الجمهورية الجزائرية الديمقراطية الشعبية
وزارة التعليم العالي والبحث العلمي

PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA

MINISTRY OF HIGHER EDUCATION
AND SCIENTIFIC RESEARCH

HARMONIZATION

MASTER TRAINING OFFER

مواءمة
عرض تكوين ماستر

Establishment	Faculty / Institute	Department
Mohamed KHIDER University -Biskra-	**Science and Technology**	**Architecture**

Domain :
ARCHITECTURE, TOWN PLANNING AND CITY PROFESSIONS
Sector :
ARCHITECTURE
Speciality :
ARCHITECTURE

College year :
2018/19

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مواءمة

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المؤسسة	الكلية/ المعهد	القسم
جامعة محمد خيضر – بسكرة–	العلوم والتكنولوجيا	الهندسة المعمارية

الميدان: هندسة معمارية عمران ومهن المدينة

الشعبة: هندسة معمارية

التخصص: هندسة معمارية

السنة الجامعية:2018/2019

a) Contents

I. MASTER'S IDENTITY SHEET

(All fields must be completed)

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1. TRAINING LOCATION:

University	**UniversityMohamed KHIDER -Biskra-**
Faculty (or Institute)	**Faculty of Science and Technology**
Department	**Department of Architecture**

2. TRAINING PARTNERS*:

- Other partner establishments:

- Businesses and other socio-economic partners:
    - Local Council of the Order of Architects of Biskra

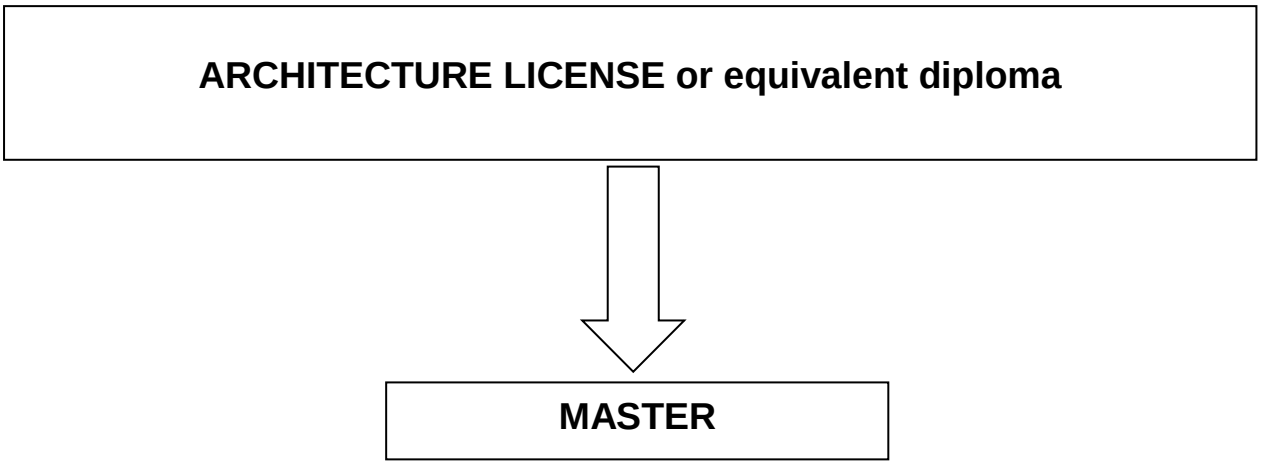
- International partners:

* = Present the conventions in the appendix to the training

3. CONTEXT AND OBJECTIVES OF THE TRAINING

A – Access conditions

(Indicate the license specialties which can give access to the Master)



B - Training objectives

(Skills targeted, educational knowledge acquired at the end of the training - maximum 20 lines)

The objectives of the training aim to prepare a "professional" equipped with the skills, abilities and abilities favoring their participation in qualitative production, the promotion of architecture and the protection of built heritage.

Thus all architectural production is called upon to preserve the quality of public interest that natural and urban landscapes have. Any intervention therefore requires the intervention of a professional with adequate skills to practice the profession of architect.

At the end of the training, the learner will be able to design, develop and manage an architectural project. These abilities will be accompanied by transversal and specific skills.

The first consist of a mastery of communicative skills at a university level (oral and written), an appropriate personal culture and knowledge to be mobilized beyond the exercise of one's profession.

The seconds relate to the discipline or specialty. These are therefore skills which promote the mobilization of knowledge for the exercise of the profession.

In short, the training aims to establish a framework equipped with the knowledge, interpersonal skills and know-how ready to be mobilized to accomplish the missions within its remit according to the rules of the art.

b)

c) C – Targeted job profiles and skills

(In terms of professional integration - maximum 20 lines):

Concerning the targeted profile and skills, it is necessary to rely on the national reference framework for professions and the legislative texts governing the profession of architect.

Indeed, the Algerian Nomenclature of Professions and Jobs (NAME) is an exhaustive basis making it possible to guide the objectives of training offers in terms of profiles and skills. Thus, the main activities of the professional are focused on mastering the proposals from the creation projects to the execution project with skills in ensuring the monitoring of the work – GO, CES). These professional responsibilities call on skills of base: knowledge of law, standards and market codes, know-how in setting up and managing projects as well as mastery of technical tools.

Concerning the legislative texts, Legislative Decree No. 94-07 of May 18, 1994 amended by Law No. 04-06 of August 14, 2004 relating to the conditions of architectural production and the exercise of the profession of architect, remains the unique reference in terms of framing, scope and prerogatives in the architect's activity. Architecture is defined in terms of knowledge and know-how in the art of building (Art.2). These skills are required of a project manager, in the person of the approved architect (art. 9).

The training is therefore developed to set up a framework to ensure activities in the field of architectural production, but also to be able to devote oneself to research in the field bringing together related disciplines.
Restoration and Conservation of heritage, eco-construction and sustainable development, construction and construction site, expertise, consulting and technical advice; administration and public service, real estate expertise; industry and business education and research finance and real estate management.

d) D- Regional and national employability potential of graduates

The distribution of architectural training points across the national territory can help cover production needs in the construction sector.
The variety of tasks and missions assigned to the profession of architect is part of the demand of all sectors, organizations and institutions related to urban services, local authorities and construction.
The production of buildings also requires management and maintenance services, ensuring tasks of updating, requalification and rehabilitation of the living environment.
Working privately is also considered. Approval follows a procedure including the completion of a professional internship and registration in the National Register of the Order of Architects.
In conclusion, employability is ensured to the extent of the needs of the sectors and services of urban and municipal organizations.

***e)* E – Gateways to other specialties**

Gateways to other specialties have not yet been established. However, it is possible to note that in the same field, subjects in the methodological and transversal units can give rise to the capitalization of credits and their transferability.

f) F – Training monitoring indicators

Training monitoring indicators can be defined based on the areas initiated by the Quality Assurance Implementation Commission in establishments.
On the “local” level, the reports of local committees and councils are called upon to make their contribution to the evaluation:

- Pedagogical Committees
- Scientific advice (Department, Faculty)
- The visibility of educational production;
- Theses and end-of-study projects.
- Internship reports
- Portfolios.
- Continuous evaluation
- Traceability of graduates,
- Follow-up in employability
- Opportunities in other fields (research, etc.).

Concerning the quality of the architect's training, based essentially on the Project workshop as a space for synthesis and application of knowledge, requires continuous monitoring with intermediate evaluations. The workshop brings together knowledge, know-how and interpersonal skills. The indicators in Master Architecture therefore revolve around this Workshop.

- Attendance rate;
- Success rate in the Workshop subject
- Quality of innovative ideas in line with reality, in Workshop
- Debt-free success rate

g) G – Supervisory capacity

160 students per year

4. HUMAN RESOURCES AVAILABLE

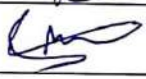
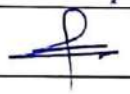
a) Teachers of the establishment working in the specialty

Nom, prénom	Diplôme graduation + Spécialité	Diplôme Post graduation + Spécialité	Grade	Type d'intervention *	Emargement
Belakehal Azeddine	Architecte d'Etat	Doctorat en Sciences + Habilitation Universitaire	Professeur	Conservation et valorisation du patrimoine architectural et urbain	
Farhi Abdellah	Architecte d'Etat	Doctorat d'Etat	Professeur	Méthodes d'analyse urbaine (typo-morphologique, paysagère, sensible)	
Zemmouri Noureddine	Architecte d'Etat	Doctorat d'Etat	Professeur	Relevé et Diagnostic énergétique	
Bennabas Moussadek	Architecte d'Etat	Doctorat d'Etat	Professeur	Logement : espaces et usages	
Bada Yassine	Architecte d'Etat	Doctorat d'Etat	Maitre de Conférences 'A'	Méthodes d'analyse urbaine (typo-morphologique, paysagère, sensible)	
Sriti Leila	Architecte d'Etat	Doctorat en Sciences + Habilitation Universitaire	Maitre de Conférences 'A'	Initiation à la recherche	
Djelloul Amel	Ingénieur en génie climatique	Doctorat en Sciences + Habilitation Universitaire	Maitre de Conférences 'A'	Equipement du bâtiment	
Bouzaher Soumia	Architecte d'Etat	Doctorat en Sciences + Habilitation Universitaire	Maitre de Conférences 'A'	Histoire de l'architecture en Algérie	
Selatnia Khaled	Architecte d'Etat	Doctorat en Sciences + Habilitation Universitaire	Maitre de Conférences 'A'	Méthodes d'analyse urbaine (typo-morphologique, paysagère, sensible)	
Boukhabla Moufida	Architecte d'Etat	Doctorat en Sciences	Maitre de Conférences 'B'	Histoire de l'architecture en Algérie	

Nom, prénom	Diplôme graduation + Spécialité	Diplôme Post graduation + Spécialité	Grade	Type d'intervention *	Emargement
Merad Yacine	Architecte d'Etat	Doctorat en Sciences	Maitre de Conférences 'B'	Maitrise d'œuvre et d'ouvrage	
M'sellem Houda	Architecte d'Etat	Doctorat en Sciences	Maitre de Conférences 'B'	Relevé et Diagnostic énergétique	
Mezerdi Toufik	Architecte d'Etat	Magister	Maitre Assistant 'A'	Architecture et innovations technologiques	
Sekhri Adel	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Seghirou Belkacem	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Boumerzoug Abdelouahab	Architecte d'Etat	Magister	Maitre Assistant 'A'	Voies et réseaux divers	
Alouane Fayçal	Architecte d'Etat	Magister	Maitre Assistant 'A'	Maitrise d'œuvre et d'ouvrage	
Karkar Houria	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Lebbal Noureddine	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Meliouh Fouzia	Architecte d'Etat	Magister	Maitre Assistant 'A'	Anglais	
Djenane Moussadek	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Gouizi Yamina	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	

Nom, prénom	Diplôme graduation + Spécialité	Diplôme Post graduation + Spécialité	Grade	Type d'intervention *	Emargement
Saadi Mohamed Yacine	Architecte d'Etat	Magister	Maitre Assistant 'A'	Relevé et Diagnostic énergétique	
Mokrane Youssef	Architecte d'Etat	Magister	Maitre Assistant 'A'	Séminaire curriculaire	
Ghanemi Fatine	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Tayeb Keltoum	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Daich Safa	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Bouhlas Lakhdar	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Saouli Ahcine zineddine	Architecte d'Etat	Magister	Maitre Assistant 'A'	Conservation et valorisation du patrimoine architectural et urbain	
Nasri Manel	Architecte d'Etat	Magister	Maitre Assistant 'A'	Le dessin du logement	
Merzougui Wafia	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Benaissa Nadjette	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Femmam Nadia	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projets et contexte urbain	
Hafsi Mustapha	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Beddiaf Walid	Architecte d'Etat	Magister	Maitre Assistant 'A'	Programmation urbaine et architecturale/CES	
Rezig Adel	Architecte d'Etat	Magister	Maitre Assistant 'A'	Maitrise d'œuvre et d'ouvrage	
Laouni Ines	Architecte d'Etat	Magister	Maitre Assistant 'A'	Le dessin du logement	
Rezig Djemoui	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	

Nom, prénom	Diplôme graduation + Spécialité	Diplôme Post graduation + Spécialité	Grade	Type d'intervention *	Emargement
Madhoui Meriem	Architecte d'Etat	Magister	Maitre Assistant 'A'	Le dessin du logement	
Mebarki Rym	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Sakhraoui Nacer	Architecte d'Etat	Magister	Maitre Assistant 'A'	Le dessin du logement	
Aboudil Rachida	Architecte d'Etat	Magister	Maitre Assistant 'A'	Etudes préalables et diagnostic selon les pathologies du système de construction	
Gouaref Habib Errahmane	Architecte d'Etat	Magister	Maitre Assistant 'A'	Anglais	
Magri Oudjari Sahar	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Sebti Moufida	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Youcef Kamal	Architecte d'Etat	Magister	Maitre Assistant 'A'	Maitrise d'œuvre et d'ouvrage	
Dali Aomar	Architecte d'Etat	Magister	Maitre Assistant 'A'	Etudes préalables et diagnostic selon les pathologies du système de construction	
Dakhia Azzedine	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Medouki Mostefa	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Boutabba Samir Djemoui	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Benferhat Mohamed Ladaoui	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Makhloufi Soumaya	Architecte d'Etat	Magister	Maitre Assistant 'A'	Programmation urbaine et architecturale/CES	
Sekkour Issam	Architecte d'Etat	Magister	Maitre Assistant 'A'	Atelier de Projet	

Nom, prénom	Diplôme graduation + Spécialité	Diplôme Post graduation + Spécialité	Grade	Type d'intervention *	Emargement
Djebnoun Rachid	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Mkihal Khadidja	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Mahaya Chafik	Architecte d'Etat	Magister	Maitre Assistant 'A'	Architecture et innovations technologiques	
Matallah Mohamed Elhadi	Architecte d'Etat	Magister	Maitre Assistant 'A'	Séminaire curriculaire	
Abdou Yamina	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projets et contexte urbain	
Badache Halima	Architecte d'Etat	Magister	Maitre Assistant 'A'	Histoire de l'architecture en Algérie	
Charif Abderrazak	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Tybermacine Souhila	Architecte d'Etat	Magister	Maitre Assistant 'A'	Projet	
Belarbi Samia	Architecte d'Etat	Magister	Maitre Assistant 'A'	Le dessin du logement	
Benchikha Lynda	Architecte d'Etat	Magister	Maitre Assistant 'A'	Histoire de l'architecture en Algérie	
Boudoukha Ayoub	Architecte d'Etat	Magister	Maitre Assistant 'B'	Equipement du bâtiment	
Kachef Sara	Architecte d'Etat	Magister	Maitre Assistant 'B'	Projets et contexte urbain	
Berkouk Djihed	Architecte d'Etat	Magister	Maitre Assistant 'B'	Projet	
Necira Hakima	Architecte d'Etat	Magister	Maitre Assistant 'B'	Projet	

* = Courses, tutorials, practical work, internship supervision, dissertation supervision, other (to be specified)

b) External supervision:

Home establishment:

Last name First Name	Graduation diploma + Specialty	Diploma Post graduation + Specialty	Grade	Type of intervention *	Registration

Home establishment:

Last name First Name	Graduation diploma + Specialty	Diploma Post graduation + Specialty	Grade	Type of intervention *	Registration

Home establishment:

Last name First Name	Graduation diploma + Specialty	Diploma Post graduation + Specialty	Grade	Type of intervention *	Registration

* = Courses, tutorials, practical work, internship supervision, dissertation supervision, other (to be specified)

5. SPECIFIC MATERIAL RESOURCES AVAILABLE

a) Educational Laboratories and Equipment:

Sheet of existing educational equipment for the practical work of the planned training (1 sheet per laboratory)

Laboratory title: Computing center

Student capacity: 30

No.	Equipment title	Number	observations
01	**Graphics station**	01	
02	**Microcomputers and complements**	31	

Laboratory title: Educational laboratory of models, structures and construction materials

Student capacity: 25

No.	Equipment title	Number	observations
01	**Support and various tools for making models**	30	
02	**Various construction and structural experimentation equipment**	15	

Laboratory title: Visual Arts Room

Student capacity: 90

No.	Equipment title	Number	observations
01	**Tools and workspaces for modeling and painting work**	10	

Laboratory title: Physical experiment room

Student capacity: 30

No.	Equipment title	Number	observations
01	**Heliodon**	01	
02	**Wind tunnel**	01	
03	**Thermo-hygrometer**	01	
04	**Lux meter**	02	
05	**Anemometer**	01	

Laboratory title:LACOMOFA(research)

Student capacity: 30

No.	Equipment title	Number	observations
01	**Various workstations**	40	
02	**Documentation center**	01	
03	**Physical environmental simulation software**	03	

b) Internship sites and in-company training:

Training place	Number of students	Training period
DL, DEP, DUC and architectural and town planning offices (private and public)	160	80 hours per student

c) Research laboratory(ies) supporting the master's degree:

Chef du laboratoire

N° Agrément du laboratoire

Date :

Avis du chef de laboratoire : Avis Favorable

Professeur

Noureddine Zemmouri

d) Master's support research project(s):

Title of the research project	Project code	Project start date	Project end date

e) Personal work spaces and ICT:

- 28 drawing workshop rooms.
- 26 TD rooms.
- 01 Amphi 300 Seats (courses).
- 01 Amphi 180 Seats (classes).
- 02 Amphis130 Places (courses).
- 01 Computer room with a capacity of 31 Microcomputers (for CAD and CAD work).
- Videoconferencing room (Home Cinema, Plasma, rear projectors, DVD player etc.).
- Internet room.
- Specialized documentation center.
- Reprography room.
- Topography Room.

