COURSE DESCRIPTION

Subject: Implantology
Year: 4th Semester: 1st
Degree: Dentistry
Modality: Attendance is required
Course 2019/2020
Faculty of Medicine
1. SUBJECT DETAILS

1. SUBJECT DESCRIPTION:

Name: IMPLANTOLOGY
Code: b425
Year: 4th course  
Semester: 1st semester
Character: Mandatory  
ECTS (credits): 4  
Hours (ECTS): 30
Language: English  
Modality: Attendance is required
Degree Program: Dentistry
Faculty of Medicine

Department: Dentistry
Area of Knowledge: Stomatology

2. BOARD OF PROFESSORS

1. SUBJECT COORDINATOR

Name: Dr. Guillermo Manzano Martínez
Phone (ext.):  
Email: guillermo.manzanomartinez@hm.ceu.es
Office:  
Teaching and research profile: DDS, MD, PhD.
Lines of research: Implant dentistry, Bone regeneration.

2.- Tutoring Sessions

For all queries related to the subject, students can contact with the professors through e-mail, phone or face to face during the presental tutoring sessions. The presental sessions schedule will be published in the student intranet.

3. SUBJECT DESCRIPTION

Implant dentistry is a main area of dentistry which is responsible for the restoration of the absent or failed teeth using surgical techniques to place dental implants in maxilla and mandible which will support a prosthetic rehabilitation.

This course will introduce the student in the world of Implant Dentistry, to know the importance of the diagnostic and therapeutic techniques, achieving essential knowledge about the different surgical and prosthetic stages.
4. CAPABILITIES & INTENDED LEARNING OUTCOMES

<table>
<thead>
<tr>
<th>Code</th>
<th>Learning results</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG.20</td>
<td>Obtain and prepare a medical history that contains all the relevant information.</td>
</tr>
<tr>
<td>CG.21</td>
<td>Learn to make a complete oral examination, including appropriate complementary x-ray and scan tests, as well as appropriate clinical references</td>
</tr>
<tr>
<td>CE35.1</td>
<td>Establish a sequential and integrated multidisciplinary clinical diagnostic and treatment planning, for patients of all ages and condition</td>
</tr>
<tr>
<td>CE35.4</td>
<td>Specifically, the student must be competent in the treatment planning using prosthetic, surgical, restorative, orthodontic solutions or the combination of this and other areas of dentistry, to correct alterations of the stomatognathic system.</td>
</tr>
<tr>
<td>CE36.1</td>
<td>The student must be competent in the analysis of the different image based diagnostic tools for dental implantology based on x-rays and other procedures based on the image.</td>
</tr>
<tr>
<td>CE36.3</td>
<td>Establish the diagnosis and treatment plan identifying the aesthetic patient expectations and the clinical options to satisfy their concerns</td>
</tr>
<tr>
<td>CE37.3</td>
<td>Surgical area preparation.</td>
</tr>
<tr>
<td>CE37.10</td>
<td>Establish both surgical and pharmacological protocols to control inflammatory processes of the periodontal/periimplant tissues including supra- and subgingival instrumentation techniques</td>
</tr>
</tbody>
</table>

2. LEARNING OUTCOMES:

<table>
<thead>
<tr>
<th>Code</th>
<th>Learning results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Learn about the major problems associated with the periimplant disease, knowing the diagnostic and therapeutic methods for their resolution</td>
</tr>
</tbody>
</table>

5. TRAINING ACTIVITIES

1 COURSE DURATION AND DISTRIBUTION:

<table>
<thead>
<tr>
<th>Total</th>
<th>120 hours</th>
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<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Hours contact</th>
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<tbody>
<tr>
<td></td>
<td>Theoretical classes</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Seminars</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Clinical practices</td>
<td>21</td>
</tr>
<tr>
<td>TOTAL class hours</td>
<td>66</td>
<td></td>
</tr>
</tbody>
</table>

