

Establishment	Faculty	Department
<i>Mohamed Khider University, Biskra</i>	<i>Faculty of Exact Sciences and Natural Sciences and Life</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>

## **Cycle : Master 1**

### **Semester 1**

#### **Matter 1 : Workshop1 city project1 : Diagnosis and issues**

##### Contents

##### Introduction to diagnosis :

- Elements of understanding urban and territorial diagnosis ;
- Conditions for carrying out a diagnosis ;
- Diagnostic methodology for the city project;
- Diagnostic stages;

##### Field approach

- Spatial framing and definition of the study perimeter;
- Spatial analysis based on data (social, economic, environmental);
- Methods for developing project evaluation and measurement grids;
- Synthesis and initial conclusions;

##### Development of evolution scenarios:

- Identification of local players: political, technical and managerial;
- Definition of the issues at stake in the city and its territory:
- Identification of issues and choice of strategy.

#### **Matter 2 : Strategic planning**

##### Contents

##### Chapter I: From traditional planning to strategic planning.

- Urban planning: purpose, fields and practices.
- Strategic planning and project-based urban planning: from plan-based urban planning to project-based urban planning. The strategic thinking process.
- The content of strategic urban planning.

##### Chapter II: The challenges of strategic planning (process objectives and new instruments) .

- The strategic planning process.
- Urban policy and territorial issues.
- Strategic urban planning and management.
- Urban planning and the challenges of sustainable development: towards integrated sustainable planning.
- Strategic planning and the participatory approach.

-The renewal of strategic planning tools.

Chapter III: Strategic planning models from around the world.

-The French model: the local, targeted approach.

-The Anglo-Saxon model: the holistic, eco-systemic approach.

.experience feedback: (the green city - .....).

Chapter IV: Towards strategic planning in Algeria.

-The shortcomings of traditional urban planning in Algeria.

-Strategic planning in Algeria: challenges and new instruments.

### **Matter 3: Urban resource management 1**

Contents:

1. Introduction  
Urban resources: Elements of understanding types of resources ,classification criteria. socio -economic study (urban economic activities and services .economic geography and financial spaces of cities

2. Resource management

- Land management

- Environmental management

- Urban services management

- Human resources management

- Management of intangible assets

3. Public action and management of urban resources

- direct management.

- indirect management (leasing, delegated management, public-private concessions)

- Urban economic and fiscal incentives.

4. Challenges and strategies for producing urban resources

### **Matter 4: Urban policy**

Contents:

City concepts

The city as a system

The city as an urban factory

1-The city and Algerian territory

2-The urban reality in Algeria

3-Dysfunctions of the Algerian city

4-New context of the Algerian city

5-Legal framework

Urban policy in Algeria,

1-Objectives of urban policy in Algeria.

3- Making city policy a reality

4-General principles of urban policy:

5-Participants in urban policy.

Governance, issues and implementation

- 1-Conceptual analysis of governance
- 2-Urban governance
- 3-objectives and principles of governance
- 4-Approaches to urban governance
- 5-Governance issues.
- 6-implementation of urban governance

Responsible governance,

Participatory democracy,

Introduction

- 1-existing forms of representative democracy
- 2- the transition from representative to participatory democracy

Local urban management

- 1-Local urban management in urban policy, the city contract
- 2-Project emergence conditions
- 3-Stakes, objectives and players in GUP
- 4-Fields of action :
- 5-Intervention methodology

EXAMPLES OF TOOLS FOR IMPLEMENTING URBAN POLICY

inter-municipal management/public/private partnership as a new form of governance,

## **Matter 5: Applied Geomatics 1**

Contents:

Introduction to Geographic Information Systems

- Geographic information and basic data
- The components of a G.I.S.
- G.I.S. fields of application and their benefits

Reference and location systems

- Types of geographic coordinates
- Projection systems

Presentation of the GIS tool (software)

- Software structure and handling
- Data structure
- Layer control
- Data manipulation

Database creation

- Simple database creation
- Joins and relationships from an Excel file
- Queries

Statistical and thematic analyses

- Cartographic representation modes
- Importing and exporting data

Page layout

- Print configuration

Examples of GIS applications

- Application of a G.I.S. to urban and regional issues.

