and ceramics.
- Describe and explore the principles of proper selection of dental materials.
- Understand the proper manipulation of different dental materials.
- Explore the basis of laboratory materials and procedures.
- Use their knowledge of the properties of modern dental materials to select and use the appropriate materials for the treatment of different cases.

#### Skills

- Ability to select the appropriate dental material for a specific task.
- Enhance the manual dexterity in mixing and manipulating dental materials.
- Ability to communicate and problem solving in the field of dental materials.

**Teaching / Learning strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Marcia Gladwin, Michael D. Bagby	2004	Clinical Aspects of Dental Materials, 2 <sup>nd</sup> ed.	Lippincott Williams & Wilkins
William J. Jobrien	2002	Dental Materials and their Selection	Quintessence Publishing
Robert G., Craig, John M. Powers, John C. Wataha	2003	Dental Materials, Properties and Manipulation, 8 <sup>th</sup> ed.	C.V. Mosby

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their practical skills and manual dexterity.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes:	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Lab:	2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

## Preclinical Stage; Second Semester Course Outline

<b>Course Code:</b> SGS 122	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> General Histology	
<b>Department:</b> General Histology Department	
<b>Course Coordinator:</b> Professor Ayman M. Ghallab	
<b>Level:</b> 1	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> SGS 114	

### AIMS

This course introduces the dental student to normal human cell and tissue structures. Lectures on general histology include the basic tissues of the body and special systemic tissues in preparation for studying organs and systems in the second term. The course also correlates the structure and function of various tissues and their clinical significance. Thus, histology constitutes a useful middle ground from which an integrated understanding of tissue structure and function will emerge. Histology is basic to the understanding of cell and tissue diseases. It is impossible to study the abnormal before the normal is well understood. So, the main objective of this course is to define and understand the functional structure of cells and the basic tissues of the human body and its clinical significance and application, and to inform the students about the different histological tools and techniques

### SYLLABUS

Topics
Introduction and basics of Micro techniques
The human Cell.
Epithelial Tissue.
Connective tissue (including, Connective tissue proper, Cartilage, Bone and the Blood.
Muscular Tissue.
Nervous Tissue.

### Learning Outcomes

#### Understanding

Upon completing this course, students will be able to understand:

- How the body is organized.
- The ultrastructure of the cell
- The general characters and classifications of epithelial tissue.
- The general characters and classifications of connective tissue.
- That cartilage, bone, and blood are special types of connective tissue.
- The clinical significance of each element of the blood
- The main difference between different types of muscle
- The concept of the neuron as the structural and functional unit of nervous tissue

#### Knowledge

Upon completing this course, students will be able to

- Know the major types of microscopes and stains
- Know the main functional structure of the different components of the cell

- Know the main functions and sites for each type of epithelium.
- Know the main functional structure and sites for each type of connective tissue 5. Know the main functional structure and sites for each type of cartilage and bones
- Know the different counts of blood elements'
- Know the functional structure of skeletal muscles
- Know the histological structure and types of neurons

### Skills

- Learn skills of using light microscope
- Learn skills of identifying and drawing the cell components at LM & EM levels
- Learn skills of identifying each type of epithelium at LM levels, and Learn skills of drawing colored diagrams of each type of epithelium at LM level
- learn skills of identifying section in umbilical cord (mucous C.T.) and adipose connective tissue, and Learn skills of drawing colored diagram of adipose connective tissues
- learn skills of identifying sections in hyaline and elastic cartilage at LM level and learn skills of drawing colored diagram of hyaline cartilage at LM
- Learn skills of identifying sections in compact bone and spongy at LM level and Learn skills Of drawing colored diagrams in sections of compact bone at LM level
- Learn skills of identifying leucocytes in blood film.
- Learn skills of identifying sections in skeletal muscles, Learn skills of drawing colour diagrams in sections of skeletal muscles
- Learn skills of identifying sections in nerve trunk, and Learn skills of drawing colored diagrams of sections in nerve trunk.

### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to examine and visualize those principles.

### Reference Text

Author	Date	Title	Publisher
Ghallab, A.M.	2004	Introduction to Functional and Clinical Histology. Text and Atlas. Part I	EI.,Meleagy Press
Young, B. and Heath, IW.	2000	Wheater's Functional Histology. A Text and Colour Atlas. Fourth edition.	Churchill Livingstone

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum.

### Assessment Scheme:

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to identify different human tissues and cell types.

Oral exam to assess their communication skills and analytical abilities.

Three hours final exam to assess their core theoretical knowledge.

### Assessment Pattern:

In Course Tests and Quizzes:	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures: 2 hr  
Lab: 2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

Preclinical Stage; Second Semester  
Course Outline

**Course Code:** SGS 123

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Medical Microbiology

**Department:** Microbiology Department, Faculty of Pharmacy, MSA

**Course Coordinator:** Dr Zeinab Abdel Khalek

**Level:** 1

**Credit Hours:** 2

**Prerequisites:** SGS 115

### AIMS

The course enables the student to understand how micro-organisms live and infect humans, and how humans respond to these infections in order to preserve health. The first part of the course presents basic microbial structure, function and genetics and principles of chemotherapy and drug resistance. The second part presents mammalian host defences and the molecular basis of immunity.

### SYLLABUS

Topics
Basic microbial structure. Microbial genetics. Drug resistance. Human defence mechanisms.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Describe and name micro-organisms, especially those of the oral cavity.
- Understand the mechanism of infectious disease transmission.
- Understand the defence mechanism against infectious micro-organisms.

#### Skills

- Ability to identify microbes of the oral cavity.
- Ability to practice sterilisation procedures.
- Choose the proper antimicrobial agents for infectious diseases.

### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Lab to apply those principles practically.

### Reference Text

Author	Date	Title	Publisher
Philip Marsh, Michael V Martin	1999	Oral Microbiology, 4 <sup>th</sup> ed	Butterworth-Heinemann
Lakshman P. Samaranayake	2002	Essential Microbiology for Dentistry	Churchill Livingstone

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to identify various micro-organisms.

Oral exam to assess their communication skills and understanding of the subject matter.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes:	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Lab:	2 hrs

Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

Preclinical Stage; Second Semester  
Course Outline

<b>Course Code:</b> SGS 126	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Mathematics and Statistics	
<b>Department:</b> Department of Physics, Faculty of Engineering, MSA	
<b>Course Coordinator:</b> Professor Adel Salah El Din Al Gohainy	
<b>Level:</b> 1	<b>Credit Hours:</b> 1
<b>Prerequisites:</b> None	

### AIMS

This course is designed to introduce students to some basic mathematical concepts such as differentiation and integration, and to enhance their ability to treat biological problems as well as their ability to present, analyze and interpret data using tables and graphs. Also, the objective of the course is to expose the students to elements of probability and probability distributions, linear regression and correlation, analysis of variance, design of statistical experiments, and statistical quality control.

### SYLLABUS

Topics
Review of basic essential concepts such as real numbers, Cartesian coordinates in a plane, circles, straight lines, parabolas, trigonometric functions, and exponential and logarithmic functions.
Differentiation, derivatives of functions, rules of differentiation, rates of change, analysis of functions (curve sketching), and derivatives of trigonometric and exponential functions. Integration, indefinite and definite integrals.
Introduction to statistics, probability, random variables and probability distributions.
Mathematical expectation, mean of a random variable, variance (standard deviation)
Discrete probability distribution, normal distribution.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand graphs and how to find their equations.
- Deal with integration in solving biological and dentistry problems.
- Apply statistical techniques in biological and dentistry situations.

#### Skills

- Ability to read scientific papers.
- Ability to comprehend epidemiological studies.
- Ability to apply mathematical and statistical expressions for application problems.

### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
George B. Thomas, Ross L. Finney	1998	Calculus and Analytical Geometry, 9 <sup>th</sup> ed.	Addison Wesley Longman
R. Walpole, R. Myers, and S. Myers	1998	Probability and Statistics, for Engineers and Scientists, 6th ed.	Prentice Hall
H. Anton, I. Bivens, and S. Davis	2002	Calculus 7th ed.	John Wiley & Sons,

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Three hours final exam to test their theoretical core knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes:	20%
Midterm Exam	10%
Final Written Exam:	70%
<b>Total:</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures: 1 hr

Total class contact hours per semester: 15

Total other study hours per semester: -

Total study hours per semester: 15

## Preclinical Stage; Second Semester Course Outline

**Course Code:** HPT 121

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Descriptive Dental Anatomy and Physiology

**Department:** Histopathology Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Hala Zaatar

**Level:** 1

**Credit Hours:** 3

**Prerequisites:** HPT 111

### AIMS

This course is designed to provide the dental student with the necessary knowledge to differentiate between deciduous and permanent teeth. This includes the correct dental terminology when discussing the general and specific features of the deciduous teeth. The course will also provide the dental student with the basic knowledge about centric occlusion and its relationship to the different movements of the mandible.

### SYLLABUS

Topics
Major differences between primary and permanent teeth
Description of anterior deciduous teeth
Description of posterior deciduous teeth
Physiologic form of the teeth and the periodontium.
Teeth at different ages
Dental arch formation and compensatory curves of the dental arches.
Angulation of the individual tooth in relation to various planes
Occlusion of permanent teeth (Facial and lingual relations of each tooth in one arch to its antagonists in the opposing arch in centric occlusion).
Human masticatory cycles
Centric occlusion of deciduous teeth

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Have a thorough understanding of the basic anatomic features of human deciduous teeth.
- Develop an increased awareness of the tooth form and its clinical importance to protect the periodontium.
- Begin to analyse the basics of normal occlusion of the teeth and different mandibular movements.

#### Skills

- Ability to identify different human deciduous teeth.
- Define occlusion, centric occlusion and its relationship to the movement of the mandible.
- Enhance the manual dexterity and carving skills of the student enabling him to perform most of waxing up tasks in succeeding years.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

### Reference Text

Author	Date	Title	Publisher
Major M. Ash; Stanley J. Nelson	2002	Wheeler's Dental Anatomy, Physiology and Occlusion	W.B. Saunders Co.
Rickne C. Scheid, Julian B. Woelfel	2002	Dental Anatomy: Its Relevance to Dentistry, 6th ed.	Lippincott Williams & Wilkins

The course leader will distribute handouts at the beginning of the semester that covers the whole curriculum of the course.

### Assessment Scheme:

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical Lab exam to test their manual dexterity and carving abilities.

Oral exam to assess their communication skills and understanding of relation of form to function of the human dentition and of the principles of occlusion.

Three hours final exam to assess their core theoretical knowledge.

### Assessment Pattern:

In Course Tests and Quizzes:	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

### Learning Unit Contact Hours

#### Per week:

Lectures:	1 hr
Lab:	4 hrs

Total class contact hours per semester: 15

Total other study hours per semester: 60

Total study hours per semester: 75

## Preclinical Stage; Second Semester Course Outline

<b>Course Code:</b> DEL 121	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Dental Ethics and Legal Aspects	
<b>Department:</b> Faculty of Dentistry, MSA	
<b>Course Coordinator:</b> Dr Murad Abdel-Salam (Chairman of the Dental Syndicate)	
<b>Level:</b> 1	<b>Credit Hours:</b> 1
<b>Prerequisites:</b> None	

### AIMS

The course provides the dental student with an introduction to the basic knowledge of theories of ethics, various models of decision making and major contemporary health care issues and dilemmas facing dental practitioners. Legal aspects of health care and State Dental Act Regulations will be studied.

### SYLLABUS

Topics
Introduction to the theories of ethics.
Decision making.
Major contemporary health care issues.
Legal aspects of dentistry.
State Dental Act Regulations.
Syndicate Regulations of Practice of Dentistry in Egypt.
State Act Regulating Dental Laboratories.
State Act Regulating Dental Internship.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Have a basic understanding about ethics and how they apply to dental practice.
- Understand the legal aspects of practicing dentistry.
- Understand the practical and ethical considerations that should be taken into account when seeking patients' consent.
- Be competent at maintaining full, accurate clinical records.
- Have knowledge of responsibilities of consent, duty of care and confidentiality.
- Have knowledge of patients' rights.
- Be fully cognizant with the obligation to practice in the best interests of the patient at all times.
- Have knowledge of the regulatory functions of the Egyptian Dental Syndicate.
- Understand the legal and ethical obligations of dentists registered with the Egyptian Dental Syndicate.

#### Skills

- Ability to apply ethical principles in daily dental practice.
- Ability to communicate with legal authorities and personnel.

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.

**Reference Text**

Author	Date	Title	Publisher
David T. Ozar, David J. Sokol	2002	Dental Ethics at Chairside: Professional Principles and Practical Applications	Georgetown University Press
State Dental Act	1983	Law No 13 for 1983 Regarding Medical Professions Syndicates	Egyptian Dental Syndicate
Syndicate Regulations of Practice of Dentistry in Egypt	1969	Rules and Regulations for Practicing Dentistry in Egypt.	Egyptian Dental Syndicate

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.  
Oral exam to test their communication skills and understanding of the subject matter.  
Two hours final exam to assess their theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	20%
Mid Term Exam	10%
End of Semester Written Exam	70%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours Per week:**

Lectures:	1 hr
Total class contact hours per semester:	15
Total other study hours per semester:	-
Total study hours per semester:	15

Preclinical Stage; Second Semester  
Course Outline

<b>Course Code:</b> ENG 102	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> English Language	
<b>Department:</b> Faculty of Languages, MSA	
<b>Course Coordinator:</b> Professor Aziza Hafez	
<b>Level:</b> 1	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> ENG 101	

### AIMS

The aims of the course are:

- To improve formal reports and business proposals writing, note taking and oral presentation skills.
- To help students to acquire study skills that would facilitate any research process.
- To teach students types of business writing, such as reports, business letters, memos, and curriculum vitae. There is also a focus on reading and listening skills and learning vocabulary in context.

### SYLLABUS

Topics	
<ul style="list-style-type: none"> <li>• <b>Introduction to Report Writing</b> <ul style="list-style-type: none"> <li>– Reading: Unit 1 – Chapter 1</li> </ul> </li> <li>• <b>Using Grammatical Information in Paraphrasing</b> <ul style="list-style-type: none"> <li>– Reading: Unit 1 – Chapter 2</li> </ul> </li> <li>• <b>Paraphrasing</b> <ul style="list-style-type: none"> <li>– Reading: Unit 1 – Chapter 2</li> </ul> </li> <li>• <b>Organization Analysis</b> <ul style="list-style-type: none"> <li>– Reading: Unit 2 – Chapter 3</li> </ul> </li> <li>• <b>Organization Analysis + Outline</b> <ul style="list-style-type: none"> <li>– Reading: Unit 2 – Chapter 3</li> </ul> </li> <li>• <b>Questionnaire</b> <ul style="list-style-type: none"> <li>– Reading: Unit 2 – Chapter 4</li> </ul> </li> <li>• <b>Memo Writing</b> <ul style="list-style-type: none"> <li>– Reading: Unit 2 – Chapter 4</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Writing a Curriculum Vitae</b> <ul style="list-style-type: none"> <li>– Reading: Unit 3 – Chapter 5</li> </ul> </li> <li>• <b>News Releases</b> <ul style="list-style-type: none"> <li>– Reading: Unit 3 – Chapter 5</li> </ul> </li> <li>• <b>Writing Business Letters</b> <ul style="list-style-type: none"> <li>– Reading: Unit 3 – Chapter 6</li> </ul> </li> <li>• <b>Writing Business Reports</b> <ul style="list-style-type: none"> <li>– Reading: Unit 3 – Chapter 6</li> </ul> </li> <li>• <b>Writing Technical Reports and Giving Presentations</b> <ul style="list-style-type: none"> <li>– Reading: Unit 3 – Chapter 6</li> </ul> </li> <li>• <b>Reading: “Unit XI”</b> <ul style="list-style-type: none"> <li>– Writing: Practice – Summary Writing</li> <li>– From Grammar to Writing: Editing exercises</li> </ul> </li> </ul>

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Analyse the texts they need to incorporate in their reports, identify graphical and visual information.

#### Skills

Upon completing this course, students will be able to:

- Paraphrase, summarize and analyse the texts they need to incorporate in their reports.
- Write clear and effective curriculum vitae, business letters and memos.
- Design and administer questionnaires.

- Analyse the quantitative and qualitative data obtained from the questionnaires.
- Integrate graphical, visual and statistical information into their reports.
- Produce a report with an outline and a simplified "Reference" page.
- Present their reports using slides or computer software.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Language lab to practice what has been taught in lectures.

### Reference Text

Author	Date	Title	Publisher
Anderson, J.; Poole, M	2002	Assignment and Thesis Writing, 4 <sup>th</sup> ed	John Wiley and Sons
Silyn-Roberts, H	1996	Writing for Science	Longman
Alice Oshima; Ann Hogue	1998	Writing Academic English	Addison Wesley

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

### Assessment Scheme:

Assessment of the students' knowledge about:

- Business proposals, note taking and oral presentations.

Assessment of the student ability to:

- Communicate effectively in debate in a professional manner.
- Write formal reports with all relevant information in clear and concise manner.
- Take notes and do oral presentations.
- Do complex rhetoric tasks.

### Assessment Pattern:

In Course Tests and Quizzes	40%
Mid-Semester Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

### Learning Unit Contact Hours

#### Per week:

Lectures and Language lab: 3 hrs

Total class contact hours per semester: 45

Total other study hours per semester: -

Total study hours per semester: 45

## Preclinical Stage; Second Semester Course Outline

<b>Course Code:</b> CSD 100b	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Computer Science	
<b>Department:</b> Faculty of Computer Science, MSA	
<b>Course Coordinator:</b> Professor Ismail H. Abdel-Fattah	
<b>Level:</b> 1	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> CSD 100a	

### AIMS

This course is designed to introduce the student to the basic skills and to familiarize him/her with the efficient use of computers, including devices and widely used applications. Familiarity with microcomputer platform with emphasis on Windows environment is a must. Use of the Internet and navigation capabilities with practical practice on how to search for information through the internet is explored. Training on popular computer application packages, namely Microsoft Office including word processor, spreadsheet, presentation, graphics and database is carried out. The course also serves as an introduction to computer-related terminology and concepts.

### SYLLABUS

Topics
<p>Explain the need for word processing and describe the basic features of word processing programs, how spelling checkers and thesaurus programs work. Explain the value of collaboration using word processing and the Web. Describe the advantages of desktop publishing.</p>
<p>Describe the advantages of spreadsheets. List several applications for spreadsheets. Explain the underlying principles of electronic spreadsheet use. Describe how to set up and modify a spreadsheet. Describe the advantages of business graphics. Differentiate between analytical graphics and presentation graphics. Identify the elements of standard charts and graphs.</p>
<p>Describe the hierarchy of data. Explain the differences between files and databases. List the four database models. Describe the concept of data integrity. Describe the functions of a database management system. Describe the process of creating a database in general terms. Explain what a data warehouse is and how it differs from a database.</p>
<p>List and describe the classic functions of managers: planning, organizing, staffing, directing, and controlling. Describe the purpose and components of a management information system (MIS). Describe how companies use employees in task-oriented teams. Describe the purpose and function of sophisticated software for top managers. Explain the problems and solutions related to managing personal computers.</p>

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand software-related terminology and concepts.
- Investigate the features of word processing and spreadsheets.
- Investigate data base concepts and management information systems.

#### Skills

- Ability to search the net efficiently and use different software packages for presentation and office skills.
- Ability to use computers in different applications.

**Teaching / Learning strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Computer lab sessions.

**Useful Websites:** [http\www. Prenhall.com/~longlong](http://www.Prenhall.com/~longlong)

**Reference Text**

Author	Date	Title	Publisher
J. Glenn Brookshear	2004	Computer Science: An Overview, 8 <sup>th</sup> ed.	Addison Wesley
Ruth Maran	2000	Computers Simplified, 5 <sup>th</sup> ed.	Wiley
Larry Long; Nancy Long.	1997	Computers, 5 <sup>th</sup> ed	Prentice Hall

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams.

Lab test to assess their skills in different computer applications.

Project to test their abilities in producing an integrated computer programme.

Three hours final exam to test their core knowledge about computers and their uses.

