

KingSaudUniversity

College of Dentistry

Department of Prosthetic Dental Sciences



**DR. MOHSIN ALI**

Course Director - DUC

**DR. MOUSTAFA HASSABALLA**

Co-Course Director - DUC

**ACADEMIC YEAR**

**1434 /1435H (2013/2014G)**

**COURSE TITLE**: **Advanced Prosthodontics and**

 **Implantology**

**COURSE CODE** : **SDS 493**

**CREDIT HOURS** : **4 (2L+2C)**

**PREREQUISITES** : **SDS 433 & SDS 42**3

**COURSE DESCRIPTION:**

This fifth year SDS course is designed to give the student both didactic and clinical experience in the comprehensive management of a variety of prosthodontic cases. Emphasis will be placed on overdentures, single dentures, transitional denture, single crowns, bridges, post and cores, attachments, RPD with surveyed crowns and implants.

The didactic component will cover general prosthodontic topics such as pattern and sequelae of edentulism. In addition, concepts of shortened dental arch and the pre-edentulous state will be reviewed. Clinically applied topics will be introduced on the following subjects: Attachments, Occlusion, Dental implants, and Maxillofacial prosthetics.

**COURSE OBJECTIVES:**

1. Improving the student's knowledge level, both didactically and clinically, with a view to refining the student's approach to comprehensive patient care.
2. Improving the student's clinical skills to perform a comprehensive examination, diagnosis, treatment planning and treatment for variety of prosthodontic cases. The students should be able to treat cases that need fixed/removable partial denture with surveyed crowns.
3. Reinforcing the mutual interdependence of high-quality clinical and technical activities for the attainment of precise and predictable clinical outcomes.

**COURSE TOPICS:**

1. Prosthodontics - Biologic and Functional Aspect of Tooth Loss
2. Pre-edentulism
3. Overdentures – Part I: rationale, advantages & disadvantages, indications & contraindications
4. Overdentures – Part II: examination, case selection, abutment selection, treatment plan
5. Overdentures – Part III: clinical procedures, impression techniques, abutments, post-insertion maintenance phase
6. Attachments for Overdentures
7. Surveyed crown
8. Attachments for RPD and FPD
9. Treatment planning for implant : Diagnosis, implant treatment decision, indications and planning overview, patient selection, biomechanical consideration
10. Dental Implants : Clinical Procedures
11. Dental Implants: Clinical and Lab Procedures
12. Dental Implants: Implant retained overdenture
13. Occlusal consideration in prosthodontics
14. Dental Implants: Occlusal considerations for implant supported prosthesis and maintenance
15. Dental Implants: Implant complications
16. Dental Implants: Immediate implant loading
17. Perio-prosthodontic relation
18. Temporomandibular disorders, screening history and exam for routine dental patients
19. Interocclusal appliance therapy
20. Bite Raising in Prosthodontics
21. Wear of Teeth
22. Maxillofacial Prosthesis – Part 1
23. Maxillofacial Prosthesis – Part 2
24. Maxillofacial Prosthesis – Part 3

**INSTRUCTIONAL METHODS:**

* Didactic Lectures
* Clinical Sessions

**EVALUATION AND ASSESSMENT:**

 The student **must pass both** the Didactic and the Clinical components separately in order to receive a passing grade in the SDS 493 Course. Passing the clinical component **necessitates** fulfilling the minimum treatment requirements and **passing all the four competency exams.**

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| **Daily Clinical Evaluation:** |  | **20%** |
| * **Quantity Course Requirements**
 | 10% |  |
| * **Quality evaluation of clinical management**
 | 10% |  |
| **Competency Tests:** |  | **30%** |
| **Continuous Written Exam (2)** |  | **20%** |
| **Final Written Exam** |  | **20%** |
| **OSCE** |  | **10%** |
| **TOTAL GRADE** |  | **100%** |

**COURSE REQUIREMENTS:**

The clinical element of this course is conducted in corporation with the comprehensive open clinic course, 493DEN, which permits the students to perform a comprehensive treatment planning as well as performing all the preparatory treatments needed for their patients. The student may schedule the same patient in any clinical sessions as long as the same Instructor that started the case is available.

