

**ANNEX**  
**SET OF DATA SHEETS**  
**FOR THE QUALITY ASSURANCE FILE**

# Contents

ANNEX.....	1
SET OF DATA SHEETS .....	1
FOR THE QUALITY ASSURANCE FILE .....	1
S0. SUGGESTED COVER SHEET AND IDENTIFICATION PAGES.....	4
F1. PRELIMINARY DATA ABOUT THE INSTITUTION: .....	6
F2. PRELIMINARY DATA ABOUT THE INSTITUTION: .....	9
F2. PRELIMINARY DATA ABOUT THE INSTITUTION (continued):.....	10
F3. PRELIMINARY DATA ABOUT THE INSTITUTION: .....	11
F4. ACADEMIC PROGRAMME DESCRIPTION .....	12
F5. HEI STRATEGY FOR THE ACADEMIC PROGRAMME .....	13
F6. COOPERATION WITH OTHER INSTITUTIONS .....	14
F7. GENERAL INFORMATION ON THE ACADEMIC PROGRAMME:.....	15
F8. GENERAL INFORMATION ON THE ACADEMIC PROGRAMME .....	16
F9. CURRICULUM.....	17
F11. SUPPLEMENTAL WORK DATA SHEET .....	23
F12. OUTCOMES .....	24
F13. LIST OF TEACHING STAFF: PERMANENT STAFF.....	25
F14. LIST OF TEACHING STAFF: NON-PERMANENT STAFF.....	26
F15. LIST OF STAFF WITH TEACHING RESPONSIBILITIES.....	28
F16. ACADEMIC PROGRAMME COORDINATOR DATA SHEET .....	30
F17. TEACHING STAFF DATA SHEET .....	33
F18. STUDENTS' MOBILITY: .....	36
F19. COUNSELLING STUDENTS, GRADUATES AND EMPLOYERS .....	37
F20. LOCATION ADEQUACY .....	38
F21. PEDAGOGIC AND SOCIAL FACILITIES.....	39
F22. MONITORING THE ACADEMIC PROGRAMME: SUCCESS RATE.....	40
F23. MONITORING THE ACADEMIC PROGRAMME: PROJECTS / PARTICIPATION IN SCIENTIFIC RESEARCH .....	41
F24. MONITORING THE ACADEMIC PROGRAMME: SYNTHETIC SELF- ASSESSMENT .....	42
F25. QUALITY PLANNING .....	43
F26. INTERNAL QUALITY ASSESSMENT .....	44
S27. OUTCOMES .....	46
27.1. KNOWLEDGE AND UNDERSTANDING .....	46
27.2. ENGINEERING ANALYSIS.....	48
27.3. ENGINEERING DESIGN.....	50
27.4. INVESTIGATIONS .....	52
27.5. ENGINEERING DESIGN.....	54
27.6. TRANSFERABLE SKILLS .....	56



***S0. SUGGESTED COVER SHEET AND IDENTIFICATION PAGES***

**INSTITUTION IDENTIFICATION AND LOGO**  
**(institution style)**

**Bachelor / Master Degree Programme in**  
**Title**

**Application to ARACIS**  
**for the award of the EUR-ACE LABEL**

Month, year

## Institutional Identification

Institution -

Rector/ Director/ Dean – as applicable –

E-mail –

Phone - \*

Fax - \*

Address –

Course Title –

Course Director –

E-mail –

Phone - \*

Fax - \*

Address –

Secretarial Office (where correspondence shall be addressed to)

Name –

E-mail –

Phone - \*

Fax - \*

Address –

\* Optional Data

**F1. PRELIMINARY DATA ABOUT THE INSTITUTION:**

(INSTITUTION, FACULTY, UNIVERSITY)

INSTITUTION:	
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APPLICATION ACADEMIC YEAR AND SUPPORTING DOCUMENTS (N -1)/N	/
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**MANAGING ENTITIES**

RECTOR/PRO-RECTORS	
DEAN / PRO-DEANS	
FACULTY SCIENTIFIC SECRETARY / SENATE / COUNCIL	

**ACADEMIC AND SUPPORT STAFF**

TOTAL NUMBER OF STAFF academic and support staff		TOTAL NUMBER OF ACADEMIC STAFF		Ph. D. STAFF or equivalent		OTHER ACADEMIC STAFF	
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**NO. OF STUDENTS IN THE ACADEMIC YEAR (N -1)/N**

	N-5/N-4	N-4/N-3	N-3/N-2	N-2/N-1	N -1/N
NO. OF STUDENTS ENTERED INTO THE FIRST CYCLE (BACHELOR) OR INTEGRATED MASTER PROGRAMME					
NO. OF STUDENTS ENTERED INTO THE SECOND CYCLE (MASTER)					
TOTAL NO. OF STUDENTS ENTERED INTO FIRST AND SECOND CYCLE (BACHELOR AND MASTER)					
TOTAL NO. OF STUDENTS ENTERED INTO FIRST CYCLE (BACHELOR) COURSES					
TOTAL NO. OF STUDENTS ENTERED INTO SECOND CYCLE (MASTER) COURSES					
TOTAL NO. OF STUDENTS ENTERED INTO INTEGRATED MASTER COURSES					
TOTAL NO. OF STUDENTS ENTERED INTO BACHELOR,					

MASTER OR INTEGRATED MASTER COURSES					
NUMBER OF FIRST ENTRIES AS PH. D. STUDENTS					
TOTAL ENTRIES AS PH. D. STUDENTS					

**F1. PRELIMINARY DATA ABOUT THE INSTITUTION (continued):**

DIPLOMAS ISSUED IN THE ACADEMIC YEAR (N-1)

Total no. of Bachelor's Degree Diplomas					
Total no. of Master's Degree Diplomas					
TOTAL NUMBER OF BACHELOR'S DEGREE AND MASTER'S DEGREE DIPLOMAS					
Total number of Ph.D. Diplomas					

LOCATION ADDRESS

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**F2. PRELIMINARY DATA ABOUT THE INSTITUTION:**

(INSTITUTION, FACULTY, UNIVERSITY)

**BACHELOR COURSES IN THE FIRST CYCLE, DELIVERED AT THE INSTITUTION:**

COURSE DESIGNATION	NO. OF STUDENTS	TOTAL NO. OF ACADEMIC STAFF	NO. OF PH. D. STAFF

**MASTER COURSES DELIVERED AT THE INSTITUTION:**

COURSE DESIGNATION	NO. OF STUDENTS	TOTAL NO. OF ACADEMIC STAFF	NO. OF PH. D. STAFF

**PH. D. COURSES DELIVERED AT THE INSTITUTION:**

COURSE DESIGNATION	NO. OF STUDENTS	TOTAL NO. OF ACADEMIC STAFF	NO. OF PH. D. STAFF

***F2. PRELIMINARY DATA ABOUT THE INSTITUTION (continued):***  
 (INSTITUTION, FACULTY, UNIVERSITY)

BACHELOR COURSES WITHIN THE CURRICULUM:

COURSE DESIGNATION	NO. OF STUDENTS	TOTAL NO. OF ACADEMIC STAFF	NO. OF PH. D. STAFF

MASTER COURSES WITHIN THE CURRICULUM:

COURSE DESIGNATION	NO. OF STUDENTS	TOTAL NO. OF ACADEMIC STAFF	NO. OF PH. D. STAFF

**F3. PRELIMINARY DATA ABOUT THE INSTITUTION:**  
(INSTITUTION, FACULTY, UNIVERSITY)

INSTITUTION:	
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**BRIEF INSTITUTION HISTORY**

Institution vocation development, its pedagogic and academic trajectory, its integration in the national system of education, either private or public. Highlighting different phases in the institutions' life since its foundation, giving an idea of the increase in the number of students, types of delivered courses, changes and extensions in terms of location designation, etc.

