

PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA
MINISTRY OF HIGHER EDUCATION
AND SCIENTIFIC RESEARCH

Compliance Framework

L.M.D.

ACADEMIC LICENSE

2017 - 2018

Establishment	Faculty	Department
<i>Mohamed Khider University, Biskra</i>	<i>Faculty of Exact Sciences and Natural Sciences and</i>	<i>Earth Science and the Universe</i>
Domain	Study	Common Core
<i>Architecture, Urban Planning and City</i>	<i>Management of Urban Techniques</i>	<i>Urban Planning and City Management</i>

SEMESTR 1

Teaching unit	SHV	Hourly Volume				Coeff	Credits	Evaluation method	
	15sem	C	DW	PW	Workshop			Continuous	Exam
Fundamental EU1						9	18		
UEF1(O/P)									
Matter 1 : Introduction to town planning 2	45h00	1h30	1h30			2	4	50%	50%
Matter 2 : WORKSHOP 2: Housing and Construction Files	90h00				6h00	4	8	100%	
Matter 3 spatial planning1	67h30	1h30	3h00			3	6	50%	50%
EU methodology1						5	9		
UEM1(O/P)									
Matter 1 : Mathematics 1	45h	1h30	1h30			2	4	50%	50%
Matter 2 : Building materials	45h	1h30			1h30	2	4	50%	50%
Matter 3 : Computer Science	22h30				1h30	1	1	100%	
UE transversal						2	2		
UED1(O/P)									
Matter 1 : Urban legislation 1	45h	1h30	1h30			2	2	50%	50%
EU Discovered 1						1	1		
UET1(O/P)									
Matter 1 : Language 2 French/English	22h30	1h30				1	1		100%
Weekly hourly volume Semester 2		9h00	7h30		3h00	6h00			
Total hourly volume Semester 2	382h30					17	30		

SEMESTRE 2

Teaching unit	SHV	Hourly Volume				Coeff	Credits	Evaluation method	
	15sem	C	DW	PW	Workshop			Continuous	Exam
Fundamental EU2						9	18		
UEF1(O/P)									
Matter 1: Introduction to town planning 1	45h00	1h30	1h30			2	4	50%	50%
Matter 2: Workshop 1: Introduction to technical drawing	90h00				6h00	4	8	100%	
Matter 3: spatial planning2	67h30	1h30	3h00			3	6	50%	50%
EU methodology2						5	9		
UEM1 (O/P)									
Matter 1: Mathematics 2	45h00	1h30	1h30			2	4	50%	50%
Matter 2: Chemistry	45h00	1h30		1h30		2	4	50%	50%
Matter 3: Technical Communication	22h30	1h30				1	1		100%
UE transversal 2						2	2		
UET1 (O/P)									
Matter 1: Urban legislation 2	45h00	1h30	1h30			2	2	50%	50%
EU Discovered 2						1	1		
Matter 1: Language 2: English/French									
Weekly total	22h30	1h30				1	1		100%
Weekly hourly volume Semester 2		10h30	7h30	1h30	6h00				
Total hourly volume Semester 2	382h30					17	30		

Training contents

L1

Cycle: License 1- Semester 1

Matter 1: Initiation to urban planning

Contents:

- 1-Urban planning: a global approach
 - the major problems addressed or to be addressed by urban planning
 - urban planning as a virtual mode of development of inhabited space
 - urban planning as a place of conflict and power
- 2 - History of cities
- 3 - Urban planning currents of thought and doctrines

Matter 2: introduction to technical drawing

Contents:

- 1- Building design
 - 1.1 Construction design process
 - 1.2 Construction design documents
- 2- General notions of construction drawing
 - 2.1 The different types of construction drawings
 - 2.2 The role of construction drawings
- 3- Reminder about construction drawings s
 - 3.1 Standards and recommendations (folds, cartridges, formats, etc.)
- 4- Representation agreements
 - 4.1 Roles of representation agreements
 - 4.2 Groups of conventional representations
- 5- The different plane graphic representations
 - 5.1 Plan view
 - 5.2 Cuts
 - 5.3 The facades
 - 5.4 Dimensions

Matter 3: spatial planning1

Contents:

- 1- history
- 2- general principles of planning
- 3- Territorial planning
- 4- Urban planning
 - purposes and objectives of the development
 - planning instruments and tools
- 5-. The foundations of planning
 - Links between general land use planning and urban planning
 - History of development: awareness of spatial inequalities.

Matter 4: Mathematics 1

Contents:

- 1- Real functions of one real variable
 - 1.1 - General information
 - 1.2 - Possible properties of a function
 - 1.3 - Limits of a function
 - 1.4 - Notion of continuity
- 2- Trigonometric functions
 - 2.1 - Trigonometric functions of an angle
 - 2.2 - Trigonometric function of two angles
- 3- Derivation
 - 3.1- Derivative of a real function of a real variable at a point
 - 3.2 - Algebraic operations on derivable functions
- 4- Neperian logarithm function
 - 4.1 - Definition
 - 4.2 - Properties
 - 4.3 - Variation table and graph
- 5- Base exponential function (e)
 - 5.1 - Definition
 - 5.2 - Properties
 - 5.3 - Graph
- 6- Reciprocal circular functions
 - 6.1 - Definition
 - 6.2 - Properties

Translated with DeepL

https://www.deepl.com/app/?utm_source=android&utm_medium=app&utm_campaign=share-translation

Matter 5: Chemistry

Contents:

- 1- Main soluble and suspended substances in surface waters
 - 1.1 - natural waters.
 - 1.2 - consumer waters
- 2- Surface water and pollution
- 3- Theoretical bases of the main treatment processes
 - 3.1 - physico-chemical phenomena
 - 3.2- biological phenomena
- 4- Basic stages in drinking water purification

Translated with DeepL

https://www.deepl.com/app/?utm_source=android&utm_medium=app&utm_campaign=share-translation

Matter 6: Technical Communication

Contents:

- 1 - General introduction
- 2 - How to obtain information
- 3 - Putting together a file
- 4 - Creativity
- 5 - Information storage
- 06 - Information processing
- 07 - How to inform?
- 8 - Presentation techniques
- 9 - Leading a discussion group

Matter 7: Urban legislation 1

Contents:

- Spatial planning tools Land law
Urban planning tools Urban legislation
Urban interventions Urban actors
- History and general principles of urban planning law
 - 1.1 - The fragmentation of problems
 - 1.2 - The birth of coherent legislation
 - 1.3 - Confirmation of the predominance of the State
 - Urban planning
- General principles of urban planning
- A - Legal tools
 - B - The common logic of these tools

