Universidad del País Vasco Euskal Herriko Unibertsitatea

VITORIA-GASTEIZKO INGENIARITZA ESKOLA
ESCUELA DE INGENIERÍA DE VITORIA-GASTEIZ

ACTION PLAN
(WEEKS FROM 22 TO 30)

Computer Assisted Structural Analysis

[MECHANICAL ENGINEERING DEGREE]

Coordinador/a de la Asignatura
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ÍNDICE

1. THEORETICAL-PRACTICAL CONTENTS

The theoretical-practical contents will correspond to the last weeks of the subject:

MESHING AND CALCULATION OF SOLIDS:

- Solid meshing: tetrahedrons, hexahedra

- Failure criteria

MESHING AND CALCULATION OF SURFACES:

- Surface meshing: types

- Mid surface extraction methods

FINAL PROJECT OF SUBJECT IN GROUPS:

- 5 projects are proposed and they will have to be developed them in groups and they will have to present them in class, in this case in Egela. Tasks within the project are information search, application of regulations, design and calculation of an engineering component and oral presentation.

2. METHODOLOGY

In the remaining weeks until the end of the school period, the subject consists of master classes (1 hour per week), classroom practices (1 hour per week) and computer practices (2 hours per week).

2.1. MASTER CLASSES AND CLASSROOM PRACTICES

The master classes and classroom practices are being carried out through explanatory videos that are uploaded to egela in the days prior to class time. This course is taught one day a week, 4 hours in the same day, in order to do the computer practices immediately after the theoretical explanations. In these weeks of non-contact teaching, the first 2 hours will be used to watch videos and do exercises, and the following 2 hours will be done through Black Board Collaborate, to answer questions by presenting the exercises. Some exercises have had to be adapted and the initially planned ones have to be modified, since now the version that the students have to use is the student version of the software, since it is more limited than the one we use in class. In egela they have the course organized

by weeks, and with all the statements of the deliverables available so that the exercises can be uploaded once completed

2.2. COMPUTER PRACTICES

Computer practices are done at home, on their own computers, using the student version.

3. EVALUATION SYSTEMS

The evaluation will be maintained as established in the teaching guide.

Continuous Assessment System. Tools and rating percentages:

- - DELIVERY WEEKLY PRACTICES: 40%
- - PROJECT (INCLUDING THE PRESENTATION): 30%
- - EXAM: PRACTICE FEM: 30%

4. ORDINARY AND EXTRAORDINARI CALL: GUIDELINES

ORDINARY CALL: CONTINUOUS ASSESMENT

- DELIVERY WEEKLY PRACTICES: 40%

Every week they have to upload to egela the results of their exercises, either theoretical or from the results of calculations made with the finite element program.

PROJECT (INCLUDING THE PRESENTATION): 30%

In the last weeks of class, the completion of a final project of the subject is proposed, which will be carried out in groups. This project encompasses not only computer practice, but also the application of regulations, information search, and the development of design and the calculation and selection of materials.

At the end of the project an oral presentation is made. In the case of non-face-to-face teaching, they will do so using the BBC tool that allows sharing the powerpoint and the camera so that they can do the closest thing to the face-to-face oral presentation.

EXAM: PRACTICE FEM: 30%

Initially, and whenever this is possible, the final test will be carried out in person. In case it is not, it is proposed to do the practice remotely and use the black board tool to be able to supervise the realization of the same, so that the students have to share the screen during the test and the result of the same for its later evaluation.

EXTRAORDINARY CALL: As for the extraordinary call, students who have failed the subject for not reaching the minimum grade, will have to take an online exam on the corresponding day.