

ACTION PLAN

(FROM WEEK 22 TO THE END OF THE COURSE)

STRUCTURES AND INDUSTRIAL CONSTRUCTIONS

MECHANICAL ENGINEERING DEGREE

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1. THEORETICAL-PRACTICAL CONTENTS

The theoretical-practical contents will be the following:

CHAPTER V: Characterization of industrial units

- **TOPIC 5. Dimensioning of structural elements: Materials for roofs, purlins, beams, piers**
 - 5.4. Beams
 - 5.5. Piers

CHAPTER VIII: Dimensioning of sections of reinforced concrete

- **TOPIC 1. Dimensioning of footings**
 - 1.2. Rigid footings

2. METHODOLOGY

The subject consists of master classes (3 hours per week), classroom practices (2 hours per week) and computer practices (1 hour per week).

In the weeks that remain until the end of the school period, an attempt will be made to maintain the tasks corresponding to the master classes by means of readings of specified theoretical contents and with periodic clarifications through the BlackBoard Collaborate (BBC) and egela forums. And the corresponding tasks to classroom practices by studying solved exercises and solving exercises to collect. As for computer practices, they cannot be carried out, since licenses have to be used from the School's computers.

2.1. MASTER CLASSES AND CLASSROOM PRACTICES

The master classes have been replaced by the reading by the students of the PowerPoint presentation (ppt) on the current topic that is uploaded to the egela virtual platform. This ppt is the same one that would have been read and explained in class by the teachers of the subject. The range of slides where they can find the required information is specified. And they are allowed a certain period of time to do and assimilate. In any case, one or two BBC sessions will be held weekly to explain possible doubts about the content displayed.

The classroom practices have been replaced by the reading, study and understanding by the students of a series of solved exercises that have been sent to them through the egela virtual platform. These exercises are explained and commented, and if the students had doubts about the content, a forum has been set up on the same egela virtual platform so that they can ask their questions, so that both the questions and the answers are accessible by every student, since they can share the same doubts. And a period of dedication is proposed to them. Subsequently, they have been proposed a collection of exercises to be carried out in teams or individually, depending on the task, to be delivered via email to the teacher of each group, scanning the exercises performed. Delivery times for these tasks have also been scheduled. Likewise, in the weekly sessions of the BBC it is foreseen that doubts about the exercises solved can be clarified in order to successfully carry out the proposed ones.

2.2. SEMINARS

Since there are no seminars in this subject, nothing needs to be explained.

2.3. LABORATORY PRACTICES AND COMPUTER PRACTICES

They cannot be performed. If one returned to the modality of face-to-face classes with time before the end of the school period, it would be considered to continue with the activities that were suspended, where the number of exercises would be reduced.

3. EVALUATION SYSTEMS

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

In case of continuous assessment, the assigned percentages are:

- 60%: written test
- 20%: activities carried out and delivered
- 15%: directed computer tasks
- 5%: report on computer directed tasks

In case of final evaluation, the percentages assigned are:

- 80%: written test
- 20%: practical computer exam

4. ORDINARY CALL: GUIDELINES

CONTINUOUS ASSESMENT

Written test (60%)

Whenever possible, the written test will be carried out on dates arranged according to the School calendar. However, throughout the semester there were stipulated partial elimination tests for the final exam. These partial tests are currently being replaced by the performance of special exercises that the students have to deliver individually for dates established through the virtual platform egela. If these special exercises are approved, the students would not have to take the corresponding part of the written test, just as it would have happened with the initially scheduled partial tests.

Activities carried out and delivered (20%)

Since the beginning of the semester, students have been proposed exercises to deliver in teams of 3. These exercises have a weight in the final mark, therefore, despite being voluntary, it is recommended that they be carried out. Until the suspension of classes, these exercises were delivered on pre-established dates to the teacher, but once the face-to-face classes were suspended, March 23 was established as the deadline to deliver everything that was pending.

Likewise, the exercises proposed for the remaining topics have been proposed following more or less the same routine. Once the theory corresponding to the topic of beams has been read and assimilated (present on the egela virtual platform and explained on the BBC) and accessible since March 17, the students have at hand a series of solved exercises that they have to review. Then, in a BBC session, the doubts of the exercises are explained to them. And finally, they solve the proposed exercises with a delivery deadline of April 8.

Subsequently, the same procedure will be carried out with the topic of piers. No dates have been set yet, but it could be around April 1 to have the theory of piers read, with their corresponding weekly BBC sessions, and delivery of solved exercises. These would be studied by the students and explained by BBC sessions to clarify doubts. As a deadline to deliver the proposed exercises, it could be around May 4. And by then it would be necessary to see if face-to-face teaching has been restored or not, to know how to program the rest of the agenda related to rigid footings.

Computer-directed tasks (20%)

Until the suspension of face-to-face classes, some computer sessions were carried out with the CYPE program for structural calculation. If one could return to the face-to-face classes before the end of the school period, one could do some more sessions, but obviously doing fewer tasks than those initially

scheduled. If it is not possible to return to face-to-face classes, we cannot carry out any more computer tasks, so the evaluation would be limited to carrying out the previous sessions plus a descriptive report of what was done:

- Tasks presential15%
- Report delivered: 5%Informe entregado: 5 %

FINAL EVALUATION

Written test (80%)

At first, the final evaluation, which will take place on the date assigned for the ordinary call, will consist of taking a written test that will consist of theoretical and practical content of the entire subject and will take place in a face-to-face way.

In the event that, under the circumstances, this is not possible, an alternative will be proposed using the egela virtual platform.

Computer exam (20%)

As a beginning, there will be a practical computer exam, which will have a weight of 20% of the final grade. This practical exam will consist of carrying out the calculations of some structure proposed by the teachers.

In the event that, under the circumstances, real-time exams are not allowed, a questionnaire with theoretical and practical content related to CYPE software will be proposed through the egela virtual platform.