C - Managing development projects

Matter 8: language 1 english or french

Subject content:

- Grammatical
- grammatical analysis
- Lexical analysis
- Text study
- Terminology
- Construction

Semester 2

Matter 1: initiation to urbanism 2

Contents:

1. urban policy and urban social movements
 - overview of the technical methods used to design urban planning documents
 - implementation and logic of actors
 - urban planning tools
2. urban framework and network

Matter 2: WORKSHOP 2: Housing and Construction Files

Contents:

- Application projects (buildings, engineering structures, hydraulic structures, etc.)
- Project presentation
- Purpose of the project
- Situation and layout Programs
- Description Required work Layout
- Various flat representations (plans, sections and facades)
- Volume representations

Matter 3: Landscaping 2

Contents:

- 1 Evolution of planning policies
 - History of major regional planning policies and missions.
 - The role of decentralization and current developments in decentralization.
- 2- Planning players
 - Players (national, regional, local, major agencies, etc.).
 - National land-use policy
- 3- Planning tools: planning laws and resort development
 - Legal and financial tools for urban planning and development
- 4- Case studies: examples of projects
 - Case study of several development operations

Matter 4: Mathematics 2

Contents :

- 1- Hyperbolic functions
 - Definition
 - Formula
 - Table of variation and graph

2- Reciprocal hyperbolic functions

- Definition
- Proof
- Theorems
- Graph

3- Primitives (calculating integrals)

- Definition
- Applications

4- Differential equations

- Definition
- First-order differential equation
- Techniques for solving certain types of equation

5- Matrices

- Definition
- Square matrices
- Sum, difference and multiplication of matrices 4 - Some types of matrices

6- Complex numbers

- Algebraic operation
- Graphical representation
- Trigonometric form of complex numbers

Matter 5: Building materials

Contents :

1- Binder numbers :

- 1.1 Airborne binders
 - 1.1.1 Lime, plaster, magnesium binders
- 1.2 Hydraulic binders
 - 1.2.2 Hydraulic lime
 - 1.2.3 Roman cement

- 1.2.4 Silica-lime products
- 2- Mixing water
- 3 -Additives
 - 3.1 Classification according to the role of each admixture
 - 3.2 Role and influence of each admixture
- 4 Aggregates (sand, gravel and crushed stone)
 - 4.1 Introduction and definition, classification, particle size analysis, water content and impurities.
 - 4.2 Manufacturing processes
- 5- Concrete (heavy and light) and mortar
 - 5.1 Introduction and classification
 - 5.2 Concrete composition methods
 - 5.3 Concrete shrinkage and creep
 - 5.4 Fresh concrete
 - 5.5 Hardened concrete
 - 5.6 Special concrete
- 6 -Raw materials used in building materials technology
 - Classification, properties and use

Matter 6: Computer Science

Contents:

- 1 -General information about computers
 - 1.1 Definition of computer science
 - 1.2 Fields of application
- 2- Computer components
 - 2.1 Hardware (HARD)
 - 2.1.1 Central processing unit
 - 2.1.2 Peripherals
 - 2.2 Software (SOFT)
 - 2.2.1 Operating systems

2.2.2 Programming languages

2.2.3 Application software

Matter 7: Urban Legislation 2

Contents:

1- Land ownership

- Urban planning law and property rights
- the relationship between urban planning and property rights
- Property rights
- Land institutions, urban land acquisition and the LOF land law
- Urban planning as a means of public intervention

2- Real estate management

3- legislation governing interventions on existing fabrics

Matter 8: Language 2 French/English

Contents:

- Terminology.
- Lexicon and text study.
- Writin

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Compliance Framework

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2017 - 2018

Establishment	Faculty	Department
<i>Mohamed Khider University, Biskra</i>	<i>Faculty of Exact Sciences and Natural Sciences and</i>	<i>Earth Science and the Universe</i>
Domain	Study	Specialty
<i>Architecture, Urban Planning and City</i>	<i>Management of Urban Techniques</i>	<i>Urban Planning and City Management</i>

SEMESTR 1

Teaching unit	SHV	Hourly Volume				Coeff	Credits	Evaluation method	
	15sem	C	DW	PW	Workshop			Continuous	Exam
Fundamental EU1						9	18		
UEF1(O/P)									
Matter 1 : Introduction to town planning 2	45h00	1h30	1h30			2	4	50%	50%
Matter 2 : WORKSHOP 2: Housing and Construction Files	90h00				6h00	4	8	100%	
Matter 3 spatial planning1	67h30	1h30	3h00			3	6	50%	50%
EU methodology1						5	9		
UEM1(O/P)									
Matter 1 : Mathematics 1	45h	1h30	1h30			2	4	50%	50%
Matter 2 : Building materials	45h	1h30			1h30	2	4	50%	50%
Matter 3 : Computer Science	22h30				1h30	1	1	100%	
UE transversal						2	2		
UED1(O/P)									
Matter 1 : Urban legislation 1	45h	1h30	1h30			2	2	50%	50%
EU Discovered 1						1	1		
UET1(O/P)									
Matter 1 : Language 2 French/English	22h30	1h30				1	1		100%
Weekly hourly volume Semester 2		9h00	7h30		3h00	6h00			
Total hourly volume Semester 2	382h30					17	30		

SEMESTRE 2

Teaching unit	SHV	Hourly Volume				Coeff	Credits	Evaluation method	
	15sem	C	DW	PW	Workshop			Continuous	Exam
Fundamental EU2						9	18		
UEF1(O/P)									
Matter 1: Introduction to town planning 1	45h00	1h30	1h30			2	4	50%	50%
Matter 2: Workshop 1: Introduction to technical drawing	90h00				6h00	4	8	100%	
Matter 3: spatial planning2	67h30	1h30	3h00			3	6	50%	50%
EU methodology2						5	9		
UEM1 (O/P)									
Matter 1: Mathematics 2	45h00	1h30	1h30			2	4	50%	50%
Matter 2: Chemistry	45h00	1h30		1h30		2	4	50%	50%
Matter 3: Technical Communication	22h30	1h30				1	1		100%
UE transversal 2						2	2		
UET1 (O/P)									
Matter 1: Urban legislation 2	45h00	1h30	1h30			2	2	50%	50%
EU Discovered 2						1	1		
Matter 1: Language 2: English/French									
Weekly total	22h30	1h30				1	1		100%
Weekly hourly volume Semester 2		10h30	7h30	1h30	6h00				
Total hourly volume Semester 2	382h30					17	30		

