

The new model of
INDUSTRY PLACEMENTS
at the

**ESCUELA TÉCNICA SUPERIOR
DE INGENIEROS DE MINAS**

UNIVERSIDAD POLITÉCNICA DE MADRID



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1987 REFORM OF UNIVERSITY SYSTEM



- ***Less theoretical programs***
- ***Agreement with the European Systems***

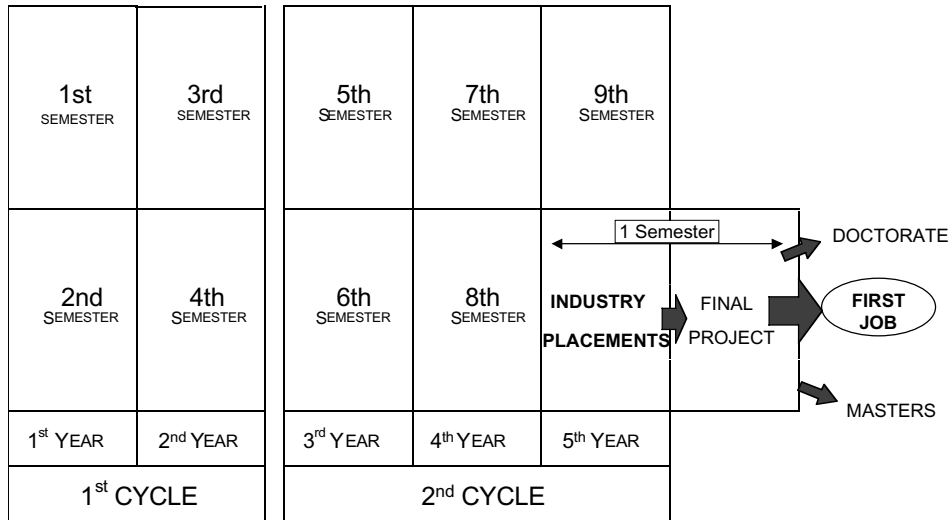
**INCLUSION OF PLACEMENTS IN THE
STUDY PROGRAMS**

Posibilities

- ¥ Core credits (*for all Universities*)
- ¥ Compulsory (*for each (University)*)
- ¥ Optionals (*proposed by the University,
selected by the student*)
- ¥ Free Option (*complementary credits,
freely chosen by the students*)

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**INDUSTRY PLACEMENTS IN THE 1996 CURRICULUM
OF THE ETSIMM**



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FINAL PROJECT DEVELOPMENT

BY MEANS OF A *MISSION* WITHIN A COMPANY:

Proposing a solution
to a real professional problem
of enough difficulty,
applying the previous knowledge.

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BASIC CHARACTERISTICS
OF THE SUBJECT *INDUSTRY PLACEMENTS*

1/2

¥Description of contents	✦	Monitored period within a company
¥Year	✦	5th
¥Semester	✦	2nd
¥Type	✦	UPM Compulsory subject

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BASIC CHARACTERISTICS
OF THE SUBJECT *INDUSTRY PLACEMENTS*

2/2

¥Duration	✦	13 weeks (minimum)
¥Number of credits awarded	✦	16 credits
¥ Credit value	✦	1 credit = 30 hours
¥Type of credits	✦	Practical

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REMARKABLE POINTS

1/2

¥ Similar aspects to long distance learning
(developed outside the School)

¥ Bridge between two different worlds
(academic and professional)

¥ The internship of each student is different
from all the other students

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REMARKABLE POINTS

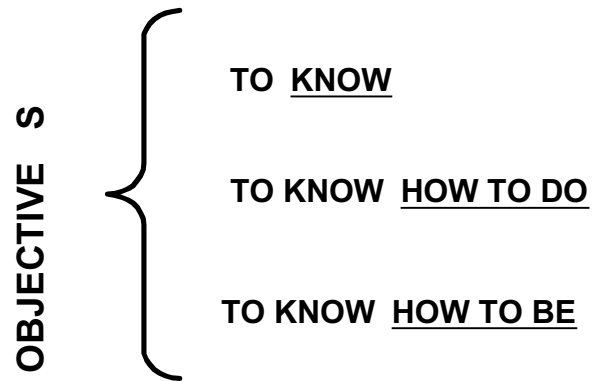
2/2

¥ Professional skills in addition to learning skill are
developed according to the objectives