### **Matter 6: Introduction to research 1**

Contents:

#### SCIENTIFIC RESEARCH

- a. Sources and methods of knowledge acquisition
- b. What is scientific research?
- c. Functions of research
- d. Types of research

#### PRELIMINARY NOTIONS

- a. Notion of approach
- b. Notion of method
- c. Notion of Technique
- d. Survey

#### THE SEVEN STAGES OF THE RESEARCH APPROACH

1. starting question (SDQ)
2. exploration
3. the problem
4. construction of the analysis model
5. observation (fieldwork)
6. information analysis

### **Matter 7 : Seminar**

Content:

This is a seminar where discussions are held on the experiences and testimonials of professionals, experts and practitioners in the field.

The main themes will be

- Experiences of city players in terms of management
- Experiences of project management, contracting and user management
- Innovations in urban management
- Practical methods and ways of mobilizing users.

### **Matter 8: Environmental management**

Contents:

Environmental management, theoretical approach:

- A. History of environmental thinking :
- B. Environmental debates :

Environmental management, legal and political approach :

- A. Environmental law and community law :

- B. Governance and management of protected natural areas:
  - Environmental transformation :
    - A. Altered environments, social and economic aspects :
    - B. Altered environments, physical and regulatory aspects :
    - C. Applied studies :
  - Resource management and preservation :
    - A. Resource management :
    - B. Industrial and territorial ecology :
    - C New environmental management strategies
  - Environmental rehabilitation
    - A. Contemporary planning issues :
    - B. Soil remediation :
    - C Renewable energies

### **Matter 9 : Language1 : General terminology**

Contents:

- Text structure
- The importance of structure
- Style and characteristics
- The writing process
- Stages in the writing process
- Relational markers in informative text
- Syntax
- Descriptive text
- Informative text
- Explanatory text
- Explanatory procedures
- Argumentation
- Structure of an argumentative discussion
- Injunctive and prescriptive text
- Narrative text
- Figures of speech
- Repetition
- Analogy
- Exaggeration
- Attenuation
- Opposition
- Substitution

## **Matter 1: Workshop 2: City projects: action plans**

Contents:

Project management

- Description of the action,
- Analysis of technical, financial and human resources, with a focus on the project owners.

- Levels of intervention,
- Study of action plan requirements and priorities,
- Action plan chronology,
- Coordination of all community actions in a global, cross-sectoral approach,
- Thematic presentation by issues and objectives,
- Comparison of different methods of implementing action plans,

Project implementation :

o Context

o Practice

- Project set-up phases,
- Project evaluation,

Project impact :

- o Anticipating the impact of a project during the construction phase,
- o Anticipating the impact of a project in the operational phase.

Topic 2: Urban resource management 2

Content

- Institutional systems for managing urban resources
  - 1- land management
  - 2- the environment
  - 3- urban services
  - 4- human resources
  - 5- intangible heritage
- Urban resource management instruments and their impact on urban dynamics
- Urban resource exploitation processes
- Ways of mobilizing urban resources for the benefit of the city
- Study of examples of urban resource exploitation (heritage, land, etc.)

## **Matter 2: Urban dynamics**

Contents:

INTRODUCTION

- 1- Cities and urban dynamics: Elements of understanding
- 2- Cities, civilizations and modernity
- 3- Cities, reflections and products of social, economic and political life

SPATIO-TEMPORAL DEVELOPMENT OF THE CITY (FROM MONO-CENTRALITY TO POLY-CENTRALITY).

- 1- Cities of antiquity

2- City of the Middle Ages

3-Renaissance town

4- Industrial city

5- Capitalist city

6- Modern city

7- Contemporary city

#### .CENTER, CENTRALITY AND URBAN DYNAMICS

1- The dynamics of urban space

2- From center to centrality: a dynamic relationship

#### NEW URBAN DYNAMICS

1- Metropolization and globalization

2- Urban mobility

3- Urban marketing (a vector of urban dynamics)

#### THE ALGERIAN CITY: DYNAMICS, TRANSFORMATIONS AND FUTURE

1- Transformations of urban space

2- Urban management

3- The city and contemporary issues

4- The future of the Algerian city

### **Matter 3: Utility Management**

Contents:

#### GENERAL INTRODUCTION TO THE ROLE OF PUBLIC SERVICES IN THE ORGANIZATION OF SOCIETIES

- the historical evolution of the notion of public services
- Assessing the impact of public services on public policy
- The legislative resources of public services

#### CRITERIA, CROSS-REFERENCE OF INDICATORS1-Fundamental principles of public services

- Standards for public service structures
- New evaluation methods internal auditing
- PUBLIC SERVICE MANAGEMENT METHODS
- All public services
- Local autonomy
- Delegated management
- New management trends: good governance .

#### PLANS AND ACTIVITIES

- Urban transport management
- Administrative management plan
- Technical management plan (water, gas, electricity, sanitation)
- Green spaces management plan
- Telecoms management plan

## **Matter 4: Applied Geomatics 2**

Contents:

- 1- Definitions
- 2- Physical bases of remote sensing
  - electromagnetic radiation
  - signal complexity and interfering media
  - Spectral behavior of objects (vegetation, water, minerals)
- 3- Sensor performance
  - Spatial resolution
  - Spectral resolution
  - Radiometric resolution
  - Temporal resolution
- 4- Thematic approach to satellite image processing (application on ENVI 5 software)
  - Presentation and familiarization with ENVI 5.1 software
  - Two-dimensional histogram and channel crossover
  - Calculation of indices (vegetation, water, buildings)
- 5- Supervised classification of multispectral images
  - Production of a land-use map
  - Spatiomap layout (using ENVI and ArcGis)
- 6- Geometric correction and diachronic analysis of satellite images

## **Matter 5: Introduction to research 2**

Contents:

### INTRODUCTION

What is a dissertation?, What is a Master's thesis?, What is a research topic?

### THE STAGES INVOLVED IN PRODUCING A DISSERTATION

Defining the subject

Gathering information

Information processing

Writing

### ELEMENTS OF A MEMOIR

Introduction

Bibliographical references

Different types of sources

### STRUCTURING A DISSERTATION

### FORMATTING THE DISSERTATION

#### APPENDICES

Survey methodology tools

How to write a summary

Scientific style

## **Matter 6 : Project management**



## Contents:

### Chapter I: Management

- 1 The diverse nature of construction companies
- 2 The different roles of a construction company
- 3 Specific elements. Production units
- 4 General contractor and subcontractors
- 5 Integrated multi-purpose company
- 6 Company size. SMES. Agencies. Subsidiaries
- 7 International companies

### Chapter II

1. project identification
2. Project players and their roles:
3. Project stages (process)
4. Programming and establishing requirements.
- 5- project scoping
- 6- mastering procedures:
- 7- project planning and monitoring (project steering)
- 8- project procurement
- 9- public procurement regulations

## **Matter 7: Language 2: Expression and Communication Techniques**

### Content:

- Generalities of communication and expression
- Information research and processing
- Understanding, compiling, updating and analyzing documentation
- Choice of means of expression
- Expression within a group to achieve a goal
- Improve expression skills
- Production of written messages
- Forms of communication
- Procedures for informing and being informed
- Creativity
- Infographics, media and support
- Presentation technique
- Note-taking
- Administrative documents

## **Cycle : Master 2**

### **Semester3**

#### **THEME1: CITY MANAGEMENT**

##### **Matter 1 : Workshop 3: Feasibility and impact studies: assessment and evaluation.**

###### Contents

Approach1 : feasibility study : Application exercises on the following concepts:

- Introduction to feasibility studies for city projects Needs assessment and analysis
- Drawing up a SWOT matrix listing the region's strengths, weaknesses, opportunities and threats.
- Establishment and selection of scenarios.
- Financing and communication strategy for the project
- Examination of project launch in time and space.

Approach2: impact assessment

Theoretical support for impact studies:

Environmental issues: definitions and typology of possible impacts

Presentation of the environmental impact study

definitions, objectives and typologies

Actors and projects subject to EIA

Environmental Impact Assessment (EIA) process

General phases of an EIA (Program, diagnosis, design, planning permission, construction, operation, deconstruction).