**DESCRIPTION OF THE MAIN LOCATION:**

Installations shall be described so that to include both the most relevant aspects and the adequacy thereof in terms of the higher education institution's needs, including libraries, central workshops, canteens, experimental installations, specific fields of research, students' accommodation, aid in starting a business, interface institutions.

#### ***F4. ACADEMIC PROGRAMME DESCRIPTION***

INSTITUTION:	
ACADEMIC PROGRAMME:	

##### **CURRENT PROGRAMME**

Date of programme structure or of its last formal modification approval:	
Valid since the academic year:	

##### **DOCUMENT IN PROOF OF THE LEGAL FRAMEWORK OF THE PROGRAMME:**

Ex. Romanian Government Decision (H.G.), issued annually

##### **APPROVAL IN PROGRESS FOR A NEW PROGRAMME**

Ex. Favourable / unfavourable ARACIS-report is / is not available concerning the academic programme to be organized in the institution.

The provisional authorization file for the academic programme ... is forwarded to ARACIS under registration no. ....

## **F5. HEI <sup>1</sup> STRATEGY FOR THE ACADEMIC PROGRAMME**

INSTITUTION:	
ACADEMIC PROGRAMME:	

### **HISTORY AND GROUNDS OF THE ACADEMIC PROGRAMME:**

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### **SPECIAL FEATURES OF THE ACADEMIC PROGRAMME AS COMPARED TO OTHER SIMILAR PROGRAMMES:**

Delivery, applied research, pedagogic project development.

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### **COMPETITIVE ADVANTAGES AND THREATS:**

COMPETITIVE ADVANTAGES	THREATS
Applicants, teaching staff, teaching facilities, higher education institution environment and delivered training	Applicants, teaching staff, teaching facilities, higher education institution environment and delivered training

### **SUSTAINABILITY OF THE ACADEMIC PROGRAMME:**

Highlighting the financial sustainability, demand, market prospective and institutional support

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<sup>1</sup> HEI - Higher Education Institution

## ***F6. COOPERATION WITH OTHER INSTITUTIONS***

INSTITUTION:	
ACADEMIC PROGRAMME:	

PROTOCOLS AND PARTNERSHIP AGREEMENTS WITH OTHER INSTITUTIONS / ORGANIZATIONS:

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INTERFACE INSTITUTIONS AND HOW THEY OPERATE IN COLLABORATION WITH THE HEI:

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## **F7. GENERAL INFORMATION ON THE ACADEMIC PROGRAMME:**

INSTITUTION:	
ACADEMIC PROGRAMME:	

APPLICATION ACADEMIC YEAR AND SUPPORT DOCUMENTS (N - 1)/N	/
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SUBJECT MATTERS		FINAL PAPER / WORK	PROFESSIONAL PRACTICE
SEMESTER <input type="text"/>	CTS <input type="text"/>	YES <input type="text"/>	YES <input type="text"/>
ANNUALLY <input type="text"/>		NO <input type="text"/>	NO <input type="text"/>
TOTAL ACTIVITY (HOURS) <input type="text"/>	COURSE (YEARS) <input type="text"/>	LECTURE HOURS / WEEK <input type="text"/>	

### NO. OF HOURS PER WEEK:

YEAR	YEAR IV		YEAR V	
SEMESTER	I	II	I	II
COURSES				
TUTORIALS				
PRACTICE / PROJECT				
TOTAL				

### NUMBER OF STUDENTS DURING THE LAST 5 YEARS:

ACADEMIC YEAR (N-1)/N	ENTRANCE IN YEAR I	TOTAL IN YEAR I	TOTAL IN ACADEMIC PROGRAMME	GRADUATES

### GENERAL OUTCOME OF THE ACADEMIC PROGRAMME:

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## ***F8. GENERAL INFORMATION ON THE ACADEMIC PROGRAMME***

INSTITUTION:	
ACADEMIC PROGRAMME:	

OUTCOMES (COMPETENCIES AND ABILITIES) PER SCIENTIFIC FIELD:

FIELD 1
FIELD 2
FIELD 3
FIELD 4
FIELD 5



## F9. CURRICULUM

INSTITUTION:	
ACADEMIC PROGRAMME:	

MANDATORY SUBJECT MATTERS	A	S	REF (*)	TEACHING ACTIVITY HOURS PER SEMESTER					CREDITS AS PER THE CREDIT TRANSFER SYSTEM (CTS)
				Courses	Seminar	Laboratory	Practice/ Project	TOTAL	
(add rows as might be necessary)									

OPTIONAL MATTERS	SUBJECT									
(add rows as might be necessary)										

FACULTATIVE MATTERS	SUBJECT									
(add rows as might be necessary)										

Ref (\*) – Type of subject matter: Please, fill in the type of the subject matter – Basic subject matter (B), Engineering science (C), Specialty (S), Optional (O), Complementary subject matters (P). The number of hours per week for each semester shall be included in the table below according to disciplines.  
 Note: If the course is composed of fields, fold the sheets in order to separate each individual field.

## F10

**INSTITUTION:**

**ACADEMIC FIELD:**

**ACADEMIC PROGRAMME:**

# . DATA SHEET OF DISCIPLINE

.....

Discipline status: ☐ mandatory ☐ optional ☐ facultative

Cycle of studies: ☐ Bachelor ☐ Master ☐ Ph. D.

Year of study: ..... ((N-1)/N)

Semester: .....

Teacher in ordinary of the discipline:

Number of hours / Type of check / Credits					
Course	Seminar	Laboratory	Project	Examination	Credits

## A. DISCIPLINE OBJECTIVES

Completing the discipline offers the following specific professional competencies:	<b>1. Theoretical knowledge - Knowledge and Understanding</b>
	<b>2. Acquired skills - Explanation and Interpretation</b>
	<b>3. Acquired abilities - Instrumental-applicative</b>

	<b>4. Attitudes</b>
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**B. PRIOR CONDITIONS FOR ACCESSING THE DISCIPLINE**

**C. DISCIPLINE CONTENTS:**

**a. COURSE**

<i>Chapter</i>	<i>Contents</i>	<i>No. of hours</i>
<i>Semester</i>		
<b>Total hours</b>		
<i>Semester</i>		
<b>Total hours</b>		
<b>OVERALL TOTAL</b>		

**b. APPLICATIONS (SEMINAR, LABORATORY, PROJECT, PRACTICE)**

## Seminar

<i>Application</i>	<i>Subjects</i>	<i>No. of hours</i>
<i>Semester</i>		
<i>Total hours</i>		
<i>Semester</i>		
<i>Total hours</i>		
<b>TOTAL HOURS SEMINAR</b>		

## Laboratory

<i>Application</i>	<i>Work / paper</i>	<i>No. of hours</i>
<i>Semester</i>		
<i>Total hours</i>		
<i>Semester</i>		

<i>Total hours</i>		
<b>TOTAL HOURS LABORATORY</b>		

**Laboratory room:**

<i>Equipment</i>	<i>Equipment description</i>	<i>Year of purchase</i>

**Project:**

<i>Application</i>	<i>Work / paper</i>	<i>No. of hours</i>
<i>Semester</i>		
<i>Total hours</i>		
<b>TOTAL HOURS PROJECT</b>		

**D. INDIVIDUAL STUDY**

<i>Total time estimate</i>				
1. Deciphering and studying course notes			8. Preparation of oral presentations	
2. Study using manuals, course support			9. Preparation of final examination	
3. Study of the minimum recommended reference literature			10. Consultations	
4. Additional documentation in library			11. Documentation in laboratory	

5. Specific work for preparing SEMINAR and/or LABORATORY		12. Documentation using the INTERNET	
6. Writing coursework, essays, reports, making translations, etc.		13. Other work	
7. Preparing for test papers		14. Other work	
<b><i>TOTAL HOURS INDIVIDUAL STUDY (per semester) =</i></b>			

## E. STRATEGIES AND TEACHING METHODS

<b><i>Data transmission methods</i></b>	
<b><i>Forms of activity</i></b>	<b><i>Applicable teaching methods</i></b>
Course	
Seminar	
Laboratory	
Project	

## F. EVALUATION

<b><i>Final marks shall take into account:</i></b>		<b><i>Mark weight, expressed in %</i></b> <i>(total 100%)</i>
• Marks obtained for periodical or partial tests		
• Marks granted for participation in scientific circles and / or professional competitions		
• Mark granted for the final examination		
Describe the practical method for the final evaluation:		
<b><i>Minimum requirements for passing (for mark 5):</i></b>		<b><i>Maximum requirements for passing (for mark 10):</i></b>

## G. REFERENCE LITERATURE

Date endorsed by the University Chair: .....