II. SEMESTERLY TEACHING ORGANIZATION SHEET

(Please present the forms for the 4 semesters)

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1. SEMESTER 1:

SEMESTER 1										
Teaching unit	VHS	Weekly VH					coefficient	Credits	Evaluation method	
	14-16 weeks	VS	T.D.	TP	Workshop	Total			Continuous	Exam
EU Fundamentals							**10**	**18**		
Subject 1: Programming, Sketch and Preliminary Project	135h				9am		6	12	100%	-
Subject 2: Urban and architectural programming	10:30 p.m.	1h30					2	3		100%
Subject 3: Structure 1	45h	1h30	1h30				2	3	40%	60%
EU Methodology							**7**	**9**		
Subject 1: Introduction to research	10:30 p.m.	1h30					3	2		100%
Subject 2: History of architecture in Algeria 19th-20th century S. 1	45h	1h30	1h30				2	3	40%	60%
Subject 3: Equipment 1. Electricity and lighting of buildings.	45h	1h30	1h30				2	4	40%	60%
Discovery/Transversal EU							**3**	**3**		
Subject 1: Project management and project management	10:30 p.m.	1h30					1	1		100%
Subject 2: Roads and various networks	10:30 p.m.	1h30					1	1		100%
Subject 3: English 1	10:30 p.m.	1h30					1	1	-	100%
Total Semester 1	**382h30**	**12 p.m.**	**4:30 a.m.**		**9am**	**25:30**	**20**	**30**		

2. SEMESTER 2:

SEMESTER 2										
Teaching unit	VHS	Weekly VH					coefficient	Credits	Evaluation method	
	14-16 weeks	VS	T.D.	TP	Workshop	Total			Continuous	Exam
EU Fundamentals							**10**	**18**		
Subject 1: Execution File (DEX)	135h				9am		6	12	100%	-
Subject 2: Introduction to details and secondary trades (CES)	10:30 p.m.	1h30					2	3		100%
Subject 3: Structure 2	45h	1h30	1h30				2	3	40%	60%
EU Methodology							**7**	**9**		
Subject 1: Introduction to writing a dissertation in architecture	10:30 p.m.	1h30					3	2	100%	
Subject 2: History of architecture in Algeria 19th-20th century S. 2	45h	1h30	1h30				2	3	40%	60%
Subject 3: Equipment 2. Acoustics	45h	1h30	1h30				2	4	40%	60%
Discovery/Transversal EU							**3**	**3**		
Subject 1: Curricular seminar	45h	3h					2	2		100%
Subject 2: English 2	10:30 p.m.	1h30					1	1	-	100%
Total Semester 2	**382h30**	**12 p.m.**	**4:30 a.m.**		**9am**	**25:30**	**20**	**30**		

3. SEMESTER 3:

SEMESTER 3										
Teaching unit	VHS	Weekly VH					coefficient	Credits	Evaluation method	
	14-16 weeks	VS	T.D.	TP	Workshop	Total			Continuous	Exam
EU Fundamentals							10	18		
Subject 1: Theoretical statement of the Project/Memory	135h				9am		6	12	100%	-
Material 2: Support material 1 (see canvas)	10:30 p.m.	1h30					2	3		100%
Material 3: Support material 2 (see canvas)	45h	1h30	1h30				2	3	40%	60%
EU Methodology							7	9		
Subject 1: Professional situation training course	90 hrs					15 days	7	9	100%	
Discovery/Transversal EU							3	3		
Subject 1: Seminar on architectural news	45h	3h					3	3		100%
Total Semester 2	**337h30**	**6am**	**1h30**		**9am**	**4:30 p.m.**	**20**	**30**		

SEMESTER 4:

SEMESTER 4										
Teaching unit	VHS	Weekly VH					coefficient	Credits	Evaluation method	
	14-16 weeks	VS	T.D.	TP	Workshop	Total			Continuous	Exam
EU Fundamentals							**20**	**30**		
Subject 1: END OF STUDY PROJECT	135h				9am		12	20	100%	
Subject 2: END OF STUDY Dissertation	45h				3h		8	10	100%	
Total Semester 2	**180h**				**12 p.m.**	**12 p.m.**	**20**	**30**		

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Domain	**AUMV**
Sector	**Architecture**
Speciality	**Architecture**

	VHS	coefficient	Credits
Personal work	1057h30	68	106
Internship in company	90h	7	9
Seminars	90h	5	5
other (explain, list,)			
Total 4 Semesters	1237:30	80	120

4. OVERALL SUMMARY OF THE TRAINING:

(Indicate the separate global VH in progress, TD, for the 04 semesters of teaching, for the different types of EU)

EU V.H.	UEF	EMU	UED/ UET	Total
Course	135 p.m.	135 p.m.	180 hours	450 hours
T.D.	67h30	90 hrs	-	157:30
TP	-	-	-	-
WORKSHOP	585h	-	-	585 hours
Personal work	135h	225 hours	180 hours	540 hours
Other (specify) internship	-	90h	-	90h
Total	922h30	540 hours	360	1822h30
Credits	84	27	9	120
% in credits for each EU	70%	22.5%	7.5%	100%

III. DETAILED PROGRAM BY SUBJECT

(1 detailed sheet per subject)

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MASTER 1 / SEMESTER 1 [back]

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	1	UEF	6	12		
Subject title					**Workshop**	**TP**
f) PROGRAMMING, SKETCH AND PRELIMINARY DESIGN					9am	

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TITLED :PROGRAMMING, SKETCH AND PRELIMINARY DESIGN
TEACHING UNIT :UEF 1 – PROJECT 1 – SEMESTER 1
NUMBER OF CREDITS:12 COEFFICIENT: 06
TOTAL WEEKLY HOURLY VOLUME:09 A.M.

COURSES (NUMBER OF HOURS PER WEEK):00:00
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00:00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00
WORKSHOP (NUMBER OF HOURS PER WEEK):09 A.M.

PREREQUISITES:
Project workshop and project theory 1, 2, 3, 4, 5 and 6, Spatial analysis, Anthropology of space, planning and spatial development 1

GENERAL OBJECTIVE OF THE TEACHING SUBJECT:
Acquisition of methodological bases to approach the development of projects based on the programmatic approach
Acquisition of the tools necessary for the progressive design (Sketch, preliminary project)

SPECIFIC (LEARNING) OBJECTIVES:
INTRODUCTION to the programmatic approach (analysis – programming and architectural design). This approach is based on:
Collection of data, needs, requirements and constraints of the project owner and future users (learn how to carry out the survey prior to any project)
The Summary of the analytical phase in the form of a program: General program, specific program
The transition from a surface program to architectural projection (organization of spaces) by developing a sketch and preliminary project.

CONTENT OF TEACHING MATERIAL
In order to achieve the advanced objectives, the student chooses a plot of land in an urban area with an area of 1000 to 1500 M^2. It also chooses a type of small project presenting a specific use which adapts to this land (Non-exhaustive example: Sports hall, Swimming pool, Mosque, Cultural center, Leisure center, Youth center, Office building, Residence (housing + office), Neighborhood library, Health center, Bank, Postal agency, Daycare, Primary school, Vehicle dealership, Clinic, Medical analysis laboratory, Research laboratory, Student houses, etc.). The choices are made by the student in order to introduce them to justification (problematic and objective) and decision-making in relation to the different possibilities identified. After carrying out a thematic analysis, the student analyzes the land and its site to arrive at a detailed program of the different functions and their surfaces. From this data, the student identifies the identity of the project (interpretation of the program) by taking into consideration all of the requirements presented.

Phase 1: Analysis and programming (4 Weeks)

Step 1 - The Choices: Choice of an equipment or housing project in an urban context - Choice of land with an area of 1000 to 1500 M² - Motivation of the choices of the project and the land (from 'a problem and objectives).
2nd step- Thematic analysis: Bibliographic research, Existing projects, Functional aspects, Survey on users and users, Sociological and psychological aspects, Summary.
Choices + thematic analysis (2 Weeks) - Presentation - (Coefficient 1)
Step 3 -Site analysis:
The environment: neighborhood, urban facade, urban landscape, heights, silhouette, access, climate, mechanical and pedestrian traffic flows,
The terrain: morphology, topography, occupation, surface.
The various existing networks: drinking water supply (AEP), gas supply, electricity supply, sanitation, telephone, etc.
The soil: geology, admissible stress.
Step 4 - Program:main and secondary functions, Detailed functions and justified surfaces
Site analysis + Programming (2 Weeks) - Display 1 - (Coefficient 1)
Phase 2: Architectural projection (10 Weeks)
Step 1 - Conclusive sketch: Summary design resulting in a working model (volume), operation and choice of type of structure
Step 2 - Sketch:Location plan (Scale: 1/5000, 1/2000, 1/1000) - Ground plan (Scale: 1/500, 1/200) - Plan of all levels (Scale: 1/200) - All facades (Scale: 1/200) - Minimum 2 useful sections including one on a staircase (Scale: 1/200) - Perspectives and atmospheres - Model (Scale: 1/200) - Written piece (summary description)
Sketch (5 weeks) - Display 2 - (Coefficient 2)
Step 3 - Preliminary project: Location plan (Scale: 1/5000, 1/2000, 1/1000) - Mass plan (Scale: 1/500, 1/200) - Plan of all levels (Scale: 1 /100) - All facades (Scale: 1/100) - Minimum 2 useful sections including one on stairs (Scale: 1/100) - Structural plan (Scale: 1/100) - Foundation plan (Scale: 1/100) 100) - Roof plan (Scale: 1/100) - Perspectives and atmospheres - Model (Scale: 1/100) - Lowering of loads (dimensions of structural elements)
Preliminary Project (5 weeks) - Display 3 - (Coefficient 3)
EVALUATION MODE

Nature of control	Weighting in %
Exam	00%
Continuous	100%
Total	100%

REFERENCES & BIBLIOGRAPHY
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Zetlaoui-Léger, Jodelle. 2002. Modalities for applying concerted and participatory programmatic approaches for local projects, Paris: Ministerial delegation of the city/Paris12 Val-de-Marne University.
Zuchelli.A, 1984, introduction to operational planning and urban composition, volume 1,2 3 and 4, OPU
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PaneraiP.,DemorgonM., Depaule JP., Urban analysis, Parenthesis, 1999
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Mazouz S, Elements of architectural design, Office of University Publications, Algiers, 2004.
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Zevi B,Learning to see architecture, ed. de Minuit, 1959.
Saidouni M., Introductory elementsin town planning, Casbah, Algiers 2000

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	1	UEF	2	3	1h30	
Subject title					**Workshop**	**TP**
g) URBAN AND ARCHITECTURAL PROGRAMMING						

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TITLED :URBAN AND ARCHITECTURAL PROGRAMMING
TEACHING UNIT :UEF 1 – SUBJECT 1 – SEMESTER 1
NUMBER OF CREDITS:03 COEFFICIENT: 02
TOTAL WEEKLY HOURLY VOLUME:1H 30

COURSES (NUMBER OF HOURS PER WEEK):01:30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00:00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00

PREREQUISITES:
Project workshop and project theory 1, 2, 3, 4, 5 and 6, Spatial analysis, Anthropology of space, spatial planning and development 1 and 2.

GENERAL OBJECTIVE OF THE TEACHING SUBJECT:
Mastery of programming as a design tool and as an instrument of reflection in architectural practice
Awareness of the programming phase as a field of activity underlying qualitative and quantitative production.

SPECIFIC (LEARNING) OBJECTIVES:
Development of critical reflection on the context of evolution of programming practices and the different methods it involves beyond spatial quantification
Framing the act of programming in the different scales of intervention in the architectural project

CONTENT OF TEACHING MATERIAL
Architectural and urban programming is a subject developed to support certain aspects of project workshop work in S1. It is a master class that emphasizes the act of programming as an essential phase of architectural design at different scales.
The course has two parts:
The first part presents a reflection of a genealogical nature which consists of summarily identifying in the genesis of the ideas and practices of the act of programming, references likely to explain the current conditions of practicing programming according to its scales and its processes. diversified.
The second part aims to understand and understand the practical modes of the act of programming as well as the forms of knowledge and know-how induced by the latter. That is to say, explaining each method according to the nature of the project it underlies.

Course 1: Programming versus program

- What is programming? Genesis of the practice
- What is a program? Types of programs for an architectural project
- Interest and consistency of programming for the project process

Course 2:genesis of programming processes

- Planned programming
- Standardized programming
- Strategic programming
- Concerted and participatory programming

Course 3: Programming scales

- Architectural programming (functional – operational)
- Urban programming (territorial-city-district)
- Mixed programming (housing project-Large facilities)

Course 4:the references of spatial programming for the architectural project

- Anthropomorphic frames of reference for spatial dimensioning
- Technical and regulatory standards (sanitary and hygienic regulations – comfort and construction – urban equipment)
- The notions of surface in a space program according to the uses of spaces

Course 5: Spatial programming: Basic ergonomic method / sizing of functional units / determination of habitable surfaces / calculation of circulation of ancillary services (technical premises, parking space, green spaces, etc.)

Course 6:references and methods of urban programming

Threshold for sizing urban entities (neighborhood-neighborhood units-housing-residence group) / usual indicators of urban forms (COS-CES-DENSITY) / Urban development rules (setback and prospects) / Scaling grids equipment / Urban programming within the framework of urban development instruments: GPU-PDAU-POS

Course 7:mixed programming

- Modes of production and state surface programs in Algeria
- Method of urban and spatial programming for housing projects according to type (promotional, social, assisted social, etc.): determination of the surface areas of buildings, roads and service annexes, number of housing units, types of buildings , type of grouping.
- Urban and spatial programming method for large infrastructure projects:
- the program according to the size and area of influence of the equipment (its scale);
- financing: technical sheets for registration, reassessment, restructuring.

Course 8:operational programming of architectural interventions (rehabilitation-requalification-reconversion) / Institutional and regulatory framework / Action contexts: Technical diagnosis - estimation of implementation costs - definition of the action protocol

DIRECTED WORK IN THIS MATTER WILL BE ACCOMPLISHED IN THE WORKSHOP AT THE CORRESPONDING PHASE IN THE DEVELOPMENT OF THE PROJECT. IN THIS SPECIFIC CASE, THEY WILL CONCERN THE PHASE Analysis and programming. (PHASE 1)

EVALUATION MODE

Nature of control	Weighting in %
Exam	100%
Tutorials	00%
Total	100%

REFERENCES & BIBLIOGRAPHY

Allégret, Jacques. 1998. Framing and formulation of architectural orders, case studies, Paris: Urban planning, construction, architecture (PUCA).

Duarte Paulette, Novarina Gilles, Seigneur et Natacha, Roux Jean-Michel, 2008, Reflections on large-scale project tools, living on the banks, PUCA

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Interministerial Mission for the Quality of Public Construction (MIQCP), 1994. Programming of public constructions, Paris, le Moniteur

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Zetlaoui-Léger, Jodelle. 2002. Modalities for applying concerted and participatory programmatic approaches for local projects, Paris: Ministerial delegation of the city/Paris12 Val-de-Marne University.

Zetlaoui-Leger Jodelle, 2008. Architectural and urban programming, emergence and evolution of a function - Les Cahiers de la recherche architecturale eturbane [Online], 24/25 | 2009, posted online on September 1, 2017, consulted on February 14, 2018. URL: http://journals.openedition.org/crau/312

Zetlaoui-Léger, Jodelle. 2009. “The exercise of architectural and urban programming in France”, in Biau, Véronique and Tapie, Guy (dir.), La Fabrication de la ville, Paris: Parenthesis, p. 87101.

Zuchelli.A, 1984 “introduction to operational town planning and urban composition” volume 3- OPU

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	1	UEF	2	3	1h30	1h30
Subject title					**Workshop**	**TP**
h) STRUCTURE 1						

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TITLED :STRUCTURE 1
TEACHING UNIT :UEF 1 – SEMESTER 1
NUMBER OF CREDITS:03 COEFFICIENT: 02
TOTAL WEEKLY HOURLY VOLUME:03:00

COURSES (NUMBER OF HOURS PER WEEK):1H 30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):1H 30
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES:
Building Materials Technology 1 and 2, Construction 1 and 2, Structure 1 and 2.

