

1. BASIC INFORMATION

Course	DIAGNOSTICS IN DENTISTRY
Degree program	DENTISTRY
School	FACULTY OF HEALTH SCIENCES
Year	2º
ECTS	3
Credit type	MANDATORY
Language(s)	ENGLISH
Delivery mode	CAMPUS BASED
Semester	S2
Academic year	25-26
Coordinating professor	Dr. MARIA PALOMA ALVAREZ

2. PRESENTATION

The subject Diagnostics in Dentistry (Diagnostics) is developed on a semester basis in the 2nd year of Dentistry Degree. Its general objectives are framed within the Objectives of the "Faculty of Health Sciences" of the Universidad Europea de Valencia (UEV).

From a general perspective, the objective of the subject Diagnostics, together with the other subjects that form the module 2 of the studies in Dentistry Degree (Psychology, Biomaterials, Preventive Dentistry, Community and Public Health, Professionalism, Health English, Statistics and Anthropology and History of Dentistry) is that students know and understand the basic biomedical sciences on which dentistry is based to ensure adequate oral and health care, including psychological, biomaterial, prevention and historical aspects.

3. COMPETENCIES AND LEARNING OUTCOMES

Core competencies:

- CB2- That students know how to apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the development and defense of arguments and problem solving within their area of study.
- CB3 - Students should have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include reflection on relevant social, scientific and ethical issues.
- CB5 - That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.
- CG1 - Know the essential elements of the dental profession, including ethical principles and legal responsibilities.
- CG12 - Ability to understand and recognize the structure and normal function of the stomatognathic apparatus, at the molecular, cellular, tissue and organic levels, in the different stages of life.
- CG17 - Ability to understand and recognize the principles of ergonomics and occupational safety (including cross-infection control, radiological protection, and occupational and biological diseases).
- CG19 – Understand the scientific method and have the critical ability to evaluate established knowledge and novel information. Be able to hypothesize, collect and critically appraise information for problem solving, following the scientific method.
- CG3 - Ability to identify patient concerns and expectations, as well as to communicate effectively and clearly, both orally and in writing, with patients, family members, the media and other professionals.
- CG6 - Understand the importance of developing a professional practice with respect for the patient's autonomy, beliefs and culture.
- CG7 - Ability to promote autonomous learning of new knowledge and techniques, as well as motivation for quality.
- CG9 - Ability to understand the importance of maintaining and using records with patient information for subsequent analysis, preserving the confidentiality of the data.

Cross-curricular competencies:

- CT1 - Responsibility: That the student is able to assume the consequences of the actions he/she performs and be accountable for his/her own actions.
- CT2 - Self-confidence: That the student is able to act with confidence and with sufficient motivation to achieve their goals.
- CT3 - Awareness of ethical values: The student's ability to feel, judge, argue and act in accordance with moral values in a coherent, persistent and autonomous manner.
- CT5 - Interpersonal understanding: That the student is capable of active listening in order to reach agreements using an assertive communication style.
- CT6 - Flexibility: That the student is able to adapt and work in different and varied situations and with different people. It involves valuing and understanding different positions, adapting their own approach as the situation requires.
- CT8 - Initiative: The student must be able to anticipate proactively proposing solutions or alternatives to the situations presented.
- CT9 - Planning: That the student is able to effectively determine goals and priorities defining the actions, deadlines, and optimal resources required to achieve such goals.