Regulatory procedure for an EIA in Algeria

- Contents of an EIA
- Study frames of reference
- Project context: description of the receiving environment
- Project description
- Impact analysis
- Accident risk management
- Environmental monitoring and follow-up
- Completion and content of the EIA
- Methods and tools most commonly used at different stages (checklists, impact matrices, networks, GIS, etc.)
- Content and structure of the EIA report

Application exercises on the following concepts:

Environmental impact assessment and project life cycle

Drawing up an EIA report

EIA management and control

## **Matter 2: Asset management**

Contents:

Introduction: public-sector assets

- The public domain / The private domain
- key issues in managing public-sector assets
- Cultural heritage
  - Architecture, history of built and urban heritage
  - Cultures and intangible heritage
  - Natural environments and landscape heritage
- Conventions, charters and regulations
  - International
  - At national level
- Heritage analysis and diagnosis
- Heritage management systems
  - Management systems
  - management plans
  - Content of management plans
- Heritage inventory
- Role of local communities
- Heritage protection measures: conservation, restoration, rehabilitation
- Respect and promotion of traditions
- Heritage promotion: tours, sites, exhibitions, museums, interpretation centers, etc.
- Citizen participation
- Mobilization of associations

## **Matter 3 : Public space management**

Contents:

General :

- Public spaces: concepts and definitions
- Genesis and history of public space:

Public space in -ancient cities, -Arab-Islamic cities, -medieval cities, -renaissance cities, -industrial cities and the loss of traditional public space, -the modern city of the 20th century, -public space in the 21st century: connected and sustainable space

- Typology of public spaces

Urban structure and morphology of public spaces:

- Public spaces and city structures
  - Streets and squares: squares and plazas, streets, alleyways and cul-de-sacs, avenues and boulevards, pedestrian walkways and mechanical traffic lanes, etc.
  - Green spaces and public gardens, playgrounds, residual spaces in the urban fabric

Public spaces: design and functions In the Algerian city, typo-morphology of public spaces, experience and use, perception and appropriation of public spaces) :

- the compact city (Medina)
- Functions and design principles :
  - Primary functions -circulation, relationships and distribution-,
  - Socio-economic functions (meeting and sharing, cultural activities, economic dimensions, etc.)
  - Leisure and recreation functions

#### **Matter 4: Cities and New Information and Communication Technologies**

Content:

Information for the city  
 Forms of communication  
 The power of information in the city  
 Problems of information management  
 Application of NICTs to the city  
 The smart city  
 Electronic information and data flows  
 Urban communication: access and distribution  
 Social networks in city management  
 Impact of NICTs  
 On urban flows  
 On urban and socio-economic relations  
 Limits to adapting NICTs to the city  
 Time management in the NICT era  
 Behaviors of actors and users in the face of NICTs  
 NICTs in urban security  
 NICT perspectives in the sustainable city

#### **Matter 5 : Urban risk management**

Contents:

- I- Definitions: risks, hazards, issues, vulnerability
- II- Reminders on the typology of risks: Landslide risk; Flood risk; Seismic risk; Silting risk; Technological risk; Others
- III- Risk, crisis and disaster management:
  - Risk acceptability.
  - General approach to natural risk management.
  - Knowledge and assessment of hazards.
  - Hazard diagnosis: identification and characterization.
  - Forecasting, prevention, precaution, vigilance and warning.
- IV- Hazard mapping and localization:
  - Research-related mapping.
  - Regulatory mapping: PGP, PPRN.
- V- Risk management approaches and tools.

- VI- Emergency plans and crisis management.
- VII- Algeria's urban risk prevention and management strategy.
- VIII- The role of local authorities in risk management.

### **Matter 6: Urban engineering**

Contents :

#### 1 Theoretical part:

- A/ Urban planning and roads
  - Earthmoving techniques and protection of building sites
  - Urban roads (road layout, hierarchy, right-of-way, layout, radius of curvature)
  - Road networks (green network, water network, pedestrian network, etc.)
  - Urban junctions: layout and integration of junctions into urban fabric (grade separations, crossings, roundabouts, hoppers, tunnels, etc.).
  - Layout of parking areas and parking lots.
- B/ Urban planning and technical networks
  - Technical networks and planning and development specifications (drinking water, sewerage, gas, electricity, public lighting, telephone, urban waste, etc.).
  - Standards, ratios, easements
  - Coordination of technical networks in space and time

2. practical part: - Each part of the course will be the subject of an exercise designed to apply the study and projection methods and tools applied in urban engineering to development operations.