GENERAL OBJECTIVE OF THE TEACHING SUBJECT:
Acquisition of information and knowledge on the actors in the act of building and the need for coordination (with engineers)
Introduction to structural choices in architectural designs and the pre-sizing of special works.

SPECIFIC (LEARNING) OBJECTIVES:
Acquisition of fundamental knowledge on the different construction systems which allow the student to make choices from the range of existing technological solutions for the realization of a specific project.
Introduction to the choice of construction systems and techniques appropriate to the architectural project

CONTENT OF TEACHING MATERIAL
The structure course 1 of the 1st semester complements the knowledge acquired as part of the prerequisite subjects taught in the Bachelor's degree. It allows you to take stock of the diversity of constructive approaches and to become familiar with the different types of structures. The course places a fundamental interest in structure as part of architectural form in the same way as function and allows students to acquire the basic knowledge necessary for the design of a structure as the genesis of an architectural project. The course introduces an approach to complex structures (special and spatial) by allowing the student to think about a design by structure taking into account regulatory parameters (earthquake rules, standards, etc.)

1. **Geotechnics and special foundations**

Reminder on the fundamental notions of soil mechanics (physical and mechanical properties of soils) - Geotechnical report - Soil-structure interaction
Deep foundations:Study of the most common problems in a subgrade (clay soil, cavities, faults, water tables, etc.) and proposal of appropriate solutions (improvement, consolidation, drainage, etc.) or specific foundations (then, piles, etc.).

2. **Stability of work structures with respect to seismic forces and torsion. (Seismic recommendations)**

- Regulatory framework: RPA and Eurocode - Evolution of the regulatory framework in Algeria
- General notions: design, hazards and solutions.
- Bracing systemshorizontal and vertical: case of reinforced concrete, metallic or mixed structures):
- Arrangements of seismic joints and regularities of structures in plan and elevation.
- Repair of a post-earthquake structure.

3. Supporting systems for metal buildings

- Industrial halls
- Usual supporting systems (with a simple or suspended central core, tube structure, etc.)
- Special supporting systems (alternating trusses, bridge buildings, etc.)

4. Structures of high-rise buildings (IGH)

- Particularities of the different construction systems of IGHs
- Recommendations provided for in the regulations in force

5. Mixed structures (Steel/Concrete)

EVALUATION MODE

Nature of control	**Weighting in %**
Exam	**60%**
Tutorials	**40%**
Total	**100%**

REFERENCES & BIBLIOGRAPHY

Francis DK Ching.Technical and practical guide to construction,
Capra A., Davidovici V. Dynamic calculation of structures, Eyrolles, Paris 1984
Zacek M., Seismic construction, Parentheses 1996
RPA Algiers 2003 and 2010
Edwardo Torroja. Architectural Structures
Matthys Levy and Mario Salvadori.How does it happen?
Andrew W Charleson .Structure as architecture,
In Muttoni. The art of structures,
Philip Garriso.Architectural Structures for Engineers and Architects
R. Vittone: Building, construction manual. Ed. PPUR
Mr. Salvadori: How does it hold up? Ed. Parentheses
P. Rice: The Memoirs of an Engineer. Ed. Parentheses
Collective: Building with steel. PPUR, 1999
MA Studer, F. Frey: Introduction to structural analysis. Ed. PPUR
E. Torroja: Architectural structures. Ed. Eyrolles
M. Salvadori and R. Heller: Structures and architectures. Ed. Eyrolles
N. Lislorg: Principle of structural design
H. Thonier: Design and calculation of building structures
P. Guillemont: Reinforced concrete cheat sheet. Dunoc 2005
D. Gauzin-Müller: Building with wood. Ed. Le Moniteur

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	1	EMU	3	2	1H30	
Subject title					**Workshop**	**TP**
i) INITIATION TO RESEARCH						

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TITLED :INITIATION TO RESEARCH
TEACHING UNIT :UEM1 – SEMESTER 1
NUMBER OF CREDITS:2 COEFFICIENT: 2
TOTAL WEEKLY HOURLY VOLUME:1H30

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

GENERAL OBJECTIVE OF THE TEACHING SUBJECT: Introduction to scientific research. Acquisition of basic research concepts and tools

LEARNING OBJECTIVES: Construction of research objects, problems and arguments. Definition of objectives and approaches (methods)

CONTENT OF TEACHING MATERIAL

General characteristics of the scientific mind: The characteristics of science / Scientific research / The methodology of approach / The formulation of the research problem / The implementation of the research problem,

EVALUATION MODE

Nature of control	Weighting in %
Exam	100%
Tutorials	00%
Total	100%

REFERENCES & BIBLIOGRAPHY

Angers M. (1997). Practical Introduction to Human Sciences Methodology. Ed. Casbah, Algiers and Ed. CEC Inc., Quebec.

Arbrio AM and Fournier P. (2003). The Investigation and its Methods. Direct Observation. Ed.Nathan/VUEF, Paris.

Blanchet A., Ghiglione R., Massonat J. and Trognon A. (2000). Survey Techniques in the Social Sciences. Observe, Interview, Question. Dunod, Paris.

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Diday E., Lemaire J., Pouget J. and Testu F. (1982). Elements of Data Analysis. Ed.Dunod, Paris.

Doise W. et al (1992). Social Representations and Data Analysis. Presses Grenoble academics, Grenoble.

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	1	EMU	2	3	1H30	1H30
Subject title					**Workshop**	**TP**
j) HISTORY OF ARCHITECTURE IN ALGERIA 1 (19th AND 20th CENTURIES)						

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TITLED :HISTORY OF ARCHITECTURE IN ALGERIA 1 (19TH AND 20TH CENTURIES)
TEACHING UNIT :UEM1 - SEMESTER 1
NUMBER OF CREDITS: 3COEFFICIENT: 2
TOTAL WEEKLY HOURLY VOLUME:3H

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):1H30
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES: Critical history of HCA3 architecture
GENERAL OBJECTIVE OF THE TEACHING SUBJECT:
Introduction to knowledge of architecture in Algeria.
Acquisition of the foundations of architectural styles in Algeria during the 19th and 20th centuries
SPECIFIC (LEARNING) OBJECTIVES:
Acquisition of a cultural base (architectural and historical) from the local context.
Introduction to participation in the development of a national architectural "model".
CONTENT OF THE TEACHING MATERIAL:

A/ Vernacular Architectures in Algeria:

Insights into traditional and vernacular architecture in Algeria from the period preceding French colonization (the aim is to take stock of the situation at the time preceding the changes caused by colonization). This component includes a necessary allusion to the spatial context characterizing the territory directly linked to the location of the training without being exclusively referring to it, for example the courses will preferably develop, depending on the location:

- The urban/medinal context: Casbah of Algiers / Old Town of Constantine / Derb and Arab city of Mostaganem / Medieval Spanish town planning in Oran / Medina of Tlemcen, Bejaia, etc. / Old Punic and Berber towns / Military Architectures in Adrar, Annaba, Bechar, etc. / the dechras and fortified villages in Kabylie and Aurès / the ksour Mzab, Saoura Gourara and the Souf / The list is not exhaustive.
- Spatial organization and culture (geography/environment)
- Materials/construction techniques
- Built landscapes.

B/ Colonial Period 1830-1962

These courses will emphasize the historical aspects in a local relationship on the one hand and the development of Architecture in the global framework. It is also necessary to highlight the socio/spatial destructuring (interventions on cities and medinas) and on cities created ex nihilo.
First installations / Neo-classical / Art Nouveau in Algeria / Neo-Moorish / Art Deco /Modern architecture / Modern urban planning.

EVALUATION MODE

Nature of control	Weighting in %
Exam	60%
Tutorials	40%
Total	100%

REFERENCES & BIBLIOGRAPHY:

Nabila Oulebsir,"The ambiguities of regionalism: the neo-Moorish style", in Algiers, urban landscape and architectures, 1800-2000, Jean-Louis Cohen, Nabila Oulebsir and Youcef Kanoun (dir.), Besançon: Les éditions de l'Imprimeur, 2003, p . 104-125.
Nabila Oulebsir,The uses of heritage: monuments, museum and colonial policy in Algeria (1830-1930), Paris: Editions de la Maison des Sciences de l'Homme, 2004.
François Béguin,Arabisances, Paris: Dunod, 1983.
Aleth Picard. Architecture and urban planning in Algeria. From one shore to the other (1830-1962). In RMMM, No. 73/74. 1994 pp.121-136
Michele Biesse-Eichelbrenner,Constantine. The conquest and the time of the pioneers, L'Haÿ-les-Roses, Chez l'auteure, 1985, 207 p.
Isabelle Grangaud,The impregnable city. Social history of Constantine in the 18th century, doctoral thesis in history under the direction of Lucette Valensi, EHESS, 1998, 2volumes, 495 p.
Algiers, lights on the city, Proceedings of the international conference held from May 4 to 6, 2002 at the Polytechnic School of Architecture and Urban Planning of Algiers, EPAU, 2002, 729p.
Rafik Baghafor,Oran (Algeria). Urban stages and monograph of its public facilities, 1830 to 1930, DEA in history under the direction of JM Leniaud, 1992, 134 p
Roger Le Tourneau,The Muslim cities of North Africa, Algiers, "Library of the Institute of Higher Islamic Studies of Algiers", XI 1957, 130 p.
François Dumasy,"Rethinking the urban history of colonization. Some reflections for a social approach to forms in the Maghreb case", Pierre-Robert Baduel, Projects and challenges of research on the contemporary Maghreb, Tunis/Paris, IRMC/Karthala, 2009 p. 265-287.
Malverti,X"Algiers, Mediterranean, sun and modernity -, French Overseas Architectures" collective work directed by M. Culot and JM, AAM, Liège 1991.
Mark. Side,Algeria or space returned, Ed.MEDIA-PLUS, Constantine 1993
Jean Pierre Frey, Henri Raymond,"Words of a sociologist, towards an architectural history of society", Edition: le Harmattan, Paris, 2006.
Tony Socard,(1945), "The fabric of cities", Publications of the Center for Economic and Social Studies of French Africa, n°1 and 2, Algiers.

BENKADA Saddeket al. “Oran, Past, Present and Perspectives”. International conference on the future of the Mediterranean city - “Tradition and Urban Future”. UNCHS-European Union. Venice January 11, 12 and 13, 1996. Published under the direction of Anna Marson: Tradizione e futuro urbano. The Mediterranean city fronts all the sfida Habitat. Turin, L'Harmattan, 1996, pp. 95-105.

BENKADA Saddek,“Spanish Oran. Urban developments and works during the second Spanish occupation 1732-1792), Primeras jornadas hispano-argelinas de Historiadores y documentalistas. National University of

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	1	EMU	3	4	1H30	1H30
Subject title					**Workshop**	**TP**
k) EQUIPMENT 1: ELECTRICITY AND LIGHTING OF BUILDINGS						

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TITLED :EQUIPMENT 1: ELECTRICITY AND LIGHTING OF BUILDINGS
TEACHING UNIT: UEM1 - SEMESTER: 1
NUMBER OF CREDITS:4 COEFFICIENT: 3
TOTAL WEEKLY HOURLY VOLUME:3H

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):1H30
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES: Frame equipment (L3 S6)
GENERAL OBJECTIVE OF THE TEACHING SUBJECT:

- Introduction to energy performance in construction.
- Acquisition of equipment installation methods in relation to architectural design / Awareness of equipment choices.

LEARNING OBJECTIVES:
Mastery of the graphic representation of electrical installations / Mastery of the sizing of equipment in the building.
CONTENT OF THE TEACHING MATERIAL:

1. **Visual comfort and standards**
2. **Natural lighting**

2.1 Photometric quantities
2.2Natural lighting devices
2.3Sun and architecture - Climate potential
2.4Sun and architecture - Sunshine control by architectural forms
Light and color

3. **Artificial lighting**

3.1Building lighting - Standards, regulations and good practices
3.2Promises and weaknesses of indoor lighting
3.3 Good lighting practices
3.4 Safety lighting (Design requirements for stand-alone emergency lighting units)
3.5Urban lighting

4. **Renewable energies: photovoltaics and wind turbines**

EVALUATION MODE

Nature of control	Weighting in %
Exam	**60%**
Tutorials	**40%**
Total	**100%**

REFERENCES & BIBLIOGRAPHY:(To be defined by the teacher at the start of the semester).

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	1	UET.D	1	1	1H30	
Subject title					**Workshop**	**TP**
I) PROJECT MANAGEMENT AND PROJECT MANAGEMENT						

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TITLED :PROJECT MANAGEMENT AND PROJECT MANAGEMENT
TEACHING UNIT :UET/D1 - SEMESTER 1
NUMBER OF CREDITS:1 COEFFICIENT: 1
TOTAL WEEKLY HOURLY VOLUME:1H30

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES:
The learner must have:

- The knowledge acquired during the Bachelor of Architecture training, in particular:
- Scientific skills: basic mathematical knowledge of quantity calculations (surface areas and volumes).
- Technical skills: knowledge of materials and equipment as well as their conditions of use and implementation.
- Practical skills: qualities of observation and deduction.

GENERAL OBJECTIVE OF THE TEACHING SUBJECT:
At the end of this course the learner must know the different participants in the act of building as well as the role, the responsibilities of each actor and the interactions between them. He must, in addition, know how to establish quantitative estimates for a building project,

LEARNING OBJECTIVES:
At the end of this course the learner should be able to:
Identify the different stakeholders in the act of building;
Recognize the missions of the project manager and the project owner;
Recognize the Algerian regulatory framework relating to the exercise of project management and project management;
Calculate a sub-detail of prices;
Establish a quantitative quote - estimate

CONTENT OF TEACHING MATERIAL
This teaching unit taught during semester 1 has 06 chapters:
Chapter I: The participants in the act of building.
Course 1: Those involved in the act of building: defining the act of building, the project owner, the project manager and the construction company(ies).

Chapter II: The Project:

Course 2: Preliminary studies:Opportunity study, feasibility study, environmental impact study, definition of needs (quantity and quality), pre-program, etc.

Course 3: architectural studies:Summary Preliminary Project (APS), Final (or Detailed) Preliminary Project (APD), Building permit file and other administrative authorizations…

Course 4: detailed studies (or execution):The execution plans and the CTC approval.

Chapter III: Project management (MOE).

Course 5: Definitions and functions of the project manager.

Course 6: Regulatory system for project management: Study of the main texts of Algerian regulations (see references below), content of project management missions.

Course 7: The exercise of project management: Designer project manager, controller project manager, use of IT tools, establishment of specifications.

Chapter IV: The economics of construction.

Course 8: Quantity measurement and construction economics: Introduction to the Art of quantity surveying, the basic notions of calculating quantities (with examples and application exercises)...

Course 9: Deadlines, work scheduling and schedules:The notion of deadlines in particular in the Algerian public procurement regulations and the consequences of non-compliance with contractual deadlines (in particular on the economics of the project).

Course 10: Price studies and price variations.Calculation of unit prices for different items. The study includes the following steps:

Search for basic quantities of components, calculation of hourly labor costs, calculation of costs excluding taxes of materials delivered to construction sites, calculation of costs of using production equipment assignable to Elementary Works, Calculation of price sub-details in dry disbursements, Research of the PVHT / DS sales coefficient (K) and calculation of the PVHT of each OE, Development of the estimated quantity quote (DQE

Course 11: Price variations: updating and revision of prices.

Chapter V: Project management and public procurement.

Course 12: Project management; definitions, roles, functions, responsibilities…

Course 13: Public contracts: Technical and administrative management: implementation of contracts, site installations, additional and less and complementary services, contingencies, execution control, settlement of disputes,

Course 14: Public procurement: Financial and accounting management:Public expenditure procedure, differences between authorizing officers and paying accountants, guarantees, payment of services, closure of a contract, etc.

ChapterVI:The organization of construction sites and the construction stages.

EVALUATION MODE

Nature of control	Weighting in %
Exam	100%
Tutorials	00%
Total	100%

REFERENCES & BIBLIOGRAPHY

Patricia Grellier Wyckoff. Practice of construction law, public and private markets. Eyrolles 2010.

Michel Manteau, Eyrolles building survey, 1987.

