

What is the European Project Semester?

The *European Project Semester (EPS)* is an **innovative training programme** that addresses the **new professional demands** that will be placed on the engineers of the future. The programme has been designed in keeping with the **new learning outcomes** established by the Bologna Process and the European Higher Education Area.

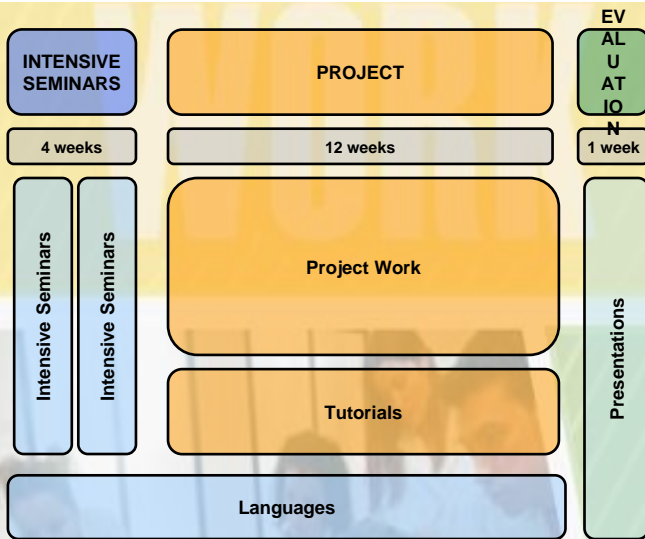
The EPS has become a **huge success** since the Engineering College of Copenhagen offered it the first time in 1995. **Industrial participation** ensures a **quality semester** for those students who follow the programme.

The programme offers you the opportunity to learn to work in teams in an international, multicultural and interdisciplinary atmosphere.

Structure of the EPS program

The EPS has two complementary parts:

- A project:** during the semester and under the guidance of an academic tutor, an international team of four to six students works on a real-life multidisciplinary project for a Spanish or an international company. The work teams are made up of students with different academic backgrounds from all over Europe. Individual and group tutorials will be offered during the semester.
- Intensive seminars:** a short intensive programme with practical workshops about topics related to project management will also be offered to enhance the work related to the project. These complementary workshops will also help students develop their communication and cooperation skills.



Projects Developed by students - Year 07/08

AAB :: AUTONOMOUS ACOUSTIC BUOY
embedded solution for underwater sounds acquisition and acoustics study

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Nowadays, the ocean is filled with noise pollution sources. An increasing number of man-made factors coming from human activities, e.g. shipping and leisure activities, create underwater noise which may have a great negative effect on the life cycle of cetaceans and may threaten their conservation. More needs to be known about their habits and being aware of this, knowledge, these magnificent animals may be protected from an uncertain future.

It is well known that marine mammals are the most vocal animals on the sea and can cover a wide range of different signals. The AAB provides a solution for the monitoring of cetaceans. It consists of an embedded PC system including a data acquisition circuit combined with an analogical amplifier to record high frequency sounds in accordance with resolution and sampling rate criteria.

System Overview

Amplifier system

AD conversion

User Interface

Results

Conclusion

ACKNOWLEDGMENT

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Autonomous Meteorological Buoy Project 2008

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The project is to set up an autonomous meteorological buoy to be operated in the Mediterranean Sea. It obtains weather and sea related data and transmits them to a base station on the land for further processing and archiving. Besides the measurement system, a reliable communication system to the coastal station and the handling of the measurements had to be solved. Also a robust, floating and reliable mechanical design had to be found in order to provide space and allow the equipment to function correctly.

User Interface

Power Supply

Communication

Further Information

Acknowledgment

References

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Design and Layout of Renewable Energy Equipment for the New Roof of the EPSEVG

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Introduction

Background and Purpose

Methods & Calculations

Results

Conclusion

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Literature References

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Main results of the EPS'08 edition

- 11 Students from 8 nationalities and 6 engineering specialties** have worked together acquiring **meta-cognitive skills** in teambuilding, management of projects, working in an international and multidisciplinary atmosphere, professional and scientific communication, etc.
- All students passed the semester and have evaluated very positively their experience**, both from the learning point of view and the social one.
- All the universities** who sent students in this edition are interested in **sending more students to the EPS'09**.
- 16 professors and teachers** have been directly involved in the programme.
- The programme has introduced a multidisciplinary approach** in the departmental culture.
- The programme is directly transferable to the new Bachelor degrees** under the European Higher Education Area framework that started at UPC in the year 2009-2010.