**Assessment Pattern:**

In Course Tests and Quizzes	40%
Mid-Semester Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures: 2 hrs

Lab: 2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

## Preclinical Stage; Third Semester Course Outline

<b>Course Code:</b> PRS 231	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Properties of Dental Materials	
<b>Department:</b> Department of Dental Materials, MSA	
<b>Course Coordinator:</b> Professor Dina Mostafa	
<b>Level:</b> 2	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> PRS 121	

### AIMS

This course covers the application of the basic knowledge of the different structural, physical, mechanical, and biological properties on the contemporary laboratory and restorative dental materials.

### SYLLABUS

Topics
Model and Die Materials
Non-metallic Denture Bases
Impression Materials
Direct Aesthetic Restorative Materials
Dental Cements
Dental Amalgam

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the physical, mechanical and biological properties of dental materials.
- Have an understanding of the basic properties of metals, alloys, polymers and ceramics.
- Describe and explore the principles of proper selection of dental materials.
- Understand the proper manipulation of different dental materials.
- Explore the basis of laboratory materials and procedures.
- Use their knowledge of the properties of modern dental materials to select and use the appropriate materials for the treatment of different cases.

#### Skills

- Ability to select the appropriate dental material for a specific task.
- Enhance the manual dexterity in mixing and manipulating dental materials.
- Ability to communicate and problem solving in the field of dental materials.

#### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Marcia Gladwin, Michael D. Bagby	2004	Clinical Aspects of Dental Materials, 2 <sup>nd</sup> ed.	Lippincott Williams & Wilkins
William J. Jobrien	2002	Dental Materials and their Selection	Quintessence Publishing
Robert G., Ph.D. Craig, John M., Ph.D. Powers, John C., Ph.D. Wataha	2003	Dental Materials, Properties and Manipulation, 8 <sup>th</sup> ed.	C.V. Mosby

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their practical skills and manual dexterity.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures: 2 hrs

Lab: 2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

## Preclinical Stage; Third Semester Course Outline

<b>Course Code:</b> SGS 232	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> General Histology	
<b>Department:</b> General Histology Department, Faculty of Medicine, Cairo Univ.	
<b>Course Coordinator:</b> Professor Ayman M. Ghallab	
<b>Level:</b> 2	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> SGS 122	

### AIMS

Histology is the study of the normal detailed structure of the body as a result of microscopic examination. Dental students must master the subject of Histology because only by doing so they will be able to understand how different tissues function. It is important to emphasize that what they are learning in Histology will have significant applications to their later clinical work. Histology is a fascinating subject because it has close relationship with other disciplines. Histology links other broad basic science subjects as physiology, Gross Anatomy and Biochemistry; with more applied subjects such as Histology, Pathology and Immunology. Thus, it constitutes a useful middle ground from which an integrated understanding of tissue structure and function will emerge. Histology is basic to the understanding of cell and tissue diseases. It is impossible to study the abnormal before the normal is known.

This course introduces the dental student to normal human organs and systems, e.g. vascular system, lymphatic system, skin, etc... Lectures include comparison of the histologic structure of different organs of the same system.

### SYLLABUS

Topics
Vascular system
Lymphatic system
Reticuloendothelial system
Skin.
Digestive system I (Oral Cavity)
Digestive system II (Glands, Salivary, Pancreas, Liver).
Endocrine glands. (Pituitary, Suprarenal, Thyroid, Parathyroid)

### Learning Outcomes

#### Understanding

Upon completing this course, students will be able to understand:

- The general structure of blood vessels.
- The general similarity and differences between different lymphatic organs
- How widely distributed is the reticuloendothelial system.
- The general structure of skin.
- The epithelial lining and covering of the mouth
- General distribution of salivary gland
- The difference between pancreas and salivary glands
- General architecture of liver
- The super control of Pituitary gland
- The concept of the endocrine secretions

## Knowledge

- The difference between sections of blood vessels
- The difference between sections in lymph node, spleen and tonsils.
- The different types of cells of the reticuloendothelial system.
- The difference between sections in thick and thin skin.
- The functional structure of lip and tongue.
- Functional structure of salivary gland
- Functional ultrastructure of pancreas.
- Functional structure of hepatocytes
- The functional structure of Pituitary gland
- The histological structure of suprarenal and thyroid glands

## Skills

- Identifying and drawing sections in aorta, artery, and vein.
- Identifying and drawing sections in lymphatic organs
- Enumerate RES cells
- Identifying and drawing sections in thick skin.
- Drawing colour diagrams of lip and tongue and different types of papillae
- Drawing sections in salivary glands,
- Identifying s of drawing sections in, pancreas
- Identifying s of drawing sections in, liver
- Identifying and drawing of Pituitary gland
- Identifying and drawing sections in thyroid and parathyroid glands

## Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to examine and visualize those principles.

## Reference Text

Author	Date	Title	Publisher
Ghallab, A.M.	2004	Introduction to Functional and Clinical Histology. Text and Atlas. Part II	EI.,Meleagy Press
Young, B. and Heath, IW.	2000	Wheater's Functional Histology. A Text and Colour Atlas. Fourth edition.	Churchill Livingstone

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

## Assessment Scheme:

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to identify different human tissues and cell types.

Oral exam to assess their communication skills and analytical abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	2 hr
Lab:	2 hrs

Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60



**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to identify various micro-organisms.

Oral exam to assess their communication skills and understanding of the subject matter.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Lab:	2 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

Preclinical Stage; Third Semester  
Course Outline

**Course Code:** HPT 231

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Biology, Oral Histology and Embryology

**Department:** Department of Histopathology, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Hala Zaatar

**Level:** 2

**Credit Hours:** 3

**Prerequisites:** SGS 122

### AIMS

The major goal of this course is to provide the student with current, basic knowledge of the development, structure, and function of the oral and Para-oral soft and hard tissues. The age changes of hard dental tissues and the mechanisms of organic matrix formation and mineralization of hard dental structures are stressed. The objective of this course is to integrate the histological structures of the tooth and Para tooth hard and soft tissues with their genesis and development. Also to correlate these histological structures with their clinical applications.

### SYLLABUS

Topics
Embryology (germ layers & branchial arches).
Development of face and nasal cavity.
Development of palate.
Development of tongue.
Development of salivary glands, facial malformations.
Development and growth of the mandible and maxilla.
Tooth development
Structure and genesis of tooth hard substances and their age changes (E, D and C).
Structure, physiology and age changes of Pulp and PDL.

### Learning Outcomes

#### Knowledge

When a student has successfully completed this course, he will be able to:

- Understand the importance of the developmental processes and the structural specialization of the cells and tissues of the oral cavity.
- Critically evaluate histological sections and images of dental hard and soft tissues.
  - Understand the mechanism of mineral deposition in hard dental tissues.
- Will know the age changes that occur in the dental tissues and the basic mechanisms to repair and regenerate.

#### Skills

- Ability to use the light microscope.
- Ability to identify different oral and dental tissues.
- The student will develop critical thinking and problem solving skills which will apply to other basic science and clinical courses.

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Reference Text**

Author	Date	Title	Publisher
Antonio Nanci	2003	Ten Kate's Oral Histology: Development, Structure and Function, 6 <sup>th</sup> ed	C.V. Mosby
A. R. Ten Kate	1998	Oral Histology: Development, Structure and Function	Mosby Year Book

The course leader will distribute handouts at the beginning of the semester that covers the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Richard Brand, Donald E. Isselhard, Elaine Satin	2003	Anatomy of Orofacial Structures	C.V. Mosby
B.K.B. Berkovitz; G.R. Holland; B.J. Moxham	2002	Oral Anatomy, Embryology and Histology, 3 <sup>rd</sup> ed	C.V. Mosby
James K. Avery, Pauline F. Steele	2000	Essentials of Oral Histology and Embryology: A Clinical Approach	C.V. Mosby

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to identify various oral and dental cells, tissues and structures.

Oral exam to assess their communication skills and understanding of the subject matter.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Lab:	2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

## Preclinical Stage; Third Semester Course Outline

<b>Course Code:</b> SGS 234	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> General Anatomy	
<b>Department:</b> Anatomy Department	
<b>Course Coordinator:</b> Professor Soheir Hanafy Ahmad	
<b>Level:</b> 2	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> SGS 114	

### AIMS

This course has been planned to provide comprehensive knowledge about the basic structure of the human body and its clinical significance that provides a strong foundation for future studies. It deals with human morphology in a systematic approach that starts with the cellular level of organization followed by tissue, organ and system levels, starting with study of the basic tissues of the body and their developmental origin. This is followed by the build-up of organs which constitute the various body systems starting with those forming the main bulk of the human body – musculoskeletal - followed by the control systems comprising the nervous and endocrine systems. This is followed by study of the maintenance systems comprising cardiovascular, respiratory, digestive, urinary and reproductive systems. A concise look to general embryology is also provided.

### SYLLABUS

<b>Topics</b>
Introduction to biology in the field of anatomy and human development.
Anatomical position planes and anatomical terminology.
Tissues of the body: epithelial, connective tissue, muscular and nervous tissues.
Skin, superficial and deep fascia, characteristics and functions.
Bones: functions, classification, structure, blood supply and development.
Skeleton: different bones of appendicular and axial skeletons.
Joints: articular system with examples. Study of important joints of the body.
Muscular tissue and system. Study of important muscles of the trunk and limbs.
Nervous tissue and system; central, peripheral.
Autonomic nervous system.
Special senses.
Cardiovascular and lymphatic systems.
Respiratory system.
Digestive system.
Urinary and genital systems.
Glandular system and hormonal balance.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basic anatomic structure of the human body.
- Recognize the different bones of the skull and of the human body.
- Identify the muscles of the head and neck region and their relations.
- Comprehend the circulatory system and the great vessels of the head and neck.
- Develop a deep understanding of neuro-anatomy.

**Skills**

- Ability to identify different organs of the head and neck and the human body.
- Ability to identify different body structures.
- Ability to identify different skull structures, the mandible and human skeleton.
- Enhance the manual dexterity and surgical skills of the student.

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Dissecting room to visualize those principles.

**Reference Text**

Author	Date	Title	Publisher
Richard Brand, Donald E. Isselhard, Elaine Satin	2003	Anatomy of Orofacial Structures	C.V. Mosby
Johannes W. Rohen, Chihiro Yokochi, Elke Lutjen-Drecoll	2002	Color Atlas of Anatomy: A Photographic Study of the Human Body, 5 <sup>th</sup> ed.	Lippincott Williams & Wilkins
Richard, L. Drake; Wayne Vogl; Adam W.M. Mitchell	2004	Grays Anatomy for Students	Churchill Livingstone
Richard S. Snell	2005	Clinical anatomy	Lippincott Williams & Wilkins

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Dissecting room exam to test their abilities identify different anatomical structures.

Oral exam to assess their communication skills and understanding of the human body and its development.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Dissecting Room:	2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

## Preclinical Stage; Third Semester Course Outline

**Course Code:** SGS 235

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** General Physiology

**Department:** Physiology Department

**Course Coordinator:** Professor Alaa Afifi

**Level:** 2

**Credit Hours:** 4

**Prerequisites:** SGS 114

### AIMS

This course focuses on introducing the student to the basics of how the human body functions. Emphasis will be placed on understanding physiological principles. Each body system is reviewed with reference to function and its role in the balanced mechanisms that control homeostasis.

### SYLLABUS

Topics
Body Fluids and Blood. Autonomic nervous system. Kidney Endocrines. Cardiovascular system.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basic physiological functions of the human body.
- Have a deep understanding of the different human body systems and how they interact.
- Appreciate the relationship of physiological phenomena with the oral cavity.

#### Skills

- Ability to conduct simple physiology experiments.
- Ability to apply this knowledge to simple clinical procedures such as recording blood pressure, recognizing normal heart sounds and reading a normal ECG.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

### Reference Text

Author	Date	Title	Publisher
Arthur C. Guyton, John E. Hall, W. F. Ganong,	2005	Textbook of Medical Physiology, 11 <sup>th</sup> Ed.	W.B. Saunders
Hema Pispati	2003	Concise Textbook of Physiology for Dental Students	OUP India
William F Ganong	2001	Review of Medical Physiology	McGraw Hill

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their abilities in performing simple physiology experiments.

Oral exam to assess their understanding of the functioning of the human body, their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	3 hrs
Lab:	2 hrs
Total class contact hours per semester:	45
Total other study hours per semester:	30
Total study hours per semester:	75

Preclinical Stage; Third Semester  
Course Outline

**Course Code:** SGS 236

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Biochemistry

**Department:** Biochemistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Aisha S. Eid

**Level:** 2

**Credit Hours:** 3

**Prerequisites:** SGS 121

**RATIONALE:**

Biochemical reactions in health and disease are a prerequisite to identify and manage health problems. The student has to relate the biochemical events at the cellular level to the physiological or pathophysiological processes occurring in the human body with particular emphasis on the biochemical and molecular basis of disease with special re-emphasis given to areas applicable to dentistry. This can be used as a tool for diagnosis of disease and follow-up of treatment. Thus the student will be able to recognize the pathological phenomena, make interpretation of clinical and laboratory findings and arrange for proper management. The student will be able to practice the basic biochemical tests and will be motivated for self learning.

**AIMS OF THE COURSE:**

The principal aim of this course is to provide an understanding of the molecular mechanisms fundamental to the life processes. An understanding of the way in which reactions take place at the cellular level will then provide a background against which the changes due to disease can be viewed.

**The course is divided into 3 teaching areas:**

Lectures, Data Analysis/Laboratory Simulations and Tutorials.

The specific aims of these areas are as follows:

**Lectures:**

The aim of the lecture course is to provide a framework of information upon which students can begin to build a body of biochemical knowledge.

**Data analysis/laboratory simulations:** the aims of these exercises are:

- To illustrate and reinforce the lecture course in order to further the understanding of each subject area.
- To provide experience in the critical analysis of data and data handling.
- Develop team work skills.

**Tutorials:**

The small group tutorial classes aim to provide an informal environment for the student to discuss his/her difficulties and to go over material that is causing problems. Self assessment questions, issued in advance of each tutorial, aim to help the student identify areas that might be causing problems.

**SYLLABUS**

Principles of biomedical importance:

- Acid base balance
- Physiological buffers
- Solutions

Carbohydrate chemistry

Lipid chemistry

Amino acid chemistry

Protein chemistry

Proteins of extracellular matrix

Cell membrane

Immunoglobulin

Nucleic acid chemistry

Molecular biology

Enzymes

**LEARNING OUTCOMES****Knowledge & Understanding:**

At the end of the semester the student should be able to understand and give an account of:

- The concepts of pH and buffering and types of solutions.
- The basic structures of the major biochemical components, to understand the way in which their structure is related to function.
- The proteins of the extracellular matrix.
- The relationship between membrane structure and function, membrane transport.
- The structure and importance of immunoglobulin.
- The mechanisms of DNA replication and information transfer at the molecular level.
- The role of DNA as the hereditary material and understand the basic mechanisms involved in the control of gene expression.
- The mechanism of protein synthesis.
- The contribution which recombinant DNA technology has made to the understanding and diagnosis of human diseases and to understand the basic practical procedures involved.
- The concepts of enzyme catalysis.

**Skills:****1. General Skills:**

By the end of the program the students will be able to work effectively in a group in lab, and will be able to use the sources of biomedical information to remain oriented with advances in knowledge and practice.

**2. Practical Skills:**

By the end of the course, students should be able to perform some basic chemical tests to identify unknown sugar or protein solutions.

**3. Intellectual Skills:**

By the end of the course, students should be able to:

- Interpret the observations of chemical tests to identify unknown sugar or protein solutions.
- Point out the significance of determination of serum levels of glucose, total proteins, albumin, cholesterol, creatine and uric acid.

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials with small group discussion using audio/visual (A/V) aids to help in understanding these principles.
- Lab to apply those tutorials practically.

## Software Requirements

- Internet search engines:  
[www.yahoo.com](http://www.yahoo.com)  
[www.google.com](http://www.google.com)  
[www.altavista.com](http://www.altavista.com)  
[www.ipl.org](http://www.ipl.org)
- Websites:  
<http://www.LWW.com>  
<http://www.fleshandbones.com.imagebank> (for illustrative animations and diagrams)  
<http://www.biology.arizona.edu/biochemistry.html>  
<http://web.indstate.edu/thcme/mking/subjects.html>  
<http://www.dentistry.leeds.ac.EU/biochem/>

## Reference Text

Author	Date	Title	Publisher
Pamela C Champe; Richard A Harvey; Denise R Ferrier	2005	Lippincott's Illustrated Reviews: Biochemistry 3 <sup>rd</sup> edition	Lippincott's Williams & Wilkins.

## Assessment Scheme

Tool	Purpose
<b>1. Written Exams (midyear + final)</b> <ul style="list-style-type: none"> <li>• Short answer questions</li> <li>• Chart stimulation recall</li> <li>• Diagrammatic illustrations</li> <li>• Multiple choice questions MCQ</li> <li>• Problem solving</li> </ul>	Assessment of knowledge and understanding
<b>2. Oral Exam</b>	Assessment of knowledge and understanding
<b>3. Practical Exams</b>	Assessment of knowledge and understanding
<b>4. Formative Assessment by: Written quizzes - MCQ</b>	Assessment of knowledge and understanding

## ASSESSMENT PATTERN:

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

## LEARNING UNIT CONTACT HOURS:

Per week:	
• Lectures:	2 hrs.
• Lab:	2 hrs.
Total class contact hours per term	30 hrs.
Total other study hours per term	30 hrs.
Total study hours per term	60 hrs.

Preclinical Stage; Fourth Semester  
Course Outline

**Course Code:** RES 241

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Operative Dentistry Technology

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Faten Kamel

**Level:** 2

**Credit Hours:** 2

**Prerequisites:** HPT 121; PRS 231

### AIMS

This is a preclinical course extending over three semesters designed to introduce the student to the science of operative dentistry. It provides students with basic principles about cavity preparation and restorative techniques for amalgam and resin composite restorations. The first semester deals with basic definitions, nomenclature, instruments used and principles of cavity preparation and cutting dental tissues.

### SYLLABUS

Topics
Scope and objectives of operative dentistry.
Classifications of cavities and nomenclature.
Carious and non-cariious lesions.
General principles of cavity preparation.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand and explore the basic principles of operative dentistry.
- Understand the basic principles of diagnosis and treatment planning of carious lesions.

#### Skills

- Ability to use different instruments to prepare cavities for different types of fillings.
- Acquire enhanced manual dexterity in handling instruments used in operative dentistry.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Pre-clinical Lab sessions.

### Reference Text

Author	Date	Title	Publisher
James B. Summitt, J. William Robbins, Richard S. Schwartz	2001	Fundamentals of Operative Dentistry, A Contemporary Approach, 2 <sup>nd</sup> ed.	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Theodore M. Roberson, Harold O. Heymann, Edward J. Swift Jr	2001	Sturdevant's Art & Science of Operative Dentistry, 4 <sup>th</sup> ed.	Mosby-Year Book
Avishai Sadan	2004	Quintessence of Dental Technology	Quintessence Publishing
John A. Sorensen	2001	Quintessence of Dental Technology	Quintessence Publishing
Lloyd Baum, Ralph W. Phillips, Melvin R. Lund	1995	Textbook of Operative Dentistry	W.B. Saunders Company

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical Lab exam to test their manual dexterity and skills in cavity preparation and filling.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Lab:	2 hrs

Total class contact hours per semester: 15

Total other study hours per semester: 30

Total study hours per semester: 45

Preclinical Stage; Fourth Semester  
Course Outline

<b>Course Code:</b> PRS 241	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Applied Dental Materials	
<b>Department:</b> Department of Dental Materials, MSA	
<b>Course Coordinator:</b> Professor Dina Mostafa	
<b>Level:</b> 2	<b>Credit Hours:</b> 2
<b>Prerequisites:</b> PRS 231	

**AIMS**

This course covers the application of the basic knowledge of the different structural, physical, mechanical, and biological properties on the contemporary laboratory and restorative dental materials.

**SYLLABUS**

Topics
Dental Investment
Casting Technology
Dental Casting Alloys Noble Dental Alloys Dental Base Metal Alloys
Dental Wrought Alloys
Dental Porcelain
Porcelain Fused to Metal
Joining of Metals
Other Related Materials
Model and Die Materials

**Learning Outcomes****Knowledge**

Upon completing this course, students will be able to:

- Understand the physical, mechanical and biological properties of dental materials.
- Have an understanding of the basic properties of metals, alloys, polymers and ceramics.
- Describe and explore the principles of proper selection of dental materials.
- Understand the proper manipulation of different dental materials.
- Explore the basis of laboratory materials and procedures.
- Use their knowledge of the properties of modern dental materials to select and use the appropriate materials for the treatment of different cases.

