

Course Syllabi

CODE 104

NAME Discrete Mathematics

Credits 6 ECTS

Period Fall Semester

Course Specifications

Lectures in the lecture room. Problem solving with and without computers support in the lecture room. Individual work is required.

Objectives and contents

The Discrete Mathematics contents of this course provide a solid foundation in mathematics and analytical reasoning, while providing the mathematical tools necessary for analysis, optimization and decision making in software design and development. Their understanding allows evaluating the efficiency of algorithms, optimizing computer systems and developing intelligent software solutions based on data analysis.

Contents:

1. Preliminary concepts and Number Theory.
2. Sets, functions, counting and recurrence relations.
3. Binary relations and graphs.
4. Classical Logic.

Assessment

In general, in the assessment of students, their attitude and work during the teaching sessions will be assessed. In the practical sessions of the course, the student's active work will be encouraged to solve the exercises proposed in each of the topics. In all sessions, the student will be able to use the computer software recommended in the course.

FIRST ORDINARY CALL:

The course will be subject to continuous assessment, which will consist of the submission of completed activities and exercises, with or without computer support, in-class work, questionnaires distributed throughout the course and midterm exams. The number of assessments will depend on the organization and progress of the course and may be influenced by the coordination criteria established by the School and the actual size of the classes.

The course content is divided into four topics. The final grade for the course is a weighted average with the following weights: 25% for Topic 1, 30% for Topic 2, 25% for Topic 3, and 20% for Topic 4. To calculate the final grade, the average grade for Topics 1 and 2 must be greater than or equal to 3, and the same applies to the average grade for Topics 3 and 4.

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The weight of the course assessment during the teaching period will be 100%.

On the date scheduled by the School for the first regular session, exams will be held to make up for topics failed during the teaching period (wxMaxima and written assessment). The grade obtained for each topic in the make-up exam will replace the corresponding grade for that subject obtained during the teaching period, and the weighted average grade, which will determine the final grade, which will be recalculated.

A student's grade will only be transferred to their official records if they pass the course by continuous assessment or seat for the first regular call of the course in January.

SECOND ORDINARY CALL:

On the date scheduled by the School, the exam covering the entire course must be taken, which will account for 100% of the grade. The grade obtained will be recorded in the official examination report along with the corresponding grade.

EXTRAORDINARY CALL:

On the date scheduled by the School, the exam covering the entire course must be taken, which will account for 100% of the grade. The grade obtained will be recorded in the examination report along with the corresponding grade.

Lecturer

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