¥ The internships are interdisciplinary and
multidisciplinary

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INTERNSHIPS



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GENERAL OBJECTIVES OF THE PLACEMENTS AT THE ETSIM (UPM)

1/2

- 1) To apply the knowledge acquired in the university
- 2) To acquire new skills relevant to the student's area of study
- 3) To confront the student with situations and problems of a professional nature

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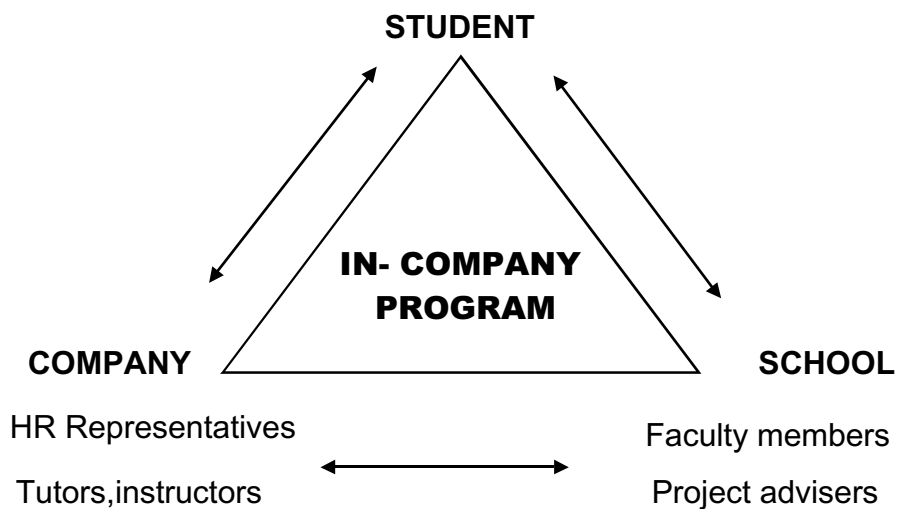
GENERAL OBJECTIVES OF THE PLACEMENTS AT THE ETSIM (UPM)

2/2

- 4) To develop an attitude and behavior appropriate for the professional environment
- 5) To analyze the conditions of the work environment
- 6) To analyze their own experience of immersion into the work environment

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INTERNSHIP PROGRAM ACTORS



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MENTORS FROM THE COMPANIES - FUNCTIONS -

¥To agree upon a job description with the university

¥Integrate the student into the company

¥Mentor the student (to teach, explain, assign works, supervise, correct)

¥ Evaluation of the student

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ADVISEMENT PROFESSORS - FUNCTIONS -

(Role: technical expert)

¥To advise the student throughout the placement on technical questions

¥Evaluation of technical aspects of the internship

¥This role gains more importance if the internship leads to the Final Project

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PROFESSORS

- FUNCTIONS -

2/2

¥ To advise the student throughout the course regarding general questions

¥ To facilitate each step of the process

¥ To oversee the development of the program

¥ To evaluate each student and the entire internship program of the school

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UNIVERSITY PROFESSORS

- FUNCTIONS -

1/2

¥ To search for and arrange internships

¥ To assign the positions

¥ To design the general aspects of each placement program

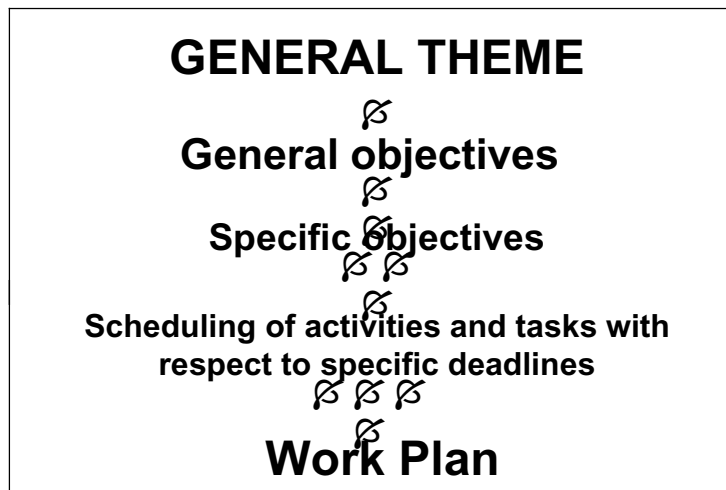
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STEPS OF THE SUBJECT

