



## Department Management

### Courses et projects

#### First year

- 2 General Economics
- 3 Enterprise Organization
- 4 Law : Notions
- 5 Quality
- 6 Health and Safety at Work
- 7 Sustainable Economics
- 8 Business Law
- 9 Public Law

#### Second year

- 10 Accountancy
- 11 Finances
- 12 Team Management
- 13 Operation Management
- 14 Change Management
- 15 Construction Economics
- 16 Construction Management

#### Third year

- 17 Marketing
- 18 Business Unit Creation
- 19 Public Tenders
- 20 Public Finances

#### Preparation to Internships

- 21 Speaking in Public
- 22 Professional Insertion
- 23 Internship

# First year

## General Economics

### Objectives

Presenting students a panorama of the "economic culture" through theory and current events, as well as a study of the reasoning behind enterprises and public powers.

### Program

- Economic circuits, actions and agents
- The concepts of products, revenue and spending

#### Production

- Factors involving production
- Work : Demography and contemporary problems
- Capital : Its forms and accumulation process
- Technical progress : History and current tendencies
- The « institutions of production » (enterprises)
- Type and distribution of enterprises : Causes and forms
- The importance of experience and competition in the market

#### Consumption

- Individual consumption : Household budgeting
- Collective consumption : The different types of public goods

#### Price and Market

- Market mechanisms : Supply and demand
- Demand elasticity in relation to price

#### Equilibrium and growth

- The economic equilibrium : currency
- The State's temporary action : budget and currency policies
- Growth and development : North-South inequalities and perspectives

### Organization of the course

Number of hours : 12h

ECTS : 0.5

Evaluation : Exam (1h30) and research

# First year

## Enterprise Organization

### Objectives

Understanding a company's structure.  
Analysis of the principles that allow the optimization of its organization.  
Study of the principal parts in a company.

### Program

Principles and theories behind a company's organisation.

- Structure of organising : Components, crucial phases, etc.  
Ford's model notion : Deconstruction of organising
- The types of organisation : Macro and microstructures  
Organisation of work in time and space
- Processes : Decision, cooperation, control  
Current evolution : The "new organisation methods"
- Working by projects, quality and certifications  
Organisation examples to learn from  
Structural forms of a company and decision models
- Methods of improving a microstructure  
Socio-technical approach to project and organisational changes
- Functions Commercial, Production Logistic and Purchase
- Functions Research & Development, Quality and Human Resources
- Functions Maintenance, Information, Finance and Organisation
- Functions Communication and General Direction

### Organization of the course

Number of hours : 21h

ECTS : 1.5

Evaluation : Exam (1h30) and presentation on tutorial work

# First year

## Law: Notions

### Objectives

Teaching first year students their first notions of public law, especially at a local scale. This module presents the institutional and juridical context in which the students will move in through the rest of their professional lives. It explains the existence of a juridical framework and the activities of local institutions.

### Program

- Presentation of the two big branches of law and judicial organization
- The hierarchy of laws
- Institutional organization of France : Local institutions - Their place in administrative organization - Their competences - Their plan of action - The control that is practiced over them
- Administrative organization of France : Principles behind its organization - Local institutions' competences - Cooperation between local institutions - Control of local institutions
- The European Union
- Responsibility : General principles - Civil responsibility - Administrative responsibility - Penal responsibility
- Contracts : Definition of a contract - Contract validity and conditions - Contract drafting - Contract execution : Effects, modifications, disputes and complaints - Contract end
- The right to work and the status of the public function
- The public domain and leases

### Organization of the course

Number of hours : 24h

ECTS : 1.5

Evaluation : Exam on course notes, oral presentation and written report

# First year

## Quality

### Objectives

Acquiring the basis of quality management through its history, current issues and rules.

### Program

#### Context

- Origins of quality
- Stakes and concepts
- Rules and standards

#### Developing an approach of «satisfaction of the user / service»

- Identifying a client's needs and expectations
- Determining the sources of non-quality, non-security, etc.