Date endorsed by the Faculty Board: .....

DEPARTMENT HEAD / CHAIR

PROFESSOR IN ORDINARY OF  
THE DISCIPLINE

PROFESSOR IN ORDINARY OF THE  
SEMINAR / PRACTICAL WORK

### ***F11. SUPPLEMENTAL WORK DATA SHEET***

INSTITUTION:	
ACADEMIC PROGRAMME:	
ACTIVITY: (training, voluntary, work, study-tours, etc.)	

I - IDENTIFICATION					
ACADEMIC YEAR -		FIELD / DISCIPLINE -		INTERNAL CODE -	
YEAR:	SEM:	CONTACT HOURS/WEEK:	TIME -	CTS:	LEVEL (B/I/A):
FORMAL PRELIMINARY REQUIREMENTS:					
TEACHING STAFF					
	NAME	POSITION	ACADEMIC BACKGROUND	% OCC.	
RESPONSIBLE					
OTHER					

II – TARGETS, SYNOPSIS, CHARACTERIZATION	
Background (max. 600 characters)- Provide a concise image of the technical and scientific fields to justify this activity	
Targets (max. 750 characters)- i.e. pedagogic objectives and how this entity contributes to the course	
Contents (max. 1000 characters) Description of the basic features of the activity	

Characterization of the objectives and of the programme

Results – according to the EUR-ACE criteria

Description of what is expected from the student to „understand” or to „know” or „to be able to do” after completing this module and reported to the six outcomes of the EUR-ACE framework standards:

Knowledge and Understanding –

Engineering Analysis –

Engineering Design–

Investigations –

Engineering practice –

Transferable skills –

### III – EVALUATION PROCEDURE

Self-assessment –

Students' reports and other

Teacher's assessment –

## F12. OUTCOMES

INSTITUTION:	
ACADEMIC PROGRAMME:	

### BASIC STRUCTURE:

MANDATORY SUBJECT MATTERS	A	S	KNOWLEDGE AND UNDERSTAN DING	ENGINEERING ANALYSIS	ENGINEERING DESIGN	INVESTIGATI ONS	ENGINEERING PRACTICE	TRANSFERA BLE SKILLS
(add rows as might be necessary)								

### OPTIONAL

(add rows as might be necessary)								

### FACULTATIVE

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#### ***F14. LIST OF TEACHING STAFF: NON-PERMANENT STAFF***

INSTITUTION:	
ACADEMIC PROGRAMME:	

##### **NON-PERMANENT TEACHING STAFF**

NAME	PROFESSIONAL ACADEMIC POSITION	AGE	PROFESSOR IN ORDINARY	ASSOCIATE	VISITOR	DATE EMPLOYED	YEARS OF SENIORITY	MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS
(add rows as might be necessary)								



**F15. LIST OF STAFF WITH TEACHING RESPONSIBILITIES**

INSTITUTION:	
ACADEMIC PROGRAMME:	

SUBJECT MATTER DESIGNATION	YEAR	SEM.	RESPONSIBLE MEMBER	PROFESSIONAL ACADEMIC POSITION (1)	EMPLOYMENT STATUS (2)	ACADEMIC BACKGROUND (3)	ACADEMIC DEGREE	MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS (4)
(add rows as might be necessary)								

Note: (1) - Different at a University level and at a Polytechnic Institute level. (2) – 100% occupancy equals 35 hours per week. (3) – Basic training: engineering or other (specify). (4) – member, senior or collaborator.



## **F16. ACADEMIC PROGRAMME COORDINATOR DATA SHEET**

INSTITUTION:			
ACADEMIC PROGRAMME:			
FAMILY NAME AND FIRST NAME:			
ACADEMIC POSITION:			YEAR OF BIRTH:
PERSONAL WEBSITE URL:			E-MAIL:

### **ACADEMIC QUALIFICATIONS**

YEAR	INSTITUTION	DIDACTIC QUALIFICATION LEVEL	SCIENTIFIC FIELD

### **OTHER ENGINEERING OR ACADEMIC TRAININGS OR QUALIFICATIONS**

YEAR	TRAINING INSTITUTION	COURSE / ACTIVITY

### **ACADEMIC CAREER**

YEARS	EMPLOYER	POSITIONS / TASKS

### **NON-ACADEMIC PROFESSIONAL CAREER**

YEARS	EMPLOYER	POSITIONS / TASKS

### **INDICATORS OF SCIENTIFIC, PEDAGOGIC AND PROFESSIONAL OUTPUT, IN A TOTAL NUMBER OF:**

BOOKS, AS AN AUTHOR		NATIONAL RESEARCH CONTRACTS (FCT AND OTHER PROJECTS)	
BOOKS, AS AN EDITOR		INTERNATIONAL RESEARCH CONTRACTS (EU AND OTHER RESOURCES)	
WRITINGS IN JOURNALS SCI		R&D&I CONTRACTS WITH INDUSTRY	
BOOK CHAPTERS		TECHNOLOGY TRANSFER CONTRACTS	
CONFERENCE WORKS		PATENTS	
EXPRESSIONS OF OPINION		PROTOTYPES	
INVITATIONS TO CONFERENCES		MAJOR ENGINEERING PROJECTS	

Ph. D. THESES		ORGANIZING RELEVANT EVENTS	
MASTER THESES		AWARDS AND MEDALS	

## ***F16. ACADEMIC PROGRAMME COORDINATOR DATA SHEET (continued):***

Up to 5 main publications (books of SCI works)

YEAR	BOOKS – AUTHORS, TITLE, EDITOR JOURNALS – AUTHORS, TITLE, JOURNAL, VOLUME, PAGES

UP TO 5 PH. D. SUPERVISIONS COMPLETED

YEAR	INSTITUTION	Ph. D. STUDENT	TITLE

UP TO 5 PATENTS FILED

YEAR	REFERENCE	AUTHORS	PATENT DESCRIPTION

UP TO 5 TECHNOLOGY TRANSFER CONTRACTS

YEAR	COMPANY / ORGANIZATION	TECHNOLOGY TRANSFER IDENTIFICATION

UP TO 5 RELEVANT RESEARCH CONTRACTS

YEARS	FINANCING INSTITUTION	REFERENCE	INVOLVED RESEARCH INSTITUTIONS	TITLE

UP TO 5 CONTRACTS / PROTOCOLS / AGREEMENTS WITH INDUSTRY

YEAR	COMPANY / ORGANIZATION	TITLE

**F16. ACADEMIC PROGRAMME COORDINATOR DATA SHEET  
(continued):**

UP TO 5 MAIN ENGINEERING PROJECTS

YEAR	AUTHORS, PROJECT TITLE, RECEIVER ENTITY

UP TO 3 AWARDS AND MERITS RECEIVED

YEAR	AWARD

UP TO 5 INVITATIONS TO MAIN CONFERENCES

YEAR	EVENT, PLACE, TITLE

UP TO 3 ARRANGEMENTS FOR RELEVANT SCIENTIFIC OR TECHNICAL EVENTS

YEAR	EVENT, FUNCTION, TYPE, PLACE

RELEVANT MANAGEMENT FUNCTIONS AT AN ACADEMIC AND PROFESSIONAL LEVEL

YEARS	FUNCTION, POSITION



## **F17. TEACHING STAFF DATA SHEET**

INSTITUTION:			
ACADEMIC PROGRAMME:			
FAMILY NAME AND FIRST NAME:			
ACADEMIC POSITION:			YEAR OF BIRTH:
PERSONAL WEBSITE URL:			E-MAIL:

### **ACADEMIC QUALIFICATIONS**

YEAR	INSTITUTION	DIDACTIC QUALIFICATION LEVEL	SCIENTIFIC FIELD

### **OTHER ENGINEERING OR ACADEMIC TRAININGS OR QUALIFICATIONS**

YEAR	TRAINING INSTITUTION	COURSE / ACTIVITY

### **ACADEMIC CAREER**

YEARS	EMPLOYER	POSITIONS / TASKS

### **NON-ACADEMIC PROFESSIONAL CAREER**

YEARS	EMPLOYER	POSITIONS / TASKS

### **INDICATORS OF SCIENTIFIC, PEDAGOGIC AND PROFESSIONAL OUTPUT, IN A TOTAL NUMBER OF:**

BOOKS, AS AN AUTHOR		NATIONAL RESEARCH CONTRACTS (FCT AND OTHER PROJECTS)	
BOOKS, AS AN EDITOR		INTERNATIONAL RESEARCH CONTRACTS (EU AND OTHER RESOURCES)	
WRITINGS IN JOURNALS SCI		R&D&I CONTRACTS WITH INDUSTRY	
BOOK CHAPTERS		TECHNOLOGY TRANSFER CONTRACTS	
CONFERENCE WORKS		PATENTS	
EXPRESSIONS OF OPINION		PROTOTYPES	
INVITATIONS TO CONFERENCES		MAJOR ENGINEERING PROJECTS	
Ph. D. THESES		ORGANIZING RELEVANT EVENTS	
MASTER THESES		AWARDS AND MEDALS	

**F17. TEACHING STAFF DATA SHEET (continued):**

Up to 5 main publications (books of SCI works)

YEAR	BOOKS – AUTHORS, TITLE, EDITOR JOURNALS – AUTHORS, TITLE, JOURNAL, VOLUME, PAGES

UP TO 5 PH. D. SUPERVISIONS COMPLETED

YEAR	INSTITUTION	Ph. D. STUDENT	TITLE

UP TO 5 PATENTS FILED

YEAR	REFERENCE	AUTHORS	PATENT DESCRIPTION

UP TO 5 TECHNOLOGY TRANSFER CONTRACTS

YEAR	COMPANY / ORGANIZATION	TECHNOLOGY TRANSFER IDENTIFICATION

UP TO 5 RELEVANT RESEARCH CONTRACTS

YEARS	FINANCING INSTITUTION	REFERENCE	INVOLVED RESEARCH INSTITUTIONS	TITLE

UP TO 5 CONTRACTS / PROTOCOLS / AGREEMENTS WITH INDUSTRY

YEAR	COMPANY / ORGANIZATION	TITLE

**F17. TEACHING STAFF DATA SHEET (continued):**

## UP TO 5 MAIN ENGINEERING PROJECTS

YEAR	AUTHORS, PROJECT TITLE, RECEIVER ENTITY

## UP TO 3 AWARDS AND MERITS RECEIVED

YEAR	AWARD

## UP TO 5 INVITATIONS TO MAIN CONFERENCES

YEAR	EVENT, PLACE, TITLE

## UP TO 3 ARRANGEMENTS FOR RELEVANT SCIENTIFIC OR TECHNICAL EVENTS

YEAR	EVENT, FUNCTION, TYPE, PLACE

## RELEVANT MANAGEMENT FUNCTIONS AT AN ACADEMIC AND PROFESSIONAL LEVEL

YEARS	FUNCTION, POSITION

## **F18. STUDENTS' MOBILITY:**

INSTITUTION:	
ACADEMIC PROGRAMME:	

### **PRELIMINARY REQUIREMENTS**

Preliminary requirements to be necessarily fulfilled by students in order to be accepted, I.E. requirements in the field of mathematics

### **BASIC REQUIREMENTS**

Criteria to be assessed for selecting applicant students

### **TRANSFERS (TO THE COURSE FROM OUTSIDE)**

ACADEMIC YEAR	INSTITUTION OF ORIGIN	YEAR II	YEAR III	TOTAL

### **STUDENTS MOBILITY AS TO THE BEGINNING OF THE YEAR:**

ACADEMIC YEAR	A) NEWLY ADMITTED	B) TRANSFERRED	C) COURSE COMPLETED BY	D) WITHDREW WITHOUT COMPLETION	COURSE ATTENDANTS
N-5 / N-4					X
					X+A+B-C-D
N-1 / N					

### **ABANDONED:**

ACADEMIC YEAR	TOTAL	STUDENTS HAVING ABANDONED THE ACADEMIC PROGRAMME IN			
		2 YEARS	3 YEARS	4 YEARS	>4 YEARS

## ***F19. COUNSELLING STUDENTS, GRADUATES AND EMPLOYERS***

INSTITUTION:	
ACADEMIC PROGRAMME:	

### RELEVANT ACTIONS SHOWN BY STUDENTS' PEDAGOGIC SURVEYS:

ACADEMIC YEAR	NUMBER OF PEDAGOGIC SURVEYS:	NUMBER OF PARTICIPANTS
N-1		
N-2		
N-3		

N= academic year of reference

### RELEVANT RESULTS SHOWN BY THE STUDENTS' SURVEYS

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### RELEVANT RESULTS SHOWN BY THE GRADUATES' SURVEYS

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### RELEVANT RESULTS SHOWN BY THE EMPLOYERS' SURVEYS

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## ***F20. LOCATION ADEQUACY***

INSTITUTION:	
ACADEMIC PROGRAMME:	

### **LOCATION ADEQUACY:**

For this requirement, please provide documents in proof of or information on: the quality of the location and the adequacy thereof for the intended purposes; the quality of the location maintenance and the wear degree thereof; number of classrooms, laboratories and lecture theatres in terms of number of students using them.

## **F21. PEDAGOGIC AND SOCIAL FACILITIES**

INSTITUTION:	
ACADEMIC PROGRAMME:	

### **PEDAGOGIC FACILITIES:**

Please, provide information in support of evaluating:

Laboratory equipment and conditions of use.

Appropriate storage of (highly relevant) hazardous, explosive or flammable products and materials.

Digital access to up-to-date journals, publications and information and proper reading facilities, browsing information and copying information.

The quality of the library room where students work and the sufficiency of the area for storing library documents.

Access to information resources for education purposes and the availability of a wireless network.

Available software applications according to the topics to be up-dated and supported by manuals in a sufficient number.

Study and recreational facilities both during classes and in the break-time for course attendants, by offering bar and canteen facilities.

Supporting facilities (dining room, stationery, study rooms, meeting rooms, etc.) for the teaching team and the students, to be located in a central and easily accessible location.

Offices and working facilities for the teaching staff and the technical support team, including appropriate degrees of comfort and easy access in the vicinity of the main individual work area.