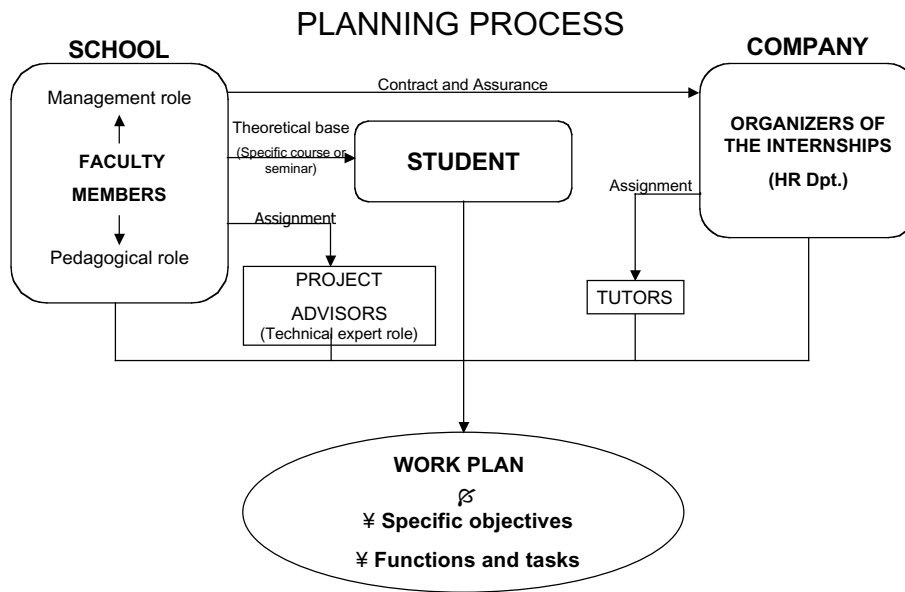
1. Distribution of information to the students
ϕ
2. Collection of applications
ϕ
3. Search for and arrangement of positions
ϕ
4. Assignment of positions
ϕ
5. Preparation of each student
ϕ
6. Planning
ϕ
7. Follow up
ϕ
8. Evaluation

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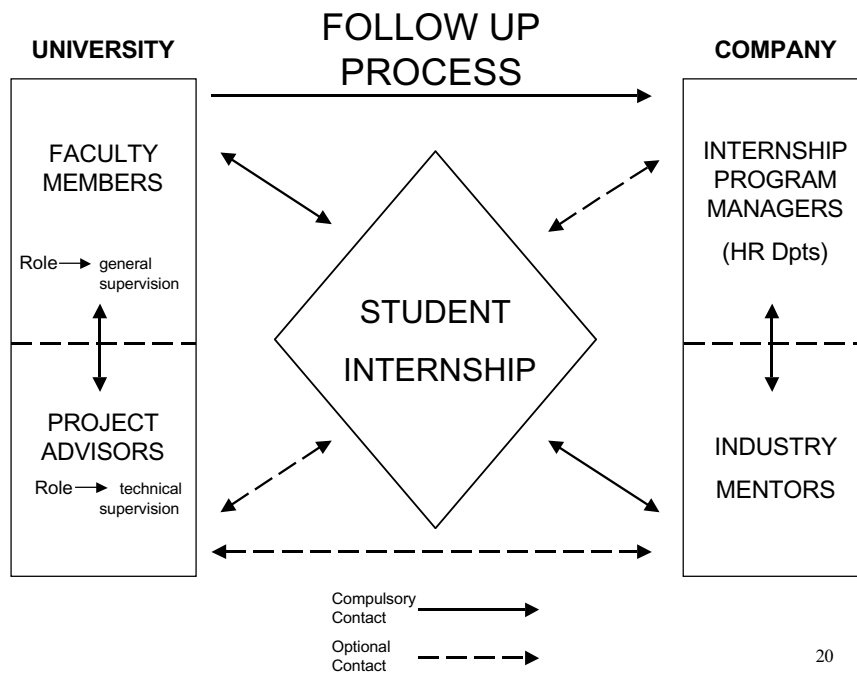
THE PROCESS OF PLANNING



