

Academic Year: (2023 / 2024)

Review date: 09-02-2024

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: RAIOLA , MARCO

Type: Bachelor Thesis ECTS Credits : 12.0

Year : 4 Semester :

SKILLS AND LEARNING OUTCOMES

CB1. Students have demonstrated possession and understanding of knowledge in an area of study that builds on the foundation of general secondary education, and is usually at a level that, while relying on advanced textbooks, also includes some aspects that involve knowledge from the cutting edge of their field of study.

CB2. Students are able to apply their knowledge to their work or vocation in a professional manner and possess the competences usually demonstrated through the development and defence of arguments and problem solving within their field of study.

CB3. Students have the ability to gather and interpret relevant data (usually within their field of study) in order to make judgements which include reflection on relevant social, scientific or ethical issues.

CB4. Students should be able to communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.

CB5. Students will have developed the learning skills necessary to undertake further study with a high degree of autonomy.

CG1. Students are able to demonstrate knowledge and understanding of concepts in mathematics, statistics and computation and to apply them to solve problems in science and engineering with an ability for analysis and synthesis.

CG2. Students are able to formulate in mathematical language problems that arise in science, engineering, economy and other social sciences.

CG3. Students can solve computationally with the help of the most advanced computing tools mathematical models coming from applications in science, engineering, economy and other social sciences.

CG4. Students are able to show that they can analyze and interpret, with help of computer science, the solutions obtained from problems associated to real world mathematical models, discriminating the most relevant behaviours for each application.

CG5. Students can synthesize conclusions obtained from analysis of mathematical models coming from real world applications and they can communicate in verbal and written form in English language, in a clear and convincing way and with a language that is accessible to the general public.

CG6. Students can search and use bibliographic resources, in physical or digital support, as they are needed to state and solve mathematically and computationally applied problems arising in new or unknown environments or with insufficient information.

CE24. Students have shown that they are able to carry out an original exercise individually defended and consisting of a project in the scope of the specific technologies of the Degree, of professional nature, in which the acquired competencies during their studies are synthesized and integrated.

RA1. Students must have acquired advanced cutting-edge knowledge and demonstrated indepth understanding of the theoretical and practical aspects of working methodology in the area of applied mathematics and computing.

RA2. Through sustained and well prepared argument and procedures, students will be able to apply their knowledge, their understanding and the capabilities to resolve problems in complex specialized professional and work areas requiring the use of creative and innovative ideas.

RA3. Students must have the capacity to gather and interpret data and information on which they base their conclusions, including where relevant and necessary, reflections on matters of a social, scientific, and ethical nature in their field of study.

RA4. Students must be able to perform in complex situations that require developing novel solutions in the academic as well as in the professional realm, within their field of study.

RA5. Students must know how to communicate with all types of audiences (specialized or not) their knowledge, methodology, ideas, problems and solutions in the area of their field of study in a clear and

precise way.

RA6. Students must be capable of identifying their own education and training needs in their field of study and the work or professional environment and organize their own learning with a high degree of autonomy in all types of contexts (structured or not).

RA7. Students must possess the professional maturity necessary to choose and evaluate their work objectives in a reflexive, creative, self-determined and responsible way, for the betterment of society.

DESCRIPTION OF CONTENTS: PROGRAMME

Original exercise and extended summary in English to be presented and defended in front of an academic committee.

The work will be an integral project

in the field of data science and engineering that will be professionally oriented where the different competences acquired during the degree courses

should be demonstrated or an innovative work developing an idea, prototype or a model related to a one of the fields developed during the Bachelor

LEARNING ACTIVITIES AND METHODOLOGY

AF4.INDIVIDUAL WORK ON BACHELOR`S DEGREE FINAL PROJECT. Students apply competences and knowledge acquired during their studies in a Project from an area of the degree program, concluding with a written report. The foregoing reflects the corresponding projec`s analysis, resolution of issues and conclusions. The Project represents 299 hours/0% on-site.

AF5.ORAL PRESENTATION OF BACHELOR`S DEGREE FINAL PROJECT. The student defends their Project before a tribunal, clearly presenting the corresponding points with resolution of any problems arising in the Project.1 hour/100% on-site

MD4.TUTORING FOR BACHELOR¿S DEGREE FINAL PROJECT. The tutor for the Bachelor`s Degree Final Project helps and guides the student in all aspects necessary to carry out a solid final Project, and to write a corresponding clear and professional report. The tutoring sessions can be on-site or on line.

ASSESSMENT SYSTEM

SE4.TOTAL FINAL EVALUATION. This is done through an oral Bachelor`s Degree Final Project defense before a tribunal selected to assess the student's work, the learning outcomes, and the presentation of the same, according to an evaluation model. Prior to the defense, the student must have duly presented their written report to the tribunal members.Represents 100% of the evaluation.