



Field : MANAGEMENT

Specialty :
PROJECT MANAGEMENT





4. Organization of the Teachings

Semester 1

FIELD: MANAGEMENT		Specialty : PROJECT MANAGEMENT					
Codes	Course title	Hourly Volume					Number Of Credits
		L	T	P	SPW	Total	
Fundamental Courses 30% (2 UC) 9 credits 135 hours							
PRM111	Mathematics and Computer Science I	50	20		5	75	5
PRM112	Quantitative techniques I	40	15		5	60	4
Professional Courses 60% (4 UC) 18 credits 270 hours							
PRM113	Legal Environment and accounting I	40	10	10		60	4
PRM114	Business ethics and analysis of markets I	45	15	10	5	75	5
PRM115	Marketing Conception I	30	15	10	5	60	4
PRM116	Editing and management of the projects I	40	15	15	5	75	5
Cross-sectional Courses 10% (1 UC) 3 credits 45 hours							
PRM117	Bilingual training I and economic environment I	25	10	5	5	45	3
Total		270	100	50	30	450	30

Semester 2

FIELD: MANAGEMENT		Specialty : PROJECT MANAGEMENT					
Courses Codes	Course title	Hourly Volume					Number Of Credits
		L	T	P	SPW	Total	
Fundamental Courses 30% (2 UC) 9 credits 135 hours							
PRM121	Mathematics and Computing II	45	15	10	5	75	5
PRM122	Quantitative techniques II	35	10	10	5	60	4
Professional Courses 60% (4 UC) 18 credits 270 hours							
PRM123	Legal Environment and accountanting II	35	10	10	5	60	4
PRM124	Business ethics and analysis of markets II	40	15	15	5	75	5
PRM125	Marketing II	30	15	10	5	60	4
PRM126	Methodology, editing and management of projects II	40	15	15	5	75	5
Cross- sectional Courses 10% (1 UC) 3 credits 45 hours							
PRM127	Bilingual Training II and Economic Environment II	25	10	5	5	45	3
Total		250	90	75	35	450	30


Semester 3

FIELD: MANAGEMENT		Specialty : PROJECT MANAGEMENT					
Codes	Course title	Hourly Volume					Number Of Credits
		L	T	P	SPW	Total	
Fundamental courses 30% (2 UC) 9 credits 135 hours							
PRM231	Quantitative techniques and computer skills I	35	20	15	5	75	5
PRM232	Information System and Financial Analysis I	30	15	10	5	60	4
Professional Courses 60% (4 UC) 18 credits 270 hours							
PRM233	General Policy and Accounting Management I	30	20	5	5	60	4
PRM234	Management of Risks and initiation to the Logistics I	25	15	15	5	60	4
PRM235	Analysis and planning of projects I	30	20	5	5	60	4
PRM236	Conception and management of projects III and IV	30	40	15	5	90	6
Cross-sectional Courses 10% (1 UC) 3 credits 45 hours							
PRM237	Legal environment and creation of enterprises	25	10	5	5	45	3
Total		205	140	70	35	450	30

Semester 4

FIELD: MANAGEMENT		specialty : PROJECT MANAGEMENT					
Courses Codes	Course title	Hourly Volume					Number Of Credits
		L	T	P	SPW	Total	
Fundamental Courses 30% (2 UC) 9 credits 135 hours							
PRM241	Quantitative techniques and computer II	20	25	25	5	75	5
PRM242	Information System and Financial Analysis II	10	20	25	5	60	4
Professional courses 60% (4 UC) 18 credits 270 hours							
PRM243	General Policy and Accounting Management II	20	25	10	5	60	4
PRM244	Management of Risks and initiation to the Logistics II	15	25	15	5	60	4
PRM245	Analysis and planning of projects I	15	20	20	5	60	4
PRM246	Professional internship			60	30	90	6
Cross-sectional Courses 10% (1 UC) 3 credits 45 hours							
PRM247	Legal environment and civic education II	25	10	5	5	45	3
Total		133	165	120	32	450	30





1. The objective of the training

The objective of this specialty is to train technicians capable of leading projects of enterprises in all sectors (industrial, service, commercial, technological and cultural), through the development of the enterprise and the acquisition of theoretical and practical knowledge in project management.

2. Skills Sought After

→ General skills

- Understand the professional and economic environment and enterprises;
- Master the use of the computer;
- Be apt in oral and written communication;



- Be capable of team leadership.

→ **Specific Skills**

Innovate, create, and ameliorate a project, product or process:

- Identify local, national and international partners;
- Monitoring technological and competitive development;

Coordinate a project:

- Carry out feasibility studies;
- Define the operational objectives of the project;
- Identify the working tools;
- Prepare the technical file.

Search and treatment of information:

- Identify the sources to exploit
- Analyze and summarize information found.

3. Outlets

- Assistant project manager;
- Assistant marketer;
- Officer responsible for public relations;
- Planner of the project.

4. Organization of the Teachings


Semester 1

FIELD: MANAGEMENT		Specialty : PROJECT MANAGEMENT					
Codes	Course title	Hourly Volume					Number Of Credits
		L	T	P	SPW	Total	
Fundamental Courses 30% (2 UC) 9 credits 135 hours							
PRM111	Mathematics and Computer Science I	50	20		5	75	5
PRM112	Quantitative techniques I	40	15		5	60	4
Professional Courses 60% (4 UC) 18 credits 270 hours							
PRM113	Legal Environment and accounting I	40	10	10		60	4
PRM114	Business ethics and analysis of markets I	45	15	10	5	75	5
PRM115	Marketing Conception I	30	15	10	5	60	4
PRM116	Editing and management of the projects I	40	15	15	5	75	5
Cross-sectional Courses 10% (1 UC) 3 credits 45 hours							
PRM117	Bilingual training I and economic environment I	25	10	5	5	45	3
Total		270	100	50	30	450	30

Semester 2

FIELD: MANAGEMENT		Specialty : PROJECT MANAGEMENT					
Courses Codes	Course title	Hourly Volume					Number Of Credits
		L	T	P	SPW	Total	
Fundamental Courses 30% (2 UC) 9 credits 135 hours							
PRM121	Mathematics and Computing II	45	15	10	5	75	5
PRM122	Quantitative techniques II	35	10	10	5	60	4
Professional Courses 60% (4 UC) 18 credits 270 hours							
PRM123	Legal Environment and accountanting II	35	10	10	5	60	4
PRM124	Business ethics and analysis of markets II	40	15	15	5	75	5
PRM125	Marketing II	30	15	10	5	60	4
PRM126	Methodology, editing and management of projects II	40	15	15	5	75	5
Cross- sectional Courses 10% (1 UC) 3 credits 45 hours							
PRM127	Bilingual Training II and Economic Environment II	25	10	5	5	45	3
Total		250	90	75	35	450	30


Semester 3

FIELD: MANAGEMENT		Specialty : PROJECT MANAGEMENT					
Codes	Course title	Hourly Volume					Number Of Credits
		L	T	P	SPW	Total	
Fundamental courses 30% (2 UC) 9 credits 135 hours							
PRM231	Quantitative techniques and computer skills I	35	20	15	5	75	5
PRM232	Information System and Financial Analysis I	30	15	10	5	60	4
Professional Courses 60% (4 UC) 18 credits 270 hours							
PRM233	General Policy and Accounting Management I	30	20	5	5	60	4
PRM234	Management of Risks and initiation to the Logistics I	25	15	15	5	60	4
PRM235	Analysis and planning of projects I	30	20	5	5	60	4
PRM236	Conception and management of projects III and IV	30	40	15	5	90	6
Cross-sectional Courses 10% (1 UC) 3 credits 45 hours							
PRM237	Legal environment and creation of enterprises	25	10	5	5	45	3
Total		205	140	70	35	450	30

Semester 4

Section 4

FIELD: MANAGEMENT		specialty : PROJECT MANAGEMENT					
Courses Codes	Course title	Hourly Volume					Number Of Credits
		L	T	P	SPW	Total	
Fundamental Courses 30% (2 UC) 9 credits 135 hours							
PRM241	Quantitative techniques and computer II	20	25	25	5	75	5
PRM242	Information System and Financial Analysis II	10	20	25	5	60	4
Professional courses 60% (4 UC) 18 credits 270 hours							
PRM243	General Policy and Accounting Management II	20	25	10	5	60	4
PRM244	Management of Risks and initiation to the Logistics II	15	25	15	5	60	4
PRM245	Analysis and planning of projects I	15	20	20	5	60	4
PRM246	Professional internship			60	30	90	6
Cross-sectional Courses 10% (1 UC) 3 credits 45 hours							
PRM247	Legal environment and civic education II	25	10	5	5	45	3
Total		133	165	120	32	450	30



5. Courses content

❖ **PRM 111: Mathematics and Computer training I**

➤ **General Mathematics I: 3 credits (45hours); L, T, SPW**

- **Algebra vector spaces**

1. **Polynomials**

- Polynomials characteristics.

2. **Vector space**

- Linear applications.