For the requirements of SDS 493,

1. the student must diagnose and complete the treatment of removable prosthodontic cases with a minimum of 4 arches that include at least:
* One Removable Partial Denture with Surveyed Crowns
* One transitional denture
* One complete denture
* One Overdenture abutment
1. The student should have a minimum of 8 units including single implant Two units should be completed during the first semester.

The number of units for the different fixed prosthetic restorations is as follows:

 Single Crown / Survey Crown, or Retainers 1 unit

 Pontic/s\* 1 unit

 Cast Post & Core 1 unit

 Restoration / Build-up with Prefabricated Posts\*\* 0.5 unit

 Non-rigid Connector 1 unit

 Resin-Bonded FPD \*\*\* 2 units (max.)

Implant case 1 unit

\* Conventional FPD units= Number of retainers +1 for pontic/s

\*\* As a foundation for fixed prosthodontic therapy

\*\*\* Only one resin-bonded FPD is counted

**COURSE PROTOCOL:**

1. Each student **must** fulfill the minimum treatment requirements of the Course. The quality of treatment of each clinical step provided will be of primary concern. Treatment exceeding the minimum requirement will be favorably considered provided that its quality is acceptable. Attitude, personality, honesty and punctuality warrant positive grading and cannot be over emphasized.
2. Students **must** criticize and evaluate their own work using the same evaluation scale used by the instructors before being evaluated by the clinical supervisors. Students should reflect on their work and the difficulties they faced.
3. The total clinical evaluation of the current course(20%) will be based on:
4. **Quality evaluation of clinical performance (10%):**
	1. Clinical management evaluation on the following aspects:
		1. The student ability to manage the clinical time: the treatment **must** be completed thirty minutes prior to the end of the clinic session.
		2. Student readiness and preparation of the needed instruments and records needed to conduct the clinical procedure
		3. The student communication with faculty, their patients, staff and the clinical team.
		4. The ethical conduction of the treatment from all aspects.
		5. Careful handling of materials, equipments, electrical and non-electrical devices.
		6. Proper wearing of uniform and laboratory apron. All procedures of infection control should be followed strictly in the clinics.
		7. Neatness in the arrangement of the instruments, equipments and materials needed for certain practical procedure will be evaluated as well as maintaining a good, neat and clean appearance of the personal outlook and the working area.
5. Students ability to reflect on their learning process as well as doing self evaluation of their own work
6. **Quantity Course Requirements** (10%)
7. Each case must be treated under the supervision of the same instructor who signs the treatment plan of the case. Exceptional cases to this rule are to be arranged only by the course director.
8. Being 5 minutes late to the lecture or 10 minutes late to the clinical session is considered as late attendance (LT), each four(LT) will be considered as one absent. Exceeding the mentioned time will be considered as absent. When 25% of the lecture or the clinical sessions are missed, the student will be deprived from taking the final exam according to the university rules and regulations. However, absence due to emergency or sickness may be accepted provided an acceptable excuse or a medical report
9. Competency tests (30%) are developed to evaluate the student’s ability to perform the procedure independent of faculty input. There will be 4 competency tests during the period of the Course. The competency tests will be performed on one of the cases being treated. The student will select the day to perform each test and will inform both his Instructor and the Course Director (when available) or second instructor at the beginning of the clinical session.

These tests include the following clinical steps

1. Tooth preparation for complete crown 8
	1. Final impression for complete crown 7
	2. Final impression for removable denture 8
	3. Survey and designing RPD. 7
2. Two Continuous Assessments (10% each) shall be given in this Course. It will be in a written exam format.
3. The final written examination at the end of didactic component will carry 20% of the total grade. The written examination will include multiple choice questions, short notes and essays.
4. Prosthodontic component of the OSCE exam (10%) should cover the overall basic knowledge related to removable and fixed prostheses.