Specialized teaching staff, technical support and funds allocated to students in order to fulfil their voluntary engineering work.

Sports facilities.

External locations and services used by the higher education institution for troubleshooting, alongside with a clear description of how are they used and under what kind of conditions.

## ***F22. MONITORING THE ACADEMIC PROGRAMME: SUCCESS RATE***

INSTITUTION:	
ACADEMIC PROGRAMME:	

ACADEMIC YEAR:	/
----------------	---

MANDATORY SUBJECT MATTERS	YEA R	SEMESTER	TOTAL	%			FIRST REGISTRATIO N
			REGIST ERED	ASSESS ED / REGIST ERED	PASSED / REGIST ERED	PASSED / EVALUA TED	TOTAL REGISTERED
(add rows as might be necessary)							

## OPTIONAL SUBJECT MATTERS

OF FORMAL SUBJECT MATTERS							
(add rows as might be necessary)							

## FACULTATIVE SUBJECT MATTERS

PROSECUTIVE SUBJECT MATTERS							
(add rows as might be necessary)							



## SUMMARY

YEARS	TOTAL	%	FIRST REGISTRATION/		
	REGISTERED	ASSESSED / REGISTERED	PASSED / REGISTERED	PASSED / EVALUATED	TOTAL REGISTERED
YEAR I					
YEAR II					
YEAR III					
YEAR IV					
YEAR V					
YEAR IV					

**F23. MONITORING THE ACADEMIC PROGRAMME: PROJECTS / PARTICIPATION IN SCIENTIFIC RESEARCH**

INSTITUTION:	
ACADEMIC PROGRAMME:	

ACADEMIC YEAR:	/
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STUDENT'S FAMILY NAME AND FIRST NAME	PARTICIPATION ASSESSMENT	TITLE OF WORK
(add rows as might be necessary)		

## **F24. MONITORING THE ACADEMIC PROGRAMME: SYNTHETIC SELF-ASSESSMENT**

INSTITUTION:	
ACADEMIC PROGRAMME:	

### **INSTITUTIONAL REVIEW OF THE ACADEMIC PROGRAMME GENERIC INDICATORS**

Examples of generic indicators: number of master cycles completed during the last 5 years. Number of Ph. D. cycles completed during the last 5 years. National and international awards granted to students and to the teaching staff. Number of scholarships granted to students and teaching staff.  
Merits granted to the institution.

### **INSTITUTIONAL REVIEW OF STUDENT-RELATED INDICATORS**

Examples of student-related indicators: course applications as compared to the general demand during the last 5 years. First option applications. Age distribution per curricular year (current year). Average age of students during the last academic year.  
Retainer index per subject matter (previous year). Retainer index per curricular year (previous year). Average time expressed in years as needed to obtain a level / degree during the last 5 academic years. Failure rate per subject matter. Practical instruction attendance records. Theoretical instruction attendance records. Evaluation of subject matters (survey on students). Global assessment of the course (survey on students and employers). Annual number of withdrawal. Number of students in excess of the maximum time limit set forth by the law for the course.

### **INSTITUTIONAL REVIEW OF ACADEMIC STAFF-RELATED INDICATORS**

Examples of academic staff-related indicators: applications to the higher education institution. Information concerning the time period since when the teaching staff is employed with the higher education institution. Review of the recommendations resulting from the survey on the teaching staff. Teaching staff's age distribution per curricular year (current year). Average age of teaching staff during the last 5 years. Attendance and punctuality records of the teaching staff / practical classes. The teaching staff's attendance records and the teaching staff's punctuality records – theoretical classes. Evaluation of subject matters by students (students' survey). Number of teaching staff completing a Ph. D. cycle.

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## ***F25. QUALITY PLANNING***

INSTITUTION:	
ACADEMIC PROGRAMME:	

METHODS OF DIAGNOSIS:

--

IDENTIFICATION OF THE CRITICAL ASPECTS:

--

PROCEEDING TO THE PROFESSIONAL ASSOCIATIONS' RECOMMENDATIONS:

--

ANNUAL PROGRESS REPORTS CONCERNING THE PROFESSIONAL ASSOCIATIONS' RECOMMENDATIONS:

--

## F26. INTERNAL QUALITY ASSESSMENT

INSTITUTION:	
ACADEMIC PROGRAMME:	

### LEGAL ORGANIZATIONAL ASPECTS:

**Composition of the Quality Assessment and Assurance Board** (*composition, date, duration of the appointment a.s.o.*):

- representatives of the teaching staff (*1-3, elected by secret vote by the Teachers' Board*):
  - 1.
  - 2.
  - 3.
- trade union representative:
- students' representative:
- employers' representative:
- national minorities' representative:

*(Members of the board cannot be in management positions in the educational institution or the very same organization, except for the person in charge with the operative management thereof)*

### **Strategy and Rules of Operation:**

*(based on the legal provisions and focused on results; date adopted, modified, validity)*

### **Annual reports (N-3/N; N-2/N; N-1/N) of internal assessment concerning the education quality in the said institution:**

*(in place, posted or published, availability of internal indicators, specific indicators, quality assurance indicators, references to the Academic Programme under discussion a.s.o.)*

### **Organizing the contents of the annual reports** (*institutional capacity, educational efficiency, quality management*):

### **Steps of internal quality assurance for the Academic Programme being evaluated**

### IDENTIFICATION OF THE CRITICAL ASPECTS:

--

### TAKING INTO ACCOUNT THE RECOMMENDATIONS AND THE EFFECTS THEREOF:

--

SIGNIFICANT ACHIEVEMENTS CONCERNING THE EVALUATED ACADEMIC PROGRAMME  
IN TERMS OF THE LABOUR MARKET, SOCIAL-ECONOMIC ENVIRONMENT AND THE  
STUDENTS' EXPECTATIONS.

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## S27. OUTCOMES

### 27.1. KNOWLEDGE AND UNDERSTANDING

The knowledge and understanding of science, mathematics and engineering fundamentals are essential to satisfying the other programme outcomes. Graduates should demonstrate their knowledge and understanding of their engineering specialisation, and also of the wider context of engineering.

First Cycle (BACHELOR) graduates should have:				
ARACIS – EMPLOYERS' EXPERTS BOARD	Documents in proof	FINDINGS	Proofs provided by the individual interview	FINDINGS
Graduates should be able to relate their knowledge acquired further to the graduated academic programme to the underlying basic knowledge in the fundamental fields of science, art, culture - exact sciences	<ul style="list-style-type: none"> <li>• The availability and volume of courses in the fundamental exact sciences (physics, mathematics, chemistry, computer sciences).</li> </ul>		<ul style="list-style-type: none"> <li>• Appreciations and criticism of the specialty knowledge acquiring system.</li> <li>• Raising awareness as to the usefulness of certain concepts of physics, chemistry, mathematics.</li> </ul>	
The graduate shall be able to identify, reproduce and interpret basic concepts of the engineering branch and to highlight actual feasibility aspects of such concepts.	<ul style="list-style-type: none"> <li>• Course contents, technical exercises.</li> <li>• Correlating theoretical aspects with actual aspects occurring in the industrial environment that is specific for the field of the completed Bachelor cycle of studies.</li> <li>• Examinations.</li> </ul>		<ul style="list-style-type: none"> <li>• Capacity to logically think and express oneself.</li> <li>• Knowledge of industrial and business environment where the student is going to develop his/her career.</li> </ul>	
The graduate shall be able to distinguish at the level of certain courses the	<ul style="list-style-type: none"> <li>• The availability of basic discipline specificities in the branch and</li> </ul>		<ul style="list-style-type: none"> <li>• The availability of well reasoned logically supported</li> </ul>	