Yves Widloecher,David Cusant.Price study manual, Construction companies - Context - Course - Case studies - Solved exercises. Eyrolles 2013

Claude-Hubert Jacquot,Jacques-Yves Renet.The economy for building and civil engineering - Eyrolles price study 2002

Jean-Pierre Gousset. Preliminary survey - Earthworks, roadworks and structural work Eyrolles 2015

Jean-Pierre Gousset - Jean Claude Capdebielle - René Parlat Le Métré: CAD-CAD with Autocad - Price study .Eyrolles 2011

Khalid Barouti Najat Iggout, Establishment of measurements theoretical summary and practical work guide OFTP, 2007

-Interministerial decree of 05/15/88 establishing the terms and conditions for the exercise and remuneration of building project management

- Executive Decree No. 16-224 of August 22, 2016 setting the terms of remuneration for building project management

- Presidential Decree No. 15-247 of September 16, 2015 regulating public procurement and public service delegations

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	1	UET.D	1	1	1H30	
Subject title					**Workshop**	**TP**
m) ROADS AND MISCELLANEOUS NETWORKS (VRD)						

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TITLED :ROADS AND MISCELLANEOUS NETWORKS (VRD)
TEACHING UNIT :UET/D1 - SEMESTER 1
NUMBER OF CREDITS:1 COEFFICIENT: 1
TOTAL WEEKLY HOURLY VOLUME:1H30

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES:
Knowledge acquired during the degree training in architecture, in the subject Building equipment 1 and 2 in 3rd years

GENERAL OBJECTIVE OF THE TEACHING SUBJECT:
Deepening knowledge in the field of roads and various networks relating to the project.

LEARNING OBJECTIVES:
Acquisition of the concepts of roads and various networks: Earthworks, AEP networks, Domestic wastewater sanitation networks, rainwater networks, Electrical networks, roads.

MATERIAL CONTENT
As a whole, this course consists of presenting theoretical knowledge, as well as technical and practical methods for solving problems linked to urban engineering (VRD) essential to the training of architects responsible for designing projects, developing specifications and to supervise by coordinating the work of the company.
The following chapters will be developed
General presentation.
I/ Earthworks Different phases of earthworks, movement of earth, cubature of earthworks.
II/ Drinking water supply networks, Main elements of an urban hydraulic system, The route of the network, Operating conditions of a network, Water demand, Distribution networks, Calculation and sizing.
III/ Domestic wastewater sanitation networks, Sanitation network accessories, different sanitation network systems, flow assessment, factors influencing the design of a sanitation project, longitudinal profile drawing.
IV/ Rainwater drainage networks, Rain, runoff and flooding, rainwater drainage networks (Dimension, construction, malfunction), sustainable management of urban water.
V/ Electrical networks, Electricity network, different voltage categories, elements of a network, different modes of a network, Transformers, light sources (lamps), Radial distribution, Outdoor lighting.

VI/ Roads. Administrative classification of roads, design and construction of urban roads (Criteria, dimensions, carriageways), general information on crossings (Types and sizing).

DIRECTED WORK IN THIS MATTER WILL BE ACCOMPLISHED IN THE WORKSHOP AT THE CORRESPONDING PHASE IN THE DEVELOPMENT OF THE PROJECT. IN THIS SPECIFIC CASE, THEY WILL CONCERN THECES (Interior sanitation, AEP, gas, heating, air conditioning, electricity, telephone, internet networks, lightning rod). (PHASE 2).

EVALUATION MODE

Nature of control	Weighting in %
Exam	100%
Tutorials	00%
Total	100%

REFERENCES & BIBLIOGRAPHY

Gérard Karsenty, “Practical guide to VRD and exterior developments: From studies to carrying out the work”, Edition Eyrolles, 2004.

Bureau VERITAS, “Roads and various networks guide: Water, electricity, sanitation, ANC”, Edition Le Moniteur, 2014.

Régis Bourrier, “Sewage networks: Calculations, applications, perspectives”, Edition Lavoisier, 2008.

AFNOR Collection, “Design, Construction and Operation”, AFNOR Edition, 1998.

Jean-Pierre Gyéjacquot, “Design, Construction and Maintenance of roads: Roads, sidewalks, crossroads, signaling”, Construction and operation”, Edition Le Moniteur, AFNOR, 1998.

Bayon, (R.) “The practice of VRD”, Editions Moniteur, Paris 1982

Bayon, (R.), (1998), VRD: roads - various networks - earthworks - green spaces: designer's aide-memoire, Eyrolles editions.

Goutte Cyril, Sahmi Nadia, (2010), Designing spaces accessible to all: transport, roads, homes, ERP, IOP, workplaces, CSTB editions.

Wachter Serge, (2004), Traffic in the city: architecture and town planning at the risk of mobility, Recherches editions.

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	1	UET.D	1	1	1H30	
Subject title					**Workshop**	**TP**
n) ENGLISH 1						

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TITLED :ENGLISH 1
TEACHING UNIT :(UET/D1) - SEMESTER 1
NUMBER OF CREDITS:1 COEFFICIENT: 1
TOTAL WEEKLY HOURLY VOLUME:1H30

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES: Foreign language L3
GENERAL OBJECTIVE OF THE TEACHING SUBJECT:
Introduction to knowledge of terms specific to the field of architecture.
Introduction to oral and written understanding of this universal language, to improve your research.
SPECIFIC (LEARNING) OBJECTIVES:

- Consolidation and improvement of language skills.
- Knowledge of terms specific to the field of architecture

CONTENT OF TEACHING MATERIAL
Oral comprehension (Listening)
• Conversations, interviews (audio texts read by a native speaker).
• Comment on a table/diagram.
• Label a diagram/illustration.
• Complete sentences/text.
• To fill out a questionnaire.
EVALUATION MODE

Nature of control	Weighting in %
Exam	**100%**
Tutorials	00%
Total	**100%**

REFERENCES & BIBLIOGRAPHY
Abby Marks-Beale, (2001), Ten days to faster reading, Warner Books.
Advanced Grammar in use, a reference and practice book for advanced learners of English from Cambridge University Press.
Bescherelle 6000 English verbs and their compounds, forms and uses at Hatier.
English Grammar in use, a self-study reference and practice book for intermediate students of English at Cambridge University press.
Journal Ease Exercises, 120 words to assimilate the vocabulary of an English or American newspaper, Chez Bréal. Stierlin Henri, (1996), Islam: the origins of Baghdad in Cordoba, Volume 1, edition

MASTER 1 / SEMESTER 2 [back]

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	2	UEF	6	12		
Subject title					**Workshop**	**TP**
o) EXECUTION FILE (DEX)					9am	

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TITLED :EXECUTION FILE (DEX)
TEACHING UNIT :UEF 2 – PROJECT 2 – SEMESTER 2
NUMBER OF CREDITS:12 COEFFICIENT: 06
TOTAL WEEKLY HOURLY VOLUME:9am

COURSES (NUMBER OF HOURS PER WEEK):00
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00
WORKSHOP (NUMBER OF HOURS PER WEEK):9 A.M.

PREREQUISITES: Project workshop and project theory 1, 2, 3, 4, 5 and 6, Building materials technology 1 and 2, Building physics, Construction 1 and 2, Building equipment 1 and 2, Structure 1 and 2.

GENERAL OBJECTIVE OF THE TEACHING SUBJECT:

Assimilation of the various means and useful knowledge to be able to move from the idea formulated architecturally to its realization,

Master the different ways of making a project feasible: execution plan, choice of materials, definitions of structural and constructive characteristics, description of works, written documents required by regulations.

SPECIFIC (LEARNING) OBJECTIVES:

Learning how to develop an execution file through the establishment of a dialogue between the architectural design (forms and functions) and the constructive dimension of the project in the broad sense of the term.

Commitment to materiality in line with the project design

Introduction to the design of technical and architectural details.

Mastery of the integration of the various installations of sanitary plumbing, heating, air conditioning, electricity and ventilation equipment and their management – upstream – in the design of the project.

CONTENT OF TEACHING MATERIAL

In continuity with the previous phases (semester 1) and after having developed a preliminary project, the work continues - on the same theme and the same terrain - by the development of an execution file (DEX) (graphic documents and written pieces). The content of project 2 of semester 2 is the design of a feasible project whose procedure took into account all the parameters involved in the act of building.

Phase 1 - Execution file (Architecture) (8 Weeks)

- Location plan (Scale: 1/5000, 1/2000, 1/1000)
- Ground plane (Scale: 1/500, 1/200)
- Layout plan (1/100, 1/200)
- Earthworks plan (1/100, 1/200)
- Plan of all levels (Scale: 1/50)
- All facades (Scale: 1/50)

- Minimum 2 useful cuts including one on stairs (Scale: 1/50)
- Structural plan (formwork) (Scale: 1/50)
- Foundation plan (Scale: 1/50)
- Roof plan (Scale: 1/50)
- Technical construction details and architectural details (Scale: 1/20, 1/10, 1/5, 1/2)
- Carpentry table (Scale: 1/20)

Phase 1 - (8 weeks) - Display 1 - (Coefficient 2)

Phase 2 - Execution file (CES, VRD and written documents)(6 weeks)

CES (Indoor sanitation, AEP, gas, heating, air conditioning, electricity, telephone, internet networks, lightning rod)
VRD (Exterior sanitation, AEP, gas, electricity, telephone)
Specifications including:
Special Prescription Books (CPS)
Technical prescription specifications (CPT)
Common prescription notebooks (CPC)
Descriptive quote
Unit price schedule
Quantitative and estimated quote

Phase 2 - (6 weeks) - Display 2 - (Coefficient 3)

Parallel work: Alongside the workshop work, other educational tools are planned as follows:
Lodges:This is work - related to the content of the subject - requested from students during a workshop day
Site visitsin progress, sanctioned by site reports which will be subject to evaluation by teachers.
Works - (Coefficient 1)

EVALUATION MODE

Nature of control	**Weighting in %**
Exam	00%
Continuous	**100%**
Total	**100%**

REFERENCES & BIBLIOGRAPHY

Architects and construction. Interviews with Paul Chemetov, Henri Ciriani, Stanislas Fiszer, Christian Hauvette, Georges Maurios, Jean Nouvel, Gilles Perraudin and Roland,C. Simon andV. Picon-Lefebvre,Parentheses, 2014
Detail design in architecture, A. Edward, Modulo, 2012
Technical and practical guide to construction,Francis DK Ching,Jean-François Perrault,Modulo, 2016
Elements of construction projectsn – 11th edition, E. Neufert, DUNOD, 2014
Construction techniques and details in i architectureinterior – 2nd edition, Materials, elements and structures, design, construction, finishes,D. Plunkett, DUNOD, 2015

Building construction technology, J.PUTATI (ed EYROLLES)
Building technology for all trades, H. Duthu, Le Moniteur, Paris 1994
Achieving quality in construction, Socotec, Le Moniteur, Paris 1991
Architectural details, Mittag, Eyrolles Paris 1983
Building construction practice, Mittag, Eyrolles Paris 1989
Veritas Building Guide, Le Moniteur, Paris 2000
The representation of constructive structures, Gheorghiu A., Dragomir V., Eyrolles 1968
Industrial Construction Atlas, W. Henn, DUNOD, Paris, 1966
Light facades in detail,P.Martin, Le Moniteur, 2017.
Treaty of sanitary and thermal installations,P. Agostini,H.Charlent, DUNOD,2018
Thermal-acoustic insulation,J.-L. Beaumier,F. Janin, Eyrolles, 2017
Implementation of technical networksdistribution: Water, electricity, gas, cold, telecommunications,Jean-Pierre Gyejacquot,The monitor, 2016

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	2	UEF	2	3	1H30	
Subject title					**Workshop**	**TP**
p) INTRODUCTION TO DETAILS AND SECONDARY STATES (CES)						

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TITLED :INTRODUCTION TO DETAILS AND SECONDARY STATES (CES)
TEACHING UNIT :UEF 2 – SEMESTER 2
NUMBER OF CREDITS:03 COEFFICIENT: 02
TOTAL WEEKLY HOURLY VOLUME:1H 30

COURSES (NUMBER OF HOURS PER WEEK):1H 30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES:
Project workshop 5 and 6, Building materials technology 1 and 2, Building physics, Construction 1 and 2, Building equipment 1 and 2, Structure 1 and 2.

GENERAL OBJECTIVE OF THE TEACHING SUBJECT:
Introduction to grasping architectural expression through architectural detail and from the articulation of form, structure (construction) and function.
Introduction to reflection on the details of construction, materiality, or equipment in the service of the architectural project from idea to realization (DEX).

SPECIFIC (LEARNING) OBJECTIVES:
Assimilation of construction relationships, materials and equipment in line with the architectural design.
Acquisition of knowledge on the different construction materials (old and contemporary) which contribute to highlighting the quality of an architectural project. The choice of materials determines the transition from the project to reality and the effect produced on the observer and/or user.

CONTENT OF TEACHING MATERIAL
The course deals with the link between constructive choices and architectural intentions, as well as ways of representing them. This involves, through examples of projects, analyzing their constructive system, the relationship between this system and the architecture developed and finally the means of representing them. The course aims to explain these projects and their details. The buildings and their structures are studied both in appearance and general layout and in constructive detail (materials, shape, equipment, reservations for technical installations, etc.). The management of the elements constituting the secondary trades in the building is explained in their principles of integration into the project (reservationfor the second work)
The course can be presented according to the typologies of details according to the different languages depending on the evolution of architectural expression and the different constructive techniques (the relationship of architecture to techniques): the modern movement, constructivism, postmodernism, High Tech, deconstructivism and contemporary architecture. Thus the course content is

structured around contemporary construction techniques (curtain walls, cladding elements, false ceilings, new processes (reticulated floors, etc.) and their relationships with architecture.

Using examples, the different relationships making up architectural design are understood in detail.:new materials, animation,the texture, the treatment of the surface and the line, the full and the empty, the overlapping of volumes, the shapes, the colors, the horizontal and vertical transition spaces, the differenttechnical installations, light treatment, ecological concerns, etc.

These different aspects are treated in detail in order to allow the student to understand the management of all the parameters in the design of the architectural project..

Course structure:

- Definition elements: Architectural detail, technical detail
- The move from design to details.
- The choice of materials
- The detail and scale of representation
- Learn to draw details.
- The detailin the structural work
- The detail in the second work
- The detail in the technical equipment.

DIRECTED WORK IN THIS MATTER WILL BE ACCOMPLISHED IN THE WORKSHOP AT THE CORRESPONDING PHASE IN THE DEVELOPMENT OF THE PROJECT. IN THIS SPECIFIC CASE, THEY WILL CONCERN THECES (Interior sanitation, AEP, gas, heating, air conditioning, electricity, telephone, internet networks, lightning rod). (PHASE 2).

EVALUATION MODE

Nature of control	**Weighting in %**
Exam	**100%**
Continuous	**00%**
Total	**100%**

REFERENCES & BIBLIOGRAPHY

Architects and construction. Interviews with Paul Chemetov, Henri Ciriani, Stanislas Fiszer, Christian Hauvette, Georges Maurios, Jean Nouvel, Gilles Perraudin and Roland,C. Simon andV. Picon-Lefebvre,Parentheses, 2014

Detail design in architecture, A. Edward, Modulo, 2012

Technical and practical guide to construction,Francis DK Ching,Jean-François Perrault,Modulo, 2016

Elements of construction projectsn – 11th edition, E. Neufert, DUNOD, 2014

Construction techniques and details in i architectureinterior – 2nd edition, Materials, elements and structures, design, construction, finishes,D. Plunkett, DUNOD, 2015

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Achieving quality in construction, Socotec, Le Moniteur, Paris 1991

Architectural details, Mittag, Eyrolles Paris 1983

Building construction practice, Mittag, Eyrolles Paris 1989
Veritas Building Guide, Le Moniteur, Paris 2000
The representation of constructive structures, Gheorghiu A., Dragomir V., Eyrolles 1968
Industrial Construction Atlas, W. Henn, DUNOD, Paris, 1966
Light facades in detail,P.Martin, Le Moniteur, 2017.
Treaty of sanitary and thermal installationsics,P. Agostini,H.Charlent, DUNOD,2018
Thermal-acoustic insulation,J.-L. Beaumier,F. Janin, Eyrolles, 2017
Implementation of technical networksdistribution: Water, electricity, gas, cold, telecommunications,Jean-Pierre Gyejacquot,The monitor, 2016

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	2	UEF	**2**	**3**	1H30	1H30
Subject title					**Workshop**	**TP**
q) STRUCTURE 2						

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TITLED :STRUCTURE 2
TEACHING UNIT :UEF 2 – SUBJECT 2 – SEMESTER 2
NUMBER OF CREDITS:03 COEFFICIENT: 02
TOTAL WEEKLY HOURLY VOLUME:03:00

COURSES (NUMBER OF HOURS PER WEEK):1H 30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):1H 30
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES: Building Materials Technology 1 and 2, Construction 1 and 2, Structure 1 and 2 of the Bachelor of Architecture.

GENERAL OBJECTIVE OF THE TEACHING SUBJECT:

Assimilation of technical reports and missions in the act of building
(Engineers).
Acquisition of knowledge on the structural aspect and its contribution to the design of a project.