**REFERENCES:**

1. Owall B, Kayser AF, Carlsson GE. Prosthodontics: Principles and management strategies. London:Mosby-Wolfe, 1996.
2. Jenkines G. Precision attachments: a link to successful restorative treatment. Quintessence Publishing Co., 1999.
3. Preiskel H. Overdentures made easy. Quintessence Publishing Co.
4. Mohl M, Zarb G, Carlsson G, Rugh J. A text book of occlusion. Quintessence Publishing Co., 1991.
5. Dawson P. Evaluation and diagnosis and treatment of occlusal problems, second edition. St Louis: Mosby, 1989.
6. Worthington P, Lang B, LaVelle W. Osseointegration in Dentistry. Quintessence Publishing Co.,1994.
7. Block M, Kent J, Guerra L. Implant in Dentistry. W.B.Saunders Company,1997.
8. Beumer, Curtis , Fritell. Maxillofacial Rehabilitation.
9. Taylor T. Clinical Maxillofacial Prosthetics. Quintessence Publishing Co., 2000.
10. Carr A, Brown D. McCracken’s Removable Partial Prosthodontics. Twelfth Edition. Elsevier Mosby, 2011.
11. Phoenix R, Cagna D, DeFreest C. Stewart’s Clinical Removable partial Prosthodontics. Fourth Edition. Quintessence Publishing Co, Inc. 2008.
12. Krol A, Jacobson T, Finzen F. Removable Partial Denture Design, Outline Syllabus. Fifth Edition. Indent, 1999.
13. Clinical and laboratory Manual of Implant Overdentures.
14. Feine J, Carlsson G. Implant Overdetnures. The Standard of care for Edentulous Patients. Quintessence Publishing Co, Inc.2003.
15. Rosenstiel, Land, Fujimoto: contemporary fixed prosthodontics, fourth edition,Mosby,2006

**EVALUATION FORMS:**

 Three forms are to be used by the Course Director to register the grades, sign the marks and write the remarks for each student on a daily basis for both the didactic and clinical parts.

**DPC Didactic Performance Card**

 The student’s evaluation form in the didactic part

**Clinical Evaluation Form**

 The student’s evaluation form in the clinical part

**Competency Tests Form**

 Each form will represent the assessments and grand total marks for each part of the course.

 A copy of each evaluation form is attached to this course outline for the student’s information and guidance.

Computer print of DPC will be submitted to each student during this academic semester:

* After each assessment for didactic part

**EVALUATION FORMS ABBREVIATION:**

LC Lecture

LT Late attendance on the lecture or clinical sessions beyond 5 minutes after the due time.

AB Absent (no show)





SDS 493

**DR. Mohsin Ali**

Course Director – M

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| Student Name |  | Group no. |  | Student no. |  |

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TOTAL: LT AB

 First Didactic Assessment GRAND TOTAL /10

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| Approved Course Director: |  | Academic Year 20 |  Semester  |

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| SDS 493 | **1st Week** |
|  | 2 September 2013  |

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|  | Lecturer: Dr. Mohsin Ali |
| TITLE: Introduction |
| TOPICS:Introduction to:* Overview of the course outline and objectives
* The inter-relationship between SDS 493 and DEN 493
* Clinical requirements, the evaluation methodology and forms
* The course protocol
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| SDS 493 | **2nd Week** |
|  | 9 September 2013  |

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|  | Lecturer: Dr. Mohsin Ali |
| TITLE: Prosthodontics - Biologic & Functional Aspect of Tooth Loss |
| TOPICS:* Biological and functional aspects of tooth loss
* The shortened dental arch concept

*REFERENCE:** *Prosthodontics. Principles and Management Strategies. Owall, Kayser and Carlsson, Chap. 3, pp. 35-47.*
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| SDS 493 | **3rd Week** |
|  | 16 September 2013 |

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|  | Lecturer: Dr. Mohsin Ali |
| TITLE: Pre-edentulism |
| TOPICS:* Definition and sequelae
* Description of ‘preventive’ prosthodontics
* Factors influencing management options
* Transitional prostheses
* Overdentures
* Implants

*REFERENCE:** *Prosthodontics. Principles and Management Strategies. Owall, Kayser and Carlsson, Chap. 4, pp. 49-47.*
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4th week National Day Holiday 23 September 2013

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| SDS 493 | **5th Week** |
|  | 30 September 2013 |

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|  | Lecturer: Dr. Mohsin Ali |
| TITLE: **OVERDENTURES I** |
| TOPICS:* Rationale
* Advantages
* Disadvantages
* Indications, contra-indications

