

TEACHING GUIDE ADAPTATION DOCUMENT DUE TO COVID-19 SPECIAL PERIOD TEACHING GUIDE YEAR 2019-20

This Adaptation Document specifies how the teaching of this course has been adapted (contents, methodologies and assessment) due to the period of temporary suspension of face-to-face educational activity as a result of the health crisis caused by the COVID-19.

COURSE: Waves Propagation

CODE: 350022

1. CONTENTS

Yes, some changes/adaptations have been made to this section:

Modifications/adaptations have been made to this section, as follows.

In the laboratory part of the practices that had not yet been performed:

- Virtualization of the practice "Guided Media Simulation".
- Virtualization of the practice "Propagation in Free Space. Simulation of Propagation with Obstacles."
- Elimination of the practice "Antenna Simulation".
- Elimination of the practice "Radiation Characteristics of an Antenna".
- Replacement of the practice "Measurement of Coaxial Cable Parameters with the Network Analyser" by the study of the results to be obtained when performing the measurements and calculation of different parameters from these results
- Replacement of the practice "Frequency Measurement in Waveguides" with the study of the results that would be obtained when performing the measurements and the calculation of different parameters based on these results.
- Replacement of the practice "Characterization of the Circuit Parameters of an Antenna with the Network Analyser" by the study of the results that would be obtained when performing the measurements and the calculation of different parameters from these results.

2. TEACHING-LEARNING METHODOLOGY. EDUCATIONAL ACTIVITIES

Yes, some changes/adaptations have been made to this section:

Modifications/adaptations have been made to this section as follows.

Theoretical learning in the classroom:

- The presentation of the various topics will be developed online, starting with item 4.

Problem Session Learning in Small Groups:

- The development of the problem sessions will be done online, starting with session 5.

Learning in Lab Work Sessions:

- Virtualized or replaced laboratory practices shall be carried out individually, and the students shall not be required to manipulate the measurement equipment by removing the face-to-face nature of the practices associated with such measurements.

- The self-assessment tests prior to the implementation of the practices are removed.

- Beyond the practice performed before the current situation, individual work will be done (not the planned rotations being performed) by assigning to each student the dates, time and tools/ways to access to the laboratory computers for the realization of the virtualized practices, leaving total freedom for the realization of the other practices that replace those consisting of measurements.

- In order to prepare the laboratory test, each student shall, after the performance of the simulation practices or the study of results substituting the measurement practices, produce a non-deliverable report. This report shall contain the derived results, if any, as well as their interpretation and the calculations which, from them, allow the obtaining of the characteristic parameters that can be obtained from them.

- The supervision of the implementation of the practices will be carried out through individual or group mentoring online, and the students can be requested to submit the report, in order to check the ability of the students to work with the simulators, using the results obtained in the different practices in order to verify the understanding of the concepts and calculations related to them.

Mentoring:

- Individual tutoring through e-mail, open hours, as well as the call for group mentoring online when there is some need of clarification on repetitive or general questions raised by students is identified.

3. ASSESSMENT: PROCEDURES, ASSESSMENT AND QUALIFICATION CRITERIA

Yes, some changes/adaptations have been made to this section:

PROCEDURES

1) Continuous evaluation:

- Suppression of evaluation tests on the previous issues of practice.

- The evaluation shall be based on the completion of a single online exam divided into three separate parts, which shall correspond to the two initial mid-term evaluation tests and the laboratory test.

2) Assessment by final examination and extraordinary call:

In this case, the evaluation would consist of a single online review of the same characteristics as those discussed in the case of continuous evaluation.

ASSESSMENT TOOLS

- Intermediate Assessment Tests (IPP). They are eliminated.
- Self-assessment tests (TA). They are eliminated.
- Laboratory test (PL). It is deleted.
- The requirement, established for continuous evaluation, of overcoming laboratory-related assessment instruments (Laboratory Test) for the completion of the subject is eliminated.
- Final Test (PEF). Single online test, to be performed individually by the student, consisting of three distinct parts:

Part One (PEF1). It consists in solving problems and/or theoretical-practical questions by the student, in an individualized way on guided media content and general content (topics 1, 2 and 3) of the subject.

Part Two (PEF2). It consists in solving problems and/or theoretical-practical questions by the student, in an individualized way on guided media content and general content (topics 1, 4, 5 and 6) of the subject.

Part Three (PEF3). It consists in the resolution of theoretical-practical questions by the student, in an individualized way on the interpretation of results or the calculation of parameters that can be derived from them, of all practices performed (in essence or virtualized) and of the results studies to be accomplished for their realization.

The division of the Final Examination Test into three distinct parts will make it easier for the student who does not pass the course in the ordinary call to perform the final test in the extraordinary call by exempting him/her from the fulfillment of those parts previously exceeded in the ordinary call.

Qualification criteria

1. Regular Call - Continuous Assessment.

- Competencies: TR2-TR3-TR5-TR8-TRU1-TRU2-CT1-CT2-CT3-CT4-CT8-CT15; Learning Result: RA1-RA2; Assessment Criterion: CE1-CE2-CE3-CE4; Assessment Instrument: PEF1; Weight in Rating: 40 %.

- Competencies: TR2-TR3-TR5-TR8-TRU1-TRU2-CT1-CT2-CT3-CT4-CT8-CT15; Learning Result: RA3-RA4; Assessment Criterion: CE1-CE5-CE6-CE7; Assessment Instrument: PEF2; Weight in Rating: 35 %.

- Competencies: TR2-TR8-TRU1-CT1-CT2-CT3-CT8; Learning Result: RA1-RA2-RA3-RA4-RA5-RA6; Assessment Criterion: CE1-CE2-CE3-CE5-CE6-CE8; Assessment Instrument: PEF3; Weight in Rating: 25 %.

As a general criterion, the student who does not perform two of the three parts of the Final Test shall be considered as "Not Shown Up".

2. Ordinary Call — Final Assessment.

The qualification criteria will be the same as those that have been collected in the case of the

Regular Call for Continuous Assessment.

As a general criterion, the student who does not perform two of the three parts of the Final Test shall be considered as "Not Shown Up".

3. Extraordinary Call.

The qualification criteria will be the same as those that have been collected in the case of the Ordinary Call, either by Continuous Evaluation or by Final Assessment.

A student who has passed one of the parts of the Final Test in any of its forms shall be examined only from part(s) no superseded, with a grade of 4-10 setting out the overcoming of each party. Of course, the weight of each part rating will be as indicated above.

4. COMMENTS

- The course planning was intended to carry out virtually all practices at a time after the alarm status was declared.
- The implementation of face-to-face practices, proposed at the Governing Council on 23 April, is foreseen for two weeks in June. In view of the health protection measurements to be taken, and considering the equipment of the laboratory, it would make it possible for only 4 students to access the laboratory simultaneously, each group of 4 student requiring the use of the laboratory for 3 hours. Given the volume of students enrolled, and adding that the same measuring equipment to be used are shared by other subjects, there is a real impossibility to perform these practices in person. Therefore, it has been chosen to replace them with the study of measurements that, carried out with the same equipment and for the intended devices, enable students to interpret the measurements and obtain from them parameters that characterize their behavior.
- The progress of the timetable leads us to think that it would not be desirable to overburden our students with the implementation of PEIs, to which the practice should be added. Therefore, all the tests have been grouped into one test, although differentiating each one, with its weight over the final qualification and the possibility to release one or more of those students who pass them, even if they do not exceed the subject and need to go to the extraordinary call.