3. **Matrices**

- Operations on the matrices;
- Matrices associated with a linear application;
- Matrices and determinants.

4. **The Determinants**

- Determinant of a square matrix;
- Calculation of determinants of order less than or equal to 3.

5. **Linear Systems**

- Inversion of matrix of order less than or equal to 3
- Method of Gauss;
- Resolution of systems of linear equations by the method of Pivot ;
- Application of matrix calculation on the resolution of systems of linear equations.

6. **Reduction of square matrices**

- Own values; vectors.

7. **Differential equations and linear récurrentielles of order 2 with constant coefficients**

8. **Mathematical applications in Economics and Management**

➤ **General Computing I: 2 credits (30hours); L, T, SPW**

The hardware and software on a computer system - the Hardware

1. **The peripheral components**

- The devices of input;
- The ouPut devices; the storage devices;
- The devices of input and ouPut.

2. **The central unit**

- The central memory;
- The microprocessor;
- The ports;
- The motherboard;
- The chipset;
- The powersupply;
- The cards of extension;



- Other internal organs.

3. The unit of exchange (or bus)

- Role;

Page **102** of **627**

- Types of bus:
 - Data bus;
 - Control bus;
 - Bus of address.

B- The Software

3. The application software

- Definition;
- Role;
- Types and examples of software.

4. The basic software (or software systems)

- Definition;
- Types of basic software: - Drivers;
 - The compilers;
 - The utilities;
 - The systems of exploitation":
 - Features;
 - Roles;
 - Types of operating system;
 - Structure of an operating system;
 - architecture.
- Concept of Free Software and proprietary software.

System of numeration and Codification

C- The numbering systems

1. A few basic concepts

- The base of the system;
- Weight;
- Alphabet of the language;
- Format of the word (length of the word);
- power of language.

2. A few numberingsystems

- The decimal system;
- The binary system;
- The octal system;
- The hexadecimal system.

3. The basic changes

- Of Decimal to another base b;



- To a base b of any kind to the decimal basis;
- Of the binary in octal and vice versa;
- From binary to hexadecimal and vice versa.

4. Arithmetic operations

- binary numbers signed:
 - Exact representation;
 - Representation in complement to 2.
- Addition of binary numbers;
- Subtraction of binary numbers;
- Use the add-in to 2 in the subtraction;

Page 103 of 627

- Multiplication of binary numbers;
- Division of binary numbers.

5. Hexadecimal arithmetic

- addition of numbers in Hexadecimal;
- subtraction of numbers in hexadecimal.

D- The codes

1. General information on the concept of a code

- Definitions;
- Objectives of the codification;
- The functional codification;
- Types of functional codes;
- the codification of technology.

2. The alphanumeric codes

- The ASCII code;
- Standard ASCII; - Extended ASCII;
- Use.

❖ PRM 121: Mathematics and Computing II

➤ General Mathematics II: 3 credits (45 hours); T, P, SPW

Analysis

1. The Real Numbers
2. Numerical Functions of a real variable, limit, Continuity
3. Differentiability, extrema, theorem of Rolle and finished increases
4. Polynomials, fractions, rational
5. Study and graphic representation, reciprocal Functions
6. Limited developments, integrals and applications to calculations of Aires
7. Logarithmic functions and exponential
8. Digital Suites: Direction of variation, convergence
9. Arithmetic Suites, Suites geometrical, recurring suites of order 1
10. Mathematical applications in Economics and Management



➤ **General Computing II: 2 credits (30 hours); T, P, SPW**

A- Computer Networks

1. General information

- Definition of A computer network;
- interest of computer networks;
- basic vocabulary:
 - Workstation;
 - Node;
 - Server;
 - packet .

2. Typology of networks according to the media:

- Wired networks;
- Networks not wired.
- according the GeographicExtent:
- The local networks (LAN);
- The metropolitan area networks (MAN);

Page **104** of **627**

- The wide area networks (WAN).

3. Network Topologies:

- PhysicalTopology;
- The bus topology;
- The star topology;
- The ring topology;
- The topology in mesh;
- the topology in shaft;
- Logical Topology;
- Networks to dissemination;
- Point-to-point networks.

4. Network architectures:

- client/server architecture;
- architecture of equal to equal.

5. The equipment of computer networks :

- Equipments of basis of a network; The computer; The network card; The server; The network cable; The transceiver (or adapter); the transmission mounts; the socket.
- The equipmentof Interconnections;Hubs (hub); Switch (Switch); Routers; Gateways the gateway (gateway); The router; The bridge (Bridge); the repeaters.

6. Concept of IP addressing

- Structure of an IP address - network identifier (Net ID); - Identifier



of host (Host ID).

- Specific addresses ;
- Network address;
- Machine address;
- Broadcast Address (broadcast);
- Limited Broadcast address (multicast);
- Address of rebroadcasting (loopback);
- Classification IP addressing; CLASS A; CLASS B; CLASS C.

B- Internet network

1. Concept of protocol

- definitions and a few types of protocols
- SMTP protocol;
- POP protocol;
- NNTP protocol;
- The FTP protocol;
- HTTP protocol;
- IMAP protocol; - Protocol TCP; - other.

2. A few Internet Services

- The e-mail;
- Research on the Internet;
- The Newsgroup (discussion forum);
- The transfer of files;
- The Download (Download A text, download An image, download a free software...);
- The online Trade;

Page **105** of **627**

- The IRC (Internet Relay Chat);
- Other.

3. The search engines

- Definition;
- Role;
- Some search engines.

4. Tools for Internet access

- The browsers (definition, examples);
- The plug-ins (definition, examples);
- The search engines (definition, examples, use).

5. The connection to the Internet

- Connection hardware;
- Suppliers of access (role, examples);
- Types of connections (specialized line, phone line, satellite).



❖ **PRM 112: Quantitative techniques I**

➤ **Financial Mathematics I: 2 credits (30hours); L, T, SPW**

1. The Basics

- Simple Interest;
- Calculation of the acquired values;
- Commercial present value and rational present value;
- forecasted interest and effective interest.

2. Calculation of the average rate of a series of simultaneous investments

3. Equivalence and replacement of effect

4. Short-term financial transactions - Current Account and interest

5. Cash Discount - real rate of discount

6. Compound interest

- Acquired value;
- Present Value;
- Rate equivalent and proportional rate;
- apparent interest rate ;
- real rate of interest.

➤ **Statistics: 2 credits (30hours); L, T, SPW**

1. Statistical series to a variable

Definition and vocabulary;

- Graphical representation;
- Characteristics of central tendency and dispersal characteristics:
 - Average;
 - Mode;
 - Median;
 - Standard deviation; quantiles; coefficient of variation.

2. Statistical series of two variables

- Definition and vocabulary;
- Cloud of points;
- Average point;

Page **106** of **627**

- Covariance and covariance matrix of 2 variables;
- The coefficient of correlation and regression;
- Linear adjustment by the method of least squares.

❖ **PRM 122: Quantitative techniques II**

➤ **Financial Mathematics II: 2 credits (30hours); T, P, SPW**

1. The Annuities

- Constant annuities;
- Annuities in arithmetic progression;



- annuities in geometric progression;
- perpetual annuities.

2. Joint loan

- Reimbursement by constant annuities;
- Amortisation Table
- Laws followed by depreciation recovery of the debt still annuities;
- Laws followed by the annuities;
- Applications on the joint loan .

3. The bond loans

- Reimbursements as pearannuities;
- Constant annuities;
- Constant Amortisation;
- Yield rate and rates of returns of a debenture loan;
- Rate of returns of the debenture loan at issue ;
- Choice of Investments.

➤ **Statistics II: 2 credits (30 hours); T, P, SPW.**

1. Estimation of an average, a proportion and a standard deviation
2. Confidence interval and confidence coefficient
3. Hypothesis testing and the KHI-square

❖ **PRM 113: The legal environment and accounting I**

➤ **General Ledger I: 2 credits (30 hours); L, T, P, SPW**

1. General information

- Definition evolution and the role of the accounting;
- Study of the accounting law : sources and Principles (briefly).

2. The balance sheet

- notion of source and Application

3. The account and the principle of the double entry

4. The accounting transfer

5. The accounting systems (conventional and computerized)

6. Purchase and sale of the goods

- the elements which diminish the invoice (reductions);
- The elements that increases the invoice (transportation costs, VAT, packaging (see only logging and deconsignation).

Page 107 of 627

➤ **Legal management and tax I: 2 credits (30 hours); L, T, P, SPW**

1. Legal classification of economic activities

- Study of different sectors of activities from the distinction of the commercial act and Civics act ;
- Study of the statutes related to the nature of the professional activity;
- Public economic activities

2. The company



- Legal aspect of the company;
- Business ;
- The building of the company (registered or not in the balance sheet).

3. The structures of the company

- Sole Proprietorship;
- Commercial companies and civil, Association
- public company.

4. Instruments of payment and credit

- Cheque, bill of exchange, promissory note, Daili slip, cards; - leasing; - the inheritance.