SEMESTER 3

Teaching unit	SHV	Hourly Volume				Coeff	Credits	Evaluation method	
	15sem	C	DW	TW	Workshop			Continuous	Exam
Fundamental EU3 UEF1(O/P)						09	18		
Matter 1 : Workshop 03 : Urban analysis	90h				6h0 0	4	8	100%	
Matter 2: Urban design	67h30	1h30		3h		3	6	40%	60%
Matter 3: Geography of cities	45h00	1h30	1h30			2	4	40%	60%
EU methodology UEM3 (O/P)						05	09		
Matter 4: Urban economics	22h30	1h30				1	1		100%
Matter 5 : Roads and other networks	45h	1h30	1h30			2	4	40%	60%
Matter 6: Topography	45h	1h30		1h30		2	4	40%	60%
UE transversal 3 (O/P)						2	2		
Matter 7 : Cartography	45h	1h30	1h30			2	2	40%	60%
EU Discovered 3 UET3						1	1		
Matter 8: Urban Sociology	22h30	1h30				1	1		100%
Weekly hourly volume Semester 3									
		10H30	04h30	4h30	6h				
Total hourly volume Semester 3	382h30	157h30	67h30	67h30	90h	17	30		

SEMESTER 4

Teaching unit	SHV	Hourly Volume				Coeff	Credits	Evaluation method	
	15sem	C	DW	TW	Workshop			Continuous	Exam
Fundamental EU UEF4(O/P)						09	18		
Matter 1 : Workshop 04 : Urban Intervention	90h				6h	4	8	100%	
Matter 2: Operational urban planning	67h30	1h30		3h		3	6	40%	60%
Matter 3: Urban Hydraulics	45h	1h30	1h30			2	4	40%	60%
EU methodology UEM4 (O/P)						05	09		
Matter 4: Remote sensing	45h	1h30		1h30		2	4	40%	60%
Matter 5: Demography	45h	1h30	1h30			2	4	40%	60%
Matter 6: Computer Assisted drawing	22h30			1h30		1	1	100%	
UE transversal 4						02	02		
Matter 7: Climatology	45h00	1h30	1h30			2	2	40%	60%
EU Discovered4 UET4 (O/P)						01	01		
Matter 8: Urban ecology	22h30	1h30				1	1		100%
Weekly hourly volume Semester 4		9h	4h30	6h	6h				
Total hourly volume Semester 4	382h30	135h	67h30	90h	90h00	17	30		

SEMESTER 5

Teaching unit	SHV	Hourly Volume				Coeff	Credits	Mode d'évaluation	
	15sem	C	DW	TW	Workshop			Continuous	Exam
Fundamental EU UEF5 (O/P)						09	18		
Matter 1: Workshop 05: Urban planning instruments in Algeria	90h				6h00	4	8	100%	
Matter 2 : Urban management	45h	1h30	1h30			2	4	40%	60%
Matter 3: Urban traffic	67h30	1h30		3h		3	6	40%	60%
EU methodology UEM5 (O/P)						05	09		
Matter 4: Research methodology	45h	1h30	1h30			2	4	40%	60%
Matter 5 : Geographic information systems	45h			3h		2	4		100%
Matter 6: Urban risks	22h30	1h30				1	1		100%
UE transversal 5						02	02		
Matter 7: Green spaces	45h	1h30	1h30			2	2	40%	60%
EU Discovered UET5 (O/P)						01	01		
Matter 8 : Field trips					22h30	1	1	100%	
Weekly hourly volume Semester5		7h30	4h30	6h	6h				
Total hourly volume Semester 5	360h	112h30	67h30	90h	90	17	30		

SEMESTER 6

Teaching unit	SHV	Hourly Volume				Coeff	Credits	Mode d'évaluation	
	15sem	C	DW	TW	Workshop			Continuous	Exam
Fundamental EU UEF1(O/P)						09	18		
Matter 1: Workshop 06: Final dissertation	90h				6h	9	18	100%	
EU methodology UEM1 (O/P)						04	09		
Matter 2: Management	45h	1h30	1h30			4	9	40%	60%
UED1 (O/P) : UE Transversale						2	2		
Matter 3: Public procurement	45h	1h30	1h30			2	2	40%	60%
UET1 (O/P): UE Découverte						1	1		
Matter 4: Ethics and deontology	22h30	1h30				1	1		100%
Weekly hourly volume Semester 6	13h30	4h30	3h00		6h				
Total hourly volume Semester 6	202h30	67h30	45h00		90h	16	30		

Cycle: License 1- Semester 1

Matter 1: Initiation to urban planning

Contents:

- 1-Urban planning: a global approach
 - the major problems addressed or to be addressed by urban planning
 - urban planning as a virtual mode of development of inhabited space
 - urban planning as a place of conflict and power
- 2 - History of cities
- 3 - Urban planning currents of thought and doctrines

Matter 2: introduction to technical drawing

Contents:

- 1- Building design
 - 1.1 Construction design process
 - 1.2 Construction design documents
- 2- General notions of construction drawing
 - 2.1 The different types of construction drawings
 - 2.2 The role of construction drawings
- 3- Reminder about construction drawings s
 - 3.1 Standards and recommendations (folds, cartridges, formats, etc.)
- 4- Representation agreements
 - 4.1 Roles of representation agreements
 - 4.2 Groups of conventional representations
- 5- The different plane graphic representations
 - 5.1 Plan view
 - 5.2 Cuts
 - 5.3 The facades
 - 5.4 Dimensions

Matter 3: spatial planning1

Contents:

- 1- history
- 2- general principles of planning
- 3- Territorial planning
- 4- Urban planning
 - purposes and objectives of the development
 - planning instruments and tools
- 5-. The foundations of planning
 - Links between general land use planning and urban planning
 - History of development: awareness of spatial inequalities.

Matter 4: Mathematics 1

Contents:

- 1- Real functions of one real variable
 - 1.1 - General information
 - 1.2 - Possible properties of a function
 - 1.3 - Limits of a function
 - 1.4 - Notion of continuity
- 2- Trigonometric functions
 - 2.1 - Trigonometric functions of an angle
 - 2.2 - Trigonometric function of two angles
- 3- Derivation
 - 3.1- Derivative of a real function of a real variable at a point
 - 3.2 - Algebraic operations on derivable functions
- 4- Neperian logarithm function
 - 4.1 - Definition
 - 4.2 - Properties
 - 4.3 - Variation table and graph
- 5- Base exponential function (e)
 - 5.1 - Definition
 - 5.2 - Properties
 - 5.3 - Graph
- 6- Reciprocal circular functions
 - 6.1 - Definition
 - 6.2 - Properties

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Matter 5: Chemistry

Contents:

- 1- Main soluble and suspended substances in surface waters
 - 1.1 - natural waters.
 - 1.2 - consumer waters
- 2- Surface water and pollution
- 3- Theoretical bases of the main treatment processes
 - 3.1 - physico-chemical phenomena
 - 3.2- biological phenomena
- 4- Basic stages in drinking water purification

Translated with DeepL

https://www.deepl.com/app/?utm_source=android&utm_medium=app&utm_campaign=share-translation

Matter 6: Technical Communication

Contents:

- 1 - General introduction
- 2 - How to obtain information
- 3 - Putting together a file
- 4 - Creativity
- 5 - Information storage
- 06 - Information processing
- 07 - How to inform?
- 8 - Presentation techniques
- 9 - Leading a discussion group

Matter 7: Urban legislation 1

Contents:

- Spatial planning tools Land law
Urban planning tools Urban legislation
Urban interventions Urban actors
- History and general principles of urban planning law
 - 1.1 - The fragmentation of problems
 - 1.2 - The birth of coherent legislation
 - 1.3 - Confirmation of the predominance of the State
 - Urban planning
- General principles of urban planning
- A - Legal tools
 - B - The common logic of these tools

C - Managing development projects

Matter 8: language 1 english or french

Subject content:

- Grammatical
- grammatical analysis
- Lexical analysis
- Text study
- Terminology
- Construction

Semester 2

Matter 1: initiation to urbanism 2

Contents:

1. urban policy and urban social movements
 - overview of the technical methods used to design urban planning documents
 - implementation and logic of actors
 - urban planning tools
2. urban framework and network

Matter 2: WORKSHOP 2: Housing and Construction Files

Contents:

- Application projects (buildings, engineering structures, hydraulic structures, etc.)
- Project presentation
- Purpose of the project
- Situation and layout Programs
- Description Required work Layout
- Various flat representations (plans, sections and facades)
- Volume representations

Matter 3: Landscaping 2

Contents:

- 1 Evolution of planning policies
 - History of major regional planning policies and missions.
 - The role of decentralization and current developments in decentralization.
- 2- Planning players
 - Players (national, regional, local, major agencies, etc.).
 - National land-use policy
- 3- Planning tools: planning laws and resort development
 - Legal and financial tools for urban planning and development
- 4- Case studies: examples of projects
 - Case study of several development operations

Matter 4: Mathematics 2

Contents :

- 1- Hyperbolic functions
 - Definition
 - Formula
 - Table of variation and graph

2- Reciprocal hyperbolic functions

- Definition
- Proof
- Theorems
- Graph

3- Primitives (calculating integrals)

- Definition
- Applications

4- Differential equations

- Definition
- First-order differential equation
- Techniques for solving certain types of equation

5- Matrices

- Definition
- Square matrices
- Sum, difference and multiplication of matrices 4 - Some types of matrices

6- Complex numbers

- Algebraic operation
- Graphical representation
- Trigonometric form of complex numbers

Matter 5: Building materials

Contents :

1- Binder numbers :

- 1.1 Airborne binders
 - 1.1.1 Lime, plaster, magnesium binders
- 1.2 Hydraulic binders
 - 1.2.2 Hydraulic lime
 - 1.2.3 Roman cement

- 1.2.4 Silica-lime products
- 2- Mixing water
- 3 -Additives
 - 3.1 Classification according to the role of each admixture
 - 3.2 Role and influence of each admixture
- 4 Aggregates (sand, gravel and crushed stone)
 - 4.1 Introduction and definition, classification, particle size analysis, water content and impurities.
 - 4.2 Manufacturing processes
- 5- Concrete (heavy and light) and mortar
 - 5.1 Introduction and classification
 - 5.2 Concrete composition methods
 - 5.3 Concrete shrinkage and creep
 - 5.4 Fresh concrete
 - 5.5 Hardened concrete
 - 5.6 Special concrete
- 6 -Raw materials used in building materials technology
 - Classification, properties and use

Matter 6: Computer Science

Contents:

- 1 -General information about computers
 - 1.1 Definition of computer science
 - 1.2 Fields of application
- 2- Computer components
 - 2.1 Hardware (HARD)
 - 2.1.1 Central processing unit
 - 2.1.2 Peripherals
 - 2.2 Software (SOFT)
 - 2.2.1 Operating systems

2.2.2 Programming languages

2.2.3 Application software

Matter 7: Urban Legislation 2

Contents:

1- Land ownership

- Urban planning law and property rights
- the relationship between urban planning and property rights
- Property rights
- Land institutions, urban land acquisition and the LOF land law
- Urban planning as a means of public intervention

2- Real estate management

3- legislation governing interventions on existing fabrics

Matter 8: Language 2 French/English

Contents:

- Terminology.
- Lexicon and text study.
- Writing

Cycle: License 2 - Semester 3

Matter 1 : Workshop 03 : Urban analysis

Content:

The aim is to use typo-morphological analysis as a "tool" for describing and classifying, reading and explaining the urban space observed, in order to:

- identify its urban and architectural characteristics and discover its underlying patterns and structures
- understand its urban forms and grasp their genesis, emphasizing the notion of interdependence and reciprocal relationship of all its components: built spaces (any three-dimensional object), unbuilt spaces (developed or undeveloped) and network spaces (linear surface, underground, overhead).
- The elements to be considered within the study perimeter are:
- relative location, land use or space consumption (relationship between surface area, density, etc.).

Layout: the relative position of various spaces in relation to each other.

Organization, structure and configuration: understanding the principles and methods that have guided the creation of the model in question.

Built environment and construction methods.....

Case study: the example studied consists of an urban perimeter defined by specific conditions (neighborhood, housing estate, residential area, etc.).

Typical works to be considered:

- Habitat/housing: collective housing, housing estates and individual housing
- Equipment: public or (private investment) equipment areas: A group of urban facilities:
 - 1 Urban center.
 2. commercial, administrative or sports activities.
 3. a group of educational activities.
- Relaxation : Green space: Green space, A space for relaxation and leisure, public garden.....
- leisure: Children's play area, A space for relaxation and leisure.
- Networks: roads and parking lots.

In each of the five exercises, students must finalize their project with a final presentation comprising the following documents:

- an analysis report (written and graphic);
- schematic diagrams, including elements of synthesis, reflection and orientation;
- detailed structural drawings;
- development plan detailing land use;

Workshop work will be reinforced by a field trip to facilitate site selection and choice of corresponding projects.