**Skills**

- Ability to select the appropriate dental material for a specific task.
- Enhance the manual dexterity in mixing and manipulating dental materials.
- Ability to communicate and problem solving in the field of dental materials.

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Marcia Gladwin, Michael D. Bagby	2004	Clinical Aspects of Dental Materials, 2 <sup>nd</sup> ed.	Lippincott Williams & Wilkins
William J. Jobrien	2002	Dental Materials and their Selection	Quintessence Publishing
Robert G., Ph.D. Craig, John M., Ph.D. Powers, John C., Ph.D. Wataha	2003	Dental Materials, Properties and Manipulation, 8 <sup>th</sup> ed.	C.V. Mosby

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their practical skills and manual dexterity.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	1 hr
Lab:	2 hrs

Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

Preclinical Stage; Fourth Semester  
Course Outline

**Course Code:** PRS 242

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Removable Prosthodontics Technology

**Department:** Prosthodontics Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Nadia Abbas

**Level:** 2

**Credit Hours:** 2

**Prerequisites:** PRS 231

### AIMS

The course is designed to provide an introduction to the basic concepts of diagnosis and treatment planning of complete dentures. The theoretical concepts will be taught, as well as the necessary anatomical features of the maxillary and mandibular edentulous arches, as well as the laboratory steps for complete denture construction.

### SYLLABUS

Topics
Prosthodontic terms and steps of complete denture construction.
Extra-oral anatomical landmarks related to complete denture construction, maxillary and mandibular landmarks.
Identifying the limiting structures (outline) of upper and lower dentures and denture surfaces.
Types of impressions and different types of impression trays.
Boxing of the impression.
Occlusion blocks (record bases and occlusal rims).
Basic mandibular movements.
Articulators and face bows.
Steps of jaw relation recording and mounting.
Selection of artificial teeth and setting up..
Waxing up of denture base for clinical try-in.
Laboratory steps for processing of complete dentures.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Identify different areas of edentulous maxillary and mandibular casts corresponding to anatomical structures important for the support of complete dentures.
- Understand the principles of complete denture construction.

#### Skills

- Ability to fabricate complete dentures.
- Enhanced manual dexterity.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Pre-clinical Lab sessions.

**Reference Text**

Author	Date	Title	Publisher
George A. Zarb, Charles L. Bolender, Gunnar E. Carlsson, Carl O. Boucher	1997	Boucher's Prosthodontic Treatment for Edentulous Patient	C.V. Mosby
Alan B. Carr, Glen P. McGivney, David T. Brown	2004	McCracken's Removable Partial Prosthodontics	Mosby-Year Book

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Rodney D. Phoenix, David R. Cagna, Charles F. Defreest, Kenneth L. Clinical Removable Partial Prosthodontics Stewart	2002	Stewart's Clinical Removable Partial Prosthodontics	Quintessence Publishing
George A. Zarb, Charles L. Bolender, Steven E. Eckert, Aaron H. Fenton, Rhonda F. Jacob, Regina Mericske-Stern	2003	Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant-Supported Prosthodontics, 12 <sup>th</sup> ed	C.V. Mosby

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical Lab exam to test their manual dexterity and skills in different removable prosthodontics laboratory procedures.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours Per week:**

Lectures:	1 hr
Lab:	2 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

Preclinical Stage; Fourth Semester  
Course Outline

**Course Code:** SGS 242

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Pharmacology

**Department:** Pharmacology Department, Faculty of Pharmacy, MSA

**Course Coordinator:** Professor Amani El Brairy

**Level:** 2

**Credit Hours:** 2

**Prerequisites:** SGS 115, SGS 235

### AIMS

Pharmacology course is divided into two phases. The first phase includes a thorough study of basic concepts and principles in pharmacology using mainly prototype drugs. Emphasis is placed on the mechanism of action of drugs, their medicinal uses and side effects.

### SYLLABUS

Topics
General pharmacology: <ul style="list-style-type: none"> <li>- Different routes of administration.</li> <li>- Pharmacokinetics.</li> <li>- Pharmacodynamics.</li> <li>- Drug-receptor interactions.</li> </ul> Drugs acting on the central nervous system: <ul style="list-style-type: none"> <li>- Introduction to autonomic nervous system.</li> <li>- Sympathomimetics.</li> <li>- Sympatholytics.</li> <li>- Parasympathomimetics</li> <li>- Parasympatholytics</li> <li>- Drugs acting on autonomic ganglia.</li> </ul> Autocoids.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basic properties of therapeutic drugs used to treat diseases affecting the oral cavity.
- Understand how drugs may be used to treat and prevent disease.
- Have adequate knowledge about legislations concerning the supply of drugs and medicines.
- Assess and appraise contemporary information on the significance and effect of drugs and other medicaments, taken by the patient, on dental treatment.

#### Skills

- Ability to properly select drugs.
- Ability to avoid undesirable drug interactions.

#### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.
- Ability to write a prescription.

**Websites:** [www.medbioworld.com.cgi](http://www.medbioworld.com.cgi)

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Goodman, Louis	1992	The Pharmacological Basis of Therapeutics	McGraw Hill, Health Professions Division
G. Katzung	2003	Basic and Clinical Pharmacology	McGraw Hill Companies

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to perform simple pharmacological tests and experiments.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours Per Week:**

Lectures:	1 hr
Lab:	2 hrs

Total class contact hours per semester: 15

Total other study hours per semester: 30

Total study hours per semester: 45

**Preclinical Stage; Fourth Semester  
Course Outline**

**Course Code:** HPT 241

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Biology, Oral Histology and Embryology

**Department:** Department of Histopathology, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Hala Zaatar

**Level:** 2

**Credit Hours:** 3

**Prerequisites:** HPT 231

### **AIMS**

This course deals with the histology, physiology and development of the structures in and around the oral cavity. The material presented in this course is based upon what the student had acquired as a working knowledge of the general histology of cells and tissues as presented in general histology. Our objective is to integrate the histological structures of the oral and Para-oral tissues as the oral mucous membrane, salivary glands, TMJ and maxillary sinus with their clinical and pathological applications. Also this course will deal with the physiological events that take place in oral cavity as; salivation, eruption and shedding of teeth and their clinical considerations.

### **SYLLABUS**

<b>Topics</b>
Bone and alveolar process.
Oral mucous membrane.
Dentogingival junction.
Salivary glands and saliva.
Tooth eruption and shedding.
Anatomy and histology of the maxillary sinus.
Anatomy and movements of the temporomandibular joint.

### **Learning Outcomes**

#### **Knowledge**

When a student has successfully completed this course, he will be able to:

- Understand the importance of the developmental processes and the structural specialization of the cells and tissues of the oral cavity.
- Critically evaluate histological sections and images of oral and Para oral soft tissues.
  - Understand the physiological mechanism of salivation, tooth eruption and shedding.
- Will know the age changes that occur in the oral soft tissues.

#### **Skills**

- Ability to use the light microscope.
- Ability to identify different oral and dental tissues.
- The student will develop critical thinking and problem solving skills which will apply to other basic science and clinical courses.

### **Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Reference Text**

Author	Date	Title	Publisher
Antonio Nanci	2003	Ten Kate's Oral Histology: Development, Structure and Function, 6 <sup>th</sup> ed	C.V. Mosby
A. R. Ten Kate	1998	Oral Histology: Development, Structure and Function	Mosby Year Book

The course leader will distribute handouts at the beginning of the semester that covers the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Richard Brand, Donald E. Isselhard, Elaine Satin	2003	Anatomy of Orofacial Structures	C.V. Mosby
B.K.B. Berkovitz; G.R. Holland; B.J. Moxham	2002	Oral Anatomy, Embryology and Histology, 3 <sup>rd</sup> ed	C.V. Mosby
James K. Avery, Pauline F. Steele	2000	Essentials of Oral Histology and Embryology: A Clinical Approach	C.V. Mosby

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to identify various oral and dental cells, tissues and structures.

Oral exam to assess their communication skills and understanding of the subject matter.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures: 2 hrs

Lab: 2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

## Preclinical Stage; Fourth Semester Course Outline

<b>Course Code:</b> SGS 244	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Head and Neck Anatomy	
<b>Department:</b> Anatomy Department, MSA University	
<b>Course Coordinator:</b> Professor Soheir Hanafy Ahmad	
<b>Level:</b> 2	<b>Credit Hours:</b> 3
<b>Prerequisites:</b> SGS 234	

### AIMS

This course is planned to provide a comprehensive study of the regional dissection of the head and neck. It starts with study of skull bones, mandible and cervical vertebrae. Different anatomic regions are dissected comprehensively with study of muscles of the head and neck region, different salivary glands and their nerve supply. Detailed study of the mouth pharynx and larynx is performed. The arterial supply and venous drainage including the cranial! venous sinuses. The nervous system including brain, spinal cord and cranial nerves is also stressed. A deep study of the autonomic nerve supply of the head and neck is done.

### SYLLABUS

Topics
.Bones of the skull, mandible and cervical vertebrae
.Scalp and face
.Parotid region and facial nerve
.Infratemporal and pterygopalatine fossae, with study of T.M.J
.Cranial cavity and dural venous sinuses
Posterior triangle of the neck with cervical and brachial plexuses
Submandibular region and salivary glands
.Anterior triangle of the neck and its subcivisons
Deep dissection of the neck thyroid gland and lower four cranial nerves
Oral cavity, pharynx, larynx, and nose
Lymphatic drainage of the head and neck
Arteries and veins of head and neck
Nervous system and account of carinal nerves
Autonomic nervous system of the head and neck

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the regional dissection of the head and neck.
- Recognize the different bones of the skull especially the skull base and mandible.
- Identify the muscles of the head and neck region and their relations.
- Comprehend the circulatory system and the great vessels of the head and neck.
- Develop a deep understanding of neuro-anatomy and autonomic nervous system.
- Have a deep understanding of the development of bones and structures.

**Skills**

- Ability to dissect human cadavers and identify different organs of the head and neck.
- Ability to identify different body structures.
- Ability to identify different skull structures.
- Enhance the manual dexterity and surgical skills of the student.

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Dissecting room to visualize those principles.

**Reference Text**

Author	Date	Title	Publisher
Richard Brand, Donald E. Isselhard, Elaine Satin	2003	Anatomy of Orofacial Structures	C.V. Mosby
Johannes W. Rohen, Chihiro Yokochi, Elke Lutjen-Drecoll	2002	Color Atlas of Anatomy: A Photographic Study of the Human Body, 5 <sup>th</sup> ed.	Lippincott Williams & Wilkins
Richard, L. Drake; Wayne Vogl; Adam W.M. Mitchell	2004	Grays Anatomy for Students	Churchill Livingstone
Richard S, Snell	2005	Clinical anatomy 7 <sup>th</sup> ed.	Lippincott Williams & Wilkins
Keith Moore and Arthur F. Dalley	2005	Clinical oriented anatomy 5 <sup>th</sup> ed	Lippincott Williams & Wilkins

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Dissecting room exam to test their abilities identify different anatomical structures.

Oral exam to assess their communication skills and understanding of the human body and its development.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Lab:	2 hrs

Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Preclinical Stage; Fourth Semester Course Outline

**Course Code:** SGS 245

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** General Physiology

**Department:** Physiology Department, MSA University

**Course Coordinator:** Professor Alaa Afifi

**Level:** 2

**Credit Hours:** 3

**Prerequisites:** SGS 235

### AIMS

This course focuses on introducing the student to the basics of how the human body functions. Emphasis will be placed on understanding physiological principles. Each body system is reviewed with reference to function and its role in the balanced mechanisms that control homeostasis.

### SYLLABUS

Topics
Gastrointestinal system. Nerve and muscle. Neurophysiology. Respiration. Regulation of body temperature and metabolism.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basic physiological functions of the human body.
- Have a deep understanding of the different human body systems and how they interact.
- Appreciate the relationship of physiological phenomena with the oral cavity.

#### Skills

- Ability to conduct simple physiology experiments.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

### Reference Text

Author	Date	Title	Publisher
Arthur C. Guyton, John E. Hall	2005	Textbook of Medical Physiology, 11 <sup>th</sup> Ed.	W.B. Saunders
Hema Pispati	2003	Concise Textbook of Physiology for Dental Students	OUP India
William F. Ganong	2001	Review of Medical Physiology	McGraw-Hill

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their abilities in performing simple physiology experiments.

Oral exam to assess their understanding of the functioning of the human body, their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	2 hrs
Lab:	2 hrs

Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Preclinical Stage; Fourth Semester Course Outline

**Course Code:** SGS 246

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Biochemistry

**Department:** Biochemistry Department, MSA University

**Course Coordinator:** Professor Aisha S. Eid

**Level:** 2

**Credit Hours:** 3

**Prerequisites:** SGS 236

### **RATIONALE:**

Biochemical reactions in health and disease are a prerequisite to identify and manage health problems. The student has to relate the biochemical events at the cellular level to the physiological or pathophysiological processes occurring in the human body with particular re-emphasis on the biochemical and molecular basis of disease with special emphasis given to areas applicable to dentistry. This can be used as a tool for diagnosis of disease and follow-up of treatment. Thus the student will be able to recognize the pathological phenomena, make interpretation of clinical and laboratory findings and arrange for proper management. The student will be able to practice the basic biochemical tests and will be motivated for self learning.

### **AIMS:**

The aim of this course is to provide an understanding of the molecular mechanisms fundamental to the life processes. An understanding of the way in which reactions take place at the cellular level will then provide a background against which the changes due to disease can be viewed.

### **The course is divided into 3 teaching areas:**

Lectures, Data Analysis/Laboratory Simulations and Tutorials.

The specific aims of these areas are as follows:

#### **Lectures:**

The aim of the lecture course is to provide a framework of information upon which students can begin to build a body of biochemical knowledge.

**Data analysis/laboratory simulations:** the aims of these exercises are:

- To illustrate and reinforce the lecture course in order to further the understanding of each subject area.
- To provide experience in the critical analysis of data and data handling.
- Develop team work skills.

#### **Tutorials:**

The small group tutorial classes aim to provide an informal environment for the student to discuss his difficulties and to go over material that is causing problems. Self assessment questions, issued in advance of each tutorial, aim to help the student identify areas that might be causing problems.

### **Syllabus**

Bioenergetics  
Tricarboxylic acid cycle  
Carbohydrate metabolism  
Lipid metabolism  
Insulin & diabetes mellitus  
Protein metabolism

Metabolic integration  
 Hemoglobin chemistry & metabolism  
 Nucleic acid metabolism  
 Vitamins  
 Minerals  
 Some body fluids (plasma, saliva, urine)  
 Plasma enzymes, NPN compounds

## Learning Outcomes

### Knowledge & Understanding:

At the end of first semester the student should be able to understand and give an account of:

- Basic bioenergetics.
- The nature of intermediate metabolism and the fundamental relationships between the metabolic pathways.
- The control mechanisms operating to govern these pathways.
- The related metabolic disorders and their clinical relevance on biochemical and clinical basis.
- The structure and intermediate metabolism of hemoglobin.
- The nucleic acid intermediate metabolism.
- The role of micronutrients (vitamins, minerals), their biochemical, clinical and laboratory importance and deficiency manifestations of each.
- The composition of saliva.

### Skills:

#### 1. General Skills:

By the end of the program the students will be able to work effectively in a group in lab, and will be able to use the sources of biomedical information to remain oriented with advances in knowledge and practice.

#### 2. Practical Skills:

By the end of the course, students should be able to:

- Identify the physical and chemical characters of normal urine under different physiological conditions.
- Perform chemical tests to detect abnormal constituents of urine.

#### 3. Intellectual Skills:

By the end of the course, students should be able to interpret a urine report.

## Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials with small group discussion using audio/visual (A/V) aids to help in understanding these principles.
- Lab to apply those tutorials practically.

## Software Requirements

- Internet search engines:
  - [www.yahoo.com](http://www.yahoo.com)
  - [www.google.com](http://www.google.com)
  - [www.altavista.com](http://www.altavista.com)
  - [www.ipl.org](http://www.ipl.org)
- Websites:
  - <http://www.LWWW.com>
  - <http://www.fleshandbones.com.imagebank> (for illustrative animations and diagrams)
  - <http://www.biology.arizona.edu/biochemistry.html>
  - <http://web.indstate.edu/thcme/mking/subjects.html>

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Pamela C Champe; Richard A Harvey; Denise R Ferrier	2005	Lippincott's Illustrated Reviews: Biochemistry 3 <sup>rd</sup> edition	Lippincott's Williams & Wilkins.

**Assessment Scheme**

<b>Tool</b>	<b>Purpose</b>
<b>1. Written Exams (midyear + final)</b> <ul style="list-style-type: none"> <li>• Short answer questions</li> <li>• Chart stimulation recall</li> <li>• Diagrammatic illustrations</li> <li>• Multiple choice questions MCQ</li> <li>• Problem solving</li> </ul>	Assessment of knowledge and understanding
<b>2. Oral Exams</b>	Assessment of knowledge and understanding
<b>3. Practical Exams</b>	Assessment of knowledge and understanding
<b>4. Formative Assessment by: Written quizzes - MCQ</b>	Assessment of knowledge and understanding

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours:**

Per week:

• Lectures:	2 hrs.
• Lab:	2 hrs.
Total class contact hours per term	30 hrs.
Total other study hours per term	30 hrs.
Total study hours per term	60 hrs.

Preclinical Stage; Fifth Semester  
Course Outline

**Course Code :** RES 351

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Operative Dentistry Technology

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Faten Kamel

**Level:** 3

**Credit Hours:** 3

**Prerequisites:** RES 241, PRS 241

### AIMS

This is a preclinical course extending over three semesters designed to introduce the student to the science of operative dentistry. The second semester deals with the properties, characteristics and handling of the most commonly used dental materials, enabling the student to acquire the knowledge and skills necessary for the diagnosis and treatment of carious lesions.

### SYLLABUS

Topics
Instruments and instrumentation Cement bases and liners. Tooth form and occlusion. Amalgam restorations.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand and explore the basic principles of cavity preparation.
- Understand tooth form and occlusion in relation to operative dentistry.

#### Skills

- Ability to prepare cavities for all types of fillings.
- Ability to manipulate different cements and lining materials.
- Ability to perform amalgam restorations.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Pre-clinical Lab sessions.

### Reference Text

Author	Date	Title	Publisher
James B. Summitt, J. William Robbins, Richard S. Schwartz	2001	Fundamentals of Operative Dentistry, A Contemporary Approach, 2 <sup>nd</sup> ed.	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Theodore M. Roberson, Harold O. Heymann, Edward J. Swift Jr	2001	Sturdevant's Art & Science of Operative Dentistry, 4 <sup>th</sup> ed.	Mosby-Year Book
Avishai Sadan	2004	Quintessence of Dental Technology	Quintessence Publishing
John A. Sorensen	2001	Quintessence of Dental Technology	Quintessence Publishing
Lloyd Baum, Ralph W. Phillips, Melvin R. Lund	1995	Textbook of Operative Dentistry	W.B. Saunders Company

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.  
 Practical Lab exam to test their manual dexterity and skills in cavity preparation and filling.  
 Oral exam to assess their communication skills and problem-solving abilities.  
 Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	1 hr
Lab:	4 hrs

Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75

Preclinical Stage; Fifth Semester  
Course Outline

**Course Code:** PRS 351

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Fixed Prosthodontics Technology

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Hisham A. Katamish

**Level:** 3

**Credit Hours:** 3

**Prerequisites:** PRS 231, HPT 121

### AIMS

The preclinical lecture and laboratory course is concerned with beginning to appreciate and recognize the principles and techniques of tooth preparation for Fixed Prosthodontics. It also acquaints and trains the student in the laboratory work and techniques required in the field of Fixed Prosthodontics.

### SYLLABUS

Topics
Terminology and Classification Instruments and Sterilisation Principles of Tooth Reduction. Finish Lines. Full Metal Cast Crown, Preparation. Different Alloys Used for Casting. Full Metal Cast Crown, Construction.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Develop an understanding of the basic principles of fixed prosthodontics.
- Recognize and understand the basic principles of preparation and laboratory techniques of cast metal fixed Prosthodontics.

#### Skills

- Ability to prepare teeth for crown and bridge work.
- Ability to prepare different finish lines of crown preparations.
- Enhanced manual dexterity and carving ability.

#### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Pre-clinical Lab sessions.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Sumiya Hobo, Lowell D. Whitsett, Richard Jacobi, Susan E. Brackett, Herbert T. Shillingburg Jr	1997	Fundamentals of fixed prosthodontics, 3 <sup>rd</sup> ed.	Quintessence Publishing
Herbert T. Shillingburg	1981	Fundamentals of Fixed Prosthodontics	Quintessence Pub Co

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical Lab exam to test their manual dexterity and skills in tooth preparation for crowns and in different crown and bridge laboratory procedures.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Lab:	4 hrs

Total class contact hours per semester: 15

Total other study hours per semester: 60

Total study hours per semester: 75

Preclinical Stage; Fifth Semester  
Course Outline

**Course Code:** PRS 352

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Removable Prosthodontics Technology

**Department:** Prosthodontics Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Nadia Abbas

**Level:** 3

**Credit Hours:** 3

**Prerequisites:** PRS 242

### AIMS

The fifth semester course is designed to emphasize skills and experience in laboratory procedures and techniques involved in complete denture construction. It provides an introduction to basic concepts of clinical procedures including diagnosis and treatment planning, as well as related biological and mechanical factors that should be incorporated for living tissues to be compatible with complete dentures.

### SYLLABUS

Topics
Selection of artificial teeth.
Setting-up of artificial teeth.
Processing, finishing, polishing and insertion of complete dentures.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Further understand the principles of complete denture construction.
- Understand the principles of setting up teeth for complete dentures.
- Understand the processing and finishing of complete dentures.

#### Skills

- Ability to set up teeth for complete dentures.
- Ability to fabricate, finish and polish complete dentures.
- Enhanced manual dexterity.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Pre-clinical Lab sessions.

### Reference Text

Author	Date	Title	Publisher
George A. Zarb, Charles L. Bolender, Gunnar E. Carlsson, Carl O. Boucher	1997	Boucher's Prosthodontic Treatment for Edentulous Patient	C.V. Mosby
Alan B. Carr, Glen P. McGivney, David T. Brown	2004	McCracken's Removable Partial Prosthodontics	Mosby-Year Book

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical Lab exam to test their manual dexterity and skills in different removable prosthodontics laboratory procedures.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Lab:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75



**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical Lab exam to test their manual dexterity and skills in root canal preparation and filling.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hr
Lab:	2 hrs

Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

Preclinical Stage; Fifth Semester  
Course Outline

**Course Code:** SGS 351

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** General Pathology

**Department:** Pathology Department, MSA University

**Course Coordinator:** Professor Bahaa Ehab

**Level:** 3

**Credit Hours:** 3

**Prerequisites:** SGS 244, SGS 245

### AIMS

The course introduces students to the concepts of cell injury, the principles of inflammation and repair, fluid derangements, developmental disorders, genetic, environmental and nutritional diseases and common infectious diseases. Emphasis is placed on understanding how changes in the general health of patients may affect the oral and head and neck regions, and how this may relate to the clinical practice of dentistry.

### SYLLABUS

Topics
Concepts of cellular injury.
Inflammation and repair.
Circulatory disturbances
Pulmonary disturbances
Immunity and hypersensitivity

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basic pathogenesis of disease and the mechanisms of inflammation and repair.
- Understand the mechanism and pathogenesis of neoplasia.
- Understand the basis of genetic and developmental disorders.
- Be familiar with the pathological features and dental relevance of common disorders of the major organ systems.

#### Skills

- Ability to identify diseased human tissues.
- Ability to use the light microscope to differentiate diseased human tissues.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

### Reference Text

Author	Date	Title	Publisher
Ramzi S. Cotran, Stanley L. Robbins, Vinay Kumar	2002	Robbins' Basic Pathology, 7 <sup>th</sup> ed.	W.B. Saunders Co

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to morphologically and histologically identify various diseased organs and tissues.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	2 hrs
Lab:	2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

Preclinical Stage; Fifth Semester  
Course Outline

**Course Code:** SGS 352

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Pharmacology

**Department:** Pharmacology Department, Faculty of Pharmacy, MSA

**Course Coordinator:** Professor Amani El Brairy

**Level:** 3

**Credit Hours:** 2

**Prerequisites:** SGS 242

### AIMS

Pharmacology course is divided into two phases. The first phase includes a thorough study of basic concepts and principles in pharmacology using mainly prototype drugs. Emphasis is placed on the mechanism of action of drugs, their medicinal uses and side effects. The second phase deals with clinical aspects of therapeutics, pharmacokinetics and pharmacodynamics for drugs acting on different organ systems considering drug interactions, indications and contra-indications

### SYLLABUS

Topics
Renal pharmacology.
Drugs acting on the cardiovascular system.
Drugs acting on the central nervous system.
Drugs acting on endocrine glands.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basic properties of therapeutic drugs used to treat diseases affecting the oral cavity.
- Understand how drugs may be used to treat and prevent disease.
- Have adequate knowledge about legislations concerning the supply of drugs and medicines.
- Assess and appraise contemporary information on the significance and effect of drugs and other medicaments, taken by the patient, on dental treatment.

#### Skills

- Ability to properly select drugs.
- Ability to avoid undesirable drug interactions.

#### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.
- Ability to write a prescription.

#### Websites:

[www.medbioworld.com.cgi](http://www.medbioworld.com.cgi)

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Goodman, Louis	1992	The Pharmacological Basis of Therapeutics	McGraw Hill, Health Professions Division
G. Katzung	2003	Basic and Clinical Pharmacology	McGraw Hill Companies

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to perform simple pharmacological tests and experiments.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours Per Week:**

Lectures:	1 hr
Lab:	2 hrs

Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

Preclinical Stage; Second Semester  
Course Outline

<b>Course Code:</b> SGS 353	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Principles of Genetics	
<b>Department:</b> Botany Department, Faculty of Science, Cairo University.	
<b>Course Coordinator:</b> Professor Fat'heya Zahraan	
<b>Level:</b> 1	<b>Credit Hours:</b> 1
<b>Prerequisites:</b> None	

### AIMS

The course aims to provide students with a strong basic knowledge of the two major areas of modern genetics: molecular genetics and population genetics. This course helps students appreciate the recent advances in the field of molecular diagnosis of human disease and the biotechnological revolution.

Aims for this course include:

- To emphasise the application of scientific concepts and principles of human genetics.
- To demonstrate the patterns of inheritance in humans.
- To introduce simple quantitative genetics, looking at genetic variation, gene frequencies and heritability of traits at the population level.
- To show how the genetic makeup of an individual can either directly or indirectly influence the development of disease.
- To describe the clinical applications of modern genetic techniques (e.g. diagnosis, treatment etc...)
- To describe the potential uses of the Human Genome Project data.
- To explore the ethical issues raised by genetic technology.

### SYLLABUS

Topics
Principles of Genetics Cell Division and Reproduction, Mitosis, Meiosis, Human Chromosomes, DNA Structure, DNA Replication, The Genetic Code, Protein Synthesis, Transcription, Translation, Mutations and Gene Regulation.
Mendelian Inheritance Mendel's Laws, Exceptions to Mendel's Rules, Incomplete Dominance, Quantitative Inheritance, Multiple Alleles, Gene Linkage, and Sex-Linked Traits.
Genes and Diseases Genetic characteristics of inherited diseases, Chromosome aberrations, Monogenic diseases, Polygenic diseases, Inheritance rules for human genetic diseases, Inheritance process in monogenic diseases, Family Pedigree, Autosomal dominant inheritance process, Autosomal recessive inheritance process, X chromosome inheritance (sex-linked inheritance) and Inheritance process in polygenic diseases.
Identification of Inherited Diseases Conventional genetic tests, Phenotype analysis, Chromosome analysis and Karyotyping
Molecular Characterization of Human Genetics Disorders Human Genome, Identification of Genetic Disorders, Recombinant DNA, DNA Libraries, Gel Electrophoresis, Polymerase Chain Reaction, DNA Sequencing, Gene Therapy.

## Learning Outcomes

### Knowledge

Upon completing this course, successful students will:

- Have gained an understanding of the pivotal role played by the gene in living organisms.
- Have gained an appreciation of classical Mendelian inheritance patterns along with the role of recombination and linkage in humans.
- Appreciate the nature of interactions between genes and the influence of gene interaction on inheritance patterns.
- Gained an understanding of how genetic information is inherited and analysed and how predictions of outcome can be statistically assessed.
- Appreciate the dynamic nature of genes in populations and understand how mutations influence evolution or diseases.
- Be able to take or develop an informed interest in matters of scientific importance and recognize the usefulness and limitations of advances in human genetics research.

### Skills

- Be able to discuss the molecular aspects of chromosome and gene structure, how genes are replicated, expressed and regulated.
- Execute and analyze genetic concepts and interactive experiments.

### Reference Text

Author	Date	Title	Publisher
Regenauer, Achim	1998	Genetics Basis for medicine in the 21 <sup>st</sup> century	Munich Reinsurance Company
Bryan, Jenny	1997	Genetic Engineering.	Raintree Steck-Vaughn
Marshall, Elizabeth L.	1996	The Human Genome Project: Cracking the Code Within Us.	Franklin Watts

The course leader will distribute handouts and a digital copy on CD-ROM at the beginning of the semester. New package of educational tools that cover the whole curriculum of the course will be included in the CD and will be easily accessible using the University website with links to web-based resources.

### Supplementary Reading:

Author	Date	Title	Publisher
Silverstein, Alvin, and others.	2002	DNA.	21st Century
Davies, Kevin.	2001	Cracking the Genome: Inside the Race to Unlock Human DNA.	Free Press
Nightingale, Elena O., M.D.; and Melissa Goodman.	1990	Before Birth: Prenatal Testing for Genetic Disease.	Harvard University Press

### Teaching / Learning strategies

The teaching approach implemented in this course has been adopted in recognition of the need for students to develop skills that will be of long-term value in an increasingly technological world. The learning outcomes of this course are consistently evaluated using quizzes that are completed by each student, graded, and discussed in class and/or individually.

### Assessment Scheme:

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Three hours final exam to assess their core theoretical knowledge.

85

**Assessment Pattern:**

In Course Tests and Quizzes:	20%
Midterm Exam	10%
End of Semester Written Exam	70%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours**

**Per week:**

Lectures 1 hr

Total class contact hours per semester: 15

Total other study hours per semester: -

Total study hours per semester: 15

**Preclinical Stage; Fifth Semester  
Course Outline**

<b>Course Code:</b> OMD 351	
<b>Campus:</b> Faculty of Dentistry (MSA)	
<b>Course Title:</b> Oral Radiology (Fundamentals)	
<b>Department:</b> Department of Oral Medicine and Periodontology, Oral Radiology and Oral Diagnosis, Faculty of Dentistry, MSA	
<b>Course Coordinator:</b> Professor Mouchira Salah-Eldin Mostafa	
<b>Level:</b> 3	<b>Credit Hours:</b> 2
<b>Prerequisites:</b> SGS 113	

### AIMS

The course teaches the fundamentals of x-ray generation physics, radiographic image production, and radiographic techniques. It also stresses the biological effects of radiation and radiation hygiene, and ways of protection from radiation.

### SYLLABUS

	<b>Topics</b>
Physics	<ul style="list-style-type: none"> <li>• Fundamental properties of matter, types of radiation</li> <li>• Basic physics of x-ray machine and x-ray production</li> </ul>
Radiation hazards and protection	<ul style="list-style-type: none"> <li>• Radiographic image quality and factors affecting it</li> <li>• Biological effects of radiation</li> <li>• Risks of radiation</li> <li>• Different types of doses and monitoring devices</li> </ul>
Image receptors	<ul style="list-style-type: none"> <li>• Principles of radiation protection</li> <li>• Dental x-ray film</li> <li>• Intensifying screen</li> <li>• Cassettes</li> </ul>
Intra-oral radiographic techniques	<ul style="list-style-type: none"> <li>• Periapical</li> <li>• Bitewing</li> <li>• Occlusal</li> <li>• Object localization techniques</li> </ul>
Processing	<ul style="list-style-type: none"> <li>• Manual</li> <li>• Automatic</li> <li>• Dark room requirements</li> </ul>

### Learning Outcomes

#### Knowledge and Understanding

Upon completing this course, students will be able to:

- Explain the principles of x-ray generation and the process of production of radiographic images.
- List the hazards of radiation, the principles of dose reduction, the protection of patients and health care personnel, and legislation appropriate to practice dental radiography in general dental practice.
- Identify the criteria of radiographic selection and image receptor types.
- Describe the techniques for undertaking and processing intra-oral radiographs.
- Recognize different pitfalls of radiographs, their causes and how they could be prevented.

## Skills

### Intellectual Skills:

- Take proper decisions concerning the need for radiographic taking and apply proper patient protection procedures.
- Choose the proper intra-oral technique and receptor type to satisfy the diagnostic needs.

### Manual Skills:

- Prescribe, take and process different types of intra-oral radiographs.

### Behavior and Attitude:

- Improve the students' awareness of the dentist's responsibility to minimize the radiation dose to the patient and environment.

Encourage good representation and self-determination.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

## Reference Text

Author	Date	Title	Publisher
Eric Whaites	2002	Essentials of Dental Radiography and Radiology, 3 <sup>rd</sup> ed	Churchill Livingstone
Norman K. Wood	1999	Review of Diagnosis, Oral Medicine, Radiology, and Treatment Planning, 4 <sup>th</sup> ed	C.V. Mosby

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

### Assessment Scheme:

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to interpret radiographic features, differentially diagnose oral and dental conditions from radiographs, and to take intra-oral radiographs.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

### Assessment Pattern:

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

### Learning Unit Contact Hours Per week:

Lectures:	1 hr
Clinic:	2 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

Preclinical Stage; Sixth Semester  
Course Outline

**Course Code:** RES 361

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Operative Dentistry Technology

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Faten Kamel

**Level:** 3

**Credit Hours:** 3

**Prerequisites:** RES 351

### AIMS

This is an extension of the second course in which the student is trained to prepare cavities for and insert cast restorations and tooth-coloured aesthetic restorations. The student will also review and prepare cavities for other restorations that he received training upon in the second course in preparation for the next clinical course that will be delivered in the following semester.

### SYLLABUS

Topics
Cast restorations. Direct tooth-coloured restorations.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand and explore the basic principles of cast restorations in operative dentistry.
- Understand the basic principles of preparing cavities and inserting direct tooth-coloured restorations.

#### Skills

- Ability to prepare cavities for cast restorations.
- Ability to manipulate and insert direct tooth-coloured filling materials.
- Acquire enhanced manual dexterity in handling instruments used in operative dentistry.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Pre-clinical Lab sessions.

### Reference Text

Author	Date	Title	Publisher
James B. Summitt, J. William Robbins, Richard S. Schwartz	2001	Fundamentals of Operative Dentistry, A Contemporary Approach, 2 <sup>nd</sup> ed.	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Theodore M. Roberson, Harold O. Heymann, Edward J. Swift Jr	2001	Sturdevant's Art & Science of Operative Dentistry, 4 <sup>th</sup> ed.	Mosby-Year Book
Avishai Sadan	2004	Quintessence of Dental Technology	Quintessence Publishing
John A. Sorensen	2001	Quintessence of Dental Technology	Quintessence Publishing
Lloyd Baum, Ralph W. Phillips, Melvin R. Lund	1995	Textbook of Operative Dentistry	W.B. Saunders Company

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical Lab exam to test their manual dexterity and skills in cavity preparation and filling.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Lab:	4 hrs

Total class contact hours per semester: 15

Total other study hours per semester: 60

Total study hours per semester: 75

Preclinical Stage; Sixth Semester  
Course Outline

**Course Code:** PRS 361

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Fixed Prosthodontics Technology

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Hisham A. Katamish

**Level:** 3

**Credit Hours:** 3

**Prerequisites:** PRS 351

### AIMS

The preclinical lecture and laboratory course is concerned with beginning to appreciate and recognize the principles and techniques of tooth preparation for Fixed Prosthodontics. It also acquaints and trains the student in the laboratory work and techniques required in the field of Fixed Prosthodontics.

### SYLLABUS

Topics
All Ceramic Crown, Preparation.
All Ceramic Crown, Construction.
Veneered Metal Crown, Preparation.
Impression Materials and Techniques.
Working Cast and Dies.
Occlusion and Bite Registration.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Develop an understanding of the basic principles of ceramic and veneered crown preparation and construction.
- Recognize and understand the basic principles of impression materials and techniques

#### Skills

- Ability to prepare teeth for ceramic and veneered crown and bridge work.
- Ability to manipulate different impression materials.
- Enhanced manual dexterity and carving ability.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Pre-clinical Lab sessions.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Sumiya Hobo, Lowell D. Whitsett, Richard Jacobi, Susan E. Brackett, Herbert T. Shillingburg Jr	1997	Fundamentals of fixed prosthodontics, 3 <sup>rd</sup> ed.	Quintessence Publishing
Herbert T. Shillingburg	1981	Fundamentals of Fixed Prosthodontics	Quintessence Pub Co

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical Lab exam to test their manual dexterity and skills in tooth preparation for crowns and in different crown and bridge laboratory procedures.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Lab:	4 hrs

Total class contact hours per semester: 15

Total other study hours per semester: 60

Total study hours per semester: 75



**Supplementary Reading:**

Author	Date	Title	Publisher
Rodney D. Phoenix, David R. Cagna, Charles F. Defreest, Kenneth L. Clinical Removable Partial Prosthodontics Stewart	2002	Stewart's Clinical Removable Partial Prosthodontics	Quintessence Publishing
George A. Zarb, Charles L. Bolender, Steven E. Eckert, Aaron H. Fenton, Rhonda F. Jacob, Regina Mericske-Stern	2003	Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant-Supported Prosthodontics, 12 <sup>th</sup> ed	C.V. Mosby

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical Lab exam to test their manual dexterity and skills in different removable prosthodontics laboratory procedures.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Lab:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75

## Preclinical Stage; Sixth Semester Course Outline

**Course Code:** HPT 361

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Pathology

**Department:** Department of Histopathology, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Mamdouh M. Abdel-Latif

**Level:** 3

**Credit Hours:** 4

**Prerequisites:** HPT 241, SGS 351

### AIMS

This is a course dealing with dental and para-dental lesions and diseases. It deals with the aetiology, incidence, clinical, radiographic and histopathological aspects and prognosis of such lesions. It also touches on the management of such lesions where relevant.

### SYLLABUS

Topics
Developmental disturbances of teeth and calcified dental tissues.
Dental caries, aetiology, clinical, radiographic and histopathological features.
Diseases of the dental pulp and periapical tissues.
Spread of dental infection.
Cysts of the jaws, oral and para-oral region.
Odontogenic tumours.
Regressive changes of the teeth

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- A thorough understanding of the basics of human dental and para-dental affections.
- Knowledge of the pathogenesis and classification of dental diseases.
- Knowledge of the aetiology and processes of dental diseases.
- Knowledge of the causes and effects of dental diseases needed for their prevention, diagnosis and management.
- Recognize odontogenic tumours, neoplasms, and cysts of oral cavity.

#### Skills

- Ability to clinically and histologically identifying different dental diseases and malformations.
- Ability to use the microscope in identifying dental diseased tissues.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Reference Text**

Author	Date	Title	Publisher
Abdel-Latif, M.; Farag, H. and Wali, M.	2010	Oral Pathology for Dental Students, Part I	MSA Pess
Robert P. Langlais, Craig S. Miller	2002	Colour Atlas of Common Oral Diseases	Lippincott Williams & Wilkins

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
R. A. Cawson, E. W. Odell	2002	Cawson's Essentials of Oral Pathology and Oral Medicine, 7 <sup>th</sup> ed	Churchill Livingstone
Douglas D. Damm, Carl M. Allen, Jerry E. Bouquot, Brad W. Neville, Brad W. Neville	2001	Oral & Maxillofacial Pathology	W. B. Saunders
Joseph A. Regezi, James J. Sciubba, Richard C. K. Jordan	2002	Oral Pathology: Clinical Pathologic Correlations	W. B. Saunders

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to identify morphologically and histologically various diseased oral and dental tissues and structures.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	10%
Oral Exam	30%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	3 hrs
Lab:	2 hrs
Total class contact hours per semester:	45
Total other study hours per semester:	30
Total study hours per semester:	75

Preclinical Stage; Sixth Semester  
Course Outline

**Course Code:** SGS 361

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** General Pathology

**Department:** Pathology Department, Faculty of Medicine, Cairo University

**Course Coordinator:** Professor Bahaa Ehab

**Level:** 3

**Credit Hours:** 3

**Prerequisites:** SGS 351

### AIMS

The course introduces students to the concepts of growth disorders, neoplasia, and cardiac, pulmonary and renal disorders. Specific bacterial infections and viral infections are also discussed. Emphasis is placed on understanding how changes in the general health of patients may affect the oral and head and neck regions, and how this may relate to the clinical practice of dentistry.