5. Forecasting and settlement of business difficulties

❖ **PRM 123: The legal environment and accountant II**

➤ **General Accounting II: 2 credits (30 hours); L, T, P**

1. The settlement

- In cash (cash, bank);
- A term (effect of trade: creation, cashing).

NB: do not see the movement of the effects of trade.

2. Trading profit and loss account (industrial and commercial company)

NB : from management accounts present the significant balances of management.

3. Concept of amortization (constant and degressive)

- Terminology;
- Calculation (Table of Depreciation of assets placed in service at the beginning and the course of the financial year.

4. Concept of Provision

- For depreciation;
- For expenses and losses.

NB : for the Chapters IX and X and present the Extract from the balance sheet (brief study and practice).

➤ **Legal management and taxation II: 2 credits (30 hours); L, T, P**

1. The sources of the tax law - national sources; - international sources.

2. Definition of the various tax levies - taxes, taxes and parafiscal charges; - Taxation of state and local taxation.

3. Presentation of different taxes

- VAT ;
- Personal Income tax on corporations.

Page 108 of 627

4. Relations between taxpayer and tax administration (fiscal control, tax litigation)



❖ **PRM 114: Business ethics and Market Research I**

➤ **Business Ethics I: 2 credits (30 hours); L, T, P, SPW**

- The loyalty in contractual matters;
- The loyalty of the competition;
- The duties and responsibility of the leaders and auditors.

➤ **Market Research I: 3 credits (45 hours); L, T, P, SPW**

- How to analyze a market?
- The study of the competition, characteristics.

The product policy

- The classification and the identity of the product;
- Life cycle, packing and packaging;
- The quality, standards and labels;
- The range, the design;
- The launch of new products;
- The communication policy: communication media, the communication non-media.

❖ **PRM 124: Business ethics and market research II**

➤ **Business Ethics II: 2 credits (30 hours); L, T, P, SPW**

- The duties and responsibility of the leaders and auditors; - the control of the management by the associated; - the prohibitions and disqualifications.

➤ **Market research II: 3 credits (45 hours); L, T, P, SPW**

The pricing policy

- The price constraints;
- The strategies of price by the launch of a new product;
- The strategies of prices compared to the demand the fixing of prices from the costs;

The distribution policy

- Definitions;
- The functions;
- The different forms of distribution.

❖ **PRM 115: Marketing I**

➤ **Fundamental Marketing: 2 credits (30 hours); L, T, P**

1. **The basis of the marketing** - History of marketing;

- Definition and objective of the Marketing;

Page 109 of 627

- Balance Sheet of marketing;
- Field of application of marketing;
- Customer satisfaction.

2. **The Market**



- The environment;
- The concept of the market;
- The segmentation;
- Indicators of the market;
- Analysis of the competition (competitive positions, competitive strategies,).

➤ **Communication in Project Management I: 2 credits (30 hours); L, T, P, PE**

- Planning the communication: needs analysis, use of technology, methods and models of communication.

PRM

➤ **Fundamental Marketing II: 2 credits (30hours); L, T, P, SPW**

1. The Marketing information

- The Analysis of consumer markets;
- Consumer buying behavior (models of analysis, the consumer, the determinants of the purchase, the process of purchase);
- The techniques of market studies (Phase of the conduct, techniques of descriptive studies, processing of information).

2. Introduction to Marketing Planning

- The strategic analysis in marketing (environmental analysis and determination of the opportunities /threats, Diagnosis of the company and determination of the strengths/weaknesses);
- The Strategic Development (formulation of objectives, targeting and positioning, choice of strategic vectors);
- The marketing mix (the concept of marketing mix, the product, the price, the distribution, the commercial communication/EOL);
- The life cycle of the product (the idea to product, phases of the cycle of life);
- Brand Management ;
- Identification of the product;
- Operation of the products.

➤ **Communication management in the projects II: 2 credits (30hours); L, T, P, PE**

- Disseminate information and make reports: Frequency necessary, technology available, duration of the project...

❖ **PRM 116: Conception and management of the projects I**

➤ **Introduction to the fitting of the projects I: 2 credits (30hours); L, T, P, SPW**

1. Technical study

- Objective of the Technical Study;

Page **110** of **627**

- Definition of the activity;
- Enumeration and qualification of needs;



- Analysis of project constraints.

2. Study of the market or of the expectations of the Beneficiaries

- Objective of the Market Study; -

- know and understand its market.

➤ Introduction of the project Management I: 3 credits (45hours); L, T, P, SPW

- Generalities on projects, problems in the management of projects;

- The Typology of projects;

- The History of the Management of Projects, part of the project, specifications.

❖ PRM 126: Methodology, Conception and management of projects II

➤ Methodology of the drafting of the report of internship: 1 credit (15hours); L, P

- The collection of information;

- How to make a report;

- The plan of the Probationary report and the summary;

- The Tables of content ;

- The introduction of the report of internship;

- The conclusion of the internship report;

- The acknowledgments;

- How to build the annexes;

- When to start his internship report;

- How to find a topic of internship report;

- The cover page;

- How to write effectively;

- Form and presentation (coverage, MSDS, summary, bibliography, glossary, index of figures, tables and illustrations);

- Instructions and typographical rules of presentation (font size, line spacing, titles, highlighted, punctuation, graphic charter); - How to prepare the defense.

➤ Introduction to the conception of projects II: 1 credit (15hours); L, T, P

Study of the market or of the expectations of the Beneficiaries

- Objectives of the Market Survey

- Know and understand your market

➤ Introduction to the management of projects II: 3 credits (45hours); L, T, P, SPW

- The techniques of managing Projects ;

- Administrative management of the project, the management of time;

- Human resources management of the project, the management of the quality.

❖ PRM 236: Conception and management of projects III and IV

➤ Conception of Projects I: 1 credit (15 hours); L, T, P, SPW

1. Study of the market or of the expectations of the beneficiaries



- Define a strategy to develop the activity.

2. **Economic and Financial study**

- Objectives of the Study;
- The initial financial plan.

➤ **Project management I: 2 credits (30hours); L, T, P.**

The five (05) stages of a project:

• **The emergence of the project**

- Definition;
- Tools: The Beast To horns, the tree of objectives.

• **The feasibility**

- Definition;
- Tools : quantitative tools, qualitative tools of Analysis of risks, tools of functional analysis.

• **The design** - definition;

- Tools: Work Break Down Structure (WBS), activity list, the planning, budget, the schedule of expenditures.

• **Implimentation** - definition;

- Tools: Specification the Gannt, sheet of reporting, dashboards.

• **Conclusion**

- Definition;
- Tools: the transfer and the closure, the sheets of capitalization of the experience.

➤ **Conception of projects II: 1 credit (15 hours); L, T, P, SPW.**

StudyEconomic and Financial

- The forecast account result; -
- The cash plan; -
- The threshold of profitability.

➤ **Project management II: 2 credits (30hours); T, P, SPW**

1. The Project Manager

- The profile of the project manager;
- The specialties;
- The strengths of the Project manager ;
- The behaviors;
- The activities;
- The dilemmas.

2. The Small Projects

- Elements of context;

Page 112 of 627

- Elements of Implementation.

3. Generalities of project

- The project, the stakeholders;



- The project of enterprise;
- The Phases of preliminary studies;
- The offers, the risks;
- The launch of the project;
- The HumanResources;
- The cycle of project management.

❖ **PRM 117: Bilingual training I and economic environment I**

➤ **French expression: 1 credit (15hours); L, T**

1. Vocabulaire

- Vocabulaire technique usuel

2. Grammaire

- Du verbe : Conjugaison aux temps communément utilisés – présent, passé composé ; imparfait, futur, conditionnel, et plus-que-parfait, l'impératif, l'infinitif, voix passive ;
- De l'adjectif : Qualificatif, possessifs, démonstratifs, interrogatifs, numéraux, indéfinis ;
- Du nom et son article: masculin/féminin ; singulier/pluriel ; dénombrable, et non-dénombrable ;
- Du pronom : personnel, possessif, interrogatif, démonstratif, relatif, indéfini ;
- De l'adverbe et de la locution adverbiale : pour dire comment, où, quand et pourquoi ;
- Des fonctions grammaticales.