### **Matter 7 : Mobility and transport**

Contents:

#### Chapter 1: General information on urban mobility

- Definitions.
- Forms of mobility.
- Characteristics of urban mobility.
- Mobility and accessibility.
- Urban mobility practices and behaviors.
- Mobility management and players.
- Sustainable mobility.

#### Chapter 2: General information on transport

- Definitions.
- Evolution of transport systems.
- Types of transport.
- Modes of transport.
- Transport in the world's major cities.
- Transport and mobility policy in Algeria.

#### Chapter3: Interactions between transport/mobility and urbanization,

- General information on urbanization.,

- Urban policy in Algeria,
- Articulation between urbanization and mobility.

### **Matter 8: Urban ergonomics**

Contents :

Chapter I: Man and his needs

- 1 The notion of human needs  
t and safety in the city.
2. physiological needs of man: biological interactions of the human body

Chapter II: Ergonomics

- 1 What is ergonomics?
- 2 Cognitive ergonomics :
- 3 Organizational ergonomics :

Chapter III: Urban ergonomics

- 1 Ergonomics of public space
2. ergonomics of daily mobility :

## Semester3

### THEME 2 : Governance and local development

#### **Matter 1 : Workshop 3: Governance and participatory approach.**

Contents:

Theoretical support on the following concepts

- The local development approach and the ability to respond to local problems by mobilizing local resources.

- Organizational learning processes
- Building a vision of the local within the global
- Progress in local governance (harnessing local resources, social innovation...)

Exercises on the following notions:

- Analysis of the concept of space and territory

- Analysis of the concept of local development (industrial districts, local production systems)

- Identification of local problems

- Valuing local resources through proximity and geographical reciprocity

- Learning to rethink the economic and social aspects of a territory (new-innovation vision)

- The economic and geographic approach.

- Draw up studies for each territory to identify its economic potential, in particular: natural resources; human resources; infrastructures;

- Natural resources shared with other regions. Constraints to local economic development.

- Draw up an inventory of economic potential at the level of each territory
- (overall assessment) and by productive sector (project opportunities, etc.).

#### **Matter 2: Tools for steering local authorities**

Contents:

1- local authorities in Algeria

strategic objectives and their budgetary translation

Setting objectives

Budgetary translation of objectives (internal and external resources)

3-new technology

Definition of e-government

Stages and challenges

Constraints

Mechanisms for planning and executing government programs in Algeria.

The role of new technology in sustainable development

Examples and experiences

4-implementing objectives and securing procedures

Internal procedures

- Policies conducted in partnership
- With associations
- With semi-public companies
- With public service delegations
- Budgetary and accounting control
- 5-involving departments in the implementation of the performance approach
  - Organizational methods
  - Positioning and coordinating departments
  - Support for the approach
  - communication
- 6-Control of CL management\_

### **Matter 3: Finance and local development**

Contents:

- Public finance
- Definitions
- General principles of public finance
- The Finance Act
- The public budget: procedure, resources, expenditure
- Types of public budgets
- State budget
- Wilaya budget
- Commune budget
- Special funds
- Financial instruments
- Local taxation and land development
- Local economy
- Local development
- Definitions
- Local development actors and institutions
- Local development plans and programs
- Financing local development initiatives
- External resources

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## **Semester4**

### **Matter 1 : Final dissertation**

- Apply all the knowledge acquired during the course to specific case studies.
- Preparation of the final dissertation;

Content: To be developed with the training team responsible for supervising final dissertations.

### **Matter 2 : Final project**

- Applying all the knowledge acquired during the training course to the materialization of the results obtained in the form of: proposals and recommendations, development plans, financial arrangements, software, specifications, personal contribution by the students, originality of the work.
- Completion of final project;

Subject content: To be developed with the training team in charge of supervising final dissertations.