




# DENTAL BIOMATERIALS DEPARTMENT



# STUDENT GUIDE

2016-2017

 *The Dental Biomaterials course focuses on introducing students to different dental materials, used in the general practice of dentistry, with regards to their composition, properties and manipulation. It helps them understand why materials behave the way they do in the oral cavity so that they can properly select and manipulate the dental material suitable for each treatment situation.*

*Aims of the course:*

1. To introduce students to the basic concepts of the science of Dental Biomaterials.
2. To familiarize the students with materials used in dentistry
3. To analyze physico-mechanical properties and microstructures of dental materials.
4. Make the students aware of biohazards associated with some dental materials.
5. To analyze causes of failure of the materials in the oral cavity.
6. To teach different ways of improving dental materials.
7. Discuss methods of manipulation of different dental materials.

# Staff Members

*Dr Essam Al-Wakeel, Professor and Dean of the Faculty*



*Dr Manal Farouk, Professor and Chair of the Department*

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*Dr El-Sayed Abd El-Hafez, Professor*

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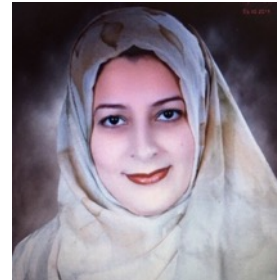
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*Dr Dina Samy, Assistant Professor*

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## *Assistant Lecturers and Demonstrators*

**Husn Ashraf**



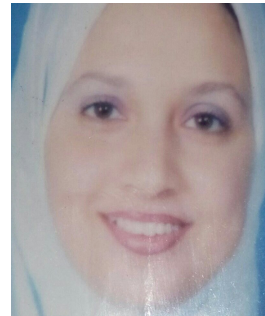
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# *Curriculum*

<i>Subject</i>	<i>Time of lecture</i>	<i>Staff member</i>
<i>Introduction to dental biomaterials</i>	<i>1<sup>st</sup> week</i>	<i>Dr Essam Al-Wakeel</i>
<i>Types of bonds &amp; crystal structures</i>		<i>Dr Salwa El-Negoly</i>
<i>Physical properties</i>	<i>2<sup>nd</sup> week</i>	<i>Dr Salma Fathy</i>
<i>Adhesion</i>		<i>Dr El-Sayed Abd El-Hafez</i>
<i>Mechanical properties</i>	<i>3<sup>rd</sup> week</i>	<i>Dr Reham Mohammed</i>
<i>Surface mechanical properties</i>	<i>4<sup>th</sup> week</i>	<i>Dr Hagag Atya</i>
<i>Time dependent properties</i>		<i>Dr Manal Farouk</i>
<i>General Classes of Biomaterials</i>	<i>5<sup>th</sup> week</i>	<i>Dr Noha El-Wassefy</i>
<i>Failure of materials</i>	<i>6<sup>th</sup> week</i>	<i>Dr Hagag Atya</i>
<i>Impression materials</i>		<i>Dr El-Sayed Ghorab</i>
<i>Impression materials</i>	<i>7<sup>th</sup> &amp; 8<sup>th</sup> week</i>	<i>Dr El-Sayed Ghorab</i>
<i>Model &amp; die materials</i>	<i>9<sup>th</sup> week</i>	<i>Dr Hagag Atya</i>
<i>Dental waxes</i>		<i>Dr Salma Fathy</i>
<i>Assessment</i>		
<i>Acrylic resin</i>	<i>11<sup>th</sup> week</i>	<i>Dr Manal Farouk</i>
<i>Soft lining and artificial</i>	<i>12<sup>th</sup> week</i>	<i>Dr Salwa El-Negoly</i>

<i>Z.O.E cement and pulp capping material</i>	<i>12<sup>th</sup> week</i>	<i>Dr Noha El-Wassefy</i>
<i>Zn Polycarboxylate, glass ionomer,</i>	<i>13<sup>th</sup> week</i>	<i>Dr Noha El-Wassefy</i>
<i>Zn phosphate and resin cements</i>	<i>14<sup>th</sup> week</i>	<i>Dr Noha El-Wassefy</i>
<i>Dental amalgam</i>	<i>15<sup>th</sup> week</i>	<i>Dr Manal Farouk</i>
<i>Bonding agents</i>	<i>16<sup>th</sup> week</i>	<i>Dr El-Sayed Ghorab</i>
<i>Composite resin</i>	<i>17<sup>th</sup> week</i>	<i>Dr El-Sayed Abd El-Hafez</i>
<i>Recent advances of composite</i>	<i>18<sup>th</sup> week</i>	<i>Dr. El-Sayed Abd El-Hafez</i>
<b>Assessment</b>		
<i>Casting investments</i>	<i>20<sup>th</sup> week</i>	<i>Dr Neven Saad</i>
<i>Noble and base metal casting alloys</i>	<i>21<sup>st</sup> week</i>	<i>Dr Salwa El-Negoly</i>
<i>Casting techniques and defects</i>	<i>22<sup>nd</sup> week</i>	<i>Dr Hagag Atya</i>
<i>Wrought alloys</i>		<i>Dr Neven Saad</i>
<i>Endodontic materials</i>	<i>23<sup>rd</sup> week</i>	<i>Dr Neven Saad</i>
<i>Dental porcelain</i>	<i>24<sup>th</sup> week</i>	<i>Dr Reham Mohammed</i>
<i>Ceramo-metallic restorations</i>	<i>25<sup>th</sup> week</i>	<i>Dr Reham Mohammed</i>
<i>All-ceramic restorations</i>	<i>26<sup>th</sup> week</i>	<i>Dr Reham Mohammed</i>
<i>Dental implants</i>	<i>27<sup>th</sup> week</i>	<i>Dr Salma Fathy</i>
<i>Nanotechnology</i>	<i>28<sup>th</sup> &amp; 29<sup>th</sup> week</i>	<i>Dr Dina Samy</i>
<i>Tissue engineering</i>	<i>30<sup>th</sup> week</i>	<i>Dr Salwa El-Negoly</i>

Teaching hours per week	
Theoretical	Practical
2 hours	2 hours

- ***Evaluation Methods:***

Assessment Policy	Weight
Final Exam (written)	100 Marks
Oral Exam	25 Marks
Course work; Quizzes (15), participation(5) and behavior (5)	25 Marks

- ***Student Books:***

Dental Materials (basic and applied sciences), 3<sup>rd</sup>ed., 2016 Dental Biomaterials Department.

- ***Helpful Textbooks:***

1. Craig's Restorative Dental Materials.
2. Phillip's Science of Dental Materials.
3. Applied Dental Materials (McCabe).

- ***General rules and regulations:***

1. The student should follow the instructions of the supervisors.
2. White coats must be worn in practical sessions.
3. Mobile phones are not allowed in practical sessions.
4. The Lab should be kept clean after each practical session.



• *Office hours for staff members of the department*

<b>Staff member</b>	<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>
<b>Dr Manal Farouk</b>	10-12	11-1			
<b>Dr El-Sayed Abd El-Hafez</b>		10-12		10-12	
<b>Dr Salwa El-Negoly</b>		10-12		10-12	
<b>Dr Reham Mohammed</b>		10-12			10-12
<b>Dr Noha El-Wassefy</b>		10-12		10.5-12.5	
<b>Dr Neven Saad</b>			10-12		10-12
<b>Dr El-Sayed Ghorab</b>	10-12		10-12		
<b>Dr Salma Fathy</b>		10-12		10-12	
<b>Dr Hagag Atya</b>	10-12	10-12			
<b>Dr Dina Samy</b>	10-12			10-12	