3. Expression et communication

- Compréhension et interaction au cours d'une discussion technique ;
- Communication orale courante ;
- Communication orale interactive
- De la phrase : simple, complexe, composée ; interrogative, déclarative, exclamative et impérative ;
- Lecture rapide et compréhension de texte ;
- synthèse d'un long texte
- De la communication : rédaction de texte, d'instructions, de rapport, d'une correspondance – d'une lettre recommandation ou de motivation, d'une, demande d'emploi, d'une demande d'explication, d'une réponse à une demande d'explication, d'un CV ;
- Gestion d'une table ronde/discussion : La prise de notes, la prise de parole
- Expressions figées

➤ **General Economics: 2 credits (30hours); L, T, P**

1. Business and production
2. Households and the consumption

Page **113** of **627**

3. Markets and Prices



4. Training and distribution of income
5. The currency and the financing of the "Economy
6. The elements of the National Accounting
7. The "macro-economic equilibrium
8. The socialist system
9. The "capitalist economy
10. The "State and its interventions
11. The foundations of international trade;
12. International payments
13. The balance of payments
14. Economic development and its inequalities
15. Growth and its inequalities
16. Inflation, unemployment, industrial change
17. The issues of development and the globalization of problems
18. The development strategies
19. The "economic integration and the forms of cooperation in the world
20. The strategies of the "International Debt

❖ **PRM 127: Bilingual training II and Economic Environment II**

➤ **English Expression: 1 credit (15 hours); L, T, SPW**

1. Vocabulary

- Technical and usual vocabulary of the specialty

2. Grammar

3. Bilingual expression

- Understanding in interaction in Technical Discussions
- Continuous oral communication: Show, explain, develop, summarize, account, comment;
- Interactions oral communication

4. Autonomous reading of "writings" of all levels

- Lead by a quick reading to understand the general sense;
- Browse a text long enough to locate desired information;
- Gather information from different parts of the document or of the different documents in order to accomplish a specific task.

5. Write clear, detailed texts

- Essay writing;
- Application for employment;
- C.V.;
- Letter of motivation;
- Letter/memo writing and minutes of a meeting

➤ **Economy and organization of enterprises: 2 credits (30 hours); L, T, P**



- The Enterprise, definition and mode of analysis;
- Classification of Entreprises ;
- The Organisational Structure of enterprises ;
- The insertion of the company in the economic fabric;
- The commercial activity of the enterprise;
- The productive activity of the enterprise;
- Logistics in the enterprise;
- The financial activity of the enterprise ;
- The management of human resources;
- The systemic approach of the enterprise;
- Information system ;
- The decision making process
- The strategic analysis of the company;
- Choice and implementation of a strategy;
- The business, society and culture;
- The business, society and the Ethics.

❖ **PRM 231: Quantitative techniques and computer skills I**

➤ **Probabilities and operational research i: 3 credits (45hours); L, T, P, SPW**

1. Algebra of sets

- Applications;
- The Counts.

2. Basic Set linked to a random experiment

- Probabilisation;
- Conditional probability;
- Formula of Bayes;
- Tests of BERNOULLI.

3. Random variables discrete

- Law of probability;
- Distribution function.

4. Random variables continuous

- Density,
- Hope;
- Variance;
- Standard deviation; moments.

5. Conventional laws

- ; Binomial
- Normal ; fisher; exponential.

➤ **Applied computer i: 2 credits (30hours); L, T, P, SPW**

1. The study of the Graphical Environment Windows



- Presentation;
- Management of Windows;
- Managing Files and Folders.

2. What is a file, a folder?

- Path of access to a file.

3. Practical Study of Microsoft Word study of basic functions.

4. Practical Study of Microsoft Excel

- Presentation;
- Arithmetic operations.

5. Construction of a formula

- Use of the integrated functions: - definition;
- Syntax of the integrated functions;
- Some integrated functions;
- Relative reference, absolute reference and joint reference; - summary case .

❖ PRM 241: Quantitative Techniques and computer II

➤ Probabilities and Operational Research II: 3 credits (45hours); L, T, P, SPW

1. Concepts of the combinatorial optimization

- Constraints/objectives;
- Feasible solution/best;
- Terminal;
- Local optima, etc.

2. Graph Theory

- Modeling;
- Coloring;
- Roads;
- The trees masking fluid;
- The Waves...

3. The linear programming

- Program to two variables; program to more than two variables.

4. The algorithm of the simplex - the table method

- Analysis of the final table of the simplex; problem of duality ; the management of stocks.

5. The problems of scheduling - General Information on the Graphs

- The PERT method:
- Applications on the PERT;
- The choice of investment in deterministic universe.

6. Modeling



7. **Decision in Uncertain Future**

8. **Transportation problems**

9. **The problems of consignment**

➤ **Applied computer training II: 2 credits (30hours); L, T, P**

Specific work

software for the management of projects.

❖ **PRM 232 : System of Information and Financial Analysis I**

➤ **System of Information I: 2 credits (30 hours); L, T, P, SPW**

1. **Concept information systems**

- Introduction
- Systemic Analysis of the Company
- Information System :
 - Functions of the information system ;
 - - the roles of the information system ;
 - - qualities of an information system.
- Computerization of the Information system:
 - The parties to an information system ;
 - Software;
 - Definitions;
 - The purpose of a system of information;
 - The functions of a system of information;
 - - the organizational system;
 - - the processing of information.

2. **Concept of algorithmic and initiation to the programming**

- Objects: cumstances, variables, operators ...;
- Basic treatments and sequential;
- Choice and repetition;
- Function and procedures;
- Structure of the data (vectors, table, registration, file);
- application with basic or Pascal.

➤ **Financial Analysis I: 2 credits (30hours); L, T, SPW**

- Accounting balance sheet;
- Financial Balance sheet;
- Functional balance sheet;
- Trading profit and loss account ;
- The ratios;
- Functional analysis and differential ;
- theindex profitability.

❖ **PRM 242: Information System and Financial Analysis II**

➤ **System of Information II: 2 credits (30 hours); L, T, P**



Elaboration of the database

A- The conceptual model of data: MCD

1. Constitution of the data dictionary DD

- Goal (objective);
- Basic Concepts: Elementary data-Rubrique-Document;
- Techniques of collection of information;
- Purge of the dictionary;
- Highlighted objects;
- Identification of entities;

Page 117 of 627

- Definition of the relations of dependency between the objects.

2. Elaboration of the model Entity-association

- Basic Concepts:
 - Entity and entity type;
 - Attribute (property);
 - Association;
 - Occurrence of a property;
 - Identifier (key);
 - Cardinality.

B- The logic model for relational data: MLDR

1. Purpose

2. Basic concepts

- Primary key;
- Foreign key;
- relationship;
- Registration.

3. The model entity/association

- Relationship of the entities;
- Definition of Other relations of dependencies between objects;
- Cardinalities.

4. Passage of the MCD at the MLD

- Transformation of entities;
- Transformation of associations;
 - Binary relationship to the cardinalities $(x, 1) - (x, n)$ with $X = 0$ or $x = 1$;
 - Relationship n-area (regardless of the cardinality);
 - Reflexive relationship to the cardinalities $(x, 1) - (x, n)$ with $X = 0$ or $X = 1$;
 - a binary relationship to the cardinalities $(0, 1) - (1, 1)$.

C- Physical Data Model: implementation of the database

1. Creation of the database;
2. Creation of tables;



3. Entering data in the tables;
4. Relationship of the tables;
5. Creating forms;
6. Relational model (relationship, degree, schema, PRIMARY KEY/secondary, cardinality, domain, ... P of base or access);
7. The languages of requests (SQL...);
8. Study of a few SQL commands.

➤ **Financial Analysis II: 2 credits (30hours); L, T, P, SPW**

- The magnitudes of the financial balance;
- Presentation of the account of result;
- Ability to self-financing;
- ratios of exploitation and profitability.

Page 118 of 627

❖ **PRM 233: General Policy and Accounting Management I**

➤ **Cost accounting and budgetary management i: 2 credits (30 hours); L, T, P, SPW**

1. Of the general ledger to the cost accounting

- Generality on the cost accounting (objectives, role, concept of load)

2. Analysis of expenses

- Loads liable and not liable;
- Corporable and non-corporable expense
- Direct costs and indirect;
- Suppletive loads;
- Allocation of Indirect Costs.

3. Valuation of stocks (FIFO method, LUP)

4. The full costs (cost of purchase, cost of production, introduce the stocks)

NB: do not address the special notes related to the costs (waste and scrap, semifinished, sub-products).

5. Partial costs

- The variable costs;
- the marginal costs.

6. The Rational Importance of loads of structure

➤ **General Policy and Strategy I: 2 credits (30hours); L, T, P**

1. The approach to undertake

- Creation of the company;
- Analysis of Evolution of activity in long period.

2. The strategic approaches

- Analysis and fault finding: identification of opportunities and modalities of decision-making, identification of strengths and weaknesses of the company;

- Strategic Choice: approach by the segmentation of the activities and/or by the Trades...;
- Implementation and coordination : articulation of strategic decisions and of the Operational functioning.

❖ **PRM 243: General Policy and Accounting Management II**

➤ **Analytical accounting and budgetary management II: 2 credits (30 hours); L, T, P, SPW**

1. **The predetermined costs**

- Identification of gaps on direct costs and indirect and algebraic analysis of these differences (exclude the graphic analysis).

2. **The Budgets (brief study and practice)**

- Sales budget ;
- The production budgets;
- The supply budget ;
- investment budget;
- cash budget.

➤ **General Policy and Strategy II: 2 credits (30 hours); L, T, P, SPW**

1. **The organizational structures**

- Bases and forms of organizations.

2. **The dynamic strategy-structure**

- Taking into account the constraints of organization and Environment in the development of strategic decisions (dimension of the company or of the markets, international context...).