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FOLLOW UP PROCESS

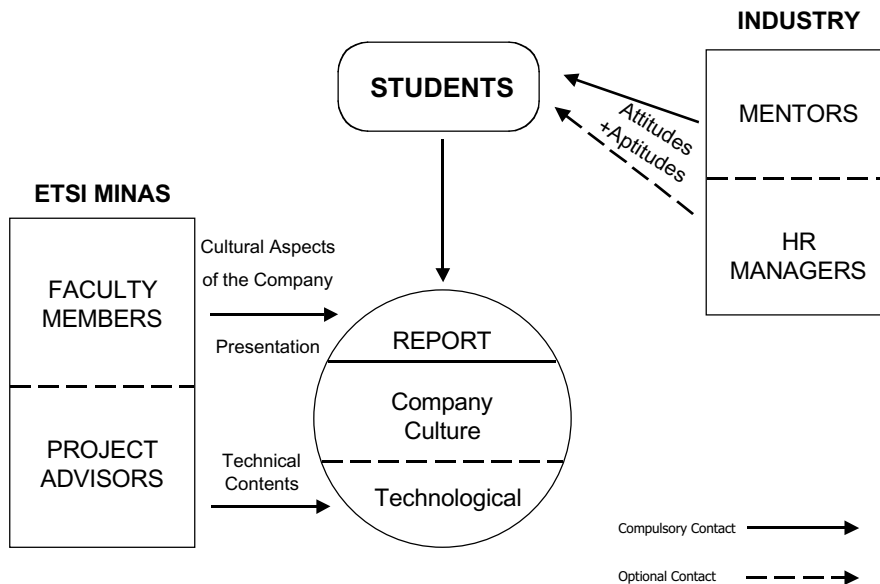
Objectives : To overseeing the development of and changes in the program

Criteria : availability of the university professors for the company and frequents contacts with the student

Protocol : confirmation of incorporation;
confirmation of work plan; brief periodically reports

Methods : meetings; telephone; e-mail; fax

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THE FINAL REPORTS OF THE INTERNSHIP

¥Technical Report

- Description of the technical processes
- Description of the project

¥Cultural Report

- Analysis of the culture of the company
- Analysis of the working conditions

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EVALUATION PROCESS

Subject / object of the evaluation:

¥the *student* (the performance and results of the internship)

¥ the *internship* (quality)

Tools

¥The *Final Report*

¥The *Interview*

¥*Questionnaires*

Dimensions

¥Educational

¥ Accreditation

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THE FINAL COURSE GRADE

Mentor: 50 %

(assessment of the process : performance of the student)

Faculty Members : 25 %

(assessment of the product : report over the cultural aspects of the company)

Project Advisors : 25 %

(assessment of the product : technical report)

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QUALITY EVALUATION OF THE COURSE

Student Questionnaire / 1st part

¥Approval of the internship assignment

¥Level of Planning

¥Level of Activity

¥Level of Difficulty

¥Relativity to the area of study

¥Attention received from the mentor and advisement professor

¥Quality of the relationships with the mentor and personnel

¥Utility of the tasks

¥Utility of the experience:

_ Technical Development

_ Knowledge of Industry Organization

_ Personal Development

_ Professional Orientation

¥Global Evaluation

¥Suggestions

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QUALITY EVALUATION OF THE COURSE

Student Questionnaire / 2nd part

Evaluation of the University Professors

Strongly Agree (5) - Strongly Disagree (1)

- ¥The student was well informed about the course
- ¥The professor responded to questions with clarity and precision
- ¥The professor was easy to talk to.
- ¥The professor had set office hours and was available for students during these times
- ¥The professor completed his tasks efficiently
- ¥The professor was able to motivate the student
- ¥Disregarding unavoidable complications, he/she was a good overall professor.