### SYLLABUS

Topics
Disorders of growth Neoplasia. Developmental and genetic mechanisms of disease. Nutritional diseases. Specific infectious diseases. Viral infections.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand the basic pathogenesis of disease and the mechanisms of inflammation and repair.
- Understand the mechanism and pathogenesis of neoplasia.
- Understand the basis of genetic and developmental disorders.
- Be familiar with the pathological features and dental relevance of common disorders of the major organ systems.

#### Skills

- Ability to identify diseased human tissues.
- Ability to use the light microscope to differentiate diseased human tissues.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

### Reference Text

Author	Date	Title	Publisher
Ramzi S. Cotran, Stanley L. Robbins, Vinay Kumar	2002	Robbins' Basic Pathology, 7 <sup>th</sup> ed.	W.B. Saunders Co

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to morphologically and histologically identify various diseased organs and tissues.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	2 hrs
Lab:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Preclinical Stage, Sixth Semester Course Outline

**Course Code:** POD 361

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Orthodontics-1

**Department:** Department of Paedodontics and Orthodontics

**Course Coordinator:** Dr Wael Attia

**Level:** 3

**Credit Hours:** 2

**Prerequisites:** HPT 231, HPT 241

### AIMS

The course prepares the student to clinically manage patients with orthodontic problems by developing his skills in biomechanics and mechanical therapy. Emphasis will be laid on the biological and technological principles of orthodontic tooth movement. Laboratory sessions are included to demonstrate and develop most of the technical skills required for the graduate to be able to provide limited clinical orthodontic treatment. Laboratory exercises involve banding, bonding, soldering, welding, bracket positioning, wire bending, ligating and establishment of anchorage.

### SYLLABUS

Topics
Introduction to development and growth of the face and jaws.
Development of normal occlusion.
Malocclusion.
Occlusal radiographs.
Classification of normal occlusion and malocclusion.
Aetiologic factors of malocclusion.
Orthodontic diagnosis.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Show a deep understanding of the basics of normal occlusion.
- Understand and evaluate the role of orthodontics in overall patient care.
- Understand the appropriate timing of interventions and what they are likely to be.
- Know when and which cases to refer to specialist advice and care.

#### Skills

- Ability to properly diagnose and manage simple orthodontic problems.
- Ability to fabricate simple orthodontic appliances.
- Acquire and enhance the skills and manual dexterity needed to manage orthodontic cases.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab work to acquire and enhance manual dexterity.
- Clinic to apply the principles related in the theoretical part.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
William R. Proffit, Henry W. Fields	2000	Contemporary Orthodontics	C.V. Mosby
Robert E Moyers	1973	Handbook of Orthodontics for the Student and General Practitioner	Year Book Medical Publishers

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical exam to test their abilities and dexterity in wire bending and fabricating simple orthodontic appliances.

Clinical exam to assess their ability to diagnose different orthodontic cases.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	1 hr
Clinic:	2 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

**Preclinical Stage; Sixth Semester  
Course Outline**

**Course Code:** OMD 361

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Radiology (Techniques)

**Department:** Department of Oral Medicine and Periodontology, Oral Radiology and Oral Diagnosis, Faculty of Dentistry, MSA

**Course Coordinator:** Dr Naglaa Abdel-Wahed

**Level:** 3

**Credit Hours:** 2

**Prerequisites:** OMD 351

### AIMS

The course further teaches the principles of radiographic image production; extra-oral radiographic techniques, panoramic radiography and alternative techniques. It also teaches the normal radiographic anatomy and ways of radiographic interpretation. It provides knowledge about uses of lasers in dentistry and radiotherapy.

### SYLLABUS

<b>Topics</b>	
Intra-Oral Anatomical Landmarks	<ul style="list-style-type: none"> <li>• Maxillary</li> <li>• Mandibular</li> </ul>
Extra-Oral Radiography	<ul style="list-style-type: none"> <li>• Techniques</li> <li>• Anatomical landmarks</li> </ul>
Panoramic Radiography	<ul style="list-style-type: none"> <li>• Principle of tomography</li> <li>• Anatomical landmarks</li> <li>• Faults during radiography</li> </ul>
Alternative And Specialized Imaging Modalities	<ul style="list-style-type: none"> <li>• DR</li> <li>• CT</li> <li>• US</li> <li>• MRI</li> <li>• Contrast radiography</li> <li>• Nuclear imaging</li> </ul>
Interpretation	<ul style="list-style-type: none"> <li>• Principles of radiographic interpretation</li> <li>• Radiographic interpretation related to the teeth and their supporting structures</li> <li>• Traumatic injuries</li> </ul>
Lasers In Dentistry	
The Effect Of Radiotherapy On Oro-Dental Strictures	

### Learning Outcomes

Upon completing this course, students will be able to:

#### Knowledge and Understanding:

- State the criteria of radiographic technique selection and image receptor types.
- Identify the techniques for undertaking and processing extra-oral and panoramic radiographs.
- List the alternative techniques to conventional radiography.
- Describe the normal radiographic anatomy.
- Summarize the basics of radiological interpretation.
- Distinguish lesions related to the teeth and their supporting structures and traumatic injuries.
- Recognize the applications of laser in dentistry, as well as the effects of radiotherapy on oral- and para-oral structures.

**Skills:****Intellectual Skills:**

- Take proper decisions concerning the need for radiographic taking and apply proper patient protection procedures.
- Choose the proper radiographic technique and receptor type to satisfy the diagnostic needs.
- Critically appraise and evaluate the use of oral radiology in the differential diagnosis of diseases and lesions of the oral and para-oral region.

**Manual Skills:**

- Prescribe, take and process different types of radiographs related to the head and neck area.
- Interpret and write informative reports on the findings of radiographs.

**Behavior and Attitude:**

- Improve the students' awareness of the dentist's responsibility to minimize the radiation dose to the patient and environment.

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

Author	Date	Title	Publisher
Eric Whaites	2002	Essentials of Dental Radiography and Radiology, 3 <sup>rd</sup> ed	Churchill Livingstone
Norman K. Wood	1999	Review of Diagnosis, Oral Medicine, Radiology, and Treatment Planning, 4 <sup>th</sup> ed	C.V. Mosby

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to interpret radiographic features, differentially diagnose oral and dental conditions from radiographs, and to take intra-oral radiographs.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	1 hr
Clinic:	2 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

## Clinical Stage; First Semester Course Outline

**Course Code:** RES 411

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Operative Dentistry

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Faten Kamel

**Level:** 4

**Credit Hours:** 3

**Prerequisites:** All Preclinical Stage courses

### AIMS

The course is continuous over four semesters. The first semester course introduces the student to the clinical application of skills acquired in the preclinical year. Instruction is focused on early development of diagnosis and treatment planning skills, along with the execution of basic restorative dental treatment.

### SYLLABUS

Topics
Patient reception, operating positions and field preparation.
Patient examination, assessment, diagnosis and treatment planning.
Sterilization and hygiene in the dental clinic.
Moisture control of the operative field.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Develop a deeper understanding of the principles necessary to provide patients with restorative operative dentistry.
- Critically examine and reflect upon the principles of diagnosing, treatment planning, and execution of treatment for patients suffering from dental caries.

#### Skills

- Ability to prepare different types of cavities and fillings for patients suffering from caries.
- Ability to perform proper sterilisation, oral hygienic procedures.
- Ability to perform moisture control in the operative field.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

Author	Date	Title	Publisher
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone
Jean-Francois Roulet, Nairn H. F. Wilson, Massimo Fuzzi	2001	Advances in Operative Dentistry: Contemporary Clinical Practice, Vol. I	Quintessence Publishing
Jean-Francois Roulet, Nairn H. F. Wilson, Massimo Fuzzi	2001	Advances in Operative Dentistry: Challenges of the future, Vol. II	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Kidd, E.A.M.	2003	Pickard's Manual of Operative Dentistry, 8 <sup>th</sup> ed	Oxford University Press
Theodore M. Roberson, Harold O. Heymann, Edward J. Swift Jr	2001	Sturdevant's Art & Science of Operative Dentistry	Mosby-Year Book

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various operative dentistry procedures, cavity preparation and filling.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	1 hr
Clinic:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75



**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone
Herbert T. Shillingburg Jr, Sumiya Hobo, Lowell D. Whitsett, Richard Jacobi, Susan E. Brackett	1997	Fundamentals of Fixed Prosthodontics	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various crown and bridge procedures, tooth preparation and impression taking.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Clinic:	2 hrs

Total class contact hours per semester: 15

Total other study hours per semester: 30

Total study hours per semester: 45

## Clinical Stage; First Semester Course Outline

**Course Code:** PRS 412

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Removable Prosthodontics

**Department:** Prosthodontics Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Nadia Abbas

**Level:** 4

**Credit Hours:** 3

**Prerequisites:** All Preclinical Stage courses

### AIMS

The removable prosthodontics course is continuous over four semesters. The first semester course introduces the student to the clinical application of skills acquired in the preclinical year. Instruction is focused on early development of diagnosis and treatment planning skills, along with the execution of complete denture prosthodontics. The course includes a detailed step by step of clinical procedures and impression materials and techniques for complete dentures, as well as problems that may be met and after care.

### SYLLABUS

Topics
Diagnosis and treatment planning for complete removable prosthodontics.
Impression taking for complete dentures.
Recording jaw relationship.
Face bow record and mounting on an articulator.
Setting of teeth and occlusion.
Denture delivery and after care.
Remounting, relining and rebasing.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Review and evaluate the principles necessary to provide patients with removable prosthodontics.
- Critically appraise the principles of diagnosing, treatment planning, and execution of treatment for completely edentulous patients.

#### Skills

- Ability to fabricate complete dentures for patients.
- Ability to manipulate different impression materials used in complete denture prosthodontics.
- Ability to communicate with dental laboratory technicians.

### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
James S. Brudvik	1999	Advanced Removable Partial Dentures	Quintessence Publishing
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Rodney D. Phoenix, David R. Cagna, Charles F. Defreest, Kenneth L.	2002	Stewart's Clinical Removable Partial Prosthetics	Quintessence Publishing
Carr, A.B.; McGivney, G.P.	2004	McCracken's Removable Partial Prosthodontics	C. V. Mosby
David W. Bartlett, Nigel F. Fisher	2003	Clinical Problem Solving in Prosthodontics	Churchill Livingstone

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various removable prosthodontics procedures, impression taking, bite registration, etc.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Clinic:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75

## Clinical Stage; First Semester Course Outline

**Course Code:** HPT 411

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Pathology

**Department:** Department of Histopathology, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Mamdouh M. Abdel-Latif

**Level:** 4

**Credit Hours:** 5

**Prerequisites:** HPT 361

### AIMS

This is a comprehensive course on oral and para-oral lesions and diseases. It deals with the aetiology, incidence, clinical, radiographic and histopathological aspects and prognosis of such lesions. It prepares the student for the clinical courses of oral surgery, and oral medicine. It also touches on the management of such lesions where relevant.

### SYLLABUS

Topics
Developmental disturbances of the face and jaws.
Benign neoplasms of the oral cavity.
Premalignant lesions of the oral cavity.
Malignant neoplasms of the oral cavity.
Bone diseases and neoplasms.
Salivary gland diseases and neoplasms.
Bacterial, mycotic and viral infections with oral manifestations.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Recognize oral tumours and neoplasms of oral and para-oral structures at an early stage.
- Understand diseases and neoplasms affecting the bones of the jaws.
- Understand diseases and neoplasms affecting the salivary glands.
- Understand the importance of and procedures for submitting specimens for laboratory pathological diagnosis and be able to interpret pathology diagnostic reports.

#### Skills

- Ability to clinically and histologically identifying oral diseases.
- Ability to use evidence based pathologic information in solving problems concerned with differential diagnosis of oral and para-oral lesions.
- Ability to use the microscope in identifying diseased tissues.

#### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Lab to apply those principles practically.

**Reference Text**

Author	Date	Title	Publisher
Abdel-Latif, M.; Farag, H. and Wali, M.	2010	Oral Pathology for Dental Students, Part II	MSA Pess
Robert P. Fick Langlais, Craig S. Miller, Craig S. Miller	2002	Color Atlas of Common Oral Diseases	Lippincott Williams & Wilkins

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
R. A. Cawson, E. W. Odell	2002	Cawson's Essentials of Oral Pathology and Oral Medicine, 7 <sup>th</sup> ed	Churchill Livingstone
Douglas D. Damm, Carl M. Allen, Jerry E. Bouquot, Brad W. Neville, Brad W. Neville	2001	Oral & Maxillofacial Pathology	W.B. Saunders
Joseph A. Regezi, James J. Sciubba, Richard C. K. Jordan	2002	Oral Pathology: Clinical Pathologic Correlations	W.B. Saunders

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Lab exam to test their ability to identify morphologically and histologically various diseased oral and dental tissues and structures.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	10%
Oral Exam	30%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	2 hrs
Lab:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Clinical Stage; First Semester Course Outline

**Course Code:** SGS 411

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** General Medicine

**Department:** General Medicine Department, Faculty of Medicine, Cairo Univ.

**Course Coordinator:** Professor Sherif El-Degwi

**Level:** 4

**Credit Hours:** 2

**Prerequisites:** All Preclinical Stage courses

### AIMS

The course is aimed at teaching the student the principles of internal medicine as they pertain to provision of dental care. It focuses on the aetiology, incidence and treatment of diseases including cardiovascular diseases, pulmonary diseases, gastro-intestinal diseases, haematology, diseases of the endocrine system, neurological diseases and oncology. There is also a course on skin and venereal diseases and their oral manifestations.

### SYLLABUS

Topics
Diseases of the cardiovascular system.
Diseases of the pulmonary system.
Diseases of the gastro-intestinal system; liver diseases.
Diseases of the blood and blood-forming organs; HIV.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Develop an increasing awareness of the basics of internal medicine.
- Explore and reflect upon the relationship between internal medicine and the practice of dentistry.
- Develop effective communication skills with patients, their relatives and fellow medical practitioners.
- Be familiar with the pathological features and dental relevance of common disorders of the major organ systems.

#### Skills

- Ability to deal with patients suffering from systemic diseases such as cardiac and diabetic patients and communicate with patients affected by general diseases in the dental setting.
- Ability to take a proper medical history, especially concerning cardio-respiratory diseases, haemorrhagic disorders, allergy and drug therapy.
- Have knowledge about diagnosing medical emergencies and delivering suitable emergency drugs using, where appropriate, intravenous techniques.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinical rounds.

**Reference Text**

Author	Date	Title	Publisher
R. W Matthews	1983	Aids to Medicine for Dental Students	Churchill Livingstone

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Prasanna Sooriakumaran	2005	Key Topics In Human Diseases for Dental Students	Taylor & Francis Group
Crispian Scully, Roderick A. Cawson	1998	Medical Problems in Dentistry, 4 <sup>th</sup> ed	Butterworth-Heinemann

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to physically examine patients and diagnose certain medical conditions of importance to the dentist.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Oral Exam	30%
End of Semester Written Exam	50%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours Per Week:**

Lectures:	2 hrs
Clinical Round:	-
Total class contact hours per semester:	30
Total other study hours per semester:	-
Total study hours per semester:	30



**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Peter F. Lawrence, Peter F. Lawrence, Richard M. Bell, Merrill T. Dayton	2000	Essentials of General Surgery, 3 <sup>rd</sup> ed.	Lippincott Williams & Wilkins
D. MacLean, P.E. Preece	1986	Lecture Notes on Clinical Medicine and Surgery for Dental Students	Year Book Medical Pub

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to physically examine patients and diagnose certain surgical conditions of importance to the dentist.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Oral Exam	25%
End of Semester Written Exam	55% (40% Surgery +15% ENT & Ophthalmology)
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours Per Week:**

Lectures:	2 hrs
Clinical Round:	-
Total class contact hours per semester:	30
Total other study hours per semester:	-
Total study hours per semester:	30

## Clinical Stage; First Semester Course Outline

**Course Code:** OMD 411

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Medicine, Periodontology, Oral & Radiographic Diagnosis

**Department:** Department of Oral Medicine and Periodontology, Oral Radiology and Oral Diagnosis, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Fat'heya Zahraan

**Level:** 4

**Credit Hours:** 3

**Prerequisites:** All Preclinical Stage courses

### AIMS

The course aims at establishing didactic information, knowledge and skills necessary for effectively diagnosing and non-surgically treating patients suffering from systemic and/or other local diseases affecting the oral and the head and neck regions. The course also introduces students to the importance of periodontics as a dental discipline. Emphasis is placed on understanding the basic micro- and macro-anatomy of the healthy tissues of the periodontium as well as its physiology. In addition, the student will be introduced to the diseased periodontium with special emphasis on aetiology, epidemiology and clinical and histopathological aspects of the disease.

### SYLLABUS

#### Topics

Principles of oral diagnosis (the diagnostic method, methods of clinical examination, etc..)

Oral manifestations of skin diseases.

Oral manifestations of blood diseases.

Basic immunology and diseases of the immune system.

Laboratory investigations required in dental practice.

Differential diagnosis of oral lesions using radiography.

Management of oral manifestations of systemic diseases.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Obtain and record a detailed dental history including chief complaint and history of the present illness.
- Deeply understand and reflect on the theoretical perspectives necessary to provide patients with simple oral gingival and periodontal care.
- Have a sound understanding of the oral manifestations of various systemic diseases and their management.
- Have a sound understanding of the prevention and management of hypersensitivity reaction emergencies in the dental clinic.
- Understand and evaluate specific laboratory investigations in dental practice.
- Show awareness of the principles of providing and maintaining patient's oral hygiene.

#### Skills

- Perform a physical and oral examination to include head and neck, oral hard and soft tissues, vital signs, and recognise disease states and abnormalities including detrimental oral habits.
- Ability to scale, root plane and clean teeth.
- Ability to provide oral hygiene measures and instructions to patients.
- Ability to obtain and record a relevant medical history which identifies both the possible effects of

oral disease on medical well-being and the medical conditions that may affect oral health and dental treatment.

- Self-management and appropriate professional development skills.

### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

### Reference Text

Author	Date	Title	Publisher
Greenberg M.S. and Click, M.	2003	Burkitt's Oral Medicine, Diagnosis and Treatment, 10 <sup>th</sup> ed.	B. C. Decker
Crispian Scully, Roderick A. Cawson	1998	Medical Problems in Dentistry, 4 <sup>th</sup> ed.	Butterworth-Heinemann
Cawson, R.A., Bennie, W.H. and Eveson, J.W.	1995	Colour Atlas of Oral Diseases, 2 <sup>nd</sup> ed.	Mosby Wolfe
Thomas G., Jr. Wilson, Kenneth S. Kornman	2002	Fundamentals of Periodontics	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

### Assessment Scheme:

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability diagnose different oral diseases and to perform periodontal procedures.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

### Assessment Pattern:

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

### Learning Unit Contact Hours

#### Per week:

Lectures:	2 hrs
Clinic:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Clinical Stage; First Semester Course Outline

**Course Code:** OSA 411

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Surgery and Anaesthesia

**Department:** Oral Surgery Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Magid Amin M Ahmed

**Level:** 4

**Credit Hours:** 3

**Prerequisites:** All Preclinical Stage courses

### AIMS

The course is continuous over the four semesters. The first semester course provides the student with basic knowledge about oral and maxillofacial surgery as they relate to the general practitioner of dentistry. The course includes an overview of aseptic techniques, an introduction to surgical instruments, as well as principles of tooth extraction and minor oral surgery.

