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## SDS 526 – IMPLANTOLOGY

### COURSE DESCRIPTION

This course will cover the principles of osseointegration as well as the indications, treatment planning, clinical and laboratory procedures of various types of implant prostheses. This is presented in a lecture format.

**COURSE CREDIT: 1 Credit Hour**

**COURSE LEVEL: 2<sup>nd</sup> Year**

### COURSE OBJECTIVES

1. To familiarize the student with types of dental implants and the biological aspects of osseointegration.
2. To enable the student to select suitable edentulous and partially edentulous cases for implant treatment, plan and prescribe the appropriate therapy.
3. Students are expected to know the surgical and prosthetic procedures and be familiar with all the components related to both phases.

### COURSE OUTLINE

- 1. Introduction to Dental Implants**
  - History
  - Types of implants
  - Nature of implant attachment
- 2. Concept of Osseointegration**
  - Biomaterials
  - Implant surface characteristics
  - Bone reaction
- 3. Patient Selection and Treatment Planning**
  - Medical and dental history
  - Clinical and radiographic examination
  - Surgical and radiographic stents

- Treatment strategies
- 4. Surgical Aspects I**
    - First surgery procedures
    - Second surgery procedures
  - 5. Surgical Aspects II**
    - Post-operative management
    - Complications
  - 6. Guided Bone Regeneration**
    - Augmentation membranes
    - Augmentation materials
  - 7. Prosthetic Aspects I**
    - Edentulous patients
  - 8. Prosthetic Aspects II**
    - Partially edentulous and single tooth replacements
  - 9. Gingival Status and Peri-Implant Health**
    - Microbiota
    - Peri-implant mucosis
    - Peri-implantitis
  - 10. Biomechanical Aspects**
    - Protheses design
    - Load transfer and distribution
    - Implant connection to natural teeth
  - 11. Functional and Psychological Response**
    - Oral motor function
    - Phonetics and speech
    - Psychological impact
  - 12. Success Criteria and Long-Term Results**
    - Survival rate
    - Success rate
    - Failures
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**COURSE METHODOLOGY**

Pure Lectures

**COURSE EVALUATION**

- Written Examinations
  - i. One Mid-Term
  - ii. One Final Written Examination
- Mid-Term Exam = 40%
- Final Exam = 60%

**REFERENCES**

1. Tissue Integrated Prostheses-Osseointegration in Clinical Dentistry Branemark, Zarb, Albrektsson, Quintessence Publishing. Co., Inc. 1987
2. The Branemark Osseointegration Implant Albrektsson & Zarb, Quintessence Publishing Co., Inc.