#### Brainstorming, tree of causes, Pareto diagram

- Implementing an organizational approach based on each process
- Defining and identifying the processes
- Mapping a process and understanding its implementation
- Flowchart elaboration
- Writing a procedure
- Performance control

#### Implementing a quality project

- Methodology (Action Quality Plan)
- Quality management system
- Tools of quality management

#### Obtaining a continuous improvement approach

- Management panels: indicators and reports
- Implementation of an improvement action (corrective or preventive)
- Audit : Methodology and tools

### Organization of the course

Number of hours : 12h

ECTS : 1

Evaluation : 30 min exam on the last day

# First year

## Health and Safety at Work

### Objectives

Know how to organize a prevention strategy.  
Understand the issues in terms of the responsibility of the person in charge.

### Program

The position of risks in everyday life and the expectations generated :

- Evolution of the relationship with risk
- Challenges in professional risk prevention

Most important definitions and indicators

- Danger and risk
- Accidents and professional diseases
- Principal indicators of the general regime of the public service

Legal framework and responsibilities of the person in charge

- Work Code
- Responsibilities in the case of work accidents and law cases

Actors in prevention

Evaluation of professional risks

- Legal framework
- Identification and evaluation of risks
- Prevention measures

General elements of professional risks

- Different types of risks
- Associated prevention measures

Analyse method for the tree of causes

### Organization of the course

Number of hours : 12h

ECTS : 1

Evaluation : 3h exam with a case study at the end of the module

Course Responsible : Grégoire MERRHEIM

# First year

## Sustainable Economics

### Objectives

To give the engineering students the necessary reference points, in terms of tools and issues, within sustainable development. This will be done from both the general principles underlying them and their implementation. Students will be taught the key concepts to understand, interpret and be able to act accordingly in the situations they will find in their professional and private life.

### Program

#### Introduction

- The different trends of sustainability in the economy
- The growth / decay debate
- The phases of sustainable development
- The issues with the economy /environment and economy /social interfaces
- Workshop 1 : The long way towards sustainable development (Study of the international conventions that have opened the way to the implementation of sustainable development in enterprises)

#### Principal tools of sustainable economy

- Market tools (efficient markets, rules, taxes, emissions quota, voluntary agreements)
- Sustainable development politics and the economic component
- Workshop 2 : Study of current measures (ex : carbon tax, urban tolls) or sustainable development policies (ex : Grenelle)

#### Tools accessible to organisations

- Integration of environmental costs : From strict financial calculations to the global cost
- Taking into account the human factor : "RSE" procedures
- Workshop 3 : Social responsibility in enterprises : Case studies

#### The issue of "DD" or the overtake of commonly used analysis methods

- Introduction to systematic approaches
- Sustainable management of resources

### Organization of the course

Number of hours : 12h

ECTS : 0.5

Evaluation : 1 written exam

# First year

## Business Law

### Objectives

To give the students :

- The minimum knowledge that will protect them from the risks in their professional life : Accidents, problems while traveling, etc.
- The basic concepts of work rules (social)

### Program

Through case studies, articles and personal experiences, understand the following concepts :

- Liability
- Administrative Responsibility
- Criminal Responsibility
- Contracts : Contract Definition - Conditions of validity of a contract - Formation of a contract - Contract Execution : Effects, changes, claims and litigation - End of a contract
- The Labour Law
- Litigation

### Organization of the course

Number of hours : 12h (with public law)

ECTS : 1 (with public law)

Evaluation : 1 exam



# First year

## Public Law

### Objectives

General public law course imparting general culture elements about the institutions and mechanisms of administrative law that the students will encounter in their future careers when dealing with public institutions.

### Program

- Constitution
- Local Institutions
- Administrative Responsibility
- Administrative Contracts
- Public Service Status
- The Public Domain and Leases

### Organization of the course

Number of hours : 12h (with business law)  
ECTS : 1 (with business law)  
Evaluation : 1 exam

# Second year

## Accountancy

### Objectives

To give the students the basic vocabulary and knowledge to understand the essential concepts used by accountants, both in France and the Anglo-Saxon world. To introduce them to accountancy rules to create a frame of knowledge that can be progressively completed throughout their careers.