<p>differences between the academic programmes in the field of the graduated Bachelor cycle studies in terms of the specificity and the boundary of such fields.</p>	<p>complementary discipline specificities in the field of the basic engineering sciences.</p> <ul style="list-style-type: none"> <li>• The sequence of disciplines as completed within the graduated academic programme.</li> <li>• Conditions to attend in the academic years to come.</li> </ul>		<p>personal viewpoints concerning the graduated academic programme.</p> <ul style="list-style-type: none"> <li>• Assessment of the teaching aspects noticed during the Bachelor cycle of studies.</li> </ul>	
<p>The graduate shall be able to identify the multidisciplinary aspects featured by products made in the field of the graduated Bachelor cycle studies.</p>	<ul style="list-style-type: none"> <li>• Course contents.</li> <li>• Correlation and adaptation of the contents to actual situations occurring in the engineering practice.</li> <li>• Integrating exercises.</li> <li>• Examinations.</li> </ul>		<ul style="list-style-type: none"> <li>• Information on top achievements in the field of the Bachelor cycle of studies.</li> <li>• Participation or accomplishment of works requiring interdisciplinary knowledge.</li> </ul>	

**Graduates of the second (MASTER) cycle of studies should:**

<b>ARACIS – EMPLOYERS' EXPERTS BOARD</b>	<b>Documents in proof</b>	<b>FINDINGS</b>	<b>Proofs provided by the individual interview</b>	<b>FINDINGS</b>
<p>The graduate should be able to identify, reproduce and interpret topics related to the own area of expertise, using the acquired scientific, mathematical and engineering knowledge. The graduate shall also prove the same ability, however to a different extent, whenever topics from other fields of expertise arise.</p>	<ul style="list-style-type: none"> <li>• Course contents.</li> <li>• Technical exercises.</li> <li>• Examinations.</li> </ul>		<ul style="list-style-type: none"> <li>• Learning attraction.</li> <li>• Interest in technical matters.</li> <li>• Engineering talent.</li> </ul>	

The graduate shall be able to word and sustain opinions on the evolution and trends of the research / investigations in his/her field of expertise, relying on the acquired scientific, mathematical and engineering knowledge.	<ul style="list-style-type: none"> <li>• Course contents.</li> <li>• Case studies.</li> <li>• Equipment / facilities to access information.</li> </ul>		<ul style="list-style-type: none"> <li>• Decision-making capacity.</li> <li>• Exemplary attitude.</li> <li>• Basic knowledge.</li> </ul>	
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## 27.2. ENGINEERING ANALYSIS

Graduates should be able to solve such engineering problems at their level of knowledge and understanding, which might involve considerations beyond their field of specialization. The engineering analysis may include the identification of the problem, the clarifications of the specification, the consideration of possible methods for the solution, selecting the most suitable method and providing a proper implementation.

Graduates should be able to use several methods including mathematical analysis, IT model or practical experiments and should also be able to take into account the importance of the restrictions in society, health and safety, environment and commerce.

First Cycle (BACHELOR) graduates should have:				
ARACIS – EMPLOYERS' EXPERTS BOARD	Documents in proof	FINDINGS	Proofs provided by the individual interview	FINDINGS
The graduate should be able of team-work, or to work independently, in the field of applied science, at the level of the Bachelor studies.	<ul style="list-style-type: none"> <li>• Collective participation in applied scientific research.</li> <li>• Contributions to the identification of actual technical issues during the practice period or whenever exercising the profession, after having completed the first cycle of studies.</li> </ul>		<ul style="list-style-type: none"> <li>• Clear and well-reasoned explanation of any such collective or individual contribution to fulfil tasks.</li> </ul>	
The graduate	• Contents of		• Simulated	



should be capable to identify - relying upon the knowledge acquired by him/her and further to an engineering analysis - the product specificity and the processes used for the production thereof.	courses, technical exercises and case studies.		discussions (brainstorming).	
The graduate should be able to be aware and use up-to-date modelling and calculation means in the field of his/her Bachelor studies, as acquired in the faculty or subsequently, by way of personal study.	<ul style="list-style-type: none"> <li>• Participation in teams or individually in the application of analytical and modelling methods.</li> <li>• Knowing for team-work or individual work, to use dedicated software, computer science concepts for documentation and creating/using databases, etc.</li> </ul>		<ul style="list-style-type: none"> <li>• The knowledge of the performances and limits of certain dedicated software.</li> <li>• Using professional databases.</li> </ul>	
<b>Graduates of the second (MASTER) cycle of studies should:</b>				
<b>ARACIS – EMPLOYERS' EXPERTS BOARD</b>	<b>Documents in proof</b>	<b>FINDINGS</b>	<b>Proofs provided by the individual interview</b>	<b>FINDINGS</b>
The graduate should be able to understand the sophistication of usual, non-usual and non-defined issues, and to make presumptions, provide testing solutions, identify the main factors influencing the	<ul style="list-style-type: none"> <li>• Course contents.</li> <li>• Technical exercises.</li> <li>• Case studies.</li> <li>• Simulated discussions.</li> <li>• Tests.</li> </ul>		<ul style="list-style-type: none"> <li>• Structured (modular) thinking.</li> <li>• Ability to speculate.</li> <li>• Forecasting abilities.</li> <li>• Experience in diverse situations.</li> </ul>	

outcomes.				
The graduate should be able to make use of the basic knowledge supplemented with new approaches and theories for investigating and solving technological issues with up-dated techniques.	<ul style="list-style-type: none"> <li>• Course contents.</li> <li>• Technical exercises.</li> <li>• Means to access documentation.</li> <li>• Simulated discussions.</li> </ul>		<ul style="list-style-type: none"> <li>• Attraction towards innovation.</li> <li>• Ability to make discoveries.</li> <li>• Innovation culture.</li> </ul>	
The graduate shall be able to conceive models interpreting natural processes and phenomena using numeric analysis and digital and analogical systems and to iteratively adapt the model.	<ul style="list-style-type: none"> <li>• Intense modelling work.</li> <li>• Study-trips on site.</li> <li>• Labour-establishment concepts.</li> </ul>		<ul style="list-style-type: none"> <li>• Powerful basic knowledge.</li> <li>• Structured (modular) thinking.</li> <li>• Ability to speculate.</li> </ul>	
The graduate shall be able to find innovative solutions using up-dated models and to test the utilization of instruments, systems and non-traditional processes.	<ul style="list-style-type: none"> <li>• Case studies.</li> <li>• Simulated discussions.</li> <li>• Comparisons between the developed model and the actual situation.</li> </ul>		<ul style="list-style-type: none"> <li>• Attraction towards innovation and invention.</li> <li>• Ability to make discoveries.</li> </ul>	

### **27.3. ENGINEERING DESIGN**

Graduates should be able to make consistent engineering designs at their level of knowledge and understanding, working in cooperation with engineers and non-engineers. Such designs shall include devices, processes, methods, and the specifications may be more than technical, including requirements to take into consideration situations in the society, health and safety, environment and commerce.