Matter 2: Urban design

Content:

The lessons are divided into the following points:

1: A reminder of the city

2: Conditions for the emergence and characteristics of the urban project 3: The urban project

1: General information on the urban project :

- a) definition of concepts
- b) history of the urban project
- c) different types of urban projects
- d) the impact of the urban project: local, regional, national
- e) the urban project: rather than an answer, a challenge
- f) the causes of the urban project

2: the birth of urban projects :

market towns at the advent of industrial civilization, observations; remedies, the ideal city

3: the genesis of the urban project

- a) the urban project and urban policy
- b) identifying the urban project as a reference approach
- c) initial sketch of an intermediate function: the urban project
- d) execution of the urban project
- e) PV approval

4: urban project conceptual devices

- a) projective relevance of concepts
- b) the two territorial scales of conceptualization
- c) scales and divisions
- d) urban space in transformation and project
- e) unanswered questions - the achievements of the urban project
- f) morphology of built space: spatial organization and visible forms.

5: operational scope of the urban project

- a) light project for broad questioning
- b) project - definition of an urban heritage
- c) neighborhood project
- d) project to reorganize a part of the city
- e) dealing with the diversity of urban projects

6: case studies of urban projects

- a) urban projects in Europe.
- b) urban projects in the USA

- c) urban projects in Scandinavia
- d) urban projects in the Low Countries
- e) urban projects in North Africa.
- f) ideal cities

7 : urban project players

- a) legal players
- b) administrative players
- c) technical players

8: urban project financing methods

- a) national financing
- b) sectoral financing
- c) financing from willayas' budgets
- d) promoting financing through investments
- d) 1-private 2-public financing players.
- e) feasibility of financing mechanisms

Matter 3: Geography of cities

Contents:

1- General introduction

- History of the city
- Definition of the city
- The evolution of urban appearance
- Differentiation between town and country

2- Medieval cities and their characteristics

- Islamic cities and their characteristics

3- Urban planning and the development of medieval towns

- Urban planning and the development of industrial towns

4- City structure

- Checkerboard, radioconcentric, linear, prestige and no-plan layout

5- Characteristics of towns:(type of town)

- Mining; industrial; commercial (wholesale); commercial (retail); transportation; cultural and educational; tourism and leisure; multi-functional; historical and religious.

6- Relationship of cities (to each other)

- Jefferson theory

- Ziff theory
 - Cristallier theory
 - Calculation of radii of influence
- 7- Methods for limiting and locating the city center (CBD) 8-Urban network in Algeria
- Urban function
 - Structuring and organization of the urban network
 - development components
 - urban network and economic development

Matter 4: Urban economics

Contents:

1- General

1-1 introduction to economics

1-2 definition and role of urban economics

2- purpose of urban economics.

2.1 Metropolization.

2.2 What is the urban world?

2.3 The city and the economy

2.4 Economic activities and urban dynamics

2.4.1 Urban planning and urban functions.

2.4.2 The urban economy.

2.4.3 Urban public services.

3-Economic theories of the urban phenomenon

1 The notion of area of influence.

2 Agglomeration forces.

3-Network economics.

4-Industrial location theory.

1-Distribution theory of economic activity.

2-Agglomeration economies,

a- Porter's model

b- Krugman's center-periphery model.

5-Measures of spatial concentration and regional diversification.

- 1- Urban hierarchies and central place theory.
 - 2- The spatial structure of the urban economy
 - 3- Economic foundation of the city center,
 - 4- Land rent theory,
 - 5- Location of manufacturing and service firms and
 - 6- Residential location.
 - 7- Price studies (revision and discounting)
- 6- Location theories,
- 1- City formation and urban spatial structure.
 - 2- Urban problems.
 - 3- Water economics.

Matter 5 : Roads and other networks

Contents:

CHAPTER 1: ROADS

- 1- General: classification and financing of urban roads
 - Traffic
 - Extent and nature of area served
 - Typology.
- 2- Road classification
- 3- Elements of urban traffic studies
 - Traffic analysis
 - Probable evolution of various modes of transport
 - Traffic forecast in an urban environment
- 4- Earthworks and Cubature Calculation
 - Soil classification
 - Cubature calculation
 - Earthworks execution.
- 5- Geometric characteristics of non-rapid urban roads
 - Boundary marking
 - Land survey and measuring instruments

- Identification of existing networks
- Altimetric and Planimetric Connections

6- Track layout

- Road profiles (longitudinal and cross-sections)
- Recommendations for layout
- Pavements (Pavement Composition, Pavement Design, Pavement Accessories).
- Sidewalks and footpaths, junctions, parking, special structures

CHAPTER 2: GENERAL EARTHWORKS

- 1 - Definition
- 2 - Technical constraints
- 3 - Economic constraints
- 4 - Soil contamination
- 5 - Soil compaction
- 6 -Slopes and embankments
- 7- Calculation of cubatures
- 8- Interpretation of results

CHAPTER 3: STREET LIGHTING

- 1- General - Exterior lighting - Ambient lighting - Lamps
- 2- Calculation methods - Calculation assumptions
- 3- Calculating cross-sections
- 4- Exterior lighting
- 5- Indoor lighting
- 6- Power balancing
- 7- Earthing
- 8- Electrical equipment

CHAPTER 4: GAS NETWORK: - Design and installation techniques

CHAPTER 5: TELEPHONE NETWORK: - Design and installation techniques

Matter 6: Topography

Contents:

I. INTRODUCTION

1. GENERAL NOTIONS

2. geodesy
3. topography
4. shape of the earth
5. system of projections
6. geographic coordinates
7. orientation (the three N's)

II. topography

III. faults and errors.

1. mistakes
2. errors
3. statistical findings on direct measurements

IV. distance measurement

- 1 Distance measuring instruments
2. staking
- 3 Flat measurement
4. measuring accuracy
- 5 Direct measurements
6. indirect length measurement

V. ANGLE MEASUREMENT

1. units of angle measurement
2. theodolite
- 3 Measuring horizontal angles
4. measuring vertical angles

Matter 7 : Cartography

Contents:

- 1- General introduction: basic concepts. 2- History of cartography
- 3- General cartography.
- 4- Introduction to cartographic representation: use of cartographic instruments, basics of

cartographic expression, synthesis maps, etc.);

5- Introduction to graphics: purpose, levels of information, forms of graphic intervention, graphic processing of information, graphic construction, etc.).).

6- Presentation and evolution of cartography, map classification,

7- Cartographic theory and design.

8- Color, map editing,

9- Layout and typography

10- Graphic semiology.

11- Graphic data processing.