### Program

#### General Accountancy

Introduction :

- The different domains of accountancy (finance and enterprise)
- General scheme of accountancy organization
- Definition of the principal documents : Balance and results sheet
- Accountancy plan : Importance and organisation
- Different types of accounts and their respective uses
- French accountancy vs. Anglo-Saxon accountancy

The accountancy game :

- Some base figures
- Conclusion
- Other accountancy definitions

Principal documents :

- Balance Sheet (French / Anglo-Saxon)
- Results sheet (French / Anglo-Saxon)
- Logic behind results sheet
- Additional statements

#### Cost Accountancy

- General scheme
- Objectives and resources
- Direct and indirect charges
- Dealing with indirect charges
- The cost of buying
- Operational and stock management
- Different costs

### Organization of the course

Number of hours : 21h  
ECTS : 2 (with finance)

# Second year

## Finances

### Objectives

To give the students the basic vocabulary and knowledge to understand the essential concepts used by the financial team, both in France and the AngloSaxon world. To make them understand the financial aspect in relation to their careers and create a frame of knowledge that can be progressively completed throughout them.

### Program

#### Basic Concepts

- Anglo-Saxon and French working capital
- The needs of working capital
- Normative working capital
- The treasury
- Indebting capacity
- The standstill

#### Fundamental Ratios

- Profitability
- Solvency
- Running Operations

#### Update notions

- Current value
- Future value

Investing and update – Scheduling revenues and expenditures

General and financial management panel

### Organization of the course

Number of hours : 12h

ECTS : 2 (with accountancy)

# Second year

## Team Management

### Objectives

To understand the different tasks that have to be done as a manager: organize, manage, animate, communicate, delegate, analyze, represent, predict, motivate, decide, negotiate.

### Program

#### Management

- Understanding the different types of management
- The different tasks of a manager

#### Animate

- Understanding relationships and arrangements
- Discovering behavioural factors that help a relationship
- Dealing with tense situations and avoiding conflict

#### Communicate

- External communication
- Meeting conduction
- Document production

#### Delegate

- What to delegate?
- How to delegate?
- Control and sustain

#### Organise

- Men (Recruitment, roles, etc.)
- Means (Premises, Informatics, Tools, Materials, etc.)
- The work space (Structure, common rules, procedures, etc.)

#### Motivate

- Motivation in the history of management
- Knowing how to motivate and self-motivation

#### Negotiate

- Finding a common solution
- Participation in the decision and preservation of mutual interests
- Avoiding unilateral agreements

### Organization of the course

Number of hours : 10.5h

ECTS : 1 (with negotiation)

Evaluation : Mean of two grades :

- 1 individual grade on the students' implication over the 1,5d.
- 1 collective grade on the work to be done over the 1,5j. This work will be done from the start of the 1,5d, it will be marked after the last session

# Second year

## Operation Management

### Objectives

Make the student understand the necessary rigor in the organisation of a project and to make him discover, through practical examples :

- The different phases in the direction of a project
- Risks and the budgetary world
- The elaboration of the reference documentation for the project : requirements, specifications, works' schedule, planning, progression report, etc.

### Program

Context : Challenges when conducting a project, its stakeholders and phases

Project Management : 6 phases to be accomplished, each including a risk and quality analysis

#### Locate and put in context

- Define « What » : Nature of the project, objectives, restrictions, etc.
- Define « How »: Techniques / tools / methods, provisional planning, humans / budgetary / materials resources, etc.
- Define its organisation : Project management, communication, etc.