Specific competencies:

- CE03 - Know the scientific method and have the critical ability to evaluate established knowledge and new information.
- SC04 - Know the scientific principles of sterilization, disinfection and antisepsis necessary to prevent cross-infection in dental practice.
- SC05 - Know the danger of ionizing radiation and its effects on biological tissues, together with the legislation regulating its use. Manage oral radiodiagnostic facilities.
- CE06 - Perform the necessary radiographs in dental practice, interpret the images obtained and know other relevant diagnostic imaging techniques.
- SC07 - Know the procedures and clinical and laboratory diagnostic tests, know their reliability and diagnostic validity and be competent in the interpretation of their results.
- SC08 - Recognize normality and oral pathology, as well as the evaluation of semiology data.
- CE09 - Identify the main reason for consultation and the history of the current disease. Take a general medical history of the patient and a clinical record that accurately reflects the patient's records.
- CE10 - Know the behavioral and communication sciences that facilitate dental practice.
- CE14 - Know and use the basic equipment and instrumentation for dental practice.
- CE16 - Provide a global approach to oral care and apply the principles of health promotion and prevention of oral diseases.
- SC17 - Educate and motivate patients in the prevention of oral diseases, control pathogenic oral habits, instruct them on proper oral hygiene, dietary and nutritional measures and, in short, on all methods of maintaining oral health.
- CE19 - To know the procedures for oral health diagnosis in the community and to know how to interpret the results.

Learning outcomes:

- RA1 Be competent in identifying the main reason for consultation and the history of the current disease.
- RA2 Be competent in making a clinical record that accurately reflects the patient's records and keeping it up to date.
- RA3 Take a medical history. Complementary diagnostic tests, diagnostic validity, interpretation and critical analysis of the results.
- RA4 Be aware of the risks of ionizing radiation and its effects on biological tissues, be competent in its use and knowledge of regulations related to radiation, protection and dose reduction.
- RA5 Be competent in performing the necessary radiographs in dental practice, in interpreting the images obtained and have knowledge of other relevant diagnostic imaging techniques.
- RA6 Have knowledge of clinical and laboratory diagnostic procedures and tests, know their reliability and diagnostic validity, and be competent in the interpretation of their results.
- RA7 Physical fundamentals of ionizing radiation. Effects of ionizing radiation. Radiological procedures and techniques, legislation and radiological protection.
- RA8 To be able to keep a clinical documentation and information management. Diagnostic and clinical dentistry.
- RA9 Intraoral and extraoral radiographs and other diagnostic imaging methods and techniques in dentistry.
- RA10 Analyze and interpret images.
- RA11 Obtain and elaborate a clinical history containing all relevant information.
- RA12 Know how to perform a complete oral examination, including the appropriate radiographic and complementary exploratory tests, as well as obtaining appropriate clinical references.
- RA13 Have the ability to make an initial diagnostic judgment and establish a reasoned diagnostic strategy, being competent in the recognition of situations that require urgent dental care.

The following table shows the relationship between the competencies developed during the course and the learning outcomes pursued:

Competencies	Learning outcomes
CB02, CB03, CG01, CG09, CG12, CG19, CT01, CT02, CT05, CE08, CE09, CE10	RA1 Be competent in identifying the main reason for consultation and history of current illness.
CE19	RA2 Be competent in making a clinical record that accurately reflects the patient's records and keeping it up to date.
CB2, CB03, CG01, CG03, CG09, CG12, CG19, CT01, CT02, CT05, CE09, CE19	RA3 Medical history taking. Complementary diagnostic tests, diagnostic validity, interpretation and critical analysis of the results.
CB05, CG01, CG07, CG17, CT01, CE05, CE07	RA4 To be aware of the risks of ionizing radiation and its effects on biological tissues, be competent in their use and knowledge of the regulations related to radiation, protection and dose reduction regulations.
CB05, GC01, CG07, CG19, CT01, CT06, CE05, CE06, CE07, CE08, CE19	RA5 Be competent in taking the radiographs that are necessary in dental practice, in interpreting the images obtained, and have knowledge of other relevant diagnostic imaging techniques. RA6 Have knowledge of clinical and laboratory diagnostic procedures and tests, know their reliability and diagnostic validity, and be competent in the interpretation of their results.
CB05, CG01, CG07, CG17, CT01, CE05, CE07	RA7 Physical fundamentals of ionizing radiation. Effects of ionizing radiation. Radiological procedures and techniques, legislation and radiation protection.
CB2, CB03, CG01, CG03, CG09, CG12, CG19, CT01, CT02, CT05, CE09, CE19	RA8 Be able to maintain clinical documentation and information management. Diagnostic and clinical dentistry
CB05, GC01, CG07, CG19, CT01, CT06, CE05, CE06, CE07, CE08, CE19	RA9 Intraoral and extraoral radiographs and other diagnostic imaging methods and techniques in dentistry.
CB03, CG12, CG19, CT01, CE03, CE06, CE07, CE19	RA10 Analyzing and interpreting images
CB2, CB03, CG01, CG03, CG09, CG12, CG19, CT01, CT02, CT05, CE09, CE19	RA11 Obtain and prepare a medical record containing all relevant information.
CB05, GC01, CG07, CG19, CT01, CT06, CE05, CE06, CE07, CE08, CE19	RA12 Know how to perform a complete oral examination, including the appropriate radiographic and complementary exploratory tests, as well as how to obtain adequate clinical references
CB03, CG12, CG19, CT01, CE03, CE06, CE07, CE19	RA13 Have the ability to make an initial diagnostic judgment and establish a reasoned diagnostic strategy, being competent in the recognition of situations requiring urgent dental care.