### SYLLABUS

Topics
<p>Diagnosis and treatment planning in oral surgery.</p> <p>Aseptic techniques.</p> <p>Sterilization and hygienic procedures.</p> <p>Preparation of the surgical field.</p> <p>Introduction to surgical instruments.</p> <p>Principles of local anaesthesia, drugs, solutions, techniques, complications and their management.</p> <p>Principles of tooth extraction and minor surgical procedures.</p>

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand and critically appraise the role of the oral surgeon in the management of patients with maxillofacial surgical problems.
- Be able to evaluate and formulate treatment plans for patients with complex surgical needs.
- Have knowledge of the principles of sterilisation, disinfection and asepsis.
- Evaluate all treatment outcomes, including the unexpected, and undertake remedial action where appropriate.

#### Skills

- Ability to administer local anaesthesia in all areas of the oral cavity and manage potential complications relating to its use.
- Ability to assess patients for and inform patients or their guardians of the indications, contraindications, limitations, risks and benefits of conscious sedation and general anaesthesia.
- Ability to perform difficult extractions of teeth.
- Ability to treat dental infections.
- Ability to administer first aid treatment to patients suffering from trauma.
- Ability to diagnose different oral lesions and refer them to the specialist concerned.

### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles / hospital rotation.
- Clinical seminars – problem-based learning.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Stanley F. Malamed	1996	Handbook of Local Anesthesia	C.V. Mosby
Edward Ellis, James Hupp, Myron Tucker, Larry Peterson	2002	Contemporary Oral and Maxillofacial Surgery	C.V. Mosby
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone
Bennett Rosenberg	2002	Medical Emergencies in Dentistry	W.B. Saunders

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability in diagnosing oral surgical conditions and in exodontia.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Clinic:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

Clinical Stage; Second Semester  
Course Outline

**Course Code:** RES 421

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Operative Dentistry

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Faten Kamel

**Level:** 4

**Credit Hours:** 3

**Prerequisites:** RES 411

### AIMS

This is the second semester course that introduces the student to the principles of dental cariology and its management. Instruction is also focused on health hazards that may be met with in the dental operating room. Instruction will also be given on the proper selection of restorative materials.

### SYLLABUS

Topics
Dental cariology. Management of deep caries. Temporary restorations. Health hazards in the operating room. Selection of restorative material.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Develop a deeper understanding of the principles of dental cariology.
- Critically examine and reflect upon the principles of diagnosing, treatment planning, and execution of treatment for patients suffering from deep dental caries.
- Use their knowledge of the properties of modern dental materials to select and use the appropriate materials for the treatment of different cases.

#### Skills

- Ability to prepare different types of cavities and fillings for patients suffering from caries, especially deep caries.
- Ability to manipulate different restorative materials.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

Author	Date	Title	Publisher
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone
Jean-Francois Roulet, Nairn H. F. Wilson, Massimo Fuzzi	2001	Advances in Operative Dentistry: Contemporary Clinical Practice, Vol. I	Quintessence Publishing
Jean-Francois Roulet, Nairn H. F. Wilson, Massimo Fuzzi	2001	Advances in Operative Dentistry: Challenges of the future, Vol. II	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Kidd, E.A.M.	2003	Pickard's Manual of Operative Dentistry, 8 <sup>th</sup> ed	Oxford University Press
Theodore M. Roberson, Harold O. Heymann, Edward J. Swift Jr	2001	Sturdevant's Art & Science of Operative Dentistry	Mosby-Year Book

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various operative dentistry procedures, cavity preparation and filling.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Clinic:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75



**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various crown and bridge procedures, tooth preparation and impression taking.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Clinic:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75

## Clinical Stage; Second Semester Course Outline

**Course Code:** PRS 422

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Removable Prosthodontics

**Department:** Prosthodontics Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Nadia Abbas

**Level:** 4

**Credit Hours:** 3

**Prerequisites:** PRS 412

### AIMS

The course will provide students with a full understanding of the sequence of procedures involved in the provision of removable partial dentures. Special attention will be given to principles of design, impression techniques, and problems met with in different classes of partial dentures. The course will also familiarise the student with the clinical records necessary to diagnose and design removable partial dentures. It will focus on the influence of biological and biomechanical factors related to partial denture design.

### SYLLABUS

#### Topics

Diagnosis and treatment planning for partial removable prosthodontics.  
Mouth preparation for receiving partial dentures.  
Impression making for partial dentures and altered cast technique.  
Partial denture jaw relation records.  
Partial denture insertion and after care.  
Problems in design of partial dentures.  
Repair and relining.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Review and evaluate the principles necessary to provide patients with removable partial prosthodontics.
- Critically appraise the principles of diagnosing, treatment planning, and execution of treatment for partially edentulous patients.
- Develop the ability to formulate and execute a treatment plan for patients with partial removable prosthodontic needs.

#### Skills

- Ability to fabricate partial dentures for patients.
- Ability to manipulate different impression materials used in removable partial prosthodontics.
- Ability to undertake mouth preparation prior to provision of removable partial prostheses.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

Author	Date	Title	Publisher
James S. Brudvik	1999	Advanced Removable Partial Dentures	Quintessence Publishing
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Rodney D. Phoenix, David R. Cagna, Charles F. Defreest, Kenneth L.	2002	Stewart's Clinical Removable Partial Prosthetics	Quintessence Publishing
Carr, A.B.; McGivney, G.P.	2004	McCracken's Removable Partial Prosthodontics	C. V. Mosby
David W. Bartlett, Nigel F. Fisher	2003	Clinical Problem Solving in Prosthodontics	Churchill Livingstone

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various removable prosthodontics procedures, impression taking, bite registration, etc.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Clinic:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75



**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
William R. Proffit, Henry W. Fields	2000	Contemporary Orthodontics	C.V. Mosby
Robert E Moyers	1973	Handbook of Orthodontics for the Student and General Practitioner	Year Book Medical Publishers

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Practical exam to test their abilities and dexterity in wire bending and fabricating simple orthodontic appliances.

Clinical exam to assess their ability to diagnose different orthodontic cases.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Clinic:	2 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

## Clinical Stage; Second Semester Course Outline

**Course Code:** SGS 421

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** General Medicine

**Department:** General Medicine Department, Faculty of Medicine, Cairo Univ.

**Course Coordinator:** Professor Sherif El-Degwi

**Level:** 4

**Credit Hours:** 3

**Prerequisites:** SGS 411

### AIMS

The course is aimed at teaching the student the principles of internal medicine as they pertain to provision of dental care. This course focuses on the aetiology, incidence and treatment of disease including diseases of the endocrine system, neurological diseases and oncology. There is also a course on skin and venereal diseases and their oral manifestations.

### SYLLABUS

Topics
Diseases of the nervous system.
Diseases of the endocrine glands.
Rheumatic and rheumatoid arthritis.
Skin and venereal diseases and their oral manifestations.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Develop an increasing awareness of the basics of internal medicine.
- Explore and reflect upon the relationship between internal medicine and the practice of dentistry.
- Develop effective communication skills with patients, their relatives and fellow medical practitioners.
- Be familiar with the pathological features and dental relevance of common disorders of the major organ systems.

#### Skills

- Ability to deal with patients suffering from systemic diseases such as cardiac and diabetic patients and communicate with patients affected by general diseases in the dental setting.
- Ability to take a proper medical history, especially concerning cardio-respiratory diseases, haemorrhagic disorders, allergy and drug therapy.
- Have knowledge about diagnosing medical emergencies and delivering suitable emergency drugs using, where appropriate, intravenous techniques.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinical rounds.

**Reference Text**

Author	Date	Title	Publisher
R. W Matthews	1983	Aids to Medicine for Dental Students	Churchill Livingstone

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Prasanna Sooriakumaran	2005	Key Topics In Human Diseases for Dental Students	Taylor & Francis Group
Crispian Scully, Roderick A. Cawson	1998	Medical Problems in Dentistry, 4 <sup>th</sup> ed	Butterworth-Heinemann

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to physically examine patients and diagnose certain medical conditions of importance to the dentist.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Quizzes	10%	
Midterm Exam	10%	
Clinical Exam	10%	
End of Semester Written Exam	55%	(40 + 15 dermatology and venereal)
Oral Exam	15%	
<b>Total</b>	<b>100%</b>	

**Learning Unit Contact Hours Per Week:**

Lectures:	2 hrs
Clinical Round:	2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60



**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Peter F. Lawrence, Peter F. Lawrence, Richard M. Bell, Merrill T. Dayton	2000	Essentials of General Surgery, 3 <sup>rd</sup> ed.	Lippincott Williams & Wilkins
D. MacLean, P.E. Preece	1986	Lecture Notes on Clinical Medicine and Surgery for Dental Students	Year Book Medical Pub

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to physically examine patients and diagnose certain surgical conditions of importance to the dentist.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%	
Midterm Exam	10%	
Clinical - Practical Exam	10%	
Oral Exam	15%	
End of Semester Written Exam	55%	(40 + 15 ENT & Ophthalmology)
<b>Total</b>	<b>100%</b>	

**Learning Unit Contact Hours****Per Week:**

Lectures: 2 hrs

Clinical Round: 2 hrs

Total class contact hours per semester: 30

Total other study hours per semester: 30

Total study hours per semester: 60

## Clinical Stage; Second Semester Course Outline

**Course Code:** OMD 422

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Medicine, Periodontology, Oral & Radiographic Diagnosis

**Department:** Department of Oral Medicine and Periodontology, Oral Radiology and Oral Diagnosis, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Fat'heya Zahraan

**Level:** 4

**Credit Hours:** 3

**Prerequisites:** OMD 411

### AIMS

This course introduces students to the importance of periodontics as a dental discipline. Emphasis is placed on understanding the basic micro- and macro-anatomy of the healthy tissues of the periodontium as well as its physiology. In addition, the student will be introduced to the diseased periodontium with special emphasis on aetiology, epidemiology and clinical and histopathological aspects of the disease.

### SYLLABUS

Topics
Macro- and micro-anatomy of the periodontium.
Diagnosis and treatment planning for periodontal problems.
Classification of periodontal disease.
Aetiology and pathogenesis of periodontal disease.
Diagnosis and prognosis of periodontal problems.
Plaque control.
Guided bone regeneration.
Drugs used in periodontal therapy.
Periodontal therapy (surgical, non-surgical, regenerative techniques and drugs used).

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Deeply understand and reflect on the theoretical perspectives necessary to provide patients with simple oral gingival and periodontal care.
- Show awareness of the principles of providing and maintaining patient's oral hygiene.

#### Skills

- Ability to scale, root plane and clean teeth.
- Ability to provide oral hygiene measures and instructions to patients.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Greenberg M.S. and Click, M.	2003	Burkitt's Oral Medicine, Diagnosis and Treatment, 10 <sup>th</sup> ed.	B. C. Decker
Crispian Scully, Roderick A. Cawson	1998	Medical Problems in Dentistry, 4 <sup>th</sup> ed.	Butterworth-Heinemann
Cawson, R.A., Bennie, W.H. and Eveson, J.W.	1995	Colour Atlas of Oral Diseases, 2 <sup>nd</sup> ed.	Mosby Wolfe
Thomas G., Jr. Wilson, Kenneth S. Kornman	2002	Fundamentals of Periodontics	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability diagnose different oral diseases and to perform periodontal procedures.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Clinic:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Clinical Stage; Second Semester Course Outline

**Course Code:** OSA 421

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Surgery and Anaesthesia

**Department:** Oral Surgery Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Magid Amin Mohamed Ahmed

**Level:** 4

**Credit Hours:** 3

**Prerequisites:** OSA 411

### AIMS

The course is continuous over the fourth and fifth years. The fourth year course provides the student with basic knowledge about oral and maxillofacial surgery as they relate to the general practitioner of dentistry. The course includes an overview of aseptic techniques, an introduction to surgical instruments, as well as principles of tooth extraction and minor oral surgery. The fifth year course is an overview of the specialty of oral and maxillofacial surgery. The student is introduced to the surgical management of congenital and acquired abnormalities of the oral structures and associated parts. He is trained in the management of odontogenic infections, cysts and tumours of the oral tissues, as well as the role of the dentist in the early diagnosis and in the care of head and neck cancer patients. He is trained in the diagnosis and management of facial fractures, particularly emergency care as far as the general practitioner is concerned.

### SYLLABUS

Topics
<p>Treatment planning for diseases of the oral cavity and related structures.</p> <p>Surgical management of congenital defects of the maxilla and mandible.</p> <p>Management of odontogenic infections and their sequelae.</p> <p>Cysts and tumours of the oral cavity and jaws and their surgical management.</p> <p>Management of patients suffering from cancer of the oral cavity and neck / reconstructive surgery.</p> <p>Fractures of the facial bones and their management.</p>

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand and critically appraise the role of the oral surgeon in the management of patients with maxillofacial surgical problems.
- Be able to evaluate and formulate treatment plans for patients with minor oral surgical needs.

#### Skills

- Ability to administer local anaesthesia in all areas of the oral cavity and manage potential complications relating to its use.
- Ability to assess patients for and inform patients or their guardians of the indications, contraindications, limitations, risks and benefits of conscious sedation and general anaesthesia.
- Ability to perform difficult extractions of teeth.
- Ability to treat dental infections.

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles / hospital rotation.
- Clinical seminars – problem-based learning.

**Reference Text**

Author	Date	Title	Publisher
Stanley F. Malamed	1996	Handbook of Local Anesthesia	C.V. Mosby
Edward Ellis, James Hupp, Myron Tucker, Larry Peterson	2002	Contemporary Oral and Maxillofacial Surgery	C.V. Mosby
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone
Bennett Rosenberg	2002	Medical Emergencies in Dentistry	W.B. Saunders

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability in diagnosing oral surgical conditions and in exodontia.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Clinic:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Clinical Stage; Third Semester Course Outline

**Course Code:** RES 531

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Operative Dentistry

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Faten Kamel

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** RES 421

### AIMS

The third semester course presents more advanced techniques and treatment planning for advanced and complex restorative needs. Emphasis is placed on aesthetic dentistry, contemporary procedures in operative dentistry and adhesives.

### SYLLABUS

Topics
Biological considerations in operative dentistry.
Postoperative pain and hypersensitivity.
Conservative approach in operative dentistry.
Aesthetic considerations in operative dentistry.
Bonding to tooth tissues.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Develop a deep understanding of the principles of biologic considerations in operative dentistry.
- Critically examine and reflect upon the causes and management of postoperative pain.
- Understand the principles of the conservative approach in operative dentistry.
- Understand the principles of aesthetic considerations and of bonding to dental tissues in operative dentistry.

#### Skills

- Ability to apply biologic procedures in the preparation and insertion of different types of cavities and fillings.
- Ability to diagnose the causes of and manage postoperative pain.
- Apply the principles of the conservative approach in operative dentistry.
- Ability to apply aesthetic considerations in operative dentistry.
- Ability to use bonding to dental tissues in operative dentistry.
- Ability to restore teeth to form, function and appearance with appropriate materials, using techniques that preserve the health of the pulp and avoid unnecessary loss of tooth tissues.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

Author	Date	Title	Publisher
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone
Jean-Francois Roulet, Nairn H. F. Wilson, Massimo Fuzzi	2001	Advances in Operative Dentistry: Contemporary Clinical Practice, Vol. I	Quintessence Publishing
Jean-Francois Roulet, Nairn H. F. Wilson, Massimo Fuzzi	2001	Advances in Operative Dentistry: Challenges of the future, Vol. II	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Kidd, E.A.M.	2003	Pickard's Manual of Operative Dentistry, 8 <sup>th</sup> ed	Oxford University Press
Theodore M. Roberson, Harold O. Heymann, Edward J. Swift Jr	2001	Sturdevant's Art & Science of Operative Dentistry	Mosby-Year Book

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various operative dentistry procedures, cavity preparation and filling.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	1 hr
Clinic:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75

**Clinical Stage; Third Semester  
Course Outline**

**Course Code:** PRS 531

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Fixed Prosthodontics

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Hisham A. Katamish

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** PRS 421

### **AIMS**

The course introduces the student to the more advanced techniques of fixed prosthodontics preparation and construction. Instruction is aimed at furthering the student's diagnosis and treatment planning skills, along with the execution of more advanced fixed prosthodontics. It also presents more advanced techniques and treatment planning for advanced and complex fixed prosthodontic needs as well as the principles of crown and bridge in implant dentistry.

### **SYLLABUS**

<b>Topics</b>
<p>The post-crown and core.            Partial veneers.            Ceramo-metallic restorations.            Modern ceramics.            Biological aspects and considerations.            Periodontal aspects and considerations.</p>

### **Learning Outcomes**

#### **Knowledge**

Upon completing this course, students will be able to:

- Review and evaluate the principles necessary to provide patients with ceramic and ceramo-metallic fixed prosthodontics.
- Critically examine and evaluate the biological and periodontal aspects of fixed prosthodontic restorations.

#### **Skills**

- Ability to fabricate post and core crowns, partial veneers and ceramo-metallic fixed prosthodontics.
- Ability to manipulate the dental and periodontal tissues during preparation and construction of fixed prosthodontics.

### **Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone
Herbert T. Shillingburg Jr, Sumiya Hobo, Lowell D. Whitsett, Richard Jacobi, Susan E. Brackett	1997	Fundamentals of Fixed Prosthodontics	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various crown and bridge procedures, tooth preparation and impression taking.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	1 hr
Clinic:	4 hrs

Total class contact hours per semester: 15

Total other study hours per semester: 60

Total study hours per semester: 75

**Clinical Stage; Third Semester  
Course Outline**

**Course Code:** PRS 532

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Removable Prosthodontics

**Department:** Prosthodontics Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Nadia Abbas

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** PRS 422

### **AIMS**

This course presents more advanced techniques and treatment planning for advanced and complex removable prosthodontics needs. Subjects included are immediate dentures, single dentures, as well as cosmetic concepts of occlusion and different types of attachment.

### **SYLLABUS**

<b>Topics</b>
Overdentures.
Implant-supported dentures.

### **Learning Outcomes**

#### **Knowledge**

Upon completing this course, students will be able to:

- Critically appraise the principles of diagnosing, treatment planning, and execution of treatment for partially edentulous patients.
- Further develop the ability to formulate and execute a treatment plan for patients with complex partial removable prosthodontic needs.

#### **Skills**

- Ability to fabricate more complex partial dentures for patients.
- Ability to manipulate different impression materials used in such prostheses.
- Ability to undertake mouth preparation prior to provision of removable prostheses.
- Ability to communicate with dental laboratory technicians.

### **Teaching / Learning strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

### **Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
James S. Brudvik	1999	Advanced Removable Partial Dentures	Quintessence Publishing
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Rodney D. Phoenix, David R. Cagna, Charles F. Defreest, Kenneth L.	2002	Stewart's Clinical Removable Partial Prosthetics	Quintessence Publishing
Carr, A.B.; McGivney, G.P.	2004	McCracken's Removable Partial Prosthodontics	C. V. Mosby
David W. Bartlett, Nigel F. Fisher	2003	Clinical Problem Solving in Prosthodontics	Churchill Livingstone

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various removable prosthodontics procedures, impression taking, bite registration, etc.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Clinic:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75

## Clinical Stage; Third Semester Course Outline

**Course Code:** RES 532

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Endodontics

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Alaa H. Diab

**Level:** 5

**Credit Hours:** 2

**Prerequisites:** RES 421

### AIMS

The course builds on the fundamentals taught in the preclinical course. It presents advanced techniques and treatment planning for advanced and complex Endodontic needs. The study encompasses the preclinical phase including the biology of the normal pulp and the aetiology, diagnosis, prevention and treatment of pulp disease and injuries, as well as disease of the periapical tissues.

### SYLLABUS

Topics
<p>Diagnosis and selection of cases.</p> <p>Rubber dam and its applications.</p> <p>Aetiology of pulp inflammation.</p> <p>Pulpal and periapical changes.</p> <p>Indications and contra-indications of root canal therapy.</p> <p>Anaesthesia in endodontics.</p> <p>Vital pulp therapy.</p> <p>Treatment of incompletely-formed permanent teeth.</p> <p>Endodontic radiography,</p>

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Show a deep understanding of the basics of diseases of the human pulp.
- Show a deep understanding of the role of endodontics in the management of patients with complex restorative needs.
- Manage diseases and conditions involving the pulp and periapical tissues in both deciduous and permanent teeth.
- Understand the basic principles of spread of infection in the periapical tissues.

#### Skills

- Ability to provide advanced care to patients with complex restorative needs.
- Ability to communicate and cooperate with practitioners of other disciplines in dentistry.

#### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

Author	Date	Title	Publisher
Leif Tronstad	2003	Clinical Endodontics: A Textbook, 2 <sup>nd</sup> ed	Thieme Medical Publishers
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Stephen Cohen, Richard C. Burns	2001	Pathways of the Pulp, 8 <sup>th</sup> ed.	C.V. Mosby
John I. Ingle and Leif K. Backland	2002	Endodontics, 5 <sup>th</sup> ed.	B.C. Decker
Thomas R. Pitt Ford	2004	Harty's Endodontics in Clinical Practice	Butterworth-Heinemann

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to diagnose pulp and periapical conditions, and to prepare teeth for root canal therapy.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hrs
Lab:	2 hrs

Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

**Clinical Stage; Fourth Semester  
Course Outline**

**Course Code:** POD 532

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Paedodontics-1

**Department:** Department of Paedodontics and Orthodontics

**Course Coordinator:** Professor Nevine G. Wali

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** HPT 411, RES 421

**AIMS**

The course prepares the student to recognize the predisposing & etiological factors that require intervention to promote oral health & to plan appropriate preventive oral health programmes for the community. It also enables the dental student to provide preventive measures & instructions in oral health with the aim of preventing dental diseases.

**SYLLABUS**

<b>Topics</b>
Introduction to preventive dentistry - Prevention of dental caries
Prevention of periodontal disease
Risk assessment for oral diseases
Prevention of malocclusion
Prevention of oral cancer
Prevention of traumatic injuries
Introduction to dental epidemiology - Epidemiology of dental caries
Epidemiology of periodontal diseases - Dental needs & demands
Organization of dental care
Group practice & team work
Dental health education
Dental health programmes

**Learning Outcomes**

**Knowledge**

Upon completing this course, students will be able to:

- Recognize predisposing & etiologic factors in dental diseases. .
- Understand the importance of prevention for the community.
- Recognize those patients at risk to dental diseases

**Skills**

Upon completing this course, students will be able to:

- Assess the need for & provide preventive measures & instructions in oral health.
- Acquire the skills needed to plan preventive oral health programmes.
- Acquire the skills to participate in an epidemiological investigation.
- Acquire the skills needed to provide dental health education for the community.
- Ability to assess patients for and inform patients or their guardians of the indications, contraindications, limitations, risks and benefits of conscious sedation and general anaesthesia.
-

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

Author	Date	Title	Publisher
John J. Murray	2007	The Prevention of Oral Disease, 4th ed	Oxford University Press

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to handle child patients and to perform operative dentistry procedures in children.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hr
Clinic:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

**Clinical Stage; Third Semester  
Course Outline**

**Course Code:** OMD 531

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Medicine, Periodontology, Oral & Radiographic Diagnosis

**Department:** Department of Oral Medicine and Periodontology, Oral Radiology and Oral Diagnosis, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Fat'heya Zahraan

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** OMD 422

### **AIMS**

The course aims at establishing didactic information, knowledge and skills necessary for effectively diagnosing and non-surgically treating patients suffering from systemic and/or other local diseases affecting the oral and the head and neck regions. The course also introduces students to the importance of periodontics as a dental discipline. Emphasis is placed on understanding the basic micro- and macro-anatomy of the healthy tissues of the periodontium as well as its physiology. In addition, the student will be introduced to the diseased periodontium with special emphasis on aetiology, epidemiology and clinical and histopathological aspects of the disease.

### **SYLLABUS**

#### **Topics**

White and red lesions of the oral cavity and their differential diagnosis.

Pigmented lesions of the oral cavity and their differential diagnosis.

Ulcerative, erosive and bullous lesions of the oral cavity and their differential diagnosis.

Differential diagnosis of lymphadenopathy.

Orofacial pain.

### **Learning Outcomes**

#### **Knowledge**

Upon completing this course, students will be able to:

- Have a sound understanding of the oral manifestations of various systemic diseases and their management.
- Have a sound understanding of the prevention and management of hypersensitivity reaction emergencies in the dental clinic.
- Understand and evaluate specific laboratory investigations in dental practice.

#### **Skills**

- Perform a physical and oral examination to include head and neck, oral hard and soft tissues, vital signs, and recognise disease states and abnormalities including detrimental oral habits.
- Ability to scale, root plane and clean teeth.
- Ability to provide oral hygiene measures and instructions to patients.
- Ability to obtain and record a relevant medical history which identifies both the possible effects of oral disease on medical well-being and the medical conditions that may affect oral health and dental treatment.
- Self-management and appropriate professional development skills.

### **Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Greenberg M.S. and Click, M.	2003	Burkitt's Oral Medicine, Diagnosis and Treatment, 10 <sup>th</sup> ed.	B. C. Decker
Crispian Scully, Roderick A. Cawson	1998	Medical Problems in Dentistry, 4 <sup>th</sup> ed.	Butterworth-Heinemann
Cawson, R.A., Bennie, W.H. and Eveson, J.W.	1995	Colour Atlas of Oral Diseases, 2 <sup>nd</sup> ed.	Mosby Wolfe
Thomas G., Jr. Wilson, Kenneth S. Kornman	2002	Fundamentals of Periodontics	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability diagnose different oral diseases and to perform periodontal procedures.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Clinic:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Clinical Stage; Third Semester Course Outline

**Course Code:** OSA 531

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Surgery and Anaesthesia

**Department:** Oral Surgery Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Magid Amin Mohamed Ahmed

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** OSA 411 – OSA 421

### AIMS

This course provides an overview of the specialty of oral and maxillofacial surgery. The student is introduced to the surgical management of congenital and acquired abnormalities of the oral structures and associated parts. He is trained in the management of odontogenic infections, cysts and tumours of the oral tissues, as well as the role of the dentist in the early diagnosis and in the care of head and neck cancer patients.

### SYLLABUS

Topics
Introduction to orthognathic surgery.
Introduction to implant dentistry.
Patient assessment and pre-anaesthetic preparation.
Types of general anaesthetic drugs and techniques / conscious sedation.
Complications of general anaesthesia and their management.
Cardiac-pulmonary resuscitation.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand and critically appraise the role of the oral surgeon in the management of patients with orthognathic surgical problems.
- Be able to evaluate and formulate treatment plans for patients with orthognathic surgical needs.

#### Skills

- Ability to administer local anaesthesia in all areas of the oral cavity and manage potential complications relating to its use.
- Ability to assess patients for and inform patients or their guardians of the indications, contraindications, limitations, risks and benefits of conscious sedation and general anaesthesia.
- Ability to perform difficult extractions of teeth.
- Ability to treat dental infections.
- Ability to administer first aid treatment to patients suffering from trauma.
- Ability to diagnose different oral lesions and refer them to the specialist concerned.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles / hospital rotation.
- Clinical seminars – problem-based learning.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Stanley F. Malamed	1996	Handbook of Local Anesthesia	C.V. Mosby
Edward Ellis, James Hupp, Myron Tucker, Larry Peterson	2002	Contemporary Oral and Maxillofacial Surgery	C.V. Mosby
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone
Bennett Rosenberg	2002	Medical Emergencies in Dentistry	W.B. Saunders

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability in diagnosing oral surgical conditions and in exodontia.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Clinic:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Clinical Stage; Fourth Semester Course Outline

**Course Code:** RES 541

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Operative Dentistry

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Faten Kamel

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** RES 531

### AIMS

This course presents more advanced techniques and treatment planning for advanced and complex restorative needs. Emphasis is placed on aesthetic dentistry, contemporary procedures in operative dentistry and adhesives.

### SYLLABUS

Topics
Indirect aesthetic restorations.
Management of non-cariou lesions.
Management of badly broken down teeth.
Failure of restorations.
Repair of restorations

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Develop a deep understanding of the principles of management of non-cariou lesions and badly broken down teeth.
- Critically examine and reflect upon the causes and management of failed restorations.
- Evaluate, critically appraise and properly formulate treatment plans for patients with complex restorative needs.

#### Skills

- Ability to prepare cavities and insert indirect aesthetic restorations.
- Ability to manage non-cariou and badly broken down teeth.
- Ability to manage and repair failed restorations.
- Ability to provide advanced restorative care to patients with complex restorative needs.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

Author	Date	Title	Publisher
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone
Jean-Francois Roulet, Nairn H. F. Wilson, Massimo Fuzzi	2001	Advances in Operative Dentistry: Contemporary Clinical Practice, Vol. I	Quintessence Publishing
Jean-Francois Roulet, Nairn H. F. Wilson, Massimo Fuzzi	2001	Advances in Operative Dentistry: Challenges of the future, Vol. II	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Kidd, E.A.M.	2003	Pickard's Manual of Operative Dentistry, 8 <sup>th</sup> ed	Oxford University Press
Theodore M. Roberson, Harold O. Heymann, Edward J. Swift Jr	2001	Sturdevant's Art & Science of Operative Dentistry	Mosby-Year Book

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various operative dentistry procedures, cavity preparation and filling.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	1 hr
Clinic:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75

## Clinical Stage; Fourth Semester Course Outline

**Course Code:** PRS 541

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Fixed Prosthodontics

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Hisham A. Katamish

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** PRS 531

### AIMS

The course is a continuation of the course given in the previous semester. The course further guides the student to the final stages of clinical application of skills acquired in his previous crown and bridge training.

### SYLLABUS

Topics
Aesthetics in relation to crowns and bridges.
Resin bonded restorations (Maryland bridges).
Implant-supported fixed prosthodontics.
Failures in fixed prosthodontics.
Removal and repair of fixed prosthodontics.
Care and maintenance of fixed prosthodontics.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand and evaluate the principles of aesthetics in relation to fixed prosthodontics.
- Critically evaluate the role of implants in fixed prosthodontics.
- Develop a critical understanding of causes and management of failures in cases of fixed prosthodontics.

#### Skills

- Ability to fabricate and place Maryland bridges.
- Ability to fabricate and place Implant-supported fixed prosthodontics.
- Ability to remove and repair fixed prosthodontics.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone
Herbert T. Shillingburg Jr, Sumiya Hobo, Lowell D. Whitsett, Richard Jacobi, Susan E. Brackett	1997	Fundamentals of Fixed Prosthodontics	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various crown and bridge procedures, tooth preparation and impression taking.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours  
Per week:**

Lectures:	1 hr
Clinic:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75

## Clinical Stage; Fourth Semester Course Outline

**Course Code:** PRS 542

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Removable Prosthodontics

**Department:** Prosthodontics Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Nadia Abbas

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** PRS 532

### AIMS

The course is designed to introduce the students to more advanced topics in removable prosthodontics. Subjects include overdentures and implant supported dentures. The student will also be taught to manage problems and special situations related to geriatric patients and patients with poor foundation as flat and flabby ridges, as well as maxillofacial prosthodontics

### SYLLABUS

Topics
Management of geriatric patients. Management of cases with flat and flabby ridges. Overdentures. Implant-supported dentures. Maxillofacial prostheses.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Review and evaluate the principles necessary to provide geriatric patients with complete dentures.
- Critically appraise the principles of diagnosing, treatment planning, and execution of treatment for special cases such as flat and flabby ridges.
- Develop the ability to formulate and execute a treatment plan for patients with complex removable prosthodontic needs.

#### Skills

- Ability to fabricate complete and partial dentures for geriatric patients.
- Ability to undertake mouth preparation prior to provision of removable prostheses for special cases and cases with prosthodontic problems.
- Self-management, patient management and appropriate professional development skills.
- Ability to communicate with dental laboratory technicians regarding special cases.

#### Teaching / Learning strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

Author	Date	Title	Publisher
James S. Brudvik	1999	Advanced Removable Partial Dentures	Quintessence Publishing
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Rodney D. Phoenix, David R. Cagna, Charles F. Defreest, Kenneth L.	2002	Stewart's Clinical Removable Partial Prosthetics	Quintessence Publishing
Carr, A.B.; McGivney, G.P.	2004	McCracken's Removable Partial Prosthodontics	C. V. Mosby
David W. Bartlett, Nigel F. Fisher	2003	Clinical Problem Solving in Prosthodontics	Churchill Livingstone

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to perform various removable prosthodontics procedures, impression taking, bite registration, etc.

Oral exam to assess their communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Clinic:	4 hrs
Total class contact hours per semester:	15
Total other study hours per semester:	60
Total study hours per semester:	75

## Clinical Stage; Third Semester Course Outline

**Course Code:** RES 542

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Endodontics

**Department:** Restorative Dentistry Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Alaa H. Diab

**Level:** 5

**Credit Hours:** 2

**Prerequisites:** RES 421

### AIMS

The course builds on the fundamentals taught in the preclinical course. It presents advanced techniques and treatment planning for advanced and complex Endodontic needs. The study encompasses the preclinical phase including the biology of the normal pulp and the aetiology, diagnosis, prevention and treatment of pulp disease and injuries, as well as disease of the periapical tissues.

### SYLLABUS

Topics
Diagnosis and selection of cases.
Rubber dam and its applications.
Aetiology of pulp inflammation.
Anaesthesia in endodontics.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Show a deep understanding of the basics of diseases of the human pulp.
- Show a deep understanding of the role of endodontics in the management of patients with complex restorative needs.
- Manage diseases and conditions involving the pulp and periapical tissues in both deciduous and permanent teeth.
- Understand the basic principles of spread of infection in the periapical tissues.

#### Skills

- Ability to provide advanced care to patients with complex restorative needs.
- Ability to communicate and cooperate with practitioners of other disciplines in dentistry.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

Author	Date	Title	Publisher
Leif Tronstad	2003	Clinical Endodontics: A Textbook, 2 <sup>nd</sup> ed	Thieme Medical Publishers
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Supplementary Reading:**

Author	Date	Title	Publisher
Stephen Cohen, Richard C. Burns	2001	Pathways of the Pulp, 8 <sup>th</sup> ed.	C.V. Mosby
John I. Ingle and Leif K. Backland	2002	Endodontics, 5 <sup>th</sup> ed.	B.C. Decker
Thomas R. Pitt Ford	2004	Harty's Endodontics in Clinical Practice	Butterworth-Heinemann

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to diagnose pulp and periapical conditions, and to prepare teeth for root canal therapy.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hrs
Lab:	2 hrs

Total class contact hours per semester: 15

Total other study hours per semester: 30

Total study hours per semester: 45

## Clinical Stage; Fourth Semester Course Outline

**Course Code:** POD 542

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Paedodontics-2

**Department:** Department of Paedodontics and Orthodontics

**Course Coordinator:** Professor Nevine G. Wali

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** POD 532

### AIMS

The course prepares the student to provide comprehensive dental care to his paediatric patients in order to produce a more ideal oral structure from a metabolic, functional and aesthetic view point in these growing children. It also provides the dental student with experience in proper management, behaviour modification and the ability to establish a positive attitude towards dental treatment in his young patients

### SYLLABUS

#### Topics

Aims and benefits of paedodontics.  
 Chronology and morphology of deciduous teeth.  
 Child psychology and dental health.  
 Management of potentially resistant child.  
 Local anaesthesia for pediatric patients.  
 Restoration of primary teeth.  
 Management of deep carious lesions in children.  
 Management of traumatic injuries.  
 Management of space maintenance.  
 Gingival and periodontal diseases in children.  
 Dental management of handicapped children.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Realize the importance of pediatric dentistry for the child, the dentist and the community.
- Understand the chronology and morphology of primary teeth.
- Recognize the morphological difference between primary and permanent dentition.
- Identify techniques of child behaviour management ( pharmacological and non pharmacological)
- Recognize local anaesthetic techniques for children.
- Understand cavity designs, restorative materials and pulp therapy techniques for primary teeth.
- Comprehend the etiology, clinical and management of early childhood caries.
- Recognize situations that require consultation with or referral to other health care professionals.
- Diagnose and solve space maintenance problems.
- Identify and diagnose traumatic dental injuries in children.
- Identify and diagnose the more prevalent gingival and periodontal problems in children.
- List and describe the necessary precautions in dental management of children with special health problems.

**Skills**

- Manage children in dental setting.
- Instil a positive attitude towards dental treatment in child patient.
- Modify the behaviour of uncooperative children.
- Perform a complete oral examination and formulate a treatment plan.
- Diagnose and treat simple pediatric dental problems (cavity preparation, pulp therapy, space maintainers)
- Give appropriate instructions and prescribe treatment for the more prevalent gingival condition in children.
- Assess patients in need for conscious sedation and general anesthesia.

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

Author	Date	Title	Publisher
Ralph E. McDonald, David R. Avery, Jeffrey A. Dean	2006	A Manual of Paediatric Dentistry,	Churchill Livingstone

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability to handle child patients and to perform operative dentistry procedures in children.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hr
Clinic:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Clinical Stage; Fourth Semester Course Outline

**Course Code:** OMD 541

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Medicine, Periodontology, Oral & Radiographic Diagnosis

**Department:** Department of Oral Medicine and Periodontology, Oral Radiology and Oral Diagnosis, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Fat'heya Zahraan

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** OMD 531

### AIMS

The course aims at establishing didactic information, knowledge and skills necessary for effectively diagnosing and non-surgically treating patients suffering from systemic and/or other local diseases affecting the oral and the head and neck regions. The course also introduces students to the importance of properly diagnosing and managing cases of facial pain.

### SYLLABUS

#### Topics

White and red lesions of the oral cavity and their differential diagnosis.

Pigmented lesions of the oral cavity and their differential diagnosis.

Ulcerative, erosive and bullous lesions of the oral cavity and their differential diagnosis.

Differential diagnosis of lymphadenopathy.

Orofacial pain.

Focal infection.

Sexually transmitted diseases.

Granulomatous diseases.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Have a sound understanding of the oral manifestations of various systemic diseases and their management.
- Have a sound understanding of the prevention and management of hypersensitivity reaction emergencies in the dental clinic.
- Understand and evaluate specific laboratory investigations in dental practice.
- Understand and evaluate causes of orofacial pain.

#### Skills

- Perform a physical and oral examination to include head and neck, oral hard and soft tissues, vital signs, and recognise disease states and abnormalities including detrimental oral habits.
- Ability to obtain and record a relevant medical history which identifies both the possible effects of oral disease on medical well-being and the medical conditions that may affect oral health and dental treatment.
- Diagnose and manage orofacial pain.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Greenberg M.S. and Click, M.	2003	Burkitt's Oral Medicine, Diagnosis and Treatment, 10 <sup>th</sup> ed.	B. C. Decker
Crispian Scully, Roderick A. Cawson	1998	Medical Problems in Dentistry, 4 <sup>th</sup> ed.	Butterworth-Heinemann
Cawson, R.A., Bennie, W.H. and Eveson, J.W.	1995	Colour Atlas of Oral Diseases, 2 <sup>nd</sup> ed.	Mosby Wolfe
Thomas G., Jr. Wilson, Kenneth S. Kornman	2002	Fundamentals of Periodontics	Quintessence Publishing

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability diagnose different oral diseases and to perform periodontal procedures.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

**Assessment Pattern:**

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	20%
Oral Exam	20%
End of Semester Written Exam	40%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Clinic:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Clinical Stage; Fourth Semester Course Outline

**Course Code:** OSA 541

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Oral Surgery and Anaesthesia

**Department:** Oral Surgery Department, Faculty of Dentistry, MSA

**Course Coordinator:** Professor Magid Amin Mohamed Ahmed

**Level:** 5

**Credit Hours:** 3

**Prerequisites:** OSA 531

### AIMS

This course is an overview of the specialty of oral and maxillofacial surgery. The student is introduced to the surgical management of congenital and acquired abnormalities of the oral structures and associated parts. He is trained in the management of odontogenic infections, cysts and tumours of the oral tissues, as well as the role of the dentist in the early diagnosis and in the care of head and neck cancer patients. He is trained in the diagnosis and management of facial fractures, particularly emergency care as far as the general practitioner is concerned.

### SYLLABUS

Topics
Introduction to orthognathic surgery.
Introduction to implant dentistry.
Patient assessment and pre-anaesthetic preparation.
Types of general anaesthetic drugs and techniques / conscious sedation.
Complications of general anaesthesia and their management.
Cardiac-pulmonary resuscitation.
Principles of differential diagnosis and biopsy.
Preprosthetic surgery.
Temporomandibular disorders – diagnosis and management.
Management of the hospitalized patient and the medically compromised patient.
Introduction to aesthetic surgery.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand and critically appraise the role of the oral surgeon in the management of patients with maxillofacial surgical problems.
- Be able to evaluate and formulate treatment plans for patients with complex surgical needs.
- Have knowledge of the principles of sterilisation, disinfection and asepsis.
- Evaluate all treatment outcomes, including the unexpected, and undertake remedial action where appropriate.