#### Decomposition

- Decomposition en stages and life cycle
- Decomposition in tasks and associated structures : PBS, WBS et OBS

#### Estimation

- Estimation levels
- Estimation methods
- Budgeting

#### Planning

- Planning techniques: Pert and Gantt
- Psychological aspects of planning

#### Following and controlling the project

- Project follow up, re-estimation, changes management
- Reporting : Objectives, management panels

### Organization of the course

Number of hours : 22.5h

ECTS : 2

Evaluation : Marked tutorials + exam

# Second year

## Change Management

### Objectives

Through conferences from leaders in public or private organizations and the «Conducting Change» classes the objective is to raise awareness of the need :

- To ensure the usefulness of a process, even (and especially) if it has been applied for a long time
- To have a client oriented process
- To plan for risks
- To want to do better

### Program

«Quality Process» Conferences

- Project Management
- Quality in Public Services
- Managing a team
- Conducting change

Changes Policy

- Performance Diagnostic
- Creation of values
- Redesigning the processes
- Effective change in enterprises
- Evolution and innovation in the company by anticipation

### Organization of the course

Number of hours : 10.5h

ECTS : 0.5

Evaluation : 1 grade given during the 1,5 days

# Second year

## Construction Economics

### Objectives

Placing the engineering student in a project manager position and allowing him/her to deal with the a complex design / construction project. The student will have to master both time and overall cost for the entire duration of the project. From the programming and early architectural sketches, to the delivery to the customer and the first years of operation of the building.

### Program

Getting the knowledge of economics required

- Understand the project from a client-investor point of view : Business plan, attractiveness of land, regulatory constraints (technical and planning), sustainable development, operation costs, etc.
- Understand the overall conduction of the design / construction project, and briefly understand the different contractual arrangements available
- Understand what stakeholders are likely to be involved in the project
- Understand the general methodology of costing and the composition of a price

Carrying out feasibility studies and creating the primary design

- The initial balance sheet
- The technical characteristics of the project (in its use, architecture, etc.).
- Risks / hazards / specific points in the project environment to take into account
- The overall planning of the operation

Estimating the cost of construction

- The technical costs per batch
- The cost of construction
- The control of work and the implementation studies
- The general methodology for building
- The types of contract used with subcontractors

Estimating operating costs

- Analysis of the main items of energy consumption
- Analysis of other expenses

Understanding the main environmental certifications

- Principle of a certification
- Examples of certifications
- Criteria, constraints, and benefits

### Organization of the course

Number of hours : 12h

ECTS : 0.5

Evaluation : Evaluation will be the mean of 2 report grades applied to the second year construction project (1 intermediary (50%) and 1 final (50%)). This compiles :

- Provisional financial report
- Detail of construction cost
- Estimation of usage costs

# Second year

## Construction Management

### Objectives

Give the engineering students a knowledge of all stakeholders in the building process:

- Their definition
- Their role
- Their rights and duties

Include the client, be it private or public, in this set.

### Program

#### Introduction

- The act of building and its environment (legal and organizational)
- Main terminologies : Public Works, General Interest, Terminologies related to project management and construction management, Terminologies related to surfaces

#### The client (public and private) and project management

- Definition of a client (public and private)
- Their rights and duties
- Who can be the client ?

#### The contractor (public and private) and project management

- Definition of a contractor (public and private)
- Their rights and duties
- Who can be the prime contractor ?

#### Assistance in project management

- Definitions : Operation conductor, Client's representative, Assistants
- Limits and assistance framework: When can it be exercised ? Who may exercise it ?

#### The «MOP»Law

The various stakeholders in the building process that surround the client

### Organization of the course

Number of hours : 25.5h

ECTS : 2

Evaluation : 1 exam (1.5h)



# Third year

## Marketing

### Objectives

Understand the principles behind marketing.  
Acquire a global view of the techniques and strategies used in marketing.  
Analyze through case studies examples of the different politics of marketing.

### Program

Putting it in perspective : 80 years of marketing!

- Explanation of the marketing process : Segmentation, targeting and positioning
- The spirit of marketing : Marketing as a creator of values

The pragmatic approach. The marketing mix : Why ?  
How ?