*REFERENCE:** + Overdentures Made Easy by Preiskel, Chapter 1, pp. 11-20.
	+ Overdentures By: A. Brewer & R. Morrow, 2nd ed. Chapter 1, pp. 3-11 and Chapter 2, pp. 12-14
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| SDS 493 | **6th Week** |
|  | 7 October 2013 |

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|  | Lecturer: Dr. Mohsin Ali |
| TITLE: **OVERDENTURES II** |
| TOPICS:* Examination
	+ - Visual
		- Digital
		- Radiographic
* Case selection and abutment selection
* Treatment plan

*REFERENCE:** + Overdentures Made Easy by Preiskel, Chapter 2, pp. 21-43
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7th week Eid Al Adha Holiday 14 October 2013

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| SDS 493 | **8th Week** |
|  | 21 October 2013 |

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|  | Lecturer: Dr. Mohsin Ali |
| TITLE: **OVERDENTURES III** |
| TOPICS:* Clinical procedures
* Impression techniques
	+ - Direct technique with Duralay
		- Indirect technique
* Abutments' selection
* Post-insertion-maintenance

*REFERENCE:** + Overdentures Made Easy by Preiskel, Chapter 3, pp.45-65
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9th week Mid Semester exam 28 October 2013

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| SDS 493 | **10th Week** |
|  | 4th November 2013 |

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|  | Lecturer: Dr. Mohsin Ali |
| TITLE: Attachments for Overdentures |
| TOPICS:* Indications and benefits
* Magnets and stud attachments
* Bar attachments, Hader and Dolder
* Clinical and laboratory methods for attachment incorporation

*REFERENCE:** *Overdentures made easy. Preiskel, Chap. 5 & 6, pp. 81-137.*
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| SDS 493 | **11th Week** |
|  | 11 November 2013 |

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|  | Lecturer: Dr. Mohsin Ali |
| TITLE: Surveyed Crowns as Abutments for RPD’s |
| TOPICS:* Prerequisites of surveyed crown fabrication
* Tooth preparation
* Wax pattern fabrication

*REFERENCE:** *Rosenstiel, Land, Fujimoto: contemporary fixed prosthodontics, chapter21*

*p 649-679** *Removable Partial Denture Design. Mouth Preparation, chapter 16 p 153-157.*
* *Stewart’s Clinical Removable Partial Prosthodontics. Chapter 10, p 291-297.*
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| SDS 493 | **12th Week** |
|  | 18 November 2013 |

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|  | Lecturer: Dr. Mohsin Ali |
| TITLE: Attachments for RPD and Segmented Bridges |
| TOPICS:* Classification of RPD attachments
* Indications and contraindications
* Rigid and non-rigid connectors for fixed bridges

*REFERENCE:** *Precision Attachments. Gareth Jenkins, Chap. 2 & 5 pp. 21-32 & 65-77.*
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| SDS 493 | **13th Week** |
|  | 25 November 2013 |

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|  | Lecturer: Dr.  |
| TITLE: **Treatment planning for implant** |
| TOPICS:* Osseointegration
* Implant systems
* Bone quality and quantity
* Diagnosis, implant treatment decision, indications
* planning overview, patient selection, biomechanical consideration
* Diagnostic workup for single, partially edentulous and overdenture
* Radiographic and surgical guides
* Surgical protocols

*REFERENCE:* |
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| SDS 493 | **14th Week** |
|  | 2 December 2013 |

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|  | Lecturer: Dr.  |
| TITLE: Dental Implants – Part I : Clinical Procedures |
|  TOPICS:* Review of surgical procedure
* Impression techniques in implant Prosthodontics.
* Abutment selection
* Temporization

*REFERENCE:* |
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| SDS 493 | **15th Week** |
|  | 9 December 2013 |

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|  | Lecturer: Dr.  |
| TITLE: Dental Implants – Part II : Clinical and Laboratory Procedures |
| TOPICS: * Laboratory procedures
* Try in and insertion
* Cementation of single implant restorations.
* Delivery of implant retained overdenture
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| SDS 493 | **16th Week** |
|  | 16 December 2013 |

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|  | Lecturer: Dr.  |
| TITLE: Dental Implants supported overdentures |
| TOPICS:* Indications
* Contraindications
* Advantages
* Disadvantages
* Implant overdentures vs. conventional dentures.
* Fabrication of the implant overdenture radiographic and surgical stent
* Pick up of attachments under overdentures
* Type of connection
* Clinical procedures with locator attachment

*REFERENCE:** Clinical and laboratory Manual of Implant Overdentures.

