ICS3163 MATHEMATICAL ENGINEERING PROJECT SEMINAR

Credits and contact hours: 10 UC Credits / 10 hours (2:40 hours lectures; 1:20 hours recitation assistantship and 6 hours individual work hours per week)

Instructor’s name: To be defined

Course coordinator’s name: None

Textbook: Course references will be determined according to the topics covered in specific semesters, as well as the projects developed by students.

Course Catalog Description: In this course students will develop an applied project using mathematical and computational modeling, and they will review applied industrial cases from the literature.

Prerequisite Courses: MAT380I Probabilities Theory And EYP2114 Statistics Inference And MAT280I Numeric Methods And MAT353I Applications Of Functional Analysis.

Co-requisite Courses: None

Status in the Curriculum: Required Crr2013

Course Learning Outcomes:
1. Critically and creatively participate in the discussion of the alternatives of mathematical models for a particular situation.
2. To be able to apply analytical, numerical or statistical methods towards the solution of the model, and to analyze the results.
3. To be able to suggest improvements and / or extensions to the model according to potential limitations.
4. To be able to present and discuss results in front of an audience.

Relation of Course to ABET Criteria:
- Knowledge of mathematics, science and engineering
- Design and conduct experiments: analyze and interpret data
- Multidisciplinary teams
- Identify, formulate, and solve engineering problems
- Effective communication
- Techniques, skills, and modern tools for engineering practice.
Topics covered: The course uses the format of a seminar in which students, organized in groups, work in a real industrial project related to a diversity of topics in Engineering, using the knowledge of previous courses.