| Code | Name | Non-Presential hours |
2. ACTIVITIES DESCRIPTION:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Definition</th>
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</thead>
</table>
| Master class     | – Activity mainly focused to acquire knowledge (CB 1 Annex I RD 1393) prioritizing the knowledge transmission by the professor, demanding from the students previous preparation of the theme and/or further study.  
 – The professor will expose main topics regarding the different subject areas and their integration, according to the program of the course. Additional teaching materials will be used to complete the contents (this documents will be distributed during the class and/or uploaded to the student website). |
| Seminars         | – Activity mainly focused to acquire knowledge (CB 1 R.D.1393/2007) apply the knowledge (CB 2 R.D.1393/2007), and to promote the ability to collect, interpret and judge information and relevant data (CB 3 R.D.1393/2007) as well as the communicate this knowledge (CB4 R.D.1393/2007). One of the targets is to promote the public exposition of the topics studied under the professor coordination. This activity may include: practical lessons, clinical cases discussion and lectures.  
 – The Seminars will follow the course program, developing the skills explained during the master classes, promoting the active participation of the students. |
 • There will be practical sessions at external institutions for observation of diagnosis and treatment plan methods, clinical procedures, computerized guided surgery and implant techniques in consonance with the Implantology Research Chair of San Pablo CEU University. |

Code GENERAL SKILLS: after completing the course the student will be able to:

<table>
<thead>
<tr>
<th>Code</th>
<th>Obtain and elaborate a complete clinical history with all the relevant information for an implant treatment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG.20</td>
<td>Do a complete buccal examination, including the necessity (or not) of X-ray tests or any other complementary diagnostic tests as well as their interpretation and analysis.</td>
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</tbody>
</table>

Code SPECIFIC SKILLS: after completing the course the student will be able to:

<table>
<thead>
<tr>
<th>Code</th>
<th>Establish the Diagnostic and treatment plan sequence of a case from a multidisciplinary point of view, integrating different disciplines of dentistry for different patient’s medical</th>
</tr>
</thead>
</table>
conditions.

CE35.4 Propose different treatment options to solve the same clinical situation, being able to identify and communicate the advantages and disadvantages of each treatment solution.

CE36.1 Analyze radiological tests based on images (X-rays, CBCT, etc…) to be able to establish a correct diagnostic and treatment plan based in the clinical findings and the different tests based in images.

CE36.3 Determine the aesthetic requirements and expectations of the patient and be able to design a treatment plan according to them.

CE37.3 Surgical area preparation.

CE37.1 0 Establish both surgical and pharmacological protocols to control inflammatory processes the periodontal/periimplant tissues including supra- and subgingival instrumentation techniques

CE37.1 1 Use surgical and/or pharmacological clinical proceedings to control inflammatory processes of the periodontal/periimplant tissues including supra- and subgingival instrumentation techniques

2.- LEARNING OUTCOMES:

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Learn about the major problems associated with the periimplant disease, knowing the diagnostic and therapeutic methods for their resolution</td>
</tr>
</tbody>
</table>

6. EVALUATION CRITERIA

1.- CLASS ATTENDANCE:

- To be eligible for the continuous evaluation system, 75% attendance to the master classes is required (attendance will be daily controlled). Since the student may lack 25% of the total of the master classes, proofs of absence will not be admitted.
- The attendance to the practical classes is obligatory in 100% to pass the subject.

2.- EVALUATION SYSTEM AND CRITERIA:

**ORDINARY CALL** (Continuous and comprehensive evaluation)

<table>
<thead>
<tr>
<th>Code</th>
<th>Type of evaluation test</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Written test</td>
<td>70%</td>
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<tr>
<td></td>
<td>Practical test</td>
<td>30%</td>
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</table>

**EXTRAORDINARY CALL**

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<tr>
<th>Code</th>
<th>Name</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Oral test</td>
<td>100%</td>
</tr>
</tbody>
</table>
3.- EVALUATION SYSTEMS DESCRIPTION:

<table>
<thead>
<tr>
<th>Evaluation System</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Written assessment</td>
<td>Test in which it is required to choose the correct answer of a set of possible answers (items of true / false, match, fill the gaps multiple choice, etc.). The items can be graphs, texts, examples or even clinical cases images. It allows to evaluate the learning objectives.</td>
</tr>
<tr>
<td></td>
<td>- The exam will include the complete subject syllabus and will consist of a minimum of 50 questions. These questions could be direct questions, deductive questions or resolution of clinical cases in a variable percentage. The qualification required to pass is equal to or greater than the 50%, discounting each incorrect question a 0'33 of a question answered correctly.</td>
</tr>
<tr>
<td>Practical assessment</td>
<td>- Procedure used to evaluate behaviors or achievements while they are occurring (debates, presentations, etc.) or the evaluation of finished works (reports, projects, etc.).</td>
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<tr>
<td></td>
<td>- Evaluation of the oral presentation that the student makes of a topic related to the subject.</td>
</tr>
<tr>
<td>Oral Assessment</td>
<td>- The examiner talks to the student asking questions about different topics included in the subject program. It allows to evaluate knowledge as well as the ability to improvise, solve problems, critical thinking, evaluation, synthesis and analysis. It also assesses the oral communication skills and interactive skills of the student by promoting autonomous thinking.</td>
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<tr>
<td></td>
<td>- Oral exam which includes the complete syllabus of the subject program.</td>
</tr>
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7. Subject program

1.- SUBJECT PROGRAM:

**Master Class program:**

**Block 1. General concepts in Implantology**
- History of Dental Implants.
- Osseointegration
- Types of dental implants. Shade and Surface characteristics of dental implants.
- Success criteria in implant dentistry.

**Block 2. Facial Anatomy**
- Maxilla anatomy.
- Mandible anatomy.
- Bone histology and phisiology.

**Block 3. Diagnosys and treatment plan in implant dentistry.**
- Clinical History, Systhemic Pathology and patient selection.
- Clinical examination.
- Radiological studies in implant dentistry: Periapical Dental X-ray, Orthopantomography, DentaScan and others.
- X-ray stents in implant dentistry.

**Block 4. Basic surgical procedures.**
- Pre-surgery preparation. General aspects. Surgical materials and instruments.
- Second stage of implant surgery. Osseointegration process.

**Block 5. Advance surgical techniques for implant dentistry.**
- Sinus lift: Surgical technique, indications and complications.
- Bone grafting: Materials, surgical techniques, indications and complications.
- Guided bone regeneration: Concept, biomaterials, indications and complications.
- Bone distraction: Concept, distractors types, indications and complications.
- Mandibular dental nerve transposition: surgical technique, indications and complications.
- Zygomatic implants.
- Short implants.
- Guided Surgery. CAD/CAM Systems.

**Block 6. Prosthetic options in implant dentistry**
- Types.
- Indications.
- Immediate loading: concept, indications.

**Block 7. Post-extraction implants**
- Technique
- Advantages and disadvantages
- Requirements.

**Block 8. Complications and failures in implant dentistry.**
- intra-surgery complications.
- Early complications.
- Late complications.
- Prosthodontic complications.

**Block 9. Maintenance of dental implants.**

**SEMINARS PROGRAM:**
- Presentation by the professor and the students of clinical cases and topics of interest related to Implant Dentistry.

**PRACTICAL PROGRAM**
- Implant positioning in phantoms
- Prosthetic abutments.
- Guided Surgery

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8. SUBJECT BIBLIOGRAPHY

1.- BASIC BIBLIOGRAPHY:

2.- Additional Bibliography:

- VICENTE JIMENEZ LOPEZ. Carga o Función Inmediata en Implantologia. Quintessence books. 2003

4.- Websites of interest:

- America academy of implant dentistry. www.aaid.com
- European association for osseointegration. www.EAO.org
- Sociedad Española de Implantes www.sociedadsei.com
- Sociedad Española de Periodoncia y Osteointegración www.sepa.es
- Sociedad Española de Cirugía Oral y Maxilofacial www.secom.org

9. RULES OF BEHAVIOUR

1.- RULES:

Lack of Academic Integrity (absence of sources citation, plagiarism or use of prohibited information during examinations), as well as signing on the attendance registration as another student who is not in the room, will imply the loss of continuous evaluation, without prejudice.
to the sanctioning actions that are established.

The use of electronic devices during classes, both theoretical and practical, is not permitted.

Likewise, the use of the documentation provided by the professor (presentations, questionnaires, exercises, seminars, practice notebooks, etc.) is restricted to the preparation of the subject. The professors reserve the right to use the regulations contained in the current legislation on Intellectual Property in cases of unauthorized use.