3AI FISE	CU 9.14
Semester 9	3 School ECTS

CU 9.14: OPENING TO THE BUSINESS WORLD

Director of studies: Pierre GIRODS

General CU objectives:

This CU summarises the achievements resulting from the internships in companies during the first two years of training.

It aims to give the student engineer a spirit of synthesis, analysis and the perspective necessary to build a future framework.

It aims to make the student-engineer understand the roles of the operator, the implementer, the technician in the company.

It aims to analyse a company in the timber sector and to situate it in its context.

It aims to learn how to write technical or economic reports and notes.

The assessment of Module 1 of this CU is based in part on a so-called "individual interview" exercise prior to the mandatory annual interview sequence, as performed in different forms in companies and which is a special opportunity to compare the needs of the company with the expectations of employees.

The purpose of the management module is to develop the managerial function of the engineering student through the implementation of basic managerial actions:

- Structure the involvement of people around a project
- Analyse the components of a team and initiate the dynamic
- Identify management styles and tools
- Embed skills into the operation of the company

Consists of:

- Module 1: Knowledge and analysis of a company in the timber sector
- Module 2: Assistant engineer internship
- Module 3: Management– the individual and the organisation, management simulation
- Module 4: Not applicable

Hourly volume

In-person		*Self-directed study*
0.00 H	**Lectures**	**20.00 H**
36.00 H	**Tutorials**	
1.00 H	**Practicals**	

Positioning of the CU in the School reference system:

This CU covers all the internships of the curriculum, excluding the end-of-studies internship.

The validation of the different modules can be done regularly during the 3 years of training.

Units of skills

In accordance with the RNCP sheet

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Module 1: Knowledge and analysis of a company in the timber sector	**Coefficient 1**
Session leaders: Laurent BLERON	
Teaching assistants:	
Prerequisites:	
Teaching materials: choice of a production company in the forestry-timber sector where the engineering student has carried out: one or more visits, an operative internship, an international internship, an internship as assistant engineer.	
Assessment methods: Presentation material: 20 slides and one-on-one interview	

Learning outcomes	**Description**	**Number of student hours (in-person)**		
		Lectures	**Tutorials**	**Practicals**
Be able to describe and analyse the company as it is. Be able to situate the company in the regional, national and international context given the company's sector: furniture, construction, energy, materials, etc. Be able to understand and analyse the industrial, sales and environmental strategy.	• activity(ies); • legal status; • history; • size criteria: revenue: evolution and prospects, employee numbers (evolution, % of executives...etc.) • know-how and means: classic and specific; • analysis of the organisational chart and internal functioning. • Situation in relation to size • Situation in relation to revenue • Regional, national competition, if applicable, international competition • Porter's five forces analysis; • swot; • value chain; • cost structures; • experience curve; • economies of scale; • segmentation; • organic or acquired growth.			0.50
		0.00	**0.00**	**0.50**

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Module 2: Assistant engineer internship	Coefficient 2
Session leaders: Pierre GIRODS + members of the jury	
Teaching assistants:	
Prerequisites:	
Teaching materials: internship in a timber business	
Assessment methods: Assessment of the engineer assistant internship by the in-company supervisor on the basis of an assessment grid. Evaluation of the viva by a jury composed of two teachers. No written report.	

Learning outcomes	Description	Number of student hours (in-person)		
		Lectures	Tutorials	Practicals
The objective is to develop the ability of the engineering student to implement a methodological approach to solving technical problems and to analyse and understand the role and point of view of engineers in the company. The goal is to validate the knowledge acquired during the first two years of the engineering program and, if necessary, to strengthen, through the internship, any course units considered average.	It is an internship where the student must join a team and conduct activities identical to those of the unit's engineers, with very regular monitoring by the in-company supervisor. The internship is built around a predominantly technical project (or mission) entrusted by the company, allowing the engineering student to acquire a sense of reality and to seek solutions, possibly outside the models learned. The engineering student must be placed under the responsibility of a non-executive technical supervisor or an executive of the company. Taking the role of assistant engineer, the engineering student must: • Perform technical or maintenance tasks, improve skills in a specific field • Adapt to different interlocutor profiles • Take into account the daily constraints of the operation, • Analyse the role of the company's assistant engineers or technicians, • Deepen understanding of the different hierarchical functions in the company, • Make a summary presentation			0.50
		0.00	**0.00**	**0.50**

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Module 3: Management– the individual and the organisation, management simulation	**Coefficient 2**

Session leaders: Valérie LAMBERT, Hélène KOEHLER (Cabinet Zèbre), Jean-Marc CHANAL (Cabinet BLIQUE ACTIMUM), MORIZOT Jean-Noël (JNM Conseil), Dominique LETANG (LTG Logistic)

Teaching assistants:

Prerequisites: CU 6.1 and CU 8.5

Teaching materials: Course notes – Presentation slides – Reading list – Company Visit – Serious game

Assessment methods: individual and in groups

Learning outcomes	Description	Number of student hours (in-person)		
		Lectures	Tutorials	Practicals
	technique for collecting and transmitting information. The different forms of group work: from meetings to brainstorming, dynamics of small groups and large groups.			
Engineering students should be able to position themselves to adopt a consistent and efficient managerial attitude: – know themselves – integrate communication as one of the essential tools of the manager	– Delegation, power, trust. – The manager and their roles: types of management, the characteristics of managerial action, the roles of the manager. – Managers and their style: finding the right distance.			
Engineering students must be able to understand and analyse the human factor as a component of evolution to support management: – Gather and manage information – Explore forms of involvement at work – Find ways to ensure team cohesion – Propose alternatives to manage conflicts	– Involve a team in a project. – Manage conflicts at work, social conflicts: risk, anticipation, mediation, non-violent negotiation.			
Future engineering managers must approach employees as human resources elements in the governance of the organisation. They should be able to: – organise the emergence of skills – support change – examine professional practices – build a development strategy	– Promote knowledge sharing and collaborative design: the communications process. – Introduction to transactional analytics: auditing and content analytics techniques. – Value systems: personal, work, culture.		36.00	
	– Change management: concepts and tools. – Manager indicators, dashboards and checklist.			
	– Introduction to human resources management: identify potentials, manage skills, build and conduct an annual assessment interview.			
	Method: 24 hour simulation 8-hour company visit 4-hour restitution			
		0.00	**36.00**	**0.00**

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