

## A PRIMER IN ENGINEERING MANAGEMENT

This Study abroad program is approached from a project based learning perspective, and structured around a case study, hands-on activities in teams, visits to industrial sites and the Port, and a final defense.

Finally, the program is complemented with cultural activities and outings to the main attractions of the region and a hospitality program including welcome reception and farewell dinner.



Students	Duration	Period
12 to 20	10 days	Spring

### CULTURE AND HOSPITALITY PROGRAM

The hospitality program includes:

- Welcome Reception at the College of Engineering.
- Civil Engineering in the Roman Era
- Ebre Delta day outing
- Reus Modernist Route
- Farewell meal





## COURSE CONTENT

### Methodology

The learning methodology of this training program is project based. Students will be assigned a case in which they will work in teams to propose a solution to the project objectives. They will have both theoretical sessions and technical visits in order to obtain all the inputs needed to work on the projects. They will have supervised time devoted to prepare their projects and their final presentation, which will take place the last day of the course.

### Assessment

The presentation will be the basis for the assessment of the student's performance. Every team will produce a presentation (PowerPoint, Prezi or other standard software) with their proposed solution to the project objectives. The estimated duration of the defense is of 20' for the presentation plus 20' of questions. The group supervisor can attend and assess the presentations as well if required.

### Structure

Every day is structured starting with 1 and ½ h. of formal lecturing to introduce a given topic, which is relevant for the project. It is followed by supervised teamwork (2 and ½ h.). In the afternoon, a visit to a prescribed site is programmed to gather information for the project (3 to 4 h).

For a number of about 20 students, groups of 5 members will be created by the staff.

### Content

The content of the course is structured around six modules:

1. Principles of Teamwork and leadership
2. Port logistics
3. Cost analysis (production, logistics, etc.)
4. Supply structure in the oil and chemical industry
5. Demand structure in the oil and chemical industry
6. Innovation strategies in a global context

### Technical visits

The technical visits will take place in facilities in which the students can acquire relevant information for their projects, such as the Port facilities, a petrochemical plant, or an engineering company.



## Civil Engineering in the Roman Era

Romans are famous for their advanced engineering accomplishments, which surpassed most other civilizations of their time, and many of their structures have withstood the test of time to inspire others.

Tarraco, the former name of Tarragona, was the oldest Roman settlement on the Iberian Peninsula, and it was during 26 and 25 BC that it attained its maximum importance as a city, when it became the de facto capital of the Roman world.

This activity will give an introduction to the students on the main engineering innovations developed by the Romans, followed by a visit to the main monuments that can still be seen in the city of Tarragona, whose ancient Roman archaeological complex of Tarraco was declared a World Heritage Site by UNESCO in 2000.



## CALENDAR

### Week 1

	Tue	Wed	Thu	Fri	Sat
09.00-10.30	Arrival to Tarragona  Welcome and orientation	L1: - Principles of Teamwork and Leadership	L3: Cost analysis (production, logistics, etc.)	L4: Supply structure in the oil and chemical industry	Day outing: Ebre Delta
		- Formation of the teams and project assignments	Break	Break	
10.30-13.00		L2: Port logistics	Teamwork	Teamwork	
		Lunch	Lunch	Lunch	
14.00-18.00		Site visit 1	Site visit 2	Civil Engineering in the Roman Era	

### Week 2

	Sun	Mon	Tue	Wed	Thu
09.00-10.30	Free day: Optional Barcelona trip	L5: Demand structure in the oil and chemical industry	L6: Innovation strategies in a global context)	Teamwork: preparation of the defense	Project presentation, group 1 and 2
		Break	Break		Break
10.30-13.00		Teamwork	Teamwork	Lunch	Project presentation, group 3, 4 and 5
		Lunch	Lunch		
14.00-18.00		Site visit 3	Site visit 4	Art Nouveau visit	Farewell meal