- The product (and related services = offer) and Implementation (direct or indirect distribution, etc.)
- Price (cost and value) and promoting (media communication and outside the media communication, the push and pull approach)

Marketing Management

- Porter's five forces, the competitive position and the life cycle of a product
- Business intelligence, benchmarking and marketing intelligence
- The Ansoff market (product / market)

B to B marketing and marketing plans

- The concept of the supply chain, the derived demand and marketing and purchasing
- The marketing plan (actions, schedule, costs, budget and results measurement)

Marketing Strategy: SWOT analysis

- Decision support matrices: BCG, ADL, McKinsey
- Strategy of cost domination and differentiation strategy
- Development by specialization and diversification
- Internal growth (organic) and external growth (by acquisition)

### Organization of the course

Number of hours : 12h

ECTS : 0.5

Evaluation : Graded workshop and reading sheet

# Third year

## Business Unit Creation

### Objectives

To produce, in groups of three, a business plan explaining, developing and enhancing the creation or redevelopment of a business unit (enterprise, activity, filial, etc.). It must be as specific and realistic as possible and from an original idea.

### Program

Synthesis module as an extension of the marketing course, and more generally of all management modules. Discussion of an «ex nihilo» idea or an idea developed from an existing group.

An obligation : The activity of the BU must be related to the CITY : transport, housing, parking, green spaces, paid services for residents, municipalities, etc.

Each group confronts the project with their tutor :  
How to go from the initial idea to the feasibility of the concept and then to the market research organization?

First decisions on the marketing mix of the project :  
What should we offer ?

Followed by general policy : What is our aim ?

Starting strategy and development.

BU organization : Structure, hierarchy, etc..

Choosing a legal form : SARL, SA, SAS, SNC, etc..

Trade policy : Distribution channels, cost of sales, etc..

Production : Investment, production costs (fixed and variable, etc.).

Finance : Social capital, debt policy (used by banks / shareholders).

### Organization of the course

Number of hours : 12h

ECTS : 1

Evaluation : Business Plan will be graded

# Third year

## Public Tenders

### Objectives

An engineer's professional activity will quickly be confronted to public purchase.

Be it as representatives of the contracting authority within a public institution or as the representatives of the company executing the works.

The objective of this course is to allow the future engineer to learn the bases in the procedures of public purchase with a practical and operational approach.

### Program

The 3 most important types of public law contracts :

- The "PPP" (Public Private Partnerships)
- The "DSP" (Service Public Delegations)
- The Public Markets

I - Evolution of regulatory dispositions

- I - 1 Directive
- I - 2 Reform to the public market Code

II - Competitive bidding

- II - 1 Principles
- II - 2 Determination of needs, transactions and calculation of thresholds

III - Buying and market procurement

- III - 1 Buying Strategy
- III - 2 Different procedures for market procurement
- III - 3 Choice of the holder and authorities intervening in this choice (3h)

IV - Market execution

- IV - 1 Instalments (vs. advance payments)
- IV - 2 The appeal
- IV - 3 The termination

V - Various principles

- V - 1 Dematerialization of purchases
- V - 2 Responsible Buying

### Organization of the course

Number of hours : 24h

ECTS : 2

Evaluation : 1 graded tutorial (50%) and 1 1h30 exam(50%)

# Third year

## Public Finances

### Objectives

Present in general lines the essential problems found in contemporary public finance, especially local finance. They are studied in different budgetary and accountancy aspects. Some points of comparison with state finance will be made.

### Program

#### Global Approach to Public Finance

- State Finance / Local Finance / Social Finance
- Budget and compatibility notions
- Budgetary principles
- Accountancy principles
- Control over Public Finance

#### Local Budgets

- Votes, Structure, Consistence of local income and spending, Budget presentation (mean's logic - result's logic)
- Local financial autonomy
- Local taxation
- General functioning allocation

#### Local Accountancy

- Stages in the procedure of public spending
- The concept of practice
- The concept of accountancy naming
- Administrative and Management accounts
- Juridical control of the accountant by the « CRC »

### Organization of the course

Number of hours : 12h

ECTS : 1

Evaluation : 1h30 exam

# Preparation to Internships - First year

*(only open to international students under certain conditions)*

## Speaking in Public

### Objectives

The professional activity of our engineers requires them to speak in public. They must do so with the greatest ease possible, whatever the public concerned : Elected officials, clients, customers or teammates. This course therefore aims to :

- Allow each student to express themselves freely, clearly and confidently by having total control over his emotions
- Improve the way they speak in public, present a project summary, describe an event, argue, explain a topic and structure a presentation