<b>First Cycle (BACHELOR) graduates should have:</b>				
<b>ARACIS – EMPLOYERS' EXPERTS BOARD</b>	<b>Documents in proof</b>	<b>FINDINGS</b>	<b>Proofs provided by the individual interview</b>	<b>FINDINGS</b>
The graduate should be able to conceive designs in an approach oriented towards the capacities to accomplish it, in keeping with the actual methods of production.	<ul style="list-style-type: none"> <li>• The course shall include actual methods to be used for making a product, technical exercises, using the DFM (Design For Manufacture) concepts.</li> </ul>		<ul style="list-style-type: none"> <li>• Personal vision on the development of creativity during the Bachelor years of study.</li> <li>• Simulated discussions</li> </ul>	
The graduate shall prove his/her capacity to use CAD methods including the ones that are specific for manufacturing (Computer Aided Manufacturing)	<ul style="list-style-type: none"> <li>• Contents of courses, technical exercises and conception of the documentation for the execution.</li> <li>• Extra-curriculum projects / designs.</li> </ul>		<ul style="list-style-type: none"> <li>• Awareness of the possibilities and utilization limits of dedicated software.</li> </ul>	
<b>Graduates of the second (MASTER) cycle of studies should:</b>				
<b>ARACIS – EMPLOYERS' EXPERTS BOARD</b>	<b>Documents in proof</b>	<b>FINDINGS</b>	<b>Proofs provided by the individual interview</b>	<b>FINDINGS</b>
The graduate should be able to conceive solutions taking into account environmental and economic aspects during the accomplishment of the engineering design, to use methodologies and models for optimizing solutions and to collaborate with engineers and other specialists from other branches.	<ul style="list-style-type: none"> <li>• Course contents.</li> <li>• Case studies.</li> <li>• Research studies.</li> <li>• Extra-curriculum projects/ designs.</li> </ul>		<ul style="list-style-type: none"> <li>• Documentary abilities.</li> <li>• Broad engineering knowledge.</li> <li>• Invention.</li> <li>• Objectivity.</li> </ul>	
The graduate should be able to	<ul style="list-style-type: none"> <li>• Case studies.</li> <li>• Simulated</li> </ul>		<ul style="list-style-type: none"> <li>• Inventions. Applied</li> </ul>	

apply innovative solutions and to assess the applicability thereof in designing goods, systems and processes.	discussions.		personality. • Documentary abilities.	
The graduate should be able to establish conditions, set up hypotheses, and test models in order to assess solutions, undefined situations and undefined parameters, taking into account and compensating for improper provisions.	<ul style="list-style-type: none"> <li>• Research studies.</li> <li>• Work reports.</li> <li>• Case studies.</li> <li>• Examinations.</li> </ul>		<ul style="list-style-type: none"> <li>• Powerful basic knowledge.</li> <li>• Structured (modular) thinking.</li> <li>• Ability to speculate.</li> </ul>	

## 27.4. INVESTIGATIONS

Graduates shall be able to use suitable methods for conducting - at their level of knowledge and understanding - detailed investigations of technical aspects. Such investigations may involve browsing the literature, designing and making experiments, construing data and simulating on the computer. Databases may be necessary to be consulted, as well as codes of practice and safety regulations.

**First Cycle (BACHELOR) graduates should have:**

ARACIS – EMPLOYERS' EXPERTS BOARD	Documents in proof	FINDINGS	Proofs provided by the individual interview	FINDINGS
The graduate should be able to carry out either individually, or in a team, suitable bibliography documentation activities for a	<ul style="list-style-type: none"> <li>• Participation, either individually or in a team, in suitable bibliography investigation.</li> <li>• Using databases and other written</li> </ul>		<ul style="list-style-type: none"> <li>• Motivating the choice of certain sources of information.</li> <li>• Explanation of the applicability of the obtained data or</li> </ul>	

clearly defined purpose and to use written or electronic databases.	or electronic sources.		capitalization suggestions.	
The graduate shall be able to conceive proper experiences, to make proper analyses, and to draw valuable and useful conclusions for the pursued aim.	<ul style="list-style-type: none"> <li>• Participation, either individually, or as a team, in the conception and organization of scientific investigations.</li> <li>• Drawing useful conclusions in terms of the assumed tasks.</li> </ul>		<ul style="list-style-type: none"> <li>• Explanation and justification of technical and organizational steps.</li> </ul>	
The graduate should have abilities to work and to organize labour in workshops and laboratories.	<ul style="list-style-type: none"> <li>• Direct participation and organization of activities in workshops or laboratories.</li> </ul>		<ul style="list-style-type: none"> <li>• Lack of any labour protection event.</li> <li>• Knowledge of laws and specific steps.</li> </ul>	

**Graduates of the second (MASTER) cycle of studies should:**

<b>ARACIS – EMPLOYERS' EXPERTS BOARD</b>	<b>Documents in proof</b>	<b>FINDINGS</b>	<b>Proofs provided by the individual interview</b>	<b>FINDINGS</b>
The graduate shall be able to use different instruments in order to identify, locate, obtain and organize data requested for a certain purpose.	<ul style="list-style-type: none"> <li>• Research studies.</li> <li>• Means to access documentation.</li> <li>• Means to organize documentation.</li> </ul>		<ul style="list-style-type: none"> <li>• Attraction towards learning.</li> <li>• Objectivity.</li> </ul>	
Whenever exposed to an issue in his/her field of expertise, the graduate shall be able to: conceive experiments; conceive models; use and/or build and/or adapt	<ul style="list-style-type: none"> <li>• Research studies.</li> <li>• Means to access documentation.</li> <li>• Intense modelling work.</li> <li>• Laboratory work.</li> <li>• Simulated discussions.</li> <li>• Statistic</li> </ul>		<ul style="list-style-type: none"> <li>• Powerful basic knowledge.</li> <li>• Inventions.</li> <li>• Persistence.</li> <li>• Applied personality.</li> </ul>	

equipment or systems for analytical purposes.	disciplines.			
The graduate shall be able to interpret experimental and bibliography data, and to adapt model design retaining a physical meaning.	<ul style="list-style-type: none"> <li>• Research studies.</li> <li>• Course contents.</li> <li>• Laboratory work.</li> <li>• Simulated discussions.</li> <li>• Statistic courses.</li> </ul>		<ul style="list-style-type: none"> <li>• Powerful basic knowledge.</li> <li>• Strong thinking ability.</li> </ul>	
For investigations in his/her field of engineering, the graduate shall be able to explore the utilization of proven technologies of new or emerging technologies in applications that have not been tested before.	<ul style="list-style-type: none"> <li>• Research studies.</li> <li>• Means to access documentation.</li> <li>• Laboratory work.</li> <li>• Simulated discussions.</li> </ul>		<ul style="list-style-type: none"> <li>• Attraction towards innovation.</li> <li>• Invention.</li> <li>• Persistence.</li> <li>• Ability to speculate.</li> <li>• Applied personality.</li> </ul>	

## 27.5. ENGINEERING DESIGN

Graduates shall be able to apply their knowledge and understanding for developing practical problem-solving abilities, conducting investigations and designing engineering devices and processes.

Such abilities may include knowledge related to the utilization of materials, computer-aided modelling, engineering processes, equipment, practice in the workshop and technical literature and source of information. They should also be able to recognize significant, non-technical implications of the engineering practice, just the ethical, environmental, commercial and industrial ones.