4. CONTENT

- 1. Diagnostics in dentistry. Clinical history and complementary tests
- 2. Diagnostic imaging: General and dental radiology I
- 3. Diagnostic imaging: General and dental radiology II
- 4. Tests with ionizing and non-ionizing radiation.
- 5. Risk of ionizing radiation. Regulations and radioprotection
- 6. Dental radiological anatomy. Reading of the radiography
- 7. Technique and radiological anatomy of panoramic radiography.
- 8. Radiology of periodontal and periapical pathology.
- 9. Radiology of dental caries
- 10. Radiology of Cysts and pseudocysts
- 11. Radiology of dental anomalies

5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Master classes
- Case method
- Cooperative learning
- Problem-based learning

6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

Campus-based mode:

Learning activity	Number of hours
Master classes	12h
Virtual master classes	3h
Presential knowledge tests	2h
Case studies	10h
Laboratory practices	12h
Tutorship	9h
Research	5h
Self autonomous study	22h
Total	75h

7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

Campus-based mode:

Assessment system	Weight
Final knowledge test	50%
Learning folder	50%

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

7.1. First assessment period

To pass the course in the first exam period, you must obtain a grade greater than or equal to 5.0 out of 10.0 in the final grade (weighted average) of the course.

In any case, it will be necessary to obtain a grade greater than or equal to 5.0, independently, in each of the evaluation systems that make up the course.

The Universidad Europea de Valencia establishes continuous assessment as a system of evaluation of knowledge, skills and basic, general, transversal and specific competences of the degree in Dentistry, in accordance with the provisions of the Regulations for the evaluation of undergraduate degrees. In this regard and for the purposes of the consumption of calls the student should be aware that, if any evaluation system provided in the Learning Guide, in the ordinary call the student will have an overall grade of the subject, thus consuming call.

Final knowledge test:

It will consist of 2 sections:

- Theory Knowledge Test (weight 70%): Multiple choice questions (MCQ) . Number of questions will be established by the professor. Each incorrectly answered question subtracts 0.33 from the grade obtained in this section.
- Images exam (weight 30%): Number of questions will be established by the professor.

Learning portfolio:

The student must comply with the Activities proposed by the professor, that will be submitted on Canvas before established deadline. Each Activity has a weight of 12.5%.

According to the aforementioned Regulations, students taking face-to-face degree courses are required to justify at least 50% of class attendance, as a necessary part of the evaluation process and in the case of theoretical or practical classes determined as mandatory by the teacher in the schedules of the subject, the student must register an attendance of 90%, whether the absence is justified or not. The lack of accreditation by the means proposed by the University will entitle the professor to grade the subject as failed in the ordinary call, according to the grading system.