### Program

While promoting inter-group activity, each student is, in turn, actor and spectator in a situation dealing with :

- Speech : The first communication tool
- Personal preparation : Knowing how be in the rind mind set
- The content of the speech : The heart of the message
- Listening - the reformulation : Making the public an accomplice

To make public speaking productive, without loss of time, the student is required to :

- Control various physical factors
  - Breathing
  - The voice
  - Flow, rhythms, etc..
- Understand verbal and non-verbal communication
  - The eyes
  - Silences
  - Listening
- Identify all the factors of success of an intervention
  - Knowing your audience
  - Mastering the topic
  - Preparing a speech
- Learn to «face» the public while still listening to it
  - Managing stress and emotions
  - Listening. Reformulation

### Organization of the course

Number of hours : 15h

Class Distribution : 10 x 1,5h classes mixing theory and practical exercises filmed, re-watched and analysed

Evaluation : Comprised within the grades of projects and presentations

# Preparation to Internships - First year

*(only open to international students under certain conditions)*

## Professional Insertion

### Objectives

Acquire the tools necessary to be able to create a quality application.  
Discover the steps and rules of an interview.  
Be comfortable in an interview.  
Know how to present yourself professionally.

To be competitive the student must know his characteristics, strengths and weaknesses. This course is used to develop the existing skills, effectiveness and potential of the student with one principal objective : To know one self better, to increase self-confidence and to therefore be able to be more convincing.

### Program

There must be a strong personal involvement from the students. This time investment must be consistent, both during the course and in the exercises or simulations to prepare at home.

Through questionnaires, exercises and simulations, the student is required to :

- Improve self-confidence by highlighting his Motivations, Choices, Skills, Prejudices, limiting negative Blocks (what he believes, what he says about himself) and Positive Images (what he sees himself doing...)
- Know how to speak about himself: Selling his successes, recognizing his qualities, valorizing himself correctly, deciding to be enthusiastic, presenting experiences, talking with examples and images

#### Finding a job

- Techniques for Job Research (T.R.E.)
- CV
- Motivation letter
- Rationale
- Monitoring students: record of things done and to be done

#### Simulation interviews

- Preparation: knowledge of the business, adjustment to the position, anticipating questions and answers
- The interview: Simulation of the Day
- The After-Interview: acknowledgments, tracking, potential

### Organization of the course

Number of hours : 9h

Evaluation : Comprised in the grades for presentations and internships

Class Distribution : 6 x1,5h lessons mixing theory and simulations

Personal Work : 1h per lesson

# Preparation to Internships - First year

*(only open to international students under certain conditions)*

## Internships

### Objectives

Discover the many aspects of the functioning of an enterprise.  
 Promote the human and professional integration of the student in a team.  
 Evaluate and enhance their professional skills.  
 Participate in projects under the supervision of other people.

### Program

During their time at EIVP student participate in four internships. They are a very important part of the learning process and are aimed to introduce them to the professional world and give them a chance to put in practice their acquired skills.

Year	Internship	Duration	Period	Type of internship / Position within the enterprise
1st Year	LABORER	3 weeks	Half Oct. End Nov.	Operational Execution
	MANAGER	8 weeks	Half June End Aug.	Leadership, team responsible
2nd Year	STUDY AND RESEARCH	12 weeks	Start June Start Sept.	Technique expertise in research and innovation, with clearly identified objectives
3rd Year	END OF STUDIES	18 - 28 weeks	Start Feb. End Aug.	Engineer level. Global implementation (technical, juridical, financial, organisational, management) of a project of conception or realisation. No help in decision making.

### Organization of the course

#### ECTS

- Labourer Internship : 4
- Manager Internship : 6
- Research Internship : 10
- End of Studies Internship : 20

#### Evaluation

Labourer and leadership internships :

- Individual Report
- Collective Report
- Collective Presentation

End of studies and Study and research internships :

- Individual Report
- Individual Presentation
- Enterprise manager evaluation

Internship Responsible : Hypatia Nassopoulos