



NATIONAL UNIVERSITY OF ENGINEERING
COLLEGE OF SCIENCES
PHYSICS PROGRAM

CF582 – RESEARCH PROJECT

I. GENERAL INFORMATION

CODE	: CF582 Research Project
SEMESTER	: 10
CREDITS	: 4
HOURS PER WEEK	: 6 (Theory – Practice)
CONDITION	: Compulsory
PREREQUISITES	: CF531, CF561, CF581

II. COURSE DESCRIPTION

For becoming Professional Engineers, graduates have to submit and defend an engineering project. In this course, students advance the development of the project with the guidance of specialized faculty. Students identify the project theme and work to complete a prototype representing the proper solution to the identified problem or need.

III. COURSE OUTCOMES

1. Interpret requirements and needs and translate them into the formulation of an engineering project.
2. Propose proper and adequate solutions to engineering problems.
3. Select equipment and instruments and properly use them according to the experiment to be done.
4. Present clear and well written technical reports using proper symbology and norms.
5. Clearly express ideas supported by coherent arguments.

IV. COURSE CONTENTS

1. Project Theme

Research themes are proposed by College research groups, faculty or students. Course faculty assures that themes are coherent within Program objectives.

2. Working Plan

Student identify the activities of the project, sequence and prioritize them, estimate required time to complete each activity and formulate a working schedule for the semester.

3. Project Progress and Development

Students working in groups advance to develop and complete project activities according to schedule. Students design a complete prototype and simulation and test its behavior and response. Students carry out required experimental work in College laboratories.

4. Report

Faculty presents the norms for report writing, as well as the corresponding formats to be used for students to write and submit the project report.

5. Oral Presentation

All students in each group orally defend the project in front of a specialized jury composed by faculty and practitioners engineers from industry.

V. METHODOLOGY

The course takes place as a workshop with intense work by students. Faculty provides advice to each group to assure that the project will be completed as scheduled.

VI. GRADING SYSTEM

The Final Grade (PF) is calculated with the following formula:

$$PF = (PP + FP) / 2$$

PP: Average grade of partial reports

FP: Final report and final presentation

VII. BIBLIOGRAPHY

The bibliography depends on each particular project. Students are encouraged to search for relevant technical information in books, technical papers, and so on.