Matter 8: Urban Sociology

Contents:

1. the concept of urban sociology

- the field of urban sociology
- the relationship between sociology and urban sociology

2. urbanization and the urban, phenomenon and process

- trend towards urbanization in the world's regions
- indexed urban norms
- urbanization process, its manifestation and conditions urbanization rate and forms

3. physical, socio-economic and cultural urban space - use of space

4. urban space and the urban environment

- realization of the idea of urbanization
- the urban population
- city residents
- population composition and classes
- deprived citizens and social movements

5. village and town participation in the development of urbanization images and models

6. urbanization and quality of life - socio-anthropological analysis

7. correlation between space and quality of life - Slums in cities

8. critique of urban values

9. immigration and employment and immigrant adaptation in the city.

Semester 4

Matter 1 : Workshop 04 : Urban Intervention

Contents:

Workshop work, Operational Urban Planning, will be translated into classic Urban Interventions on the existing urban fabric, and this through a set of exercises proposed, or after a review by the PDAU, distributed as follows, as a model: (exploitation of sloping land preferred)

- Exercise 1 Restructuring an urban center :
- Exercise 2 Urban renewal
- Exercise 3 Neighborhood rehabilitation
- Exercise 4 Redevelopment of a project in a new urban context.
- Exercise 5 Requalification and improvement of the living environment of a residential neighborhood of multi-family and single-family dwellings.

In each exercise, the following steps must be followed:

1. urban analysis of the existing urban situation;
2. urban programming
3. principle drawings.
4. structural drawings.
5. redevelopment plan.

Several issues relating to city management will also be addressed in these projects: 1- Urban analysis and survey techniques.

2- Financing.

3- Specifications and legal aspects.

Matter 2: Operational urban planning

Contents:

The problem of operational urban planning requires a broad knowledge of all the phenomena that accumulate in the existing built environment, such as: degradation of the physical environment, socio-spatial practices, technical problems of transport, the environment, etc.

This subject aims to provide a theoretical understanding of the tools of operational urban planning, and to deepen the content of the Operational Urban Planning workshop courses, as follows:

- 1 History of operational urban planning: (Haussmannian works in Paris,...)
2. renovation

3. restructuring.
4. redevelopment: requalification, renewal, residentialization. Improvement of living environment.
5. rehabilitation, restoration, enhancement.
6. Requalification
7. reconversion

As for the TDs, it should be remembered that the aim of this teaching is methodological:

The aim is to provide students with some of the tools of urban analysis, seen from a spatial angle, needed to understand the context in which a project is carried out (the site where it is located, the layout of the town, the layout of roads, etc.), in order to identify and understand its urban and architectural characteristics and discover its underlying models and structures (dimensions, functions, distributions, constructive and aesthetic systems).

1. use typo-morphological analysis as a "tool" for describing and classifying, reading and explaining the urban space observed, in order to:

2. identify its urban and architectural characteristics and discover its underlying patterns and structures

3. understand its urban forms and grasp their genesis, emphasizing the notion of interdependence and reciprocal relationship of all its components: built spaces (any three-dimensional object), unbuilt spaces (developed or undeveloped) and network spaces (linear surface, underground, overhead).

4 The elements to be considered at the level of the study perimeter are:

- relative location, land use or space consumption (relationship between surface area, density, etc.).

-Layout: the relative position of various spaces in relation to each other, i.e. urban composition.

Organization, structure and configuration: understanding the principles and methods that have guided the creation of the model in question.

- the state of the built environment and construction methods.....

- the case study: the example studied consists of an urban perimeter defined by specific conditions (neighborhood, housing estate, residential area, etc.).

Matter 3: Urban Hydraulics

Contents:

1- Introduction : Sources and nature of water; natural and artificial water cycles, groundwater and surface water. Water supply: needs, forecasts and standards.

2- Drinking water supply: Water supply systems and their components (intakes, conveyors, reservoirs and distribution networks) as well as their equipment and calculation methods.

3- Sanitation: Wastewater disposal: discharge volumes; sanitary and storm sewers; equipment and calculation methods.

Network types, design and sizing of some urban wastewater systems Diagnostic methodology for urban wastewater systems.

4- Hydraulic structures: Dams and reservoirs, What they're made of and how they function. Sizing a reservoir, a surge tank, a treatment plant and a wastewater treatment plant.

5- Pumps and pumping stations: Centrifugal and axial pumps and their different couplings. Pumping stations for drinking water and wastewater.

6- Water treatment: Evaluate the effects of various substances in water and recommend appropriate treatment techniques.

7- Wastewater treatment: Urban wastewater treatment processes and the disposal of the resulting sludge.

Matter 4: Remote sensing

Contents:

Reading cartographic documents and introduction to CAD

1 Definitions and information to be extracted: relief, contour lines, towns and settlements, hydrographic networks, projection systems, etc.

2. aerial photos

3. satellite images and remote sensing; 4- Introduction to automatic mapping.

Matter 5: Demography

Contents:

1 Introduction to demographic analysis.

- The use of figures and criticism of sources
- The notion of population movement

2. population variations

- Different rates: birth rate, death rate, fertility rate
- Notion of life expectancy

3. migratory movements

- Introduction and definition of concepts: permanent, alternate, temporary migration...
- Notions of mobility in relation to an area: total migration, balance of migration
- Measuring net migration: natural movement, probability of follow-up, place of birth
- Indices of population efficiency, redistribution and concentration.
- Spatial interactions: migration intensity, preference index
- models applied to the study of migration.

4. population composition and structure.

- Composition by sex, sex ratio
- Age composition
- Urban and rural population
- Socio-professional composition of the population and major sectors of activity.

5. demographic outlook.

- By sex and age
- Prospective mortality or follow-up indices by age
- Calculation of survivors without or before migration
- Birth prospects by mother's age
- Outlook by age and sex in space.

Matter 6: Computer-aided design

Contents:

1. visualization :

- zoom" commands for viewing the drawing.

- pan" command.

2. working with layers :

- description and advantages of layers.

- creating and managing layers

- managing object properties.

3. dressing :

- hatching and gradients.

- dimensioning.

- Text.

- tables.

- external references.

4. drawing information :

- information about an object "list".

- distance between 2 points "distance".

- area" surface calculation.

5. blocks :

- what is a "block"?

- create a block.

- inserting a block.