First Cycle (BACHELOR) graduates should have:				
ARACIS – EMPLOYERS' EXPERTS BOARD	Documents in proof	FINDINGS	Proofs provided by the individual interview	FINDINGS
The graduate shall prove his/her ability to	<ul style="list-style-type: none"> <li>• Participation in commissions or as an individual</li> </ul>		<ul style="list-style-type: none"> <li>• Clear, logical, well-reasoned description of</li> </ul>	

justify the forecasted technical solution, to use it for making products developed by him/her within the framework of the designs.	in procurement activities for machinery or equipment in the field of his/her Bachelor studies.		personal viewpoints concerning the procured instrumentation / machinery or equipment.	
The graduate shall prove his/her ability to optimize the technical solutions suggested by him/her, and such optimization shall rely upon his/her valuable technical and practical knowledge.	<ul style="list-style-type: none"> <li>• Participation as a team or individually in working out scientific papers.</li> </ul>		<ul style="list-style-type: none"> <li>• Ease of communication and reasoning.</li> </ul>	
The graduate shall prove his/her knowledge of techniques and methods of investigation in the field of his/her Bachelor studies.	<ul style="list-style-type: none"> <li>• Participating as a team or individually in defining and reasoning in support of techniques or methods of scientific investigation.</li> <li>• Simulated discussions.</li> </ul>		<ul style="list-style-type: none"> <li>• Wording verbal recommendations, remarks or corrections of investigation activities, as to colleagues or ancillary support staff.</li> </ul>	
The graduate's attitude towards the industrial and business environment, as shown in the relations with the institution where he/she graduated.	<ul style="list-style-type: none"> <li>• Participating by speeches or by working out written materials, in emphasizing and highlighting non-technical practices in industry.</li> </ul>		<ul style="list-style-type: none"> <li>• Communication capacity and ability to clearly sustain and reason in terms of personal ideas.</li> </ul>	
<b>Graduates of the second (MASTER) cycle of studies should:</b>				
<b>ARACIS – EMPLOYERS' EXPERTS BOARD</b>	<b>Documents in proof</b>	<b>FINDINGS</b>	<b>Proofs provided by the individual interview</b>	<b>FINDINGS</b>

The graduate shall be able to apply different instruments, having a realistic and integrated overall view in terms of the engineering works and the way such works are supposed to act together within the framework of one and the same objective.	<ul style="list-style-type: none"> <li>• Course contents.</li> <li>• Case studies.</li> <li>• Simulated discussions.</li> <li>• Means to access documentation.</li> </ul>		<ul style="list-style-type: none"> <li>• Experience in applications.</li> <li>• Broad engineering knowledge.</li> <li>• Ability to synthesize.</li> <li>• Objectivity.</li> </ul>	
The graduates should recognize and be able to apply technological systems, the peculiarities and the utilization thereof, methods of adaptation for each and every situation.	<ul style="list-style-type: none"> <li>• Practical presentation of methods.</li> <li>• Case studies.</li> <li>• Study-trips on site.</li> <li>• Laboratory work.</li> </ul>		<ul style="list-style-type: none"> <li>• Experience in applications.</li> <li>• Objectivity.</li> </ul>	
The graduate shall be able to overcome problems, conflicts and difficulties, to make decisions after having assessed alternatives, risks, importance and priority.	<ul style="list-style-type: none"> <li>• Problem-solving.</li> <li>• Case studies.</li> <li>• Study-trips on site.</li> </ul>		<ul style="list-style-type: none"> <li>• Experience in applications.</li> <li>• Persistence.</li> <li>• Objectivity.</li> </ul>	

## 27.6. TRANSFERABLE SKILLS

Abilities required for engineering practice that are applicable in a broader sense, should be developed within the framework of the program.

**First Cycle (BACHELOR) graduates should have:**



<b>ARACIS – EMPLOYERS’ EXPERTS BOARD</b>	<b>Documents in proof</b>	<b>FINDINGS</b>	<b>Proofs provided by the individual interview</b>	<b>FINDINGS</b>
The graduate should prove a well-grounded professional training, constructive initiative and attachment, either individually or as a member of a team.	<ul style="list-style-type: none"> <li>• Designs.</li> <li>• Proposals.</li> <li>• Periodical appreciations.</li> <li>• Compensations, stimulations.</li> <li>• Awards, decorations.</li> </ul>		<ul style="list-style-type: none"> <li>• Future studies.</li> <li>• Conception as to the improvement of his/her own results or the results of the team.</li> </ul>	
The graduate should know and use the basic communication knowledge, to master 1-2 foreign languages.	<ul style="list-style-type: none"> <li>• Elaborated documents.</li> <li>• Published papers.</li> <li>• Courses and briefing held with other team members or other groups.</li> <li>• Participation in technical negotiations or in negotiations with trade unions.</li> <li>• Participation in mass-media activities.</li> </ul>		<ul style="list-style-type: none"> <li>• Ease in expressing oneself when presenting technical solutions.</li> <li>• Basic conversation art.</li> <li>• Expressing oneself in a foreign language.</li> </ul>	
The graduate should notice and critically assess aspects of legislation, health, safety and environment, and to provide proof of the same, either individually, or as a person in charge, to promote professional ethics and norms in engineering practice.	<ul style="list-style-type: none"> <li>• Proposals to improve industrial and business legislation.</li> <li>• Activities in support of the knowledge and observance of the legislation, aspects of health, labour safety, keeping a clean environment, promoting a professional ethics.</li> <li>• Elaborated and/or published materials.</li> </ul>		<ul style="list-style-type: none"> <li>• Logical reasoning.</li> <li>• Power to convince and validity of reasons.</li> <li>• Attitude as to notorious events in his/her profession.</li> </ul>	
Knowledge and	<ul style="list-style-type: none"> <li>• Actual</li> </ul>		<ul style="list-style-type: none"> <li>• Public attitudes,</li> </ul>	

application of project management, business management and risk management.	involvement in project management. <ul style="list-style-type: none"> <li>• Actual involvement in business management.</li> <li>• Actual involvement in risk management.</li> <li>• Reviews or papers elaborated / published on the above matters.</li> </ul>		at least at the level of the team, as to the project management, business management, risk management. <ul style="list-style-type: none"> <li>• Courses completed in the field / branch.</li> <li>• Outcomes of practiced management or management in which he/she participated.</li> </ul>	
Availability to participate in actions or individual self-improvement activities by permanent learning (LLL - Life Long Learning), as acknowledged by the relevant national or European legislation.	<ul style="list-style-type: none"> <li>• Requests to participate, either individually, or as a team, in LLL (Life Long Learning) actions.</li> <li>• Participation in actions or individual self-improvement activities by permanent learning (LLL - Life Long Learning), as acknowledged by the relevant national or European legislation.</li> </ul>		<ul style="list-style-type: none"> <li>• Involvement in the LLL process.</li> <li>• Knowledge and popularization of the LLL legislation.</li> </ul>	

**Graduates of the second (MASTER) cycle of studies should:**

<b>ARACIS – EMPLOYERS' EXPERTS BOARD</b>	<b>Documents in proof</b>	<b>FINDINGS</b>	<b>Proofs provided by the individual interview</b>	<b>FINDINGS</b>
The graduate shall accumulate management abilities in order to organize, plan, control and coordinate; the graduate shall develop	<ul style="list-style-type: none"> <li>• Management courses.</li> <li>• Report on team-work.</li> <li>• Report on individual activity.</li> <li>• Presentations on the activity.</li> </ul>		<ul style="list-style-type: none"> <li>• Leadership by management.</li> <li>• Self-confidence.</li> </ul>	

sensitivity to economy and commerce issues, with a view to future cases of high responsibility.				
The graduate shall be able to understand and use leadership techniques and shall be sensitive to labour environment issues, as well as to safety, environment and social responsibility of those involved in the economic activity.	<ul style="list-style-type: none"> <li>• Disciplines of leadership techniques.</li> <li>• Disciplines of team-work.</li> </ul>		<ul style="list-style-type: none"> <li>• Leadership competences.</li> <li>• Self-confidence.</li> </ul>	
The graduate shall have the ability to communicate in different languages, different cultures and different contexts in order to attain the involved objectives. Ability to use computer science developments and other technological developments with a view to a more efficient communication is also a must.	<ul style="list-style-type: none"> <li>• Disciplines of communication techniques.</li> <li>• Presentations on the activity.</li> </ul>		<ul style="list-style-type: none"> <li>• Communication competences.</li> <li>• Abilities related to foreign languages.</li> <li>• Self-confidence.</li> </ul>	