❖ **PRM 234: Management of Risks and initiation to the Logistics I**

➤ **Risk management I: 2 credits (30 hours); L, T, P, SPW**

- Analysis of the risks in the management of enterprise";
- Risk analysis in the management of projects; -
- Risk management planning; -
- Identification of risks.

➤ **Initiation to the Logistics I: 2 credits (30 hours); L, T, P, SPW**

- Physical and informational, flows loops of coordination, mapping of flows, flow pulled /Pushed;
- Production system, expenses station, work, data time negotiation; -
- Types of needs.

❖ **PRM 244: Management of Risks and initiation to the Logistics II**

➤ **Management of Risk II: 2 credits (30 hours); L, T, P.**

- Analysis of the risk;
- Answers to the risk
- Follow-up to the risk of project;
- Communications in management of risks;



- Case study: analysis of risks in a project well specified.
- **Initiation to the Logistics II: 2 credits (30hours); L, T, P, SPW**
- Notions of load and capacity, deadlines for obtaining;
- Impact of the flows and the management of the stocks in the company, performance indicators.
- ❖ **PRM 235: analysis and planning of projects I**
- **Technical analysis of the projects I: 2 credits (30 hours); L, T, P.**
- The production process;
- The criteria to remember;
- The characteristics of the means of production; -
- The equipment of the project.

- **Planning of the projects I: 2 credits (30hours); L, T, P, SPW**
- Identification of tasks and operations of the project; -
- Scheduling of these tasks.
- ❖ **PRM 245: analysis and planning of projects II**
- **Technical analysis of projects II: 2 credits (30 hours); L, T, P, SPW**
- Location of the unit of production;
- Risk Analysis of the project;
- Prevention of risks of the project.
- **Planning of projects II : 2 credits (30hours); L, T, P, SPW**
- Scheduling of these tasks; -
- Planning tools of the projects (Gantt chart of the project).
- ❖ **PRM 237: The legal environment, civic education and the creation of business**
- **Law on Commercial Companies I: 1 credit (15hours); L, T**
- 1. The status of trader;
- 2. The acts of trade;
- 3. The fund of commerce;
- 4. The different commercial contracts.
- **Civil law: 1 credit (15hours); L, T, P**
- 1. Definition, characters, the branches and the sources of the law;
- 2. The field of application of the Act;
- 3. The dimensions of the law (objective, subjective right);
- 4. The legal organization;
- 5. The law of the legal personality;
- 6. The civil status, the name and the domicile;
- 7. The disability;
- 8. The legal acts;
- 9. The legal facts.



➤ **Creation of business: 1 credit (15 hours); L, T, P, SPW**

- Concept of contractor;
- Motivations to the creation of company;
- Search for ideas and evaluation;
- Research funding;
- Choice of legal status; -
- Ethical aspects of the business; -
- Preparation of the business plan.

Page 121 of 627

❖ **PRM 246 : Professional internship**

➤ **The professional internship: 6 credits (90 hours); P, SPW**

1. Arrival and Business Integration
2. Working in a company
3. The holding of the Intern journal
4. The choice of the theme of work: in collaboration with mentors professional academic and
5. Elaboration of the research structure
6. The resources to operate
7. The organization of work
8. Drafting of the report
9. Presentation of the report before a jury

❖ **PRM 247: legal environment and civic education II**

➤ **Law on Commercial Companies II: 1 credit (15hours); L, T**

1. Definition, Object and forms of commercial companies
2. The creation of commercial companies
3. The operation of the Commercial Companies
4. The dissolution of commercial companies

➤ **Labor law: 1 credit (15 hours); L, T, P**

1. Definition of the right of labor, birth and evolution of labor law and sources
2. The contract of work (conclusion, implementation and rupture)
3. The conflicts of work (individual and collective)
4. The delegate of the staff, unions
5. Work accidents and occupational diseases
6. The hygiene and safety in the workplace

➤ **Civic Education and Ethics: 1 credit (15 hours); L, SPW**

The Concepts

- The citizen;
- The Nation;
- The State;



- Public Property unto collective property;
- The freedoms;
- The public service;
- Problem of ethics;
- Ethics, Law and reason;
- Management and ethics of responsibility;
- Ethics and management.
- Ethics
- Civics

Page **122** of **627**

- Deontology
- Moral consciousness
- The universal declaration of Human Rights
- Good governance in public services
- Explain the importance of civics to the life of the nation
- Functions of the state and its citizens
- Deontology, Professional ethics and professionalism
- Relationship between morality, law and ethics
- Codes of ethic

❖ **PRM 111: Mathematics and Computer training I**

➤ **General Mathematics I: 3 credits (45hours); L, T, SPW**

- Algebra vector spaces

1. Polynomials

- Polynomials characteristics.

2. Vector space

- Linear applications.

3. Matrices

- Operations on the matrices;
- Matrices associated with a linear application;
- Matrices and determinants.

4. The Determinants

- Determinant of a square matrix;
- Calculation of determinants of order less than or equal to 3.

5. Linear Systems

- Inversion of matrix of order less than or equal to 3
- Method of Gauss;
- Resolution of systems of linear equations by the method of Pivot ;
- Application of matrix calculation on the resolution of systems of linear equations.

6. Reduction of square matrices

- Own values; vectors.



7. Differential equations and linear récurrentielles of order 2 with constant coefficients

8. Mathematical applications in Economics and Management

➤ General Computing I: 2 credits (30hours); L, T, SPW

The hardware and software on a computer system - the Hardware

1. The peripheral components

- The devices of input;
- The ouPut devices; the storage devices;
- The devices of input and ouPut.

2. The central unit

- The central memory;
- The microprocessor;
- The ports;
- The motherboard;
- The chipset;
- The powersupply;
- The cards of extension;
- Other internal organs.

3. The unit of exchange (or bus)

- Role;

Page **102** of **627**

- Types of bus:
 - Data bus;
 - Control bus;
 - Bus of address.

B- The Software

3. The application software

- Definition;
- Role;
- Types and examples of software.

4. The basic software (or software systems)

- Definition;
- Types of basic software: - Drivers;
 - The compilers;
 - The utilities;
 - The systems of exploitation":
 - Features;
 - Roles;
 - Types of operating system;
 - Structure of an operating system;



- architecture.
- Concept of Free Software and proprietary software.

System of numeration and Codification

C- The numbering systems

1. A few basic concepts

- The base of the system;
- Weight;
- Alphabet of the language;
- Format of the word (length of the word);
- power of language.

2. A few numberingsystems

- The decimal system;
- The binary system;
- The octal system;
- The hexadecimal system.

3. The basic changes

- Of Decimal to another base b;
- To a base b of any kind to the decimal basis;
- Of the binary in octal and vice versa;
- From binary to hexadecimal and vice versa.

4. Arithmetic operations

- binary binary numbers signed:
 - Exact representation;
 - Representation in complement to 2.
- Addition of binarynumbers;
- Subtraction of binarynumbers;
- Use the add-in to 2 in the subtraction;
- Multiplication of binary numbers;
- Division of binary numbers.

5. Hexadecimal arithmetic

- addition of numbers in Hexadecimal;
- subtraction of numbers in hexadecimal.

D- The codes

1. General information on the concept of a code

- Definitions;
- Objectives of the codification;
- The functional codification;
- Types of functional codes;
- the codification of technology.

2. The alphanumeric codes



- The ASCII code:
- Standard ASCII; - Extended ASCII;
- Use.

❖ **PRM 121: Mathematics and Computing II**

➤ **General Mathematics II: 3 credits (45 hours); T, P, SPW**

Analysis

1. The Real Numbers
2. Numerical Functions of a real variable, limit, Continuity
3. Differentiability, extrema, theorem of Rolle and finished increases
4. Polynomials, fractions, rational
5. Study and graphic representation, reciprocal Functions
6. Limited developments, integrals and applications to calculations of Aires
7. Logarithmic functions and exponential
8. Digital Suites: Direction of variation, convergence
9. Arithmetic Suites, Suites geometrical, recurring suites of order 1
10. Mathematical applications in Economics and Management

➤ **General Computing II: 2 credits (30 hours); T, P, SPW**

A- Computer Networks

1. General information

- Definition of A computer network;
- interest of computer networks;
- basic vocabulary:
 - Workstation;
 - Node;
 - Server;
 - packet .

2. Typology of networks according to the media:

- Wired networks;
- Networks not wired.
- according the Geographic Extent:
 - The local networks (LAN);
 - The metropolitan area networks (MAN);

Page **104** of **627**

- The wide area networks (WAN).

3. Network Topologies:

- Physical Topology;
 - The bus topology;
 - The star topology;
 - The ring topology;
 - The topology in mesh;



- the topology in shaft;
- Logical Topology;
- Networks to dissemination;
- Point-to-point networks.

4. Network architectures:

- client/server architecture;
- architecture of equal to equal.

5. The equipment of computer networks :

- Equipments of basis of a network; The computer; The network card; The server; The network cable; The transceiver (or adapter); the transmission mounts; the socket.
- The equipment of Interconnections; Hubs (hub); Switch (Switch); Routers; Gateways the gateway (gateway); The router; The bridge (Bridge); the repeaters.