SPECIFIC (LEARNING) OBJECTIVES:

Acquisition of fundamental knowledge on the different construction systems which allow the student to make choices from the range of existing technological solutions for the realization of a specific project.
Assimilation of the criteria for choosing the construction system and the techniques appropriate to the design of the structure

CONTENT OF TEACHING MATERIAL;

The Structure 2 course of the 2nd semester complements the knowledge acquired in the prerequisite subjects taught in the Bachelor's degree and that of the Structure 1 subject of the 1st semester. It allows you to take stock of the diversity of constructive approaches and to become familiar with the different types of structures. The course places a fundamental interest in structure as part of architectural form in the same way as function and allows students to acquire the basic knowledge necessary for the design of a structure as the genesis of an architectural project. The course introduces an approach to complex structures (special and spatial) by allowing the student to think about a design by structure taking into account regulatory parameters (earthquake rules, standards, etc.)

Large span structures: Transition from small span to large span (based on the shape and characteristics of the materials (case of prestressed, metallic or glued laminated concrete)

- Shape specifications and material characteristics
- Glued laminated
- Prestressed concrete
- Three-dimensional metal structures

The structures of the hulls and thin walls in curved or pleated reinforced concrete:structural features (examples of innovative designs)
Tensile structures:steel cables, textile roofs, inflatable structures, etc.
Structures of works of art

- Retaining walls (stability against overturning, sliding and sinking)
- The hoppers
- Bridges: structure of a bridge in general, suspension bridge, cable-stayed bridge
- Water towers: buried, semi-buried, raised
- the silos
- The tunnels

Structure and architecture

- Basic criteria for designing a structure. Genesis of the structural diagram
- Introduction to high-tech architectures (forms and structures)
- Interdependence between materials and structures (shapes, dimensions, consideration of the site)
- Dressingstructures (cladding, curtain walls, exterior coverings, stresses and fixing)

EVALUATION MODE

Nature of control	**Weighting in %**
Exam	**60%**
Tutorials	**40%**
Total	**100%**

REFERENCES & BIBLIOGRAPHY

Technical and practical guide to construction,Francis DK Ching,
Dynamic calculation of structures, Capra A., Davidovici V., Eyrolles, Paris 1984
Seismic construction, Zacek M., Parentheses 1996
RPA Algiers 2003 and 2010
Architectural Structures Edwardo Torroja
How does it fall? Matthys Levy and Mario Salvadori
Structure as architecture by Andrew W Charleson
The art of structures, A Muttoni
Architectural Structures for Engineers and Architects by Philip Garriso
R. Vittone: Building, construction manual. Ed. PPUR
Mr. Salvadori: How does it hold up? Ed. Parentheses
P. Rice: The Memoirs of an Engineer. Ed. Parentheses
Collective: Building with steel. PPUR, 1999
MA Studer, F. Frey: Introduction to structural analysis. Ed. PPUR
E. Torroja: Architectural structures. Ed. Eyrolles
M. Salvadori and R. Heller: Structures and architectures. Ed. Eyrolles
N. Lislorg: Principle of structural design
H. Thonier: Design and calculation of building structures
P. Guillemont: Reinforced concrete cheat sheet. Dunoc 2005
D. Gauzin-Müller: Building with wood. Ed. Le Moniteur

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	2	EMU	3	2	1H30	
Subject title					**Workshop**	**TP**
r) INITIATION TO WRITING A Dissertation IN ARCHITECTURE						

back

TITLED : INITIATION TO WRITING A Dissertation IN ARCHITECTURE
TEACHING UNIT :UEM2 -- SEMESTER 2
NUMBER OF CREDITS:2 COEFFICIENT: 2
TOTAL WEEKLY HOURLY VOLUME:1H30

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES:
Initiation to research.
GENERAL OBJECTIVE OF THE TEACHING SUBJECT:
Mastery of methodological tools for the preparation and writing of a dissertation from a research perspective
Development of research, argumentation or debate, synthesis and writing skills (problematization, contextualization, etc.)
Introduction to developing the conceptual and theoretical framework of a project.
SPECIFIC (LEARNING) OBJECTIVES:
Acquisition of the essential bases to establish a theoretical framework.
Assimilation of the knowledge necessary to develop the writing of a dissertation.
CONTENT OF TEACHING MATERIAL
Chapter 1: concepts and benchmarks
What is a research paper
General structure of the dissertation
Chapter2: Development phase
Choice of subject and title
State of the question and bibliography
Problem and hypotheses
Investigation methods
Development plan (summary)
Results, analysis, interpretation and debate
Conclusion, introduction and summary
Chapter 3: Formatting Recommendations
Overall organization, layout, illustrations and graphics, bibliography, table of contents, appendices, cover page.

EVALUATION MODE

Nature of control	Weighting in %
Exam	00%
Tutorials	**100%**
Total	**100%**

REFERENCES & BIBLIOGRAPHY

ALBALAT Antoine(1992), The art of writing taught in 20 lessons, Paris, Armand Colin.

BEAUD Michel(1988), The art of the thesis - How to prepare and write a doctoral thesis, a DEA or master's thesis or any other university work, La Découverte (first edition 1985).

CAMUS B.(1989), Internship reports and memoirs, Paris, Les Editions d'Organization.

 FRAGNIERE JP (1986), How to succeed in a dissertation, Paris, Dunod.

LEFORT G.(1990), Knowing how to document yourself, Paris, Les Editions d'organization.

MACE Gordon, PETRY François(2000), Guide to developing a social science research project, De Boeck-Wesmael.

MACCIO Charles, Know how to write a book, a report, a memoir. From thought to writing, Lyon: Social Chronicle, 4th edition, 2003

BOUTILLIER Sophie et al., Methodology of the thesis and dissertation, Levallois Perret: Studyrama, 2009.

BRAY Laurence, HOFMANN Yvette, The final work: a methodological approach to the dissertation, 2nd ed., Paris

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	2	EMU	2	3	1H30	1H30
Subject title					**Workshop**	**TP**
s) HISTORY OF ARCHITECTURE IN ALGERIA 2 (19TH AND 20TH CENTURIES)						

back

TITLED :HISTORY OF ARCHITECTURE IN ALGERIA 2 (19TH AND 20TH CENTURIES)
TEACHING UNIT :UEM2 --SEMESTER 2
NUMBER OF CREDITS: 3COEFFICIENT: 2
TOTAL WEEKLY HOURLY VOLUME:3H

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):1H30
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES: Critical history of architecture, 1, 2,3 of the license in architecture andHistory of architecture in Algeria (19th and 20th Centuries) (Master 1 Semester1).

GENERAL OBJECTIVE OF THE TEACHING SUBJECT:

Introduction to the construction of knowledge on Architecture in Algeria since 1962.
Introduction to knowledge of architectural production and the profession of architect in Algeria.

SPECIFIC (LEARNING) OBJECTIVES:

Acquisition of a cultural base (architectural and historical) from the local context.
Introduction to reflection in the development of a national architectural "model".

CONTENT OF TEACHING MATERIAL

1. **Period 1962 – 1990**

It is therefore a question of seizing the major political and economic options in building the nation. The call to renowned architects and their architecture in Algeria Oscar Niemeyer, Fernand Pouillon, Kenzo Tange, Riccardo Bofill, André Ravereau.
Architectural production (Public sector agencies and offices).
The first Algerian architects trained and their contributions (Abderrahmane Bouchama, Rachid Bourouiba, …
Teaching of Architecture in Algeria
The programs
Redesign and reform

2. **Period 1990 to the present: What architecture?**

LEGISLATION

The law on Architecture 77/02 of January 3, 1977
Code of Ethics for Architects of March 25, 1980
Law 94/07 and 04/06

ARCHITECTURAL PRODUCTION

Young architects/architecture
National Architecture Awards
Some flagship projects…. (Real estate development, Major facilities, etc.)

PUBLICATIONS

Works and manuals on architecture in Algeria. Specialized (periodical) magazines (Construire, Htm, Amenhis, Vie des Villes, Madina, Madinati, etc.).

EVALUATION MODE

Nature of control	**Weighting in %**
Exam	**60%**
Tutorials	**40%**
Total	**100%**

REFERENCES & BIBLIOGRAPHY:

Bouchama, A., The arch that sings, SNED, 1968, cited by JJDeluz

Bouchama, A., The Giant Oasis, Algiers, ENAL, 1984.

Bourouiba, R., Muslim religious art in Algeria, Algiers, SNED, 1981.

Deluz, J.-J., Algiers, El Djezaïr. Urban chronicle, Editions Bouchène, 2001, Ways of imagination, Editions Bouchène, 2003

Deluz, J.-J.,Town planning and architecture of Algiers. Critical overview, Algiers, Pierre Mardaga & Office of University Publications, 1988

Donnadieu, C. and P. / Didillon, H. and J.-M., Living in the desert. Mozabite houses, Architectures+ Recherches, Pierre Mardaga, 1977.

Golvin, L.,Palaces and residences of Algiers, during the Ottoman period, Office of University Publications, 1988.

Algerian Architecture, (Anonymous), produced by the Ministry of Information, “Art and Culture” Collection, 1970.

Pouillon, F., Memoirs of an architect, Editions du Seuil, 1968

Ravereau, A., L'Atelier du desert, under the direction of Rémi Baudoui and Philippe Potié, Paris, Parenthesis, 2003.

Ravereau, A., The Casbah of Algiers: and the site created the city, Photographs by Manuelle Roche, Preface by Mostefa Lacheraf, Sindbad, 1989.

Ravereau, A., The M'Zab, a lesson in architecture, Photographs by Manuelle Roche, Preface by Hassan Fathy, Paris, Sindbad, 1981.

Ravereau, A., Sense and balance, capitals of the Mediterranean world, Photographs by Manuelle Roche, Paris, Editions Etudes et Communication, 2003.

Deluz JJ, The whole and the fragment Editions Barzakh, Algiers, 2010, 379 p.,

Mazouz, Said. “Elements of architectural design”, Office of University Publications, 2004.p.57

Hammou Abdelhakim, About architectural design, University Publications Office, 2009

MaouiaSaïdouniIntroductory elements to town planning. Casbah Ed.2004

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	1	EMU	3	3	1H30	1H30
Subject title					**Workshop**	**TP**
t) EQUIPMENT 2: ACOUSTICS IN THE BUILDING						

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TITLED :EQUIPMENT 2: ACOUSTICS IN THE BUILDING
TEACHING UNIT :METHODOLOGICAL UNIT 2
SEMESTER :2
NUMBER OF CREDITS:4 COEFFICIENT: 3
TOTAL WEEKLY HOURLY VOLUME:03H

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):1H30
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES: Equipment 1 (Lighting)
GENERAL OBJECTIVE OF THE TEACHING SUBJECT:
Assimilation of physical and physiological characterizations of sound and noise
Introduction to the choice of construction materials with low transmission coefficient and high attenuation index
LEARNING OBJECTIVES:
Acquisition of knowledge on the different types of acoustic insulation (materials), their physical characteristics and their location in the architectural project (acoustic insulation for wall, floor and ceiling
CONTENT OF THE TEACHING MATERIAL:
Physical and physiological characterization of sounds and noises
1.1 Origin of sound
1.2 Characteristic quantities of a sound or noise
1.3 Wave propagation equation
1.4 Relationship between acoustic pressure p(t) and vibration speed v(t)
1.5 Intensity and acoustic energy density
1.6 Pressure and intensity levels
1.7 Analysis of 'stable' noises
1.8 Composition of two noise levels
1.9 Statistical analysis of unstable noise
1.10 Sensation of noises
1.11 Measuring devices: the sound level meter
1.12 Thresholds not to be exceeded

Sound propagation in free space
2.1 Point source
2.2 Directive point source
2.3 Line of independent point sources
2.4 Atmospheric attenuation
2.5 Attenuation due to screens (difraction)

Propagation in enclosed spaces
3.1 Evaluation of reverberated intensity
3.2 Noise level in enclosed spaces
3.3 Concept of reverberation
3.4 Measurement of a Sabine coefficient
3.5 Acoustic treatment of rooms
3.6 Architectural acoustic criteria

Insulation of walls against airborne noise
4.1 Transmission coefficient and attenuation index
4.2 Evaluation of the weakening index of simple walls
4.3 Insulating a wall
4.4 Average weakening index of a composite wall

Appendices
Regulatory texts / Main characteristics of common materials.

EVALUATION MODE

Nature of control	**Weighting in %**
Exam	**60%**
Tutorials	**40%**
Total	**100%**

REFERENCES & BIBLIOGRAPHY
(To be defined by the teacher at the start of the semester).

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	2	UET/D	2	2	3H	
Subject title					**Workshop**	**TP**
u) CURRICULUM SEMINAR						

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TITLED :CURRICULUM SEMINAR
TEACHING UNIT :UET/D 2 - SEMESTER 2
NUMBER OF CREDITS:02 COEFFICIENT: 02
TOTAL WEEKLY HOURLY VOLUME:03H

COURSES (NUMBER OF HOURS PER WEEK):3H
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00:00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00

PREREQUISITES: The learner must theoretically and operationally master the general methodology of architectural and urban design.

GENERAL OBJECTIVE OF THE TEACHING SUBJECT:

Acquisition of more in-depth knowledge on the “themes” of master 2.
Assimilation of the relationships between architectural practices and urban and socio-economic contexts.

LEARNING OBJECTIVES:

More or less definitive positioning in the thematic choice.
Acquisition of a theoretical basis on the themes.

CONTENT OF TEACHING MATERIAL

SEMINAR N°01: HABITAT

Number of sessions:03

Content : This seminar focuses on the specific area of housing and urban and rural habitat. It positions itself on the major issues of management, development and the future of the Algerian city as well as residential spaces. It thus offers an approach to the urban phenomenon at its different scales:

- from housing to urban space,
- from small towns to metropolises
- city centers, neighborhoods, peri-urban areas
- From rural to urban

It engages the seminar participants in key debates and major directions on housing policy in Algeria:

- the actors and the chronology of actions
- the fragmentation and sprawl of cities, incompleteness
- the housing crisis and urban renewal,
- social and spatial changes
- the place of nature in the city
- the energy and climate dimensions in housing.

An approach based on local experiences, the history of reforms in Algeria and the legislative framework is essential in order to provide the learner with full latitude in their future choice of specialization.

SEMINAR N°02: URBAN ARCHITECTURE

Number of sessions:03

Content : This seminar invites learners to explore and experiment with the question of interactions between the architectural project and its environment, both physical and cultural. This attitude dictated by the globalization movement tends to demonstrate that architects have a fundamental role to play through their reflection and their action in the creation of the built environment.

It is a question of realizing the extent of the architect's capacities for reflection and action in contrasting environments, preferably in nearby territories subject to diverse rhythms and phenomena of spatial transformation. Addressing projects at intermediate scales (between architecture and urban planning), this seminar offers an original contribution to encourage the design of new urban programs and projects focused on innovation while nourishing them with questions linked to local identity. It is a question of grasping the complexity of the issues which are at the heart of the making of the contemporary Algerian city in connection with economic globalization.

SEMINAR N°03: ARCHITECTURE, ENVIRONMENT AND TECHNOLOGY

Number of sessions:03

Content : The seminar aims to help learners answer questions relating to constructive culture, the environment and the notions of sustainable architecture and cities, integrating the technological aspect.

This pre-specialization of the architect's profession supports eco-responsible design and techniques integrated into a living environment and a given territory.

The seminar emphasizes varied but closely linked areas of reflection aimed at creating links between design logic and constructive logic:

- Physical atmospheres and comfort,
- sustainable architecture,
- materials and eco-construction,
- environmental quality,
- choice and uses of innovative materials

SEMINAR N°04: ARCHITECTURAL AND URBAN BUILT HERITAGE

Number of sessions:03

Content : The seminar addresses the issues of conservation, restoration, transformation and enhancement of architectural heritage, as well as the question of its use in today's city (evolution of professions and skills, awareness of those in power and appropriation of identity by residents).

Particular emphasis is placed on the dimension of the architect's intervention on existing buildings, within the social, cultural and legislative framework.

Through the local or national context as a privileged field of study, the content of the seminar focuses particularly on the Algerian Ottoman, Arab-Moorish and Colonial heritage.

It engages seminar participants in key debates and major directions on the practice of architecture sensitive to heritage heritage:

Form of intervention on the “existing”

Diagnostic culture
Respect for the architectural, urban and landscape object
Technical, cultural, administrative and legislative knowledge
The seminar highlights the social integration of the concept of preservation or transformation and its quality as a lever for economic and environmental development.

SPECIFICATIONS FOR ALL SEMINARS:

A - Modular structure: Particular importance will be given to the debate and the socio-constructivist approach. Learners will be encouraged to be active in their learning and to proceed collaboratively. The transmissive academic dimension will preferably be abandoned (despite the large number) in favor of an atmosphere of exchange and discussion.
A flipped classroom system is strongly recommended, promoting stories of experiences and channeling learners' efforts into the search for information.
Indications of the objectives of the seminar as well as preliminary resources will be made available to learners from the start of the first semester. The speaker will thus be able to act as a mediator and assist learners in restructuring what they have learned.