6. printing and page layout :

Matter 7: Climatology

Contents:

1- Notion of heat exchange and general temperature distribution

- Subsurface rhythms

- General surface temperature distribution

- Energy balances and radiation equilibria 2- Atmospheric water

- The saturating structure of water vapor

- Eating structures

- Precipitation mechanism 3- Water balances in the atmosphere

- Evaporation and evapotranspiration in heat balances
- Precipitation water
- 4- precipitation classification
 - Orographic rain
 - Cyclonic rain
 - Convective rain
- 5- Means of evaluating precipitation
 - Rainfall measurement and operating network
 - Use of climate data in urban projects

Matter 8: Urban ecology

Contents:

- 1- general introduction to the environment, urban ecology, pollution, risks, urban biodiversity, renewable energies, sustainable development, etc.
- 2- the city and its challenges.
- 3 - components of the urban landscape.
- 4- the urban environment: its components, aspects, environmental issues;
- 5- impacts:
- 6- urban pollution and nuisances: aspect, nature and source, major risks;
- 7- sustainable urban development:
 - objectives, key indicators, principles, players and techniques, etc;
 - ecological and environmental engineering tools;
 - the ecological approach to urban planning and design.
- 8- Environmental quality of neighborhoods and buildings:
 - high environmental quality (HQE);
 - environmental performance (indicators, actions, aggregation);
 - environmental maintenance and rehabilitation;
 - the eco-neighborhood: components and planning principles.
- 9- waste management :
 - 1- urban solid waste
 - 2- classification of solid waste.

3- types and quantities of solid waste

4- solid waste collection and transportation 5- controlled landfill

- general information on controlled landfills

- planning principles and site selection

- fixed installations for controlled landfills

- water collection and disposal

- landfill gas collection

- operation

- management and control

- practical application: siting, layout and operation of a landfill site, administrative aspects, technical aspects, operational aspects

- site enhancement finally in operation

- landfill redevelopment - final operation

5- municipal solid waste treatment

6-waste regulatory framework

1. definition of waste

2. legislation on waste

- 2.1 Applicable regulations: Waste framework legislation, Specific regulations

- 2.2 Obligations governing waste production, Obligation to ensure proper disposal, Obligation to provide information

- 2.3 Obligations arising from shipments

- 2.4 Obligations relating to waste disposal: Landfill, Incineration

3. Fiscal treatment of waste

b- urban liquid waste management

1- general information on wastewater

- WASTEWATER

- origins of wastewater

- composition of wastewater

- quantities of wastewater

- impact of wastewater on the environment

2- wastewater treatment

- determination of degree of treatment
- choice of treatment plant site
- choice of treatment methods
- treatment processes

3- wastewater reuse

- value of wastewater
- conditions for wastewater reuse
- areas of wastewater reuse

Matter 1: Workshop 05: Urban planning instruments in Algeria

Content:

Four approaches structure this workshop:

- 1- Analysis.
- 2- Quantification and programming. 3- Planning.
- 4- Regulations.
- 5- Intervention

Matter 2 : Urban management

Contents :

- Brief history.
- Territorial management.
- Administrative management: municipal management, budget management, local development.
- Housing management.
- Facilities management.
- Urban audit.

Matter 3: Urban traffic

Contents:

1- General information on urban transport

1- Definitions

2- Importance of transport in urban life

3- Transport and urban societies (historical considerations)

- Urban transport in the city 1- Travel in the city - Reasons for travel

- Classification of traffic flows Local traffic (within a neighborhood); High-traffic traffic (professional circuit); Economic traffic;

Tourist (leisure) traffic;

Mass traffic (popular and sporting events).

- Means of transport 3- Types of urban transport

- Passenger transport
- Transport of goods and merchandise
- Transport of information
- Study of examples.
- Studies relating to urban transport

Geographical studies:

Geographical distribution of travel; Street patterns and urban form; Land use and urban transport;

Planning studies

Determining overall travel demand in the city; Choosing means of transport

Types of decision in urban transport.

Technical studies: transport and traffic engineering

- Problem analysis of urban transport

2- Economic and financial aspects

- the cost in space (spatial consumption)
- urban traffic facilities
- roadways
- investment costs
- design and construction of urban roadworks and equipment
- maintenance of roads and vehicles
- various administrations
- pricing:
- parking
- public transit
- automobile traffic.
- Case studies

3- Legislative and decision-making aspects

- transport and city policy
- regulations;
- transport management;

- taxation.....

4- Environmental aspects

- road safety
- environmental impact of motorized vehicles

5- Study (proposal) of a transport and traffic project, including the following stages:

Study of the mobility of city dwellers and the geographical distribution of their journeys (origin and destination)

Determination of travel motives Study of the choice of means of transport Choice of a future network

Network management

Economic (profitability) and environmental analysis of proposed new networks.

Matter 4: Research methodology

Contents:

1- Scientific approaches

- qualitative
- quantitative

- 1.2- Typical methods:

- experimental methods;
- survey methods
- historical methods.....

3 - Research techniques and resources

- sampling:
- scientific observation;
- questionnaires;
- interviews
- experimentation;
- comparison.....
- Examples (concrete cases).

4 - Written communications (administrative writing)

- forms of written communication:
- minutes;
- minutes
- reports
- letters;
- notes.
- Printed matter.
- Application exercises for each form.

5 - Dissertation and internship report

- Choosing a research theme
- The problem;
- Working hypotheses
- data collection and use of different techniques;
- analysis and interpretation: (data preparation, formatting, transfer, etc.);
- final drafting and formatting of the dissertation.
- Characteristics of dissertation (or report) writing:
 - drawing up a plan;
 - choice of style
 - objectivity
 - simplicity;
 - clarity;
 - precision.

Matter 5 : Geographic information systems

Contents:

Recommended software MapInfo or arcgis :

I. MapInfo or arcgis basics

- a. The notion of Table.
- b. The concept of databases.
- c. Geographic databases.

d. MapInfo or arcgis interface.

e. Toolbars.

f. Docked windows.

g. Floating windows.

II. layer managers

a. Organize layer stack.

b. Organize layer characteristics.

III. create/modify graphic data

a. Delete an object.

b. Create an object.

c. Drawing layer.

d. Modify drawing geometry.

IV Using symbols

a. Surface symbols

b. Point symbols

c. Linear symbols

V. Page layout

VI. example of spatial analysis.

Matter 6: Urban risks

Contents:

Introduction. General risk analysis methodology.

- Natural risks linked to atmospheric phenomena.
- Natural hazards and atmospheric phenomena
- Natural hazards and climate variability
- Natural hazards related to land degradation.

Desertification

- Erosion
- Natural hazards related to atmospheric phenomena
- Natural hazards and atmospheric phenomena

- Natural hazards and climate variability

Flooding Volcanism

Karst hazards

- Natural hazards in coastal environments
- Coastal erosion
- Protection of port facilities

Air/sea interactions

Salt water intrusion

Impact of climate change Mangroves Tsunami

Urban traffic risks Safety impact of urban traffic Prevention and management measures Urbanization in risk zones

- Seismic zones
- Flood-prone areas Wind-prone areas

Use of data in decision-making and policy choices

Reducing risks of occurrence and/or effects (prevention/mitigation)

Taking account of the perceptions of the communities concerned, information, awareness-raising, education Early warning (including form of information, transmission media, ability to react)

- Emergency planning and crisis management
- Post-crisis management and evaluation.