6. Concept of IP addressing

- Structure of an IP address - network identifier (Net ID); - Identifier of host (Host ID).
- Specific addresses ;
- Network address;
- Machine address;
- Broadcast Address (broadcast);
- Limited Broadcast address (multicast);
- Address of rebroadcasting (loopback);
- Classification IP addressing; CLASS A; CLASS B; CLASS C.

B- Internet network

1. Concept of protocol

- definitions and a few types of protocols
- SMTP protocol;
- POP protocol;
- NNTP protocol;
- The FTP protocol;
- HTTP protocol;
- IMAP protocol; - Protocol TCP; - other.

2. A few Internet Services

- The e-mail;
- Research on the Internet;
- The Newsgroup (discussion forum);
- The transfer of files;
- The Download (Download A text, download An image, download a free software...);



- The online Trade;

Page **105** of **627**

- The IRC (Internet Relay Chat);
- Other.

3. The searchengines

- Definition;
- Role;
- Somesearchengines.

4. Tools for Internet access

- The browsers (definition, examples);
- The plug-ins (definition, examples);
- The search engines (definition, examples, use).

5. The connection to the Internet

- Connection hardware;
- Suppliers of access (role, examples);
- Types of connections (specialized line, phone line, satellite).

❖ PRM 112: Quantitative techniques I

➤ Financial Mathematics I: 2 credits (30hours); L, T, SPW

1. The Basics

- Simple Interest;
- Calculation of the acquired values;
- Commercial present value and rational present value;
- forecasted interest and effective interest.

2. Calculation of the average rate of a series of simultaneous investments

3. Equivalence and replacement of effect

4. Short-term financial transactions - Current Account and interest

5. Cash Discount - real rate of discount

6. Compound interest

- Acquired value;
- Present Value;
- Rate equivalent and proportional rate;
- apparent interest rate ;
- real rate of interest.

➤ Statistics: 2 credits (30hours); L, T, SPW

1. Statistical series to a variable

Definition and vocabulary;

- Graphicalrepresentation;
- Characteristics of central tendency and dispersal characteristics:
 - Average;



- Mode;
- Median;
- Standard deviation; quantiles; coefficient of variation.

2. Statistical series of two variables

- Definition and vocabulary;
- Cloud of points;
- Average point;
- Covariance and covariance matrix of 2 variables;
- The coefficient of correlation and regression;
- Linear adjustment by the method of least squares.

❖ **PRM 122: Quantitative techniques II**

➤ **Financial Mathematics II: 2 credits (30hours); T, P, SPW**

1. The Annuities

- Constant annuities;
- Annuities in arithmetic progression;
- annuities in geometric progression;
- perpetual annuities.

2. Joint loan

- Reimbursement by constant annuities;
- Amortisation Table
- Laws followed by depreciation recovery of the debt still annuities;
- Laws followed by the annuities;
- Applications on the joint loan .

3. The bond loans

- Reimbursements as pearannuities;
- Constant annuities;
- Constant Amortisation;
- Yield rate and rates of returns of a debenture loan;
- Rate of returns of the debenture loan at issue ;
- Choice of Investments.

➤ **Statistics II: 2 credits (30 hours); T, P, SPW.**

1. Estimation of an average, a proportion and a standard deviation
2. Confidence interval and confidence coefficient
3. Hypothesis testing and the KHI-square

❖ **PRM 113: The legal environment and accounting I**

➤ **General Ledger I: 2 credits (30 hours); L, T, P, SPW**

1. General information

- Definition evolution and the role of the accounting;
- Study of the accounting law : sources and Principles (briefly).

2. The balance sheet



- notion of source and Application

3. **The account and the principle of the double entry**

4. **The accounting transfer**

5. **The accounting systems (conventional and computerized)**

6. **Purchase and sale of the goods**

- the elements which diminish the invoice (reductions);
- The elements that increases the invoice (transportation costs, VAT, packaging (see only logging and deconsignation).

➤ **Legal management and tax I: 2 credits (30 hours); L, T, P, SPW**

1. **Legal classification of economic activities**

- Study of different sectors of activities from the distinction of the commercial act and Civics act ;
- Study of the statutes related to the nature of the professional activity;
- Public economic activities

2. **The company**

- Legal aspect of the company;
- Business ;
- The building of the company (registered or not in the balance sheet).

3. **The structures of the company**

- Sole Proprietorship;
- Commercial companies and civil, Association
- public company.

4. **Instruments of payment and credit**

- Cheque, bill of exchange, promissory note, Dailli slip, cards; - leasing; - the inheritance.

5. **Forecasting and settlement of business difficulties**

❖ **PRM 123: The legal environment and accountant II**

➤ **General Accounting II: 2 credits (30 hours); L, T, P**

1. **The settlement**

- In cash (cash, bank);
- A term (effect of trade: creation, cashing).

NB: do not see the movement of the effects of trade.

2. **Trading profit and loss account (industrial and commercial company)**

NB : from management accounts present the significant balances of management.

3. **Concept of amortization (constant and degressive)**

- Terminology;
- Calculation (Table of Depreciation of assets placed in service at the beginning and the course of the financial year.



4. Concept of Provision

- For depreciation;
- For expenses and losses.

NB : for the Chapters IX and X and present the Extract from the balance sheet (brief study and practice).

➤ **Legal management and taxation II: 2 credits (30 hours); L, T, P**

1. **The sources of the tax law** - national sources; - international sources.

2. **Definition of the various tax levies** - taxes, taxes and parafiscal charges; - Taxation of state and local taxation.

3. **Presentation of different taxes**

- VAT ;
- Personal Income tax on corporations.

Page 108 of 627

4. **Relations between taxpayer and tax administration (fiscal control, tax litigation)**

❖ **PRM 114: Business ethics and Market Research I**

➤ **Business Ethics I: 2 credits (30 hours); L, T, P, SPW**

- The loyalty in contractual matters;
- The loyalty of the competition;
- The duties and responsibility of the leaders and auditors.

➤ **Market Research I: 3 credits (45 hours); L, T, P, SPW**

- How to analyze a market?
- The study of the competition, characteristics.

The product policy

- The classification and the identity of the product;
- Life cycle, packing and packaging;
- The quality, standards and labels;
- The range, the design;
- The launch of new products;
- The communication policy: communication media, the communication non-media.

❖ **PRM 124: Business ethics and market research II**

➤ **Business Ethics II: 2 credits (30 hours); L, T, P, SPW**

- The duties and responsibility of the leaders and auditors; - the control of the management by the associated; - the prohibitions and disqualifications.

➤ **Market research II: 3 credits (45 hours); L, T, P, SPW**

The pricing policy

- The price constraints;



- The strategies of price by the launch of a new product;
- The strategies of prices compared to the demand the fixing of prices from the costs;

The distribution policy

- Definitions;
- The functions;
- The different forms of distribution.

❖ PRM 115: Marketing I

➤ Fundamental Marketing: 2 credits (30 hours); L, T, P

1. The basis of the marketing - History of marketing;

- Definition and objective of the Marketing;

Page **109** of **627**

- Balance Sheet of marketing;
- Field of application of marketing;
- Customer satisfaction.

2. The Market

- The environment;
- The concept of the market;
- The segmentation;
- Indicators of the market;
- Analysis of the competition (competitive positions, competitive strategies.).

➤ Communication in Project Management I: 2 credits (30 hours); L, T, P, PE

- Planning the communication: needs analysis, use of technology, methods and models of communication.

PRM

➤ Fundamental Marketing II: 2 credits (30hours); L, T, P, SPW

1. The Marketing information

- The Analysis of consumer markets;
- Consumer buying behavior (models of analysis, the consumer, the determinants of the purchase, the process of purchase);
- The techniques of market studies (Phase of the conduct, techniques of descriptive studies, processing of information).

2. Introduction to Marketing Planning

- The strategic analysis in marketing (environmental analysis and determination of the opportunities /threats, Diagnosis of the company and determination of the strengths/weaknesses);
- The Strategic Development (formulation of objectives, targeting and positioning, choice of strategic vectors);
- The marketing mix (the concept of marketing mix, the product, the price, the distribution, the commercial communication/EOL);



- The life cycle of the product (the idea to product, phases of the cycle of life);

- Brand Management ;

- Identification of the product;

- Operation of the products.

➤ **Communication management in the projects II: 2 credits (30hours); L, T, P, PE**

- Disseminate information and make reports: Frequency necessary, technology available, duration of the project...

❖ **PRM 116: Conception and management of the projects I**

➤ **Introduction to the fitting of the projects I: 2 credits (30hours); L, T, P, SPW**

1. **Technical study**

- Objective of the Technical Study;

Page 110 of 627

- Definition of the activity;

- Enumeration and qualification of needs;

- Analysis of project constraints.

2. **Study of the market or of the expectations of the Beneficiaries**

- Objective of the Market Study; -

- know and understand its market.