Regarding the mandatory attendance of 50% of classes, this must be done in person, in the classroom. In other words, attendance will only be considered for those students who are physically present in the classroom, with participation through Hyflex being considered as "absent."

Punctuality will be required, 3 delays of more than 15 minutes or departures before class will be counted as a lack of attendance.

The student must consult in the schedule of the course in the Virtual Campus the sessions of compulsory attendance in the classroom.

The mention of "Matrícula de Honor" will be awarded to students who have obtained a grade equal to or higher than 9.0. Their number may not exceed 5% of the students enrolled in each subject in the corresponding academic year, unless the number of students enrolled is less than 20, in which case only one honorary registration may be awarded.

7.2. Second assessment period

To pass the course in the second assessment period, you must obtain a grade higher or equal to 5.0 out of 10.0 in the final grade (weighted average) of the course.

In any case, it will be necessary to obtain a grade greater than or equal to 5.0 in the Final Knowledge test, so that it can be averaged with the rest of the activities.

The activities that were not passed in the ordinary exam period must be handed in, after having received the corresponding corrections from the teacher, or those that were not handed in.

The Universidad Europea de Valencia establishes the continuous evaluation as a system of assessment of knowledge, skills and basic, general, transversal and specific competences of the degree in Dentistry, in accordance with the provisions of the Regulations for the evaluation of undergraduate degrees. In the Second assessment period, the call will be used up if the student takes the Knowledge Test.

Pursuant to the aforementioned Regulations, students taking face-to-face degree courses are required to justify at least 50% of class attendance, as a necessary part of the evaluation process, and in the case of theoretical or practical classes determined as mandatory by the teacher in the schedules of the subject, the student must register an attendance of 90%, whether the absence is justified or not. Those students who, due to non-compliance with this requirement, must appear in the extraordinary call, must perform as many activities or knowledge tests determined by the teacher to recover this part and its corresponding overcoming based on the specified rubric.

8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Assessable activities	Deadline
Knowledge test	Consult virtual campus
Learning folder	Consult virtual campus

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

9. BIBLIOGRAPHY

The main reference textbooks for this subject are:

Ebooks:

- KALINOWSKA: Imaging Techniques in Dental Radiology. 2020
- WHAITES: Radiography and Radiology for Dental Care Professionals e-book. 4th edition 2020.

The recommended Bibliography also includes:

- KOENING, L: Diagnostico por la imagen Oral y Maxilofacial. Marabn 2014. Madrid
- HERRING, W: Radiología básica aspectos fundamentales. Elsevier. 2da edición 2012. Barcelona.
- AGUILAR ARGULLO MJ; ESUSTAQUIO RAGA, M V; IBANEZ CABANEL, P: Higiene bucodental, cuaderno de trabajo VOL I. Sintesis 2016. Madrid
- GIL VAZQUEZ O: Diccionario Ilustrado de odontología. Amolca. 2da edición 2016. Caracas.
- WHITE S.C, PHAROAH, M.J.: Radiología Oral. Elsevier Science. 4a edición 2001 7ª EDICION 2014
- ARIAS ROJAS: A. El diagnostico en Odontología. De la teoría al quehacer clínico. Universidad del Valle. Primera edición. 2017. Cali, Colombia.
- PALMA CARDENAS A; SANCHEZ AGUILERA F. Tecnicas de ayuda odontológica y estomatológica. Paraninfo. 2da edición. 2013. Madrid, España.
- WHAITES E. Fundamentos de radiología oral. Elvieser. 4ta edición. 2010. Barcelona, España.

10. EDUCATIONAL GUIDANCE AND DIVERSITY UNIT

From the Educational Guidance and Diversity Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

From this unit we offer to our students:

1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.
3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students in need of educational support can write to us at:
orientacioneducativa.uev@universidadeuropea.es