B - Evaluation: By this method, the summative evaluation (written exam at the end of the semester) and/or a series of formative evaluations taking place after each theme (seminar). The most active learners will have benefited from a large series of remediations.

C - Speakers: This seminar requires multiple disciplinary skills, prior programming will be done by the sector manager who will ensure the designation and planning of internal speakers as well as guest speakers who will bring an operational dimension and will thus ensure rapprochement with the socio-economic context. economic.

EVALUATION MODE (See details above)

Nature of control	**Weighting in %**
Exam	**100%**
Tutorials	**00%**
Total	**100%**

REFERENCES & BIBLIOGRAPHY:
(To be defined by the teacher at the start of the semester).

Landing	Semester	Unit	Coefficient	Credit	Course	T.D.
M1	2	UET/D	1	1	1H30	
Subject title					**Workshop**	**TP**
v) ENGLISH 2						

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TITLED :ENGLISH 2
TEACHING UNIT :UET/D 2 - SEMESTER 2
NUMBER OF CREDITS:1 COEFFICIENT: 1
TOTAL WEEKLY HOURLY VOLUME:1H30

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00

PREREQUISITES:ENGLISH 1
GENERAL OBJECTIVE OF THE TEACHING SUBJECT:
Introduction to knowledge of terms specific to the field of architecture.
Introducing the student to the oral and written understanding of this universal language, to improve their research.
SPECIFIC (LEARNING) OBJECTIVES:
Consolidation and improvement of language skills.
Knowledge of terms specific to the field of architecture
CONTENT OF TEACHING MATERIAL
Other audio-visual supports will also be very effective, such as the projection of films on architecture/urban planning, as well as the language laboratory.
Reading comprehension (notion of derivation, composition, linguistic and situational contexts, transparency):
• Comprehension questions. MCQ.
• Tables/diagrams/sentences to complete.
• Sentences/paragraphs to put in order.
• Derivation, composition, linguistic and situational contexts, transparency.

EVALUATION MODE

Nature of control	Weighting in %
Exam	**100%**
Tutorials	00%
Total	**100%**

REFERENCES & BIBLIOGRAPHY
Brieger, Nick, and Alison Pohl. Technical English: Vocabulary and Grammar. Summertown Publ., 2006.
Chappell, David, and J. Andrew Willis. The Architect in Practice. Blackwell Science, 2000.
Ching, Francis D.K. Building Construction Illustrated. Wiley, 2014.
Hetreed, Jonathan, Ann Ross, and search results. Architect's Pocket Book. 5 editions. London; New York: Routledge, 2017.

Heidenreich, Sharon. Englisch Für Architekten Und Bauingenieure - English for Architects and Civil Engineers: Ein Kompletter Projektablauf Auf Englisch Mit Vokabeln, Redewendungen, Übungen Und Praxistipps - All Project Phases in English with Vocabulary, Idiomatic Expressions, Exercises and Practical Advice. Springer-Verlag, 2016.

MASTER 2 / SEMESTER 3 [back]

1. PREAMBLE

The final year of the second cycle is devoted to the development of the end-of-studies project and the dissertation. The subjects will come from four recurring themes, used as options for current Masters (before harmonization): Housing, Architectural and urban built heritage, Urban architecture (Urban design) and Architecture, environment and technologies.

The choice of this mode is “transitional”, because these “themes” will not be considered either as options or as specialties. They cannot constitute ends in themselves because, if they serve as support for exercises (projects), the educational and learning objectives remain common for the training.

Fundamental Teaching Unit 3(semester 3/Master 2) brings together three subjects whose contents relate to the themes end-of-study projects and dissertations.

This Unit is made up of a main subject (WORKSHOP) where the knowledge acquired and constructed from the two other supporting subjects is synthesized. The association of these subjects is called upon to establish coherence and complementarity both in terms of content and timing.

2. THE THREE SUBJECTS OF UEF3

a) STATEMENT OF THE THEORETICAL SUPPORT OF THE PROJECT/MEMORY.

This subject will provide the learner with the opportunity to begin their project work in the form of a “logbook” faithfully accompanying the evolution of their ideas and the tasks carried out. Thus, educational support will focus on following the learner's work from the genesis, the gestation until the formulation of the programmatic choices of the project.

Educational objectivesof this phase are focused on methods of methodological acquisition relating to the development of a problem, definition of objectives, collection of documents and their processing, construction of diagnoses / analyzes / evaluations, argumentation of choices (programmatic, stylistic, etc.).

b) SUPPORT MATERIAL 1

In the form of courses or seminars, the content of this subject will cover a sum of information and knowledge related to the workshop theme, which the learner must acquire to carry out their project/dissertation work. The contribution of this material can also go in the direction of deepening knowledge.

Educational objectivesconcern the acquisition, the deepening of the necessary and/or complementary information for the initiation and construction of coherent knowledge (epistemology) on the theme (vocabularies, concepts, notions, current affairs, issues, etc.).

c) SUPPORT MATERIAL 2

Also in the form of courses or tutorials, the content of this subject is more oriented towards practice and/or exploration. It relates more to the methods, techniques and use of tools enabling diagnostics to be constructed and helping to develop decision-making choices.

Educational objectivesfavor the initiation and mastery of appropriate conceptual, methodological or logistical tools for establishing diagnoses related to the theme (through practice, exploration, analysis, manipulation of equipment, etc.).

3. WORKSHOP THEMES (EXPLANATORY NOTE)

THEMATIC1: HABITAT

Constructed as a concept, "living" experiments with a scientific response to the transformations that make up the contemporary world: urbanity and urbanization.

To live is therefore to evolve in an environment, it goes beyond the physical need for shelter. It is also a question of moving, evolving, emancipating oneself and communicating. Public space is as much a part of habitat as housing.

The use of public space (moving, walking, shopping, going to the café, shopping, etc.) allows the user to check the intensity of their integration into the social environment.

The theme therefore emphasizes housing in its broad sense as well as its specificities. The subject touches as much on the theoretical notions of inhabitance, appropriation, mutation, etc. as well as their concrete manifestations through a very broad scalar approach, ranging from housing strictly speaking to residential space to urban or rural housing.

The theme focuses on the major issues of management, development and the future of the Algerian city as well as residential spaces. It thus offers an approach to the urban phenomenon at its different scales:

- from housing to urban space,
- from small towns to metropolises
- city centers, neighborhoods, peri-urban areas
- From rural to urban

Habitat therefore also involves experiencing one's home as an extension of oneself, it means owning a space and controlling it, it means fulfilling all the functions of inhabiting it.

Above all, it is about taking a critical look at the production of habitat and housing, ensuring that domestic space is included in social, economic, cultural and environmental contexts.

Learning Objectives

- Raising awareness of the notion of "living", modes and models of housing
- Acquisition of knowledge on the design of domestic space.

Non-exhaustive list of subjects likely to be covered in this coloring (5 max)

Contemporary housing for the requalification of a piece of town or neighborhood or a public space, Eco-district as a reinterpretation of the vernacular. Reflections on the rehousing of slum dwellers. Conversions. Theoretical study of the flexibility, scalability and poly-functionality of housing. Rural housing, smart-city, specific habitats.

THEMATIC2: URBAN ARCHITECTURE

The "Urban Architecture" theme is intended to be a place and a moment where the learner will have the opportunity to grasp the close relationships between architecture and the urban context. Thus, this orientation will also make it possible to acquire skills and knowledge on theprocessat the basis of the creation of the city and its image.

The scale of approach offers the possibility of making the learner aware of this in-between (architecture and urban planning) which requires mastery and necessary assimilation. Thus, learning about urban composition, urban figures, morphology, public spaces and urban landscapes require deep knowledge (social, economic and environmental) and adequate artistic or creative abilities.

Learning Objectives

- Awareness of the complexity of the urban environment (social, economic, cultural and environmental).
- Introduction to the design of public spaces.
- Introduction to fields related to architecture.

Non-exhaustive list of subjects likely to be covered in this coloring (5 max)

Intervention in an urban environment (pre-existing fabric), Design/development of a public space, Major urban equipment (with significant landscape impact), Development of parks, gardens. Rehabilitation/renovation/restructuring with the intention of highlighting the identity of a place or city.

THEMATIC 3: ARCHITECTURE, ENVIRONMENT AND TECHNOLOGY

This theme intends to establish an awareness and initiation framework allowing the learner to obtain information and explore the contributions of scientific and technical knowledge to architectural practice. Indeed, the architect's mission is not only the insertion of an object into a social, cultural or natural environment, but also into a technological environment. Energy and ecological issues require very sophisticated approaches in terms of space design and the insertion of technologies. Architecture is also called upon to be "efficient" as it is part of everyday life and its consumption patterns.

This theme offers the opportunity to experiment with technological insertions in the project process and in the act of building with a view to achieving performance both on a functional level, as well as on an economic and environmental level.

Learning Objectives

- Initiation and construction of coherent knowledge (epistemology) on the theme (vocabularies, concepts, notions, news, issues, etc.).
- Initiation and mastery of appropriate conceptual, methodological or logistical tools for establishing diagnoses related to the theme (through practice, exploration, analysis, manipulation of equipment, etc.).

- Raise students' awareness of the threat of global warming, and of technological progress and their contributions to the building sector.
- Acquisition of information relating to the insertion of new technologies in the building
- Introduction to the introduction of “intelligence” in the building.

Non-exhaustive list of subjects likely to be covered in this coloring (5 max)
Smart materials and energy performance, Home automation, building automation, bioclimatic buildings, ambient performance, resilient buildings.

THEMATIC 4: BUILT ARCHITECTURAL AND URBAN HERITAGE

The “Heritage” themeintroduces the student to**understanding of the dialogue to be established between the existing heritage context and the planned building as part of an architectural project**.The aim is to bring students closer to traditional construction - ordinary and monumental - to familiarize them with the history of urban culture, to strengthen their faculty of critical analysis, and above all to exercise their ability to project. The teaching and the work of reflection required must allow students to assume their role as project manager in full awareness of their responsibility and their competence, with regard to Algerian regulations on heritage and contemporary social demand for reappropriation of the latter.

Learning Objectives:

1/ Learn about issues specific to the historical and cultural context,
2/ Become familiar with the instruments for safeguarding and protecting heritage.
3/ Structuring an urban and architectural intervention based on the recovery and reinterpretation of the significant values of the heritage context.

Non-exhaustive list of subjects likely to be covered in this coloring (5 max)
Intervention in an old stratified environment: restructuring, rehabilitation and urban renovation.
Intervention on old buildings: reconversion and architectural enhancement (Wildlands)
Architectural renovation: Design of a new project.

4. SUMMARY THEMATICS / MATERIALS / KEY WORDS

	THEMATIQUE DE L'ATELIER	MATIERE D'APPUI	5 MOTS CLES*
1	HABITAT ET POLITIQUES DE LA VILLE	**Matière 1 :** Logement : espaces et usages	Notion d'habité / modes et modèles universaux et locaux / habitat urbain et habitat rural / Conception de l'espace domestique / logement efficient
		Matière 2 : Renouvellement urbain et politiques de la ville	Politique publique / gestion sociale et patrimoniale du logement / Ville innachevée / Espaces résidentiels / Maitre de l'usage
2	ARCHITECTURE URBAINE (URBAN DESIGN)	**Matière 1 :** Projets et contexte urbain	Espace public / Echelles / Ambiances physiques / Habitats et cultures / Design urbain
		Matière 2 : Méthodes et outils d'analyse urbaine	Méthodologie et modèles de lecture / Imagibilité / Paysage urbain / Typo-morphologie / Approche sensible
3	ARCHITECTURE, ENVIRONNEMENT ET TECHNOLOGIES	**Matière 1 :** Performance environnementale et innovations technologiques dans le bâtiment	Sensibilisation aux enjeux environnementaux / Approche vernaculaire / Stratégie et simulation environnementale / Culture de l'écologie
		Matière 2 : Evaluation du confort dans le bâtiment et diagnostic énergétique	Notion de confort / Diagnostic énergétique / Bâtiments éfficients / matériaux innovants / Projet urbain durable
4	PATRIMOINE BATI ARCHITECTURAL ET URBAIN	**Matière 1 :** Conservation et valorisation du patrimoine architectural et urbain	Instruments de sauvegarde / Formes urbaines / Savoirs interdisciplinaires / Approches critiques et différentes opérations / Notion d'actualisation
		Matière 2 : Etudes préalables et diagnostic selon les pathologies du système de construction	Méthodes diagnostiques / Pathologie des ouvrages / Technologies numériques / Techniques de conservation / Méthodes de réhabilitation

(*) : certains mots clés peuvent faire allusion à des thématiques spécifiques alors que d'autres dépassent le cloisonnement apparent. Il s'agit d'une particularité transdisciplinaire, la connaissance de toute les thématiques est nécessaire pour identifier les corrélations et éviter les chevauchements.

ANY THEMATIC						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	3	UEF	6	12		
Subject title					**Workshop**	**TP**
w) THEORETICAL STATEMENT OF THE Dissertation PROJECT					9 A.M.	

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TITLED :THEORETICAL STATEMENT OF THE Dissertation PROJECT
TEACHING UNIT :EU F3
SEMESTER :3
NUMBER OF CREDITS:12 COEFFICIENT: 6
TOTAL WEEKLY HOURLY VOLUME:09 A.M.

COURSES (NUMBER OF HOURS PER WEEK):00:00
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00:00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00
WORKSHOP :09 A.M.

PREREQUISITES

Introduction to research (S1 +S 2 of M1)
Mastery of communication and representation tools
Introductory seminars to workshop themes (S2)

TEACHING OBJECTIVES

Introduction to research, collection and processing of documentation and information (relating to a project/subject).
Introduction to problematization, analysis and development of project approaches in architecture
Introduction to scientific argumentation, communication (oral and written or illustrated) and debates related to the project.

CONTENT OF TEACHING MATERIAL

The learner will need to keep a “logbook” of the project. The latter will carry all the ideas, concepts, documents and information collected or produced by the learner which support his approach and his choices in the journey towards the final proposal.
This notebook will give rise to the “memoir” subject to formatting according to established rules.
This material is divided into phases (according tothemes), punctuated by intermediate evaluations so as to allow the teacher to monitor and reframe the learner's work.
In short, these are tasks relating to:

- Collection of data, documents and information relating to the project
- The formulation of the problem, taking care to highlight the basic concepts, the state of the art, the definition of objectives and the approach to adopt to materialize the project.
- Work on concrete situations in the field, through exploratory, analysis and diagnosis approaches.

- The development of a pre-program mentioning and arguing the operational options (in terms of actions and projects), defining the architectural/urban/development options and stylistic inclinations.
- The proposal for variants/scenarios (sketch).

EVALUATION MODE (WEIGHTING IS LEFT TO THE APPRECIATION OF THE TRAINING TEAM)

Nature of control	Weighting in %
Exam	
Tutorials	100%
Total	100%

REFERENCES & BIBLIOGRAPHY

(To be defined by the teacher at the start of the semester).

x) THEMATIC 1: HABITAT

1 - HABITAT						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	3	UEF	2	3	1H30	
Subject title					**Workshop**	**TP**
y) SUPPORT MATERIAL 1 / HOUSING: SPACES AND USES						

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THEMATIC 2:HABITAT

TITLE OF SUPPORT MATERIAL 1: HOUSING: SPACES AND USES
TEACHING UNIT :EU F3
SEMESTER :3
NUMBER OF CREDITS:3 COEFFICIENT: 2
TOTAL WEEKLY HOURLY VOLUME:1H30

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00

PREREQUISITES

GENERAL OBJECTIVE OF THE TEACHING SUBJECT

Acquisition of additional information necessary for the development of coherent knowledge in thethematic

SPECIFIC OBJECTIVES / THEMATIC

Deepening the notion of inhabited space and exploring modes of appropriation of space as well as universal and local models.
Identification of urban and rural modes and their determination in the design of residential space.
Transition from one scale to another, from housing to urban space and vice versa.

CONTENT OF TEACHING MATERIAL

Habitat as a constitutive act commands operations of appropriation, of structuring both mental and physical. It is the place where inhabiting is developed as a “being”, as an ecumene, as a place and relationship to the world
Housing is a product, it is a deliverable that is built in a geographical, social, economic and technical environment. It is called upon to develop relationships with the environment using constructive techniques, ensuring the economy and its inclusion. in the landscape
It is also the field that makes up the urban or rural setting. In this sense it is the subject of an urban policy which ensures the production of the city or human settlements (rural) within the framework of strategic territorial visions and also housing while remaining prudent in terms of consumption of resources (energy, land…).

EVALUATION MODE

Nature of control	Weighting in %
Exam	100%
Tutorials	00%
Total	100%

REFERENCES & BIBLIOGRAPHY

ELEBM.;SIMONP., 2013. Contemporary housing. Between comfort desire and standards 1995 – 2012, Mardaga, 305p.

LIGHTJean-Michel, Decup-Pannier Benoîte, 2005. "The family and the architect: designers' rolls of the dice", Espaces et société, n° 120-121, pp. 15-44.