➤ **Introduction of the project Management I: 3 credits (45hours); L, T, P, SPW**

- Generalities on projects, problems in the management of projects;

- The Typology of projects;

- The History of the Management of Projects, part of the project, specifications.

❖ **PRM 126: Methodology, Conception and management of projects II**

➤ **Methodology of the drafting of the report of internship: 1 credit (15hours); L, P**

- The collection of information;

- How to make a report;

- The plan of the Probationary report and the summary;

- The Tables of content ;

- The introduction of the report of internship;

- The conclusion of the internship report;

- The acknowledgments;

- How to build the annexes;

- When to start his internship report;

- How to find a topic of internship report;

- The cover page;

- How to write effectively;

- Form and presentation (coverage, MSDS, summary, bibliography,

glossary, index of figures, tables and illustrations);

- Instructions and typographical rules of presentation (font size, line spacing, titles, highlighted, punctuation, graphic charter); - How to prepare the defense.

➤ **Introduction to the conception of projects II: 1 credit (15hours); L, T, P**

Study of the market or of the expectations of the Beneficiaries

- Objectives of the Market Survey
- Know and understand your market

➤ **Introduction to the management of projects II: 3 credits (45hours); L, T, P, SPW**

- The techniques of managing Projects ;
- Administrative management of the project, the management of time;
- Human resources management of the project, the management of the quality.

Page 111 of 627

❖ **PRM 236: Conception and management of projects III and IV**

➤ **Conception of Projects I: 1 credit (15 hours); L, T, P, SPW**

1. **Study of the market or of the expectations of the beneficiaries**

- Define a strategy to develop the activity.

2. **Economic and Financial study**

- Objectives of the Study;
- The initial financial plan.

➤ **Project management I: 2 credits (30hours); L, T, P.**

The five (05) stages of a project:

• **The emergence of the project**

- Definition;
- Tools: The Beast To horns, the tree of objectives.

• **The feasibility**

- Definition;
- Tools : quantitative tools, qualitative tools of Analysis of risks, tools of functional analysis.

• **The design** - definition;

- Tools: Work Break Down Structure (WBS), activity list, the planning, budget, the schedule of expenditures.

• **Implimentation** - definition;

- Tools: Specification the Gannt, sheet of reporting, dashboards.

• **Conclusion**

- Definition;
- Tools: the transfer and the closure, the sheets of capitalization of the experience.

➤ **Conception of projects II: 1 credit (15 hours); L, T, P, SPW.**

StudyEconomic and Financial



- The forecast account result; -
- The cash plan; -
- The threshold of profitability.

➤ **Project management II: 2 credits (30hours); T, P, SPW**

1. The Project Manager

- The profile of the project manager;
- The specialties;
- The strengths of the Project manager ;
- The behaviors;
- The activities;
- The dilemmas.

2. The Small Projects

- Elements of context;

Page **112** of **627**

- Elements of Implementation.

3. Generalities of project

- The project, the stakeholders;
- The project of enterprise;
- The Phases of preliminary studies;
- The offers, the risks;
- The launch of the project;
- The HumanResources;
- The cycle of project management.

❖ **PRM 117: Bilingual training I and economic environment I**

➤ **French expression: 1 credit (15hours); L, T**

1. Vocabulaire

- Vocabulaire technique usuel

2. Grammaire

- Du verbe : Conjugaison aux temps communément utilisés – présent, passé composé ; imparfait, futur, conditionnel, et plus-que-parfait, l'impératif, l'infinitif, voix passive ;
- De l'adjectif : Qualificatif, possessifs, démonstratifs, interrogatifs, numéraux, indéfinis ;
- Du nom et son article: masculin/féminin ; singulier/pluriel ; dénombrable, et non-dénombrable ;
- Du pronom : personnel, possessif, interrogatif, démonstratif, relatif, indéfini ;
- De l'adverbe et de la locution adverbiale : pour dire comment, où, quand et pourquoi ;
- Des fonctions grammaticales.

3. Expression et communication

- Compréhension et interaction au cours d'une discussion technique ;



- Communication orale courante ;
- Communication orale interactive
- De la phrase : simple, complexe, composée ; interrogative, déclarative, exclamative et impérative ;
- Lecture rapide et compréhension de texte ;
- synthèse d'un long texte
- De la communication : rédaction de texte, d'instructions, de rapport, d'une correspondance – d'une lettre recommandation ou de motivation, d'une demande d'emploi, d'une demande d'explication, d'une réponse à une demande d'explication, d'un CV ;
- Gestion d'une table ronde/discussion : La prise de notes, la prise de parole
- Expressions figées

➤ **General Economics: 2 credits (30hours); L, T, P**

1. Business and production
2. Households and the consumption
3. Markets and Prices
4. Training and distribution of income
5. The currency and the financing of the Economy
6. The elements of the National Accounting
7. The macro-economic equilibrium
8. The socialist system
9. The capitalist economy
10. The State and its interventions
11. The foundations of international trade;
12. International payments
13. The balance of payments
14. Economic development and its inequalities
15. Growth and its inequalities
16. Inflation, unemployment, industrial change
17. The issues of development and the globalization of problems
18. The development strategies
19. The economic integration and the forms of cooperation in the world
20. The strategies of the International Debt

❖ **PRM 127: Bilingual training II and Economic Environment II**

➤ **English Expression: 1 credit (15hours); L, T, SPW**

1. Vocabulary

- Technical and usual vocabulary of the specialty

2. Grammar

3. Bilingual expression



- Understanding in interaction in Technical Discussions
- Continuous oral communication: Show, explain, develop, summarize, account, comment;
- Interactions oral communication

4. Autonomous reading of "writings" of all levels

- Lead by a quick reading to understand the general sense;
- Browse a text long enough to locate desired information;
- Gather information from different parts of the document or of the different documents in order to accomplish a specific task.

5. Write clear, detailed texts

- Essay writing;
- Application for employment;
- C.V.;
- Letter of motivation;
- Letter/memo writing and minutes of a meeting

➤ Economy and organization of enterprises: 2 credits (30 hours); L, T, P

- The Enterprise, definition and mode of analysis;
- Classification of Entreprises ;
- The Organisational Structure of enterprises ;
- The insertion of the company in the economic fabric;
- The commercial activity of the enterprise;
- The productive activity of the enterprise;
- Logistics in the enterprise;
- The financial activity of the enterprise ;
- The management of human resources;
- The systemic approach of the enterprise;
- Information system ;
- The decision making process
- The strategic analysis of the company;
- Choice and implementation of a strategy;
- The business, society and culture;
- The business, society and the Ethics.

❖ PRM 231: Quantitative techniques and computer skills I

➤ Probabilities and operational research i: 3 credits (45 hours); L, T, P, SPW

1. Algebra of sets

- Applications;
- The Counts.

2. Basic Set linked to a random experiment

- Probabilisation;



- Conditional probability;
- Formula of Bayes;
- Tests of BERNOULLI.

3. **Random variables discrete**

- Law of probability;
- Distribution function.

4. **Random variables continuous**

- Density,
- Hope;
- Variance;
- Standard deviation; moments.

5. **Conventional laws**

- ; Binomial
- Normal ; fisher; exponential.

➤ **Applied computer i: 2 credits (30hours); L, T, P, SPW**

1. **The study of the Graphical Environment Windows**

- Presentation;
- Management of Windows;
- Managing Files and Folders.

2. **What is a file, a folder?**

- Path of access to a file.

3. **Practical Study of Microsoft Word** study of basic functions.

4. **Practical Study of Microsoft Excel**

- Presentation;
- Arithmetic operations.

5. **Construction of a formula**

- Use of the integrated functions: - definition;
- Syntax of the integrated functions;
- Some integrated functions;
- Relative reference, absolute reference and joint reference; - summary case .

❖ **PRM 241: Quantitative Techniques and computer II**

➤ **Probabilities and Operational Research II: 3 credits (45hours); L, T, P, SPW**

1. **Concepts of the combinatorial optimization**

- Constraints/objectives;
- Feasible solution/best;
- Terminal;
- Local optima, etc.

2. **Graph Theory**



- Modeling;
- Coloring;
- Roads;
- The treesmaskingfluid;
- The Waves...

3. The linearprogramming

- Program to two variables; program to more than two variables.

4. The algorithm of the simplex - the table method

- Analysis of the final table of the simplex; problem of duality ; the management of stocks.

5. The problems of scheduling - General Information on the Graphs

- The PERT method:
 - Applications on the PERT;
- The choice of investment in deterministic universe.

6. Modeling

7. Decision in Uncertain Future

8. Transportation problems

9. The problems of consignment

➤ **Applied computer training II: 2 credits (30hours); L, T, P**

Specific work

software for the management of projects.

❖ **PRM 232 : System of Information and Financial Analysis I**

➤ **System of Information i: 2 credits (30 hours); L, T, P, SPW**

1. Concept information systems

- Introduction
 - Systemic Analysis of the Company
- Information System :
 - Functions of the information system ;
 - - the roles of the information system ;
 - - qualities of an information system.
- Computerization of the Information system:
 - The parties to an information system ;
 - Software;
 - Definitions;
 - The purpose of a system of information;
 - The functions of a system of information;
 - - the organizational system;
 - - the processing of information.