Chapter 1 patient preferences and expectations. p 3-6**.** * Zest Anchor web site and video tutorial.
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2nd Semester

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| SDS 493 | **1st Week** |
|  | 27 January 2014 |

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|  | Lecturer: Mohsin Ali |
| TITLE: **Occlusal consideration in prosthodontics** |
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| SDS 493 | **2nd Week** |
|  | 3 February 2014 |

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|  | Lecturer:  |
| TITLE: **Dental Implants : Occlusal considerations for implant supported prosthesis and maintenance** |
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| SDS 493 | **3rd Week** |
|  | 10 February 2014 |

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|  | Lecturer:  |
| TITLE: **Dental Implants : Implant complications** |
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| SDS 493 | **4th Week** |
|  | 17 February 2014 |

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|  | Lecturer:  |
| TITLE: **Dental Implants : Immediate implant loading** |
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| 5th week Mid Semester exam 23 February 2014 |
| SDS 493 | **6th Week** |
|  | 3rd March 2014 |

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|  | Lecturer:  |
| TITLE: Perio-prosthodontic relationations |
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| SDS 493 | **7th Week** |
|  | 10 March 2014 |

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|  | Lecturer: Mohsin Ali |
| TITLE: **Temporomandibular disorders: screening history and exam for routine dental patients** |
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| SDS 493 | **8th Week** |
|  | 17 March 2014 |

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|  | Lecturer: Dr. Mohsin Ali |
| TITLE: **Interocclusal appliance therapy** |
| TOPICS:* Diagnostic and management rationale
* Classification
* Method of fabrication
* Post-insertion instructions

*REFERENCE:** *A Textbook of Occlusion. Mohl Zarb, Carlsson and Rugh, Chap. 20, pp. 271-284.*
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9th week Mid Semester Holidays 24 March 2014

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| SDS 493 | **10th Week** |
|  | 31 March 2014 |

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|  | Lecturer: Dr. Mohsin Ali |
| TITLE: Bite Raising in Prosthodontics |
| TOPICS:* Definition of bite collapse
* Indications and contraindication of bite raising
* Mechanics of bite raising

*REFERENCE:** *Evaluation and diagnosis of occlusal problems. Peter dawson, Chap. 5.*
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| SDS 493 | **11th Week** |
|  | 7 April 2014 |

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|  | Lecturer: Mohsin Ali |
| Title: Wear of Teeth |
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| SDS 493 | **12th Week** |
|  | 14 April 2014 |

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|  | Lecturer: Prof. Walid Sadig |
| TITLE: Maxillofacial Prosthesis – Part 1 |
| TOPICS:* Introduction
* Classification of congenital defects
* Cleft lip and palate team
* Sequence of treatment

*REFERENCE:** *Maxillofacial Rehabilitation. Beumer, Curtis & Fritell, Chap. 7, pp. 292-310.*
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| SDS 493 | **13th Week** |
|  | 21 April 2014 |

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|  | Lecturer: Prof. Walid Sadig |
| TITLE: Maxillofacial Prosthesis – Part 2 |
| TOPICS:* Review on head and neck cancer
* Acquired maxillary defects
* Acquired mandibular defects
* Radiation therapy

*REFERENCE:** *Clinical Maxillofacial Prosthetics. Thomas Taylor, Chap. 6, 7 & 8, pp. 85-133.*
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| SDS 493 | **14th Week** |
|  | 28 April 2014 |

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|  | Lecturer: Prof. Walid Sadig |
| TITLE: Maxillofacial Prosthesis III |
| TOPICS:* Classification of facial replacements
* Facial moulage
* Materials used in maxillofacial prosthetics

*REFERENCE:** *Clinical Maxillofacial Prosthetics. Thomas Taylor, Chap. 16, pp. 323-245.*
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| **FINAL WRITTEN EXAMINATION** |
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