MOLEY C., 2011, Current conceptions of habitat 2000 – 2010, final report, IPRAUS, Paris, 144 p.

MOLEY C., 1998, housing architecture. Cultures and logics of an inherited norm, Anthropos, Paris, 334p.

MOLEY C., 1999, A look at the private building. Architecture of a habitat (1880-1970), Le Moniteur, Paris, 334p

1 - HABITAT						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	3	UEF	2	3	1H30	1H30
Subject title					**Workshop**	**TP**
z) SUPPORT MATERIAL 2 / URBAN RENEWAL AND CITY POLICY						

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THEMATIC :HABITAT

TITLE OF SUPPORT MATERIAL 2:URBAN RENEWAL AND CITY POLICY
TEACHING UNIT :EU F3
SEMESTER :3
NUMBER OF CREDITS:3 COEFFICIENT: 2
TOTAL WEEKLY HOURLY VOLUME:3H

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):1H30
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00

GENERAL OBJECTIVE OF THE TEACHING SUBJECT

Initiation and acquisition of basic notions concerning the conceptual, methodological and logistical tools necessary for establishing diagnosesin connection with thethematic

SPECIFIC OBJECTIVES /THEMATIC

Understanding of the determining policies in the design of inhabited space.
Introduction to the issues of social and property management of housing.
Reflection on the problem of the unfinished city.
Theoretical approach to residential space and appropriation of the concept of “master of use”;

CONTENT OF TEACHING MATERIAL

As such, housing is subject to increasingly demanding and restrictive rules on lifestyles and consumption. Rapid changes encourage questions and methodical interrogations to grasp the scope of social changes and their spatial, technical and architectural implications.
In this sense, the need for an introduction to the methods of developing diagnoses is essential, especially since housing is a “multidisciplinary” field.
The housing “project” is dependent on visions, approaches and approaches based on concrete evaluations which can only be identified through operations of exploration, analysis and mastery of diagnostic tools.
Decision support tools in housing projects cannot ignore the fact that the product is often intended for a generic “user”. It is therefore a matter of seeking to involve the user and defining the contours of “use control”.

EVALUATION MODE

Nature of control	Weighting in %
Exam	60%
Tutorials	40%

Total	100%

REFERENCES & BIBLIOGRAPHY

BAHAMON A., 2008, High density. Contemporary housing, The new.
BERTRAND JR, Chevalier J., 1998. Housing and habitat in European cities, L'harmattan.
COLLECTIF, 2017. Conception and design: collective housing, Links Books, 300p.
GUERRAND RH, 1992. A Europe under construction - two centuries of social housing in Europe, Paris La Découverte, 1992
KATSAKOU A., MARCHAND B., 2008. Designing housing, collective housing competitions, Presses Polytechniques Romandes.
PLATZER M., 2014. Designing and building social housing. Collective residential buildings, Le Moniteur, 432p.
ROUSSEL S., 2014. The transformation of offices into housing: Viable solution to the housing shortage?, Edilivre-Aparis

aa) THEMATIC 2: URBAN ARCHITECTURE

2 - URBAN ARCHITECTURE						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	3	UEF	2	3	1H30	
Subject title					**Workshop**	**TP**
bb) SUPPORT MATERIAL 1 / PROJECT AND URBAN CONTEXT						

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THEMATIC 3:URBAN ARCHITECTURE

TITLE OF SUPPORT MATERIAL 1: PROJECT AND URBAN CONTEXT
TEACHING UNIT :EU F3
SEMESTER :3
NUMBER OF CREDITS:3 COEFFICIENT: 2
TOTAL WEEKLY HOURLY VOLUME:1H30

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00

PREREQUISITES

GENERAL OBJECTIVE OF THE TEACHING SUBJECT

Acquisition of additional information necessary for the development of coherent knowledge in thethematic

SPECIFIC OBJECTIVES / THEMATIC

Introduction to the multiple dimensions of the urban.
Acquisition of basic concepts relating to the urban (composition, morphology, typology, landscape, etc.).

CONTENT OF TEACHING MATERIAL

Urban space as a grid for reading the city throughout history
Geography of places, architecture of the city and urban planning
Urban project approach
Urban public spaces: the dimensions of urban composition
Urban composition

EVALUATION MODE

Nature of control	Weighting in %
Exam	100%
Tutorials	00%
Total	100%

REFERENCES & BIBLIOGRAPHY

Allain Remy. 2004. Urban morphology: geography, planning and architecture of the city. Paris, Armand Collin.

Boudon, F.; Chastel, A.; Couzy, H. 1977. System of urban architecture: the Halles district in Paris, Paris, cnrs.
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Lévy, Albert. 1996. “Urban composition: urban planning know-how in crisis”, in P. Genestier (ed.), Towards a new urbanism. Build the city, how, for whom? Paris, La Documentation Française.
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Mangin David & Panerai Philippe, 1999, Urban project. Marseille: Parenthesis.
Merlin, Peter. 1988. (ed.), Urban and plot morphology, Saint-Denis, Presses Universitaires de Vincennes.
Panerai, P.; Langé, J. 2001. Urban forms, urban fabrics. Reasoned bibliography essay: Urban Planning Documentation Center.
Panerai Philippe, Castex Jean & Depaule Jean-Charles, 1997. Urban forms: from the island to the bar. Marseille: Parentheses.
Panerai Philippe, Depaule Jean-Charles &Demorgon Marcelle, 1999. Urban analysis. Marseille: Parentheses.
Paquot Thierry, 2009. Public space. Paris: The Discovery.
Paquot Thierry, 2000. The city and the urban, the state of knowledge. Paris: The Discovery.
Pinon Pierre, 1991, Reading and composing public space. Paris: STU-DAU.
Pinon, Pierre. 1994. Urban composition I, II, Paris, dau-stu.
Thibault Serge, 2012. Urban composition, projects and territories. National Congress of Historical and Scientific Societies - Urban composition(s) - Tours.
urban or the transition from the pedestrian city to the motorized city, Liège, Mardaga.
Weil, M. 2004. City and mobility, Paris, Aube.
Wilmotte Jean Michel, 1999. Interior architecture of cities. Paris: Le Moniteur.

2 - URBAN ARCHITECTURE						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	3	UEF	2	3	1H30	1H30
Subject title					**Workshop**	**TP**
cc) SUPPORT MATERIAL 2 / URBAN ANALYSIS METHODS AND TOOLS						

back

THEMATIC :URBAN ARCHITECTURE

TITLE OF SUPPORT MATERIAL 2:METHODS AND TOOLS FOR URBAN ANALYSIS (TYPO-MORPHOLOGICAL, LANDSCAPE, SENSITIVE)
TEACHING UNIT :EU F3
SEMESTER :3
NUMBER OF CREDITS:3 COEFFICIENT: 2
TOTAL WEEKLY HOURLY VOLUME:3H

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):1H30
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00

GENERAL OBJECTIVE OF THE TEACHING SUBJECT

Initiation and acquisition of basic notions concerning the conceptual, methodological and logistical tools necessary for establishing diagnosesin connection with thethematic

SPECIFIC/THEMATIC OBJECTIVES

Introduction to urban analysis methods
Acquisition of the principles of urban and architectural composition.

CONTENT OF TEACHING MATERIAL

Morphogenesis and historical-interpretative methodology.
The English school of morphology (Cambridge and Bartlett School) with the work of Llewelyn Davies, Lionel March, Philip Steadman and others… The English morphological school aims to construct autonomous knowledge based on mathematical logic and the intrinsic attributes of the architectural and/or urban object
Typomorphology and structuralist analyses, works of Italian and French schools of typo-morphology, works of Caniggia, Muratori, Aldo Rossi, Panerai etc. The typo-morphological analysis of the built environment aims, through the construction of knowledge associating the architectural type with urban morphology, the identification of structural permanences associated with the cultural identity of the places.
The morphological approach of Bernard Duprat (Laf), approach of the English school;
Urban landscape analyzes
Spatial syntax.

EVALUATION MODE

Nature of control	Weighting in %
Exam	60%
Tutorials	40%
Total	100%

REFERENCES & BIBLIOGRAPHY

ALLAIN, R. 2004. Urban morphology, Paris, Armand Collin.
AYMONINO, C. 1977. Lo studio dei fenomeni urbani, Roma, Officina Edizioni.
BOUDON, F.; CHASTEL, A.; COUZY, H. 1977. System of urban architecture: the Halles district in Paris, Paris, CNRS.
CANIGGIA, G.; MAFFEI, GL 1979. Composizione architettonica e typologia aedilizia, 1. Lettura dell'edilizia di base, Venezia, Marsilio Editore.
CASTEX, J.; CELESTE, P; PANERAI, P. 1980. Reading a city: Versailles, Paris, Le Moniteur.
CULLEN, G. 1961. Townscape, Architectural press, London.
Ledrut, R., 1983. Images of the city, Paris, Anthropos.
Lévy, A. 1999. "The three ages of urban planning", Esprit, 1, January, 249.
Lynch, K. 1960. The image of the city, Cambridge Mass, mit Press.
Mangin, D. 2004. The franchised city. Forms and structures of the contemporary city, Paris, Éditions de la Villette.
Pellegrino, P. 2000. The sense of space. Urban dynamics, II, Paris, Anthropos/Économica.
Pinon, P. 1994. Urban composition I, II, Paris, dau-stu.
Roncayolo, M. 2002. City readings, Forms and times, Paris, Parentheses.
Rossi, A. 1981. The architecture of the city, Paris, L'Équerre, [1966].
Sitte, C. 1979. Town planning and its artistic foundations, Paris, Vincent, [1889].
Unwin, R. 1981. The practical study of city plans: introduction to the art of drawing development and extension plans, Paris, L'Équerre, [1909].
Weil, M. 1999. The urban transition or the transition from the pedestrian city to the motorized city, Liège, Mardaga.
Weil, M. 2004. City and mobility, Paris, Aube.

dd) THEMATIC 3: ARCHITECTURE, ENVIRONMENT AND TECHNOLOGY

3 - ARCHITECTURE, ENVIRONMENT AND TECHNOLOGY						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	3	UEF	2	3	1H30	
Subject title					**Workshop**	**TP**
ee) SUPPORT MATERIAL 1 / ENVIRONMENTAL PERFORMANCE AND TECHNOLOGICAL INNOVATIONS IN BUILDING						

back

THEMATIC 4:ARCHITECTURE, ENVIRONMENT AND TECHNOLOGY

TITLE OF SUPPORT MATERIAL 1:ENVIRONMENTAL PERFORMANCE AND TECHNOLOGICAL INNOVATIONS IN BUILDING

TEACHING UNIT :EU F3

SEMESTER :3

NUMBER OF CREDITS:3 COEFFICIENT: 2

TOTAL WEEKLY HOURLY VOLUME:1h30

COURSES (NUMBER OF HOURS PER WEEK): 1H30

SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00:00

PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00

GENERAL OBJECTIVE OF THE TEACHING SUBJECT

Acquisition of additional information necessary for the development of coherent knowledge on the topic

SPECIFIC/THEMATIC OBJECTIVES

Raising awareness of the contribution of technological innovations to architecture.
Introduction to energy performance and eco-design

CONTENT OF TEACHING MATERIAL

The content of this subject consists of two parts

1. The first part is dedicated to the environmental performance of the built environment (high performance built environment):

Climate change, ecological footprint, urbanization and environmental risks, urban heat island, sustainable urban planning, eco-neighborhoods, etc.

2. The second concerns technological innovations in construction:

New materials and construction systems
Buildings and bioclimatic techniques
Spaces, ambiances and modeling (sound, light, etc.)

EVALUATION MODE

Nature of control	Weighting in %
Exam	100%
Tutorials	00%
Total	100%

REFERENCES & BIBLIOGRAPHY

Jourda, F. (2009). A short handbook of sustainable design. Archibooks.
Wines, J. (2002). Green Architecture. Taschen.
European Association of Mineral Wool Manufacturers, www.eurima.org
Center for Sustainable Construction - Cedubo, 2003
Eco-neighborhoods in Europe, , Ed.: Terre vivant (2009).
Dominique Gauzin-Müller The ecological architecture of Voralberg,:, Ed.: Le Moniteur (2009)
Brigitte Vu The guide to passive housing, Ed.: Eyrolles
Bellin Pierre-Gilles, (2008), Bioeconomic habitat, Eyrolles editions.
Boutté Franck et al., (2003), Building environmental quality: basic work, Weka editions.
Carcano Emmanuel, (2007), Ecological building - Chronicle of a wooden construction, Terre Vivante editions.
Charlot-Valdieu, Outrequin Philippe, (2009), Sustainable urban planning: Designing an eco-district,
ourrier M. Vincent, (2006), Building Healthy and Natural - Ecological Materials Guide, Ouest-France editions.
Gauzin-Müller Dominique, (2001), Ecological Architecture, Editions du Moniteur, Paris.
- (2006), 25 Ecological houses, editions of the Moniteur
Gilles Bellin Pierre, (2008), Bioeconomic housing: insulation--heating-electricity-water, Eyrolles editions.
Claude Aubert. “Ecological houses today”; Living Earth 2002.
Alain Maugard, Jean-Pierre Cuisinier. “A look at the sustainable city - Towards new ways of life”. CSTB 2011,.
Dimitris Kottas, “Materials - Impact and innovation”.Links 2011
Alain Liébard, “Solar Architectures”; EYROLLES 2009.
Dominique Pipard and Jean-Pierre Gualezzi, “The Fight Against Noise” LE MONITEUR 2002
Dominique Gauzin-Müller. “Ecological architecture” LE MONITEUR 2001
Nelly Olin. “Build or renovate while respecting High Environmental Quality” EYROLLES 2006.

3 - ARCHITECTURE, ENVIRONMENT AND TECHNOLOGY						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	3	UEF	2	3	1H30	1H30
Subject title					**Workshop**	**TP**
ff) SUPPORT MATERIAL 2 / ASSESSMENT OF COMFORT IN THE BUILDING AND ENERGY DIAGNOSIS						

back

THEMATIC :ARCHITECTURE, ENVIRONMENT AND TECHNOLOGY

TITLE OF SUPPORT MATERIAL 2: ASSESSMENT OF COMFORT IN THE BUILDING AND ENERGY DIAGNOSIS

TEACHING UNIT :EU F3

SEMESTER :3

NUMBER OF CREDITS:3 COEFFICIENT: 2

TOTAL WEEKLY HOURLY VOLUME:3H

COURSES (NUMBER OF HOURS PER WEEK):1H30

SUPERVISED WORK (NUMBER OF HOURS PER WEEK):1H30

PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00

GENERAL OBJECTIVE OF THE TEACHING SUBJECT

Initiation and acquisition of basic notions concerning the conceptual, methodological and logistical tools necessary for establishing diagnosesrelated to the theme.

SPECIFIC/THEMATIC OBJECTIVES

Introduction to evaluation and diagnostic methods

Introduction to simulation and modeling “software”

CONTENT OF TEACHING MATERIAL

Calculation and evaluation of notions of comfort in the architectural space using IT tools (software available at the architecture department). Heat loss, energy consumption and thermal comfort, ventilation rate and natural olfactory comfort, natural lighting and visual comfort, noise level and acoustic comfort, etc.

EVALUATION MODE

Nature of control	Weighting in %
Exam	60%
Tutorials	40%
Total	100%

REFERENCES & BIBLIOGRAPHY

European Association of Mineral Wool Manufacturers, www.eurima.org

Baltus, C, Guillemeau, J.-M., Mechanical ventilation, practical guide for installers of special techniques, DGTRE and FFC, Brussels, 2004

Gilles Bellin Pierre, (2008), Bioeconomic housing: insulation--heating-electricity-water, Eyrolles editions.

Gonzalo-Habermann, (2008), Architecture and energy efficiency, Bikhäuser editions.
Claude Aubert. “Ecological houses today”; Living Earth 2002.
Dimitris Kottas, “Materials - Impact and innovation”.Links 2011
Dominique Pipard and Jean-Pierre Gualezzi, “The Fight Against Noise” LE MONITEUR 2002
Dominique Gauzin-Müller. “Ecological architecture” LE MONITEUR 2001
Nelly Olin. “Build or renovate while respecting High Environmental Quality” EYROLLES 2006.

gg) THEMATIC 4: BUILT ARCHITECTURAL AND URBAN HERITAGE

4 - BUILT ARCHITECTURAL AND URBAN HERITAGE						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	3	UEF	2	3	1H30	
Subject title					**Workshop**	**TP**
hh) SUPPORT MATERIAL 1 / CONSERVATION AND VALORIZATION OF ARCHITECTURAL AND URBAN HERITAGE						

back

THEMATIC 1:BUILT ARCHITECTURAL AND URBAN HERITAGE

TITLE OF SUPPORT MATERIAL 1: CONSERVATION AND VALORIZATION OF ARCHITECTURAL AND URBAN HERITAGE
TEACHING UNIT :EU F3
SEMESTER :3
NUMBER OF CREDITS:3 COEFFICIENT: 2
TOTAL WEEKLY HOURLY VOLUME:1h30

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00H
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00

PREREQUISITES

GENERAL OBJECTIVE OF THE TEACHING SUBJECT
Acquisition of additional information necessary for the development of coherent knowledge in thethematic.