Major risks: analysis, prevention, management, Decision support: multi-criteria analysis methods

Workshop: case analyses, role-playing exercises

Matter 7: Green spaces

Contents:

1) general introduction

- history of green spaces
- role of green spaces

2) types of green spaces

- classification by site
- classification by use and user

3) design of green spaces

- factors influencing the design of green spaces
- design modes
- regular design
- natural design
- common design
- contemporary design
- elements of green space design and organization
- basics of green space design and planning
- color organization
- principles of landscape design

4) planting standards and measures in the urban environment

- determining use
- environmental awareness

5) stages of urban planting

6) nurseries

- definition of nursery - purpose of nurseries
- different types of nurseries - general nursery planting conditions

- executive stages of nursery planting - basic nursery equipment
 - environments and mixtures favorable to plant multiplication and growth in nurseries
 - agricultural operations carried out in nurseries
 - plant propagation methods used in nurseries - nursery planting constraints
- 7) management and maintenance of green spaces
- management - maintenance

Matter 8 : Field trips

Contents:

Checking site conditions:

- Topography. Road structure. Networks Easements.
- Urban fabric: composition and morphology Peri-urbanization.
- Descriptive analysis of neighborhood: (buildings, green spaces, children's play areas, etc.) and environment. Choice of projects according to the proposed (POS).
- Site selection according to PDAU guidelines.

Semester 6

Matter 1: Workshop 06: Final dissertation

Content:

- Preparing a final project: Drawing up an urban project:

a- either, the elaboration of a planning, design and calculation project (integrating the VRD), in the case of an open site. An example is the development of a housing estate, or a POS, etc.

b- or, the study of an existing urban problem, in the case of developed or built-up land. The example of a regulatory and operational urban planning operation (urban improvement, rehabilitation, restructuring, etc.), in this case focusing on networks and urban techniques.

Matter 2: Management

Contents:

1 Roles and diversity of companies

1.1 Diversity in the nature of construction companies

1.2 Diverse roles of construction companies

1.3 Specific elements. Production units

1.4 General contractors and subcontractors

1.5 Integrated multi-purpose company

1.6 Company size. SMES. Agencies. Subsidiaries

1.7 International companies

2 Company services and organization

2.1 Operational departments

2.1.1 Works Department

2.1.2 Specialized divisions

2.1.3 One-off operations

2.1.4 Design services

2.1.5 Feasibility studies. Promotions

2.2 Functional services

- 2.2.1 Technical studies
- 2.2.2 Testing. Laboratory
- 2.2.3 Execution methods. Planning
- 2.2.4 Materials
- 2.2.5 Supplies. Supplies
- 2.2.6 Import - Export
- 2.2.7 Price studies. Estimates

3 Company management

- 3.1 Human resources
- 3.2 Business research
 - 3.2.1 Tenders
 - 3.2.2 Private contracts
 - 3.2.3 Innovations
 - 3.2.4 Product development
- 3.3 Contract management
- 3.4 Operating forecasts
- 3.5 Accounting
- 3.6 Financial services
- 3.7 Legal assistance
- 3.8 IT tools

4 Company management

- 4.1 Choosing and managing managers
- 4.2 Motivation. Incentives
- 4.3 Delegation rules
- 4.4 Technical management
- 4.5 Management control
- 4.6 Capital expenditure

4.7 Corporate strategy and projects

4.8 Communication

5 Agencies

5.1 Types of agency

5.2 Degrees of independence and responsibility

5.3 Organization and management

5.4 Advantages and disadvantages of agencies

5.5 The agency as a road haulage company

6 Public services

1 - history of urban utilities

2 - management methods

3 - local management

4 - guiding principles for public services - legal and institutional framework

5 - green space management plan: analysis, criticism, outlook

6 - public transport management plan: analysis, criticism, outlook

7 - Waste management plan: analysis, criticism, outlook

8 - VRD management plan: analysis, criticism, outlook

9 - organization of local public services in networks 10 - e-governance

Matter 3: Public procurement

Contents:

1- PARTNERS :

- The public operator (contracting authority, person responsible for the contract, etc.)
- The contractor (groups of companies)
- Other participants (prime contractors, subcontractors, etc.)

2- CONTRACT PURPOSE AND PRICES :

- Contract categories

- Nature and content of prices
 - Settlement prices
- 3- SELECTION PROCEDURES :
- Selection methods
 - Advertising rules
- 4- SPECIAL FORMS OF CONTRACT :
- Purchase orders
 - Conditional contracts
- 5- CONTRACTUAL DOCUMENTS :
- Constituent documents
 - Subsequent documents (amendments, etc.)
 - Service order
- 6- GUARANTEES : - Bond, - retention money, - terms of return or release
- 7- PAYMENT TERMS :
- determination of quantities
 - monthly statement of account. advance and deposit payments
 - final and general accounts
- 8- CHANGES DURING PERFORMANCE :
- new prices, - variation in the mass
 - Change in the importance of the various types of work.
- 9- DEADLINES AND ACCEPTANCE :
- Deadlines, penalties and bonuses, - Acceptance of work, - Guarantee period
- 10- TERMINATION : different cases of termination.

Matter 4: Ethics and deontology

Contents:

A. Deontology

- 1- Definitions : - professional deontology, - Ethics. – Values, – Duty, -Profession, etc.
- 2- Rules: - Vision and applicability, – Responsibility, – Respect, – Fairness, -Honesty
- 3- Professional conduct
- 4- Examples of codes of ethics.
- 5- Protection of personal data and new information and communication technologies
 - a. Security of research data
 - b. Ethical aspects of data sharing in science
- 6- The research profession in relation to ethics and societal issues:
 - a. Scientific integrity, b. fraud and ethics, c. Research policy ethics, d. Ethical vigilance of researchers,
- e. Research ethics and ethics of research participation
- 7- Main ethical standards for research involving human subjects

B. Corruption

- 1* concept of corruption :
- 2* types of corruption :
- 3* manifestations of administrative and financial corruption :
- 4* reasons for administrative and financial corruption : causes of corruption from the point of view of theorists , general causes of corruption :
- 5* The effects of administrative and financial corruption :
- 6* The fight against corruption by local and international bodies and organizations
- 7* Methods of dealing with and ways of combating the phenomenon of corruption
- 8* Models from the experience of certain countries in the fight against corruption:
-The Indian experience, the Singapore experience, the United States experience, the Hong Kong experience, the Malaysian experience and the Turkish experience.