2. Concept of algorithmic and initiation to the programming



- Objects: cumstances, variables, operators ...;
- Basic treatments and sequential;
- Choice and repetition;
- Function and procedures;
- Structure of the data (vectors, table, registration, file);
- application with basic or Pascal.

➤ **Financial Analysis I: 2 credits (30hours); L, T, SPW**

- Accounting balance sheet;
- Financial Balance sheet;
- Functional balance sheet;
- Trading profit and loss account ;
- The ratios;
- Functional analysis and differential ;
- theindex profitability.

❖ **PRM 242: Information System and Financial Analysis II**

➤ **System of Information II: 2 credits (30 hours); L, T, P**

Elaboration of the database

A- The conceptual model of data: MCD

1. Constitution of the data dictionary DD

- Goal (objective);
- Basic Concepts: Elementary data-Rubrique-Document;
- Techniques of collection of information;
- Purge of the dictionary;
- Highlightedobjects;
- Identification of entities;
- Definition of the relations of dependency between the objects.

2. Elaboration of the model Entity-association

- Basic Concepts:
 - Entity and entity type;
 - Attribute (property);
 - Association;
 - Occurrence of aproperty;
 - Identifier (key);
 - Cardinality.

B- The logic model for relational data: MLDR

1. Purpose

2. Basic concepts

- Primary key;
- Foreign key;



- relationship;
- Registration.

3. The model entity/association

- Relationship of the entities;
- Definition of Other relations of dependencies between objects;
- Cardinalities.

4. Passage of the MCD at the MLD

- Transformation of entities;
- Transformation of associations;
- Binary relationship to the cardinalities $(x, 1) - (x, n)$ with $X = 0$ or $x = 1$;
- Relationship n-area (regardless of the cardinality);
- Reflexive relationship to the cardinalities $(x, 1) - (x, n)$ with $X = 0$ or $X = 1$; - a binary relationship to the cardinalities $(0,1) - (1,1)$.

C- Physical Data Model: implementation of the database

1. Creation of the database;
2. Creation of tables;
3. Entering data in the tables;
4. Relationship of the tables;
5. Creating forms;
6. Relational model (relationship, degree, schema, PRIMARY KEY/secondary, cardinality, domain, ... P of base or access);
7. The languages of requests (SQL...);
8. Study of a few SQL commands.

➤ Financial Analysis II: 2 credits (30hours); L, T, P, SPW

- The magnitudes of the financial balance;
- Presentation of the account of result;
- Ability to self-financing;
- ratios of exploitation and profitability.

❖ PRM 233: General Policy and Accounting Management I

➤ Cost accounting and budgetry management i: 2 credits (30 hours); L, T, P, SPW

1. Of the general ledger to the cost accounting

- Generality on the cost accounting (objectives, role, concept of load)

2. Analysis of expenses

- Loads liable and not liable;
- Corporable and non-corporable expense
- Direct costs and indirect;
- Suppletive loads;



- Allocation of Indirect Costs.

3. **Valuation of stocks (FIFO method, LUP)**

4. **The full costs (cost of purchase, cost of production, introduce the stocks)**

NB: do not address the special notes related to the costs (waste and scrap, semifinished, sub-products).

5. **Partial costs**

- The variable costs;
- the marginal costs.

6. **The Rational Importance of loads of structure**

➤ **General Policy and Strategy I: 2 credits (30hours); L, T, P**

1. **The approach to undertake**

- Creation of the company;
- Analysis of Evolution of activity in long period.

2. **The strategic approaches**

- Analysis and fault finding: identification of opportunities and modalities of decision-making, identification of strengths and weaknesses of the company;
- Strategic Choice: approach by the segmentation of the activities and/or by the Trades...;
- Implementation and coordination : articulation of strategic decisions and of the Operational functioning.

❖ **PRM 243: General Policy and Accounting Management II**

➤ **Analytical accounting and budgetary management II: 2 credits (30 hours); L, T, P, SPW**

1. **The predetermined costs**

- Identification of gaps on direct costs and indirect and algebraic analysis of these differences (exclude the graphic analysis).

2. **The Budgets (brief study and practice)**

- Sales budget ;
- The production budgets;
- The supply budget ;
- investment budget
- cash budget.

➤ **General Policy and Strategy II: 2 credits (30hours); L, T, P, SPW**

1. **The organizational structures**

- Bases and forms of organizations.

2. **The dynamic strategy-structure**

- Taking into account the constraints of organization and



Environment in the development of strategic decisions (dimension of the company or of the markets, international context...).

❖ **PRM 234: Management of Risks and initiation to the Logistics I**

➤ **Risk management I: 2 credits (30 hours); L, T, P, SPW**

- Analysis of the risks in the management of enterprise";
- Risk analysis in the management of projects; -
- Risk management planning; -
- Identification of risks.

➤ **Initiation to the Logistics I: 2 credits (30hours); L, T, P, SPW**

- Physical and informational, flows loops of coordination, mapping of flows, flow pulled /Pushed;
- Production system, expenses station, work, data time negotiation; -
- Types of needs.

❖ **PRM 244: Management of Risks and initiation to the Logistics II**

➤ **Management of Risk II: 2 credits (30hours); L, T, P.**

- Analysis of the risk;
- Answers to the risk
- Follow-up to the risk of project;
- Communications in management of risks;
- Case study: analysis of risks in a project well specified.

➤ **Initiation to the Logistics II: 2 credits (30hours); L, T, P, SPW**

- Notions of load and capacity, deadlines for obtaining;
- Impact of the flows and the management of the stocks in the company, performance indicators.

❖ **PRM 235: analysis and planning of projects I**

➤ **Technical analysis of the projects I: 2 credits (30 hours); L, T, P.**

- The production process;
- The criteria to remember;
- The characteristics of the means of production; -
- The equipment of the project.

➤ **Planning of the projects I: 2 credits (30hours); L, T, P, SPW**

- Identification of tasks and operations of the project; -
- Scheduling of these tasks.

❖ **PRM 245: analysis and planning of projects II**

➤ **Technical analysis of projects II: 2 credits (30 hours); L, T, P, SPW**

- Location of the unit of production;



- Risk Analysis of the project;
- Prevention of risks of the project.
- **Planning of projects II : 2 credits (30hours); L, T, P, SPW**
- Scheduling of these tasks; -
- Planning tools of the projects (Gantt chart of the project).

❖ **PRM 237: The legal environment, civic education and the creation of business**

➤ **Law on Commercial Companies I: 1 credit (15hours); L, T**

1. The status of trader;
2. The acts of trade;
3. The fund of commerce;
4. The different commercial contracts.

➤ **Civil law: 1 credit (15hours); L, T, P**

1. Definition, characters, the branches and the sources of the law;
2. The field of application of the Act;
3. The dimensions of the law (objective, subjective right);
4. The legal organization;
5. The law of the legal personality;
6. The civil status, the name and the domicile;
7. The disability;
8. The legal acts;
9. The legal facts.

➤ **Creation of business: 1 credit (15 hours); L, T, P, SPW**

- Concept of contractor;
- Motivations to the creation of company;
- Search for ideas and evaluation;
- Research funding;
- Choice of legal status; -
- Ethical aspects of the business; -
- Preparation of the business plan.

❖ **PRM 246 : Professional internship**

➤ **The professional internship: 6 credits (90 hours); P, SPW**

1. Arrival and Business Integration
2. Working in a company
3. The holding of the Intern journal
4. The choice of the theme of work: in collaboration with mentors professional academic and



5. Elaboration of the research structure
6. The resources to operate
7. The organization of work
8. Drafting of the report
9. Presentation of the report before a jury

❖ **PRM 247: legal environment and civic education II**

➤ **Law on Commercial Companies II: 1 credit (15hours); L, T**

1. Definition, Object and forms of commercial companies
2. The creation of commercial companies
3. The operation of the Commercial Companies
4. The dissolution of commercial companies

➤ **Labor law: 1 credit (15 hours); L, T, P**

1. Definition of the right of labor, birth and evolution of labor law and sources
2. The contract of work (conclusion, implementation and rupture)
3. The conflicts of work (individual and collective)
4. The delegate of the staff, unions
5. Work accidents and occupational diseases
6. The hygiene and safety in the workplace

➤ **Civic Education and Ethics: 1 credit (15 hours); L, SPW**

The Concepts

- The citizen;
- The Nation;
- The State;
- Public Property unto collective property;
- The freedoms;
- The public service;
- Problem of ethics;
- Ethics, Law and reason;
- Management and ethics of responsibility;
- Ethics and management.
- Ethics
- Civics
- Deontology
- Moral consciousness
- The universal declaration of Human Rights
- Good governance in public services
- Explain the importance of civics to the life of the nation
- Functions of the state and its citizens
- Deontology, Professional ethics and professionalism



- Relationship between morality, law and ethics
- Codes of ethic