#### Skills

- Ability to administer local anaesthesia in all areas of the oral cavity and manage potential complications relating to its use.
- Ability to assess patients for and inform patients or their guardians of the indications, contraindications, limitations, risks and benefits of conscious sedation and general anaesthesia.
- Ability to perform difficult extractions of teeth.
- Ability to treat dental infections.

- Ability to administer first aid treatment to patients suffering from trauma.
- Ability to diagnose different oral lesions and refer them to the specialist concerned.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Clinic to apply those principles / hospital rotation.
- Clinical seminars – problem-based learning.

### Reference Text

Author	Date	Title	Publisher
Stanley F. Malamed	1996	Handbook of Local Anesthesia	C.V. Mosby
Edward Ellis, James Hupp, Myron Tucker, Larry Peterson	2002	Contemporary Oral and Maxillofacial Surgery	C.V. Mosby
Edward W. Odell	2000	Clinical Problem Solving in Dentistry	Churchill Livingstone
Bennett Rosenberg	2002	Medical Emergencies in Dentistry	W.B. Saunders

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

### Assessment Scheme:

Written quizzes/tests, multiple choice exams for continuous in-course assessment.

Clinical exam to test their ability in diagnosing oral surgical conditions and in exodontia.

Oral exam to assess their understanding, communication skills and problem-solving abilities.

Three hours final exam to assess their core theoretical knowledge.

### Assessment Pattern:

In Course Tests and Quizzes	10%
Midterm Exam	10%
Clinical - Practical Exam	30%
Oral Exam	20%
End of Semester Written Exam	30%
<b>Total</b>	<b>100%</b>

### Learning Unit Contact Hours

#### Per week:

Lectures:	2 hrs
Clinic:	2 hrs
Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60



- Acquire presentation skills through class presentations.
- Acquire reading and research skills through the article reviews.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Article Reviews
- Class Presentations.

**Videos:** Going for Growth.  
Business in the Economy.

**Websites:** <http://www.liraz.com/q&a>  
<http://www.mcspotlight.org./debate/capitalism/messages/15.html>  
<http://www.ita.doc.gov/media/emerger.htm>

### Reference Text

Author	Date	Title	Publisher
William G Nickels, James McHugh, Susan McHugh	2004	Understanding Business. 7 <sup>th</sup> edition	McGraw-Hill/Irwin

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

### Assessment Scheme:

- Six written quizzes comprising multiple choice, and essay questions.
- Four assignments comprising case studies, with 4 - 6 questions on each.
- Two article reviews are required; the first one must be submitted two weeks before midsemester, the second, two weeks before final examination. A copy of the original article should be attached to every review.

### Assessment Pattern:

In Course tests and quizzes	20%
Mid-Semester exam	20%
End of Semester exam	60%
<b>Total</b>	<b>100%</b>

### Learning Unit Contact Hours

#### Per week:

Lectures:	2 hrs
Tutorials	1 hr

Total class contact hours per semester:	30
Total other study hours per semester:	15
Total study hours per semester:	45



**Reference Text**

Author	Date	Title	Publisher
Irwin, J. D. and Kerns, D.	1995	Introduction to Electrical Engineering	Prentice Hall

**Supplementary Reading**

Author	Date	Title	Publisher
Nilsson, J. W.	1995	Electric Circuits	Addison Wesley Co.
Adel S. Sedra, Kenneth Carless Smith	2003	Microelectronic Circuits	Oxford University Press

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Weekly written Assignment (8 Home Assignments)

Short written Quizzes (4 10-min. Quizzes)

Laboratory Test

Unseen written Semester Exam (1.5-hr. Exam)

Unseen written Final-Exam (3-hr. Exam)

**Assessment Pattern:**

In Course tests and quizzes	20%
Mid-Semester exam	20%
End of Semester exam	60%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Tutorials	1 hr
Laboratories	1 hr

Total class contact hours per semester: 15

Total other study hours per semester: 30

Total study hours per semester: 45

Elective Course  
Course Outline

**Course Code:** EQM 200

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Operatory and Equipment Maintenance

**Department:** Faculty of Engineering, MSA

**Course Coordinator:** Dr. Tarif El-Shafie

**Level:** 4-5

**Credit Hours:** 2

**Prerequisites:** None

### AIMS

This course is designed to provide information and practical experiences in basic skills including assembly and transfer of instruments. It also includes fundamental principles of communication and interview techniques as they apply to patient management and health histories.

### SYLLABUS

Topics
Operatory and Equipment Maintenance
Dental Operatory and Equipment
The Dental Compressor
The Dental Unit
Care and Maintenance of Operatory and Equipment
Care and Maintenance Procedures
Headpieces
Dental Team and Patient Positioning
Two-, Four-, Six-Handed Dentistry
Patient and Team Positioning
Patient Management Skills
Zones of Activity
Operating Field
Illumination
Retraction
Oral Irrigation and Evacuation
Operating Field Maintenance
Transferring Armamentarium
Basic Hard Instruments
Tray Assembly
Instrument Handling and Transfer
Sundry Supplies
Patient Management
Basic Concept of Communication
Personal Aspects of Communication
Professional Aspects of Communication
Patient Management Skills
Health Histories
Health Histories
Interviewing Techniques
Patient Management for Interviewers

**Learning Outcomes****Knowledge**

Upon completing this course, students will be able to:

- Maintain the dental operating room and equipment
- Position the dental team and patient
- Apply patient management skills
- Maintain the operating field
- Assemble armamentarium
- Transfer armamentarium
- Apply interviewing techniques
- Obtain health histories

**Skills**

Upon completing this course, students will be able to:

- Communicate and collaborate to work effectively within a group
- identify personal areas of communication strength and weaknesses
- Interact effectively in various contexts
- Facilitate effective interaction in a variety of situations
- Work towards accomplishing collective goals and responsibilities
- Express loyalty/affiliation with the group

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.

**Reference Text**

Author	Date	Title	Publisher
Doni L. Bird, Debbie S. Robinson	2002	Torres and Ehrlich Modern Dental Assisting, 7 <sup>th</sup> ed	W.B. Saunders
Donna Phinney, Judy Helen Halstead	2003	Delmars Dental Assisting: A Comprehensive Approach 2 <sup>nd</sup> ed	Thomson Delmar Learning

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams.

Oral exam.

Two hours final exam.

**Assessment Pattern:**

In Course tests and quizzes	20%
Mid-Semester exam	20%
End of Semester exam	60%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Tutorials	2 hrs

Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

## Elective Course Course Outline

**Course Code:** DIN 200

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Dental Informatics

**Department:** Faculty of Computer Science, MSA

**Course Coordinator:** Dr Azza El-Saeid

**Level:** 4-5

**Credit Hours:** 2

**Prerequisites:** CSD100a, CSD100b

### AIMS

This course discusses several topics related to the use of new technologies in the information science and communication as applied to the learning, research and clinical practice of dentistry. This course covers topics in managing the patients' electronic record, dental imaging and the use of communication and internet technologies in dental practice.

### SYLLABUS

Topics
Introduction to Dental Informatics
Implementation of New Technologies in Dental Practice.
Managing the patients electronic record
– Practice management.
▪ Maintaining patient records, tracking payments, marketing, etc.
– Recording and management of clinical data.
▪ Patient history, medical alerts, treatment planning, monitor treatment progress.
– Dental Imaging
▪ Intra-oral and Extra-oral camera
▪ X-rays
▪ Digital Imaging
– The use of communication technologies and Internet teaching issues as e-mail, search, teledentistry/ teleconference and web development in the study, research and clinical dentistry practice.

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Differentiate between different kinds of dental imaging techniques.
- Demonstrate basic computer graphics concepts.
- Demonstrate fundamental principles of data, information, knowledge and data mining.
- Illustrate Web Development Basics.

#### Skills

- Use the internet to send and receive electronic mail.
- Perform on-line search in the dental and medical literature through World Wide Web, Med-line and other search tools.
- Create a web page for the dental office
- Use a graphics package such as Photoshop or Microsoft Photo Editor in dentistry.
- Choose the type of hardware and software necessary to open and maintain a dental office.
- Experienced in a dental application software package which includes computer-based oral health records, dental office management software and clinical management software.

**Teaching / Learning Strategies**

- Weekly lectures to introduce the basic concepts of the course subjects.
- Weekly computer labs to conduct a series of sessions on the use of the internet, web development, image processing and a dental application software package.

**Software Requirements**

Microsoft FrontPage HTML editor

Image processing tool as Photoshop or Microsoft Photo Editor

Dental application software package

**Websites:**<http://webdesign.com><http://www.dentalinformatics.com><http://www.wessex.org.EU/dental/itcourse/index.htm?about.htm><http://www.dentalinformatics.com/>**Reference Text**

Author	Date	Title	Publisher
Jennifer Niederst	2001	Web Design in a Nutshell, 2 <sup>nd</sup> ed	O'Reilly
Schleyer T; Spaliek H.	2001	Dental Informatics: A Cornerstone of Dental Practice	J. Am. Dent. Ass.; 132: 605-613
Louis M. Abbey, John Zimmerman	1992	Dental Informatics: Integrating Technology Into the Dental Environment	Springer-Verlag

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams.

Comp Lab exam.

Oral exam.

Three hours final exam.

**Assessment Pattern:**

In Course tests and quizzes	20%
Mid-Semester exam	20%
End of Semester exam	60%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Tutorials	2 hrs

Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

Elective Course  
Course Outline

**Course Code:** PSY 200  
**Campus:** Faculty of Dentistry (MSA)  
**Course Title:** Introduction to Psychology and Sociology  
**Department:** Faculty of Dentistry, MSA  
**Course Coordinator:** Dr. Aziza  
**Level:** 4-5 **Credit Hours:** 2  
**Prerequisites:** None

### AIMS

To enhance the student understanding of a discipline moving rapidly towards a level of integration, unity coherence and cross-fertilization between its various sub fields. Students study the principles of psychology applicable to many different contexts of medicine and organizations. A wide array of theoretical perspectives is presented and an attempt is made to provide students with enough background in research methods and insight into health related behavior.

### SYLLABUS

Topics
Introduction
Origins and development
Research Methods in Psychology
The Biology Underlying Behavior
Communication Learning
Social Cognition: Intelligence
Motivation
Personality
Health Psychology
Applications of Psychology to Medicine
Applying Psychology to Health Related Behavior

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Demonstrate an understanding of the field of psychology; theories, research and applications that constitute the discipline.
- Identify how psychology relates to health situations and medical organizations.

#### Skills

At the end of this module students will be able to:

- Apply psychological theories to current problems and propose solutions.
- Discuss the main influencing factors in current social context in an informed and more thoughtful manner.
- Deal with stress in health related situations.
- Critically think about psychological phenomena, particularly those that have an impact on health related situations and medical organizations.

**Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.

**Websites:** <http://www.psych.purdue.edu/~esmith/scarch.html>

**Reference Text**

Author	Date	Title	Publisher
Feldman, Robert S.	1997	Understanding Psychology, 4 <sup>th</sup> edition	McGraw-Hill Inc.
Baucum, Don	1999	Psychology	Baron's Educational Series Inc

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Students sit for a first semester unseen exam of 90 minutes and a final unseen exam of 3 hours- with multiple choice, short answer and long essay questions. Students undertake a practical project where they must evaluate a current psychological theory using a current case study. They must submit a 1500 word report.

**Assessment Pattern:**

In Course tests and quizzes	20%
Mid-Semester exam	20%
End of Semester exam	60%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	2 hrs
Tutorials	2 hrs

Total class contact hours per semester:	30
Total other study hours per semester:	30
Total study hours per semester:	60

## Elective Course Course Outline

**Course Code:** STC 200

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Statistics

**Department:** Faculty of Engineering, MSA

**Course Coordinator:** Professor Adel Al Gohainy

**Level:** 4-5

**Credit Hours:** 2

**Prerequisites:** None

### AIMS

This course is designed to introduce the student to some basic and advanced statistical techniques which provides the methodology to make inferences about the population from the collection and analysis of sample data. These methods enhance the student's knowledge and ability to derive plausible generalisations and then assess the extent of uncertainty underlying them. Statistical concepts are also essential during the planning stage of an investigation when decisions must be made as to the mode and extent of the sampling process.

### SYLLABUS

Topics
Introduction to descriptive statistics
Measures of central tendency, description, and position.
Binomial distribution
Normal distribution for continuous variables
Sampling distribution.
Estimation.
Simple regression

### Learning Outcomes

#### Knowledge

Upon completing this course, students will be able to:

- Understand graphs and how to read them.
- Transform raw data to furnished data that can be analyzed and interpreted
- Make inference about the population from the collection and analysis of sample data.

#### Skills

- Ability to read scientific papers.
- Ability to comprehend epidemiological studies
- Ability to use computers in different applications.

### Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Computer lab sessions to apply the theoretical knowledge.

**Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Richard A. Johnson, Gouri K. Bhattacharyya	2001	Statistics, Student Solutions Manual : Principles and Methods 4 <sup>th</sup> ed	John Wiley & Sons
Mario F. Triola	2003	Elementary Statistics, 9 <sup>th</sup> ed	Addison Wesley

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

**Assessment Scheme:**

Written quizzes/tests, multiple choice exams.

Lab exam.

Oral exam.

Three hours final exam.

**Assessment Pattern:**

In Course tests and quizzes	20%
Mid-Semester exam	20%
End of Semester exam	60%
<b>Total</b>	<b>100%</b>

**Learning Unit Contact Hours****Per week:**

Lectures:	1 hr
Tutorials	2 hrs

Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45

Elective Course  
Course Outline

**Course Code:** ENG 201

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** English Language for Research

**Department:** Faculty of Languages, MSA

**Course Coordinator:** Professor Aziza Hafez

**Level:** 4-5

**Credit Hours:** 3

**Prerequisites:** ENG 102

**RATIONALE:**

- To prepare students for writing research papers and project reports and books.
- Appropriate dentist should be able to master the English language.

**AIMS**

This module emphasizes research skills necessary for writing research papers. It also provides a survey of different articles on specialized topics. The module trains the students on rhetorical awareness beyond traditional composition, intensive writing practice with a thorough guidance on using references and citing sources.

**SYLLABUS**

Topics
<b>Introduction and instructions explaining objectives, assignments and grading system</b>
Library Skills and Classification Systems
Reading: Unit 1
<b>Thesis Statement</b>
Reading: Unit 2
<b>Outlining (Submit research paper outline)</b>
Reading: Unit 3
<b>Summary Writing</b>
Reading: Unit 4
<b>Organization Analysis</b>
Application of Summary Writing (Source I)
APA in-text citations
<b>Organization Analysis</b>
Application of Summary Writing (Source II)
Reading: Unit 5
<b>Revision</b>
<b>Fallacies</b>
Reading: Unit 6
<b>Fallacies (Cont.)</b>
Reading: Unit 7
<b>APA Style Sheet</b>

Application of Summary Writing (Source III)

### **APA Style Sheet (Cont.)**

Application of Summary Writing (Source IV)

Reading: Unit 8

### **Application of Summary Writing (Source V)**

Submitting Research Paper & Giving Oral Presentations

## **Learning Outcomes**

### **Knowledge**

Upon completing this course, students will be able to:

- Analyze different texts to identify thesis statements and developmental functions of those texts.
- Identify fallacies in the texts they analyze.
- Identify different library classification systems and card catalogs..

### **Skills**

At the end of this module students will be able to:

- Write outlines and summaries.
- Develop logical arguments.
- Identify key elements of problems and choose appropriate methods for their resolution in a considered manner.
- Write a research paper using correct in-text citations according to the APA style.
- Prepare in their research paper a complete "Reference" page prepared according to the APA style.
- Present their papers using slides or computer software.

## **Teaching / Learning Strategies**

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Computer lab sessions to apply the theoretical knowledge.

## **Reference Text**

<b>Author</b>	<b>Date</b>	<b>Title</b>	<b>Publisher</b>
Anderson, J. Poole, M.	2002	Assignment and Thesis Writing (4 <sup>th</sup> edition)	Wiley
Silyn-Roberts, H.	1996	Writing for Science	Longman
Oshima, Alice, Hogue, Ann	1998	Writing Academic English	Addison Wesley
John Swales	1991	Genre Analysis: English In Academic and Research Settings	Cambridge University Press
Zaher, Christian	1997	Academic Writing Skills, Cairo	Sphinx Bookshop
Raimes, Ann	1996	Keys for Writers, New Jersey	Houghton Muffin
Roseberry and Weinstock	1992	Reading Etc, New Jersey	Prentice Hall
Greenall, S.	1986	Effective Skills Reading for Advanced Students	Cambridge University Press

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

## **Recommended websites:**

<http://www.devry-phx.edu/irnresrc/dowsc/>

<http://www.owl.english.purdue.edu/>

**Assessment Scheme:****Assessment of the student's knowledge about:**

1. Writing research papers and project reports

**Assessment of the student's ability to:**

1. Survey different articles on specialized topics.
2. Use proper reference citations.
3. Analyze new abstract data and situations using a wide range of techniques
4. Synthesize information, expand or redefine existing knowledge.
5. Organize research papers, project reports and books.

**Assessment Pattern:**

Attendance and Participation	10%
Research Paper	30%
Mid-Semester Examination	20%
Final Examination	40%

**Learning Unit Contact Hours****Per week:**

Lectures:	3 hrs
Tutorials	2 hrs

Total class contact hours per semester: 45

Total other study hours per semester: 30

Total study hours per semester: 75

## Elective Course Course Outline

**Course Code:** DPH 200

**Campus:** Faculty of Dentistry (MSA)

**Course Title:** Dental Photography

**Department:** Faculty of Dentistry, MSA

**Course Coordinator:** Dr Ahmed Salah Hashem

**Level:** 4-5

**Credit Hours:** 2

**Prerequisites:** None

### AIMS

This course is designed to introduce the student to some basic and advanced photographic techniques which enable the student to utilize oral and dental photography as an aid of scientific research and appreciate modern trends in the field of photography and understand the facilities offered by and the limits imposed by cameras.

### SYLLABUS

#### Topics

What is Photography? Registration of an image on a receiver

What is Light?

- A mix or spectrum of seven visible colours
- Wave lengths of light colours
- Characteristics of light
- Colour temperature

Basic colours

Complementary Colours

The Camera

- Types
  - o Range finder
  - o SLR (Single Lens Reflex) (inter-changeable lens)
- Components of the camera
  - Lens
    - o Properties
    - o Types
  - Shutter
  - Film
    - o Negative
  - Black and white
  - Colour
    - o Positive
  - Black and white
  - Colour
- Factors affecting image quality
  - Lighting (brightness and contrast)
    - o Diaphragm
    - o Shutter speed (for continuous light)
    - o Light distribution
    - o Distance from flash and guide n° of the flash
  - Focus
- Properties of an image
  - Sharpness

- Depth of field
  - Contrast
  - Brightness
  - Colour balance
- Digital Photography
- Requirements for scientific digital photography
  - Photographic Errors
  - Digital enhancement of poorly photographed images

## Learning Outcomes

### Knowledge

Upon completing this course, students will be able to:

- Understand the concept of registering photographic images.
- Understand how to select the proper tools that he may use to achieve his photographic needs.
- Understand the basics of digital photography.

### Skills

- Ability to take acceptable medical, dental and scientific photographic images.
- Ability to avoid and correct errors and defects that he/she may meet with in their photographic work.
- Ability to effectively digitally edit/enhance photographic images.

## Teaching / Learning Strategies

- Lectures to explain underlying principles.
- Tutorials to help in understanding these principles.
- Practical sessions to apply the theoretical knowledge.

## Reference Text

Author	Date	Title	Publisher
Wolfgang Bengel	2002	Mastering Dental Photography	Quintessens Verlags

The course leader will distribute handouts at the beginning of the semester that cover the whole curriculum of the course.

## Assessment Scheme:

Written quizzes/tests, multiple choice exams.

Practical exam.

Oral exam.

Three hours final exam.

## Assessment Pattern:

In Course tests and quizzes	40%
Mid-Semester exam	20%
End of Semester exam	40%
<b>Total</b>	<b>100%</b>

## Learning Unit Contact Hours

### Per week:

Lectures:	1 hr
Tutorials	2 hrs

Total class contact hours per semester:	15
Total other study hours per semester:	30
Total study hours per semester:	45