SPECIFIC/THEMATIC OBJECTIVES
Acquisition of knowledge about heritage and the different types of intervention on heritage sites,
Introduction to instruments for safeguarding and preserving heritage…etc.

CONTENT OF TEACHING MATERIAL
Overview of the theoretical foundations of the notion of historical heritage and the different schools of thought.
The contents and limits of the different heritage charters.
The expansion of the new concept of heritage to environmental and cultural landscape assets;
The issue of heritage: definitions, principles and methodologies.
Measures to protect and enhance heritage: inventory, classification and various intervention strategies.
The revitalization of historic cores: identification of centralities and concept of center, concept of urban renovation, concept of urban revitalization, recycling of former activity sites, concept of urban consolidation, treatment of urban facades.
The reconversion of heritage: museums, industrial heritage, religious, hospital, military heritage, etc.

Safeguarding and promoting heritage: safeguarding instruments: Safeguarding plans, protected sectors, Protection and development plan for archaeological sites and their protection zone (PPMVSA).

EVALUATION MODE (WEIGHTING IS LEFT TO THE APPRECIATION OF THE TRAINING TEAM)

Nature of control	Weighting in %
Exam	100%
Tutorials	00%
Total	100%

REFERENCES & BIBLIOGRAPHY

Bercé F., (2000) “From historical monuments to heritage, from the 18th century to the present day, or The wanderings of the heart and the mind”, Ed. Flammarion.
DinkelR., (1997), “The Encyclopedia of Heritage (Historical Monuments, Built and Natural Heritage - Protection, Restoration, Regulations. Doctrines - Techniques - Practices”, published by Les Encyclopédies du patrimoine.
Brandi C., (2001) “Restoration theory”, Paris
Choay F., (1992), The allegory of Heritage, Paris

Detry N., PRUNET P., (2000), Architecture and restoration, Paris

Giovannoni G., (1998) Urban planning in the face of ancient cities, Paris (French translation)

Riegl, A., (2003), “The modern cult of monuments”, Paris (French translation)
Severo, D., (1998), “Ancient and modern, The confusion of monuments”, in “Les Cahiers de médiologie” n°7, Paris

4 - BUILT ARCHITECTURAL AND URBAN HERITAGE						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	3	UEF	2	3	1H30	1H30
Subject title					**Workshop**	**TP**
ii) SUPPORT MATERIAL 2 / PRIOR STUDIES AND DIAGNOSIS ACCORDING TO PATHOLOGIES OF THE CONSTRUCTION SYSTEM						

back

THEMATIC 1:HERITAGE

TITLE OF SUPPORT MATERIAL 2: PRIOR STUDIES AND DIAGNOSIS ACCORDING TO PATHOLOGIES OF THE CONSTRUCTION SYSTEM
TEACHING UNIT :EU F3
SEMESTER :3
NUMBER OF CREDITS:3 COEFFICIENT: 2
TOTAL WEEKLY HOURLY VOLUME:3H

COURSES (NUMBER OF HOURS PER WEEK):1H30
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):1H30
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00

GENERAL OBJECTIVE OF THE TEACHING SUBJECT

Initiation and acquisition of basic notions concerning the conceptual, methodological and logistical tools necessary for establishing diagnosesin connection with thethematic

SPECIFIC/THEMATIC OBJECTIVES

Introduction to developing diagnostics on the state of conservation of buildings.
Introduction to architectural, constructive and structural intervention methods (in relation to a buildingclass).

CONTENT OF TEACHING MATERIAL

Introduction to preliminary studies and documentary resources (written sources, cartography, plans and surveys, iconography, theoretical works, study reports and bibliography, documentary research).
Subsoil archeology (excavation techniques, stratigraphic analysis, sampling technique, investigation and interpretation methods)
Archeology of buildings (stratigraphic analysis and methods of investigation and interpretation)
Surveying, graphic representation, restitution and simulation techniques (manual surveys, topographical, photogrammetric, photographic and metro photographic surveys, technical drawing, stereotomy, CAD and restitution software, photomontages, synthetic images)
Cost estimation and management (Case study)
Sanitary studies and diagnosis (Technique for recognition and monitoring of materials, structures and frames - Analysis of pathologies of materials, structures and frames (structural disorders including soils) - Analysis of risks linked to natural phenomena)

Conservation and restoration techniques (Monument: temporary or definitive consolidation, emergency intervention, repair or replacement of structures or materials, anastylosis, cleaning and renovation, protection against humidity and aggressive or polluting agents, adaptation to special techniques current)

EVALUATION MODE (WEIGHTING IS LEFT TO THE APPRECIATION OF THE TRAINING TEAM)

Nature of control	Weighting in %
Exam	60%
Tutorials	40%
Total	100%

REFERENCES & BIBLIOGRAPHY

Verges-Belmin V., Bromblet P. (2001) technical and scientific file, Paris, Heritage Department,. In: Monumental, p. 236-271, scientific and technical review of historic monuments, Editions du Patrimoine, Lorusso S., Schippa B. (1995) Scientific methodology applied to the study of cultural property. Diagnosis and technico-economic evaluation, (translated from Italian by Stefanaggi, E.), 262p.

Preserve the objects of its heritage, details of preventive conservation. Collective SFIIC, Pierre Mardaga publisher, Sprimont, Belgium, 2001, 264 p., ISBN 2-87009-766-2.

Proceedings of the round table organized in Tours on October 6 and 7, 2003, Archaeological diagnostics in urban areas. Objectives and methods and results, Sub-Directorate of Archeology and National Center for Urban Archeology (CNAU), 2004

Measuring and diagnostic devices (C 97), Technical assistance and documentation center (CATED), Domaine St Paul, 78470 St-Rémy-lès-Chevreuse

ALL THEMATICS						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	3	EMU	7	9		
Subject title					**Workshop**	**TP**
jj) PROFESSIONAL SITUATION INTERNSHIP						

back

TITLED :PROFESSIONAL SITUATION INTERNSHIP
TEACHING UNIT :EU M3
SEMESTER :3
NUMBER OF CREDITS:9 COEFFICIENT: 7
TOTAL HOURLY VOLUME:15 DAYS

COURSES (NUMBER OF HOURS PER WEEK):/
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):/
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):/

PREREQUISITES:
All previous training at Master 2 and in particular the Project Workshop S1 and S2, project management and project management S1 and S2 of Master 1.

GENERAL OBJECTIVE OF THE TEACHING SUBJECT
Adaptation of theoretical knowledge to the professional framework.
Gradual immersion in the professional environment.

SPECIFIC (LEARNING) OBJECTIVES
Acquisition of information on the professional environment
Situation of the exercise of the profession of Architect.
Awareness of the institutional, legal and regulatory environment for the exercise of the architectural profession

CONTENT OF TEACHING MATERIAL
This internship, lasting 15 days, is carried out individually by the student according to the agreements and internship conventions drawn up/signed by the faculty, with the organizations and institutions concerned: design offices, Order of Architects, construction sites, construction companies, construction industry, local authorities, ministries, urban planning agencies, etc. It is recommended to complete the internship during the vacation period (divided into 2 times of 07 days each).

At the end of the internship, the student prepares a report approved by the managers of the host structures and evaluated by the teachers responsible for monitoring the internship. The report presents the progress and the tasks carried out, the student's remarks concerning the exercise of the profession, as well as the difficulties observed (professional, administrative, legal, financial, organizational, etc.). The report can be accompanied by a graphic and photographic file, presenting the projects and projects to which the student was introduced during his internship.

Possibly, the student may be asked to produce a quantitative and estimated quote, specifications and the site management plan for their architectural project developed as part of the project workshop.
Proposed structure for the content of the internship report:
Purpose of project management
Interest in the project
Host organization
Operational organization and modalities of the internship
Summary of the main professional and operational achievements
Formalization of project management according to the case study (quantitative measurements, estimates, production method, management method, specifications, constructive details…….).
Encountered difficulties.

EVALUATION MODE

Nature of control	Weighting in %
Exam	
Personal works	100%
Total	100%

REFERENCES & BIBLIOGRAPHY

(To be defined by the teacher at the start of the semester).

ALL THEMATICS						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	3	UET/D	3	3	3:00	
Subject title					**Workshop**	**TP**
kk) SEMINARS ON ARCHITECTURAL NEWS						

back

TITLED :SEMINARS ON ARCHITECTURAL NEWS
TEACHING UNIT :EU T/D3
SEMESTER :3
NUMBER OF CREDITS:3 COEFFICIENT: 3
TOTAL WEEKLY HOURLY VOLUME:3H

COURSES (NUMBER OF HOURS PER WEEK):3H
SUPERVISED WORK (NUMBER OF HOURS PER WEEK):00:00
PRACTICAL WORK (NUMBER OF HOURS PER WEEK):00:00

PREREQUISITES:
All previous training at Master 2 and in particular the Project Workshop S1 and S2, project management and project management S1 and S2 of Master 1.

GENERAL OBJECTIVE OF THE TEACHING SUBJECT
Updating/renewing knowledge relating to the practice of architecture
Awareness of new discursive and technical developments in architecture and the profession.

SPECIFIC (LEARNING) OBJECTIVES
Acquisition of an architectural culture
Introduction to debates and oral communication

CONTENT OF TEACHING MATERIAL
This seminar will be open to various speakers.
Whether they come from teaching staff, researchers, professionals or "promoters", interventions are called upon to establish, beyond the information and knowledge to be given, a dialogue encouraging learners to debate.
This will involve encouraging learners (future professionals or researchers) to develop an enthusiasm for current events in architecture/urban planning, design and art.
The contents of the interventions will preferably focus on:

- Technological innovations and their contributions to architecture
- The new utopias
- New discourses on architecture (epistemology, doctrines, etc.)
- Simulation, design, etc. (computer) tools
- The professional experiences of practicing and well-known professionals
- Screening of films on architecture followed by debates.

EVALUATION MODE

Nature of control	Weighting in %
Exam	100%
Personal works	
Total	100%

REFERENCES & BIBLIOGRAPHY

(To be defined by the teacher at the start of the semester).

MASTER 2 / SEMESTER 4 [back]

ALL THEMATICS						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	4	UEF	12	20		
Subject title					**Workshop**	**TP**
II) PROJECT GRADUATION					9:00 a.m.	

back

TITLED :PROJECT GRADUATION
TEACHING UNIT : EU F4
SEMESTER :4
NUMBER OF CREDITS:20 COEFFICIENT: 12
TOTAL WEEKLY HOURLY VOLUME:09 HOURS

COURSES (NUMBER OF HOURS PER WEEK): 00h
SUPERVISED WORK (NUMBER OF HOURS PER WEEK): 00h
PRACTICAL WORK (NUMBER OF HOURS PER WEEK): 00h
PERSONAL WORK:09 A.M.

PREREQUISITES:
All the training acquired from the license to the end of semester 3 of the Master.

GENERAL OBJECTIVE OF THE TEACHING SUBJECT
Elaboration and Mastery of "personal" and methodical principles in the elaboration of an architectural "idea" (or thought) and its development towards a project.
Mastery of communication skills and representation and project tools (written, oral, drawings, simulations, models, etc.).
Acquisition/development of skills in the mobilization of knowledge (practical/theoretical acquired during training) in the face of complex project situations (approach, reflect, design and represent/communicate).
Acquisition of the basics of autonomy in taking charge of professional development.
Allow each student, on the basis of the work carried out in semester 3, to assert the chosen theme and their positions by examining the links between the project to be designed and the questions raised in the dissertation by developing a dialogue between the design of the project and the theoretical reference already established in semester 3.

SPECIFIC (LEARNING) OBJECTIVES
Development of intellectual, creative, autonomous and critical capacities through project interventions on a real site,
Develop communicative skills graphically (project file), in writing (FE dissertation) and orally (defense before jury).
Acquisition of specific skills relating to the profession (transition from theory to practice).

CONTENT OF TEACHING MATERIAL

The teaching of the project is envisaged as a tool for research and experimentation, where the student is placed in an exploratory posture both on the methodological level and on the creative level. Through the analysis of issues and uses located and real tools, the student is

invited to develop a thought of the architectural project and design it autonomously within the framework of the assets and constraints of the local contexts and the games of real actors.

The lessons provided are thus focused on a disciplinary support approach. The learner is "supervised" and guided to build their own knowledge, develop their know-how to ultimately achieve learning autonomy which will continue in the professional context.

Developed in weekly workshop sessions, the end-of-study project addresses design axes which combine, depending on the themes, both action on existing buildings and the project of creating new buildings. The theme covered at the workshop level serves to frame practices of the architectural project and the city in coherence with local contexts, the expectations and lifestyles of users, as well as contemporary requirements (environment, sustainable development, etc. .).

From this perspective, the project is approached in its different scales simultaneously: from the urban scale to that of detail. At the same time, from the programmatic level, to the formal level, back and forth, through a mastery of the relationships that exist between the design tools and the framework (regulatory and normative) of the production of the built environment in Algeria.

The aim is to support each student in building their methodological approach based on the analysis of urban, social, cultural and economic data and on design work articulating a spirit of rigor and freedom of imagination and innovation. The project will also support technical and/or regulatory development, which will place the project proposal in an operational implementation perspective.

Each student develops their end-of-studies project and dissertation individually (In accordance with Order 362 of 2014).

EVALUATION MODE

Nature of control	Weighting in %
Exam	--
Continuing works	100%
Total	100%

REFERENCES & BIBLIOGRAPHY

(To be defined by the teacher at the start of the semester).

ALL THEMATICS						
Landing	**Semester**	**Unit**	**Coefficient**	**Credit**	**Course**	**T.D.**
M2	4	UEF	8	10		
Subject title					**Workshop**	**TP**
mm) END OF STUDY Dissertation					3:00	

back

TITLED :MEMORY
TEACHING UNIT : EU F4
SEMESTER :4
NUMBER OF CREDITS:10 COEFFICIENT: 8
TOTAL WEEKLY HOURLY VOLUME:03H

COURSES (NUMBER OF HOURS PER WEEK): 00H
SUPERVISED WORK (NUMBER OF HOURS PER WEEK): 00H
PRACTICAL WORK (NUMBER OF HOURS PER WEEK): 00H
WORKSHOP (NUMBER OF HOURS PER WEEK):03:00

PREREQUISITES:
Initiation to research.
Introduction to writing a dissertation in architecture

GENERAL OBJECTIVE OF THE TEACHING SUBJECT
Support the student in writing their dissertation based on the problem formulated.
Lead the student to greater reflection, knowledge and mastery of the subject when developing the dissertation.
Highlight the student's rigor in their work through the formulation of sentences, the structuring and logical flow of the different arguments, the structuring of the dissertation, the general presentation and formatting of the document.

SPECIFIC (LEARNING) OBJECTIVES
Finalization of the writing of the dissertation: the work carried out by the student during the first three semesters will be synthesized according to the project and will form part of the theoretical support of the dissertation.
Use the spirit of criticism and synthesis acquired by the student to write the dissertation

CONTENT OF TEACHING MATERIAL
The workshop devoted to support in writing the dissertation is structured around:

- Delineation of the problem
- The justification of the subject and the state of the art
- Preparing the theoretical framework
- Delineation of the methodological framework
- Developing the memory plan
- The introduction to the dissertation
- The empirical part of the dissertation
- The conclusion of the dissertation
- The bibliography of the dissertation

- The summary of the dissertation

EVALUATION MODE

Nature of control	Weighting in %
Exam	00%
Continuous	100%
Total	100%

REFERENCES & BIBLIOGRAPHY

ALBALAT Antoine (1992), The art of writing taught in 20 lessons, Paris, Armand Colin.
BEAUD Michel (1988), The art of the thesis - How to prepare and write a doctoral thesis, a DEA or master's thesis or any other university work, La Découverte (first edition 1985).
CAMUS B. (1989), Internship reports and memoirs, Paris, Les Editions d'Organization.
FRAGNIERE JP (1986), How to succeed in a dissertation, Paris, Dunod.
LEFORT G. (1990), Knowing how to document yourself, Paris, Les Editions d'organization.
MACE Gordon, PETRY François (2000), Guide to developing a social science research project, De Boeck-Wesmael.
MACCIO Charles, Know how to write a book, a report, a memoir. From thought to writing, Lyon: Social Chronicle, 4th edition, 2003
BOUTILLIER Sophie et al., Thesis and dissertation methodology, Levallois Perret: Studyrama, 2009.
BRAY Laurence, HOFMANN Yvette, The final work: a methodological approach to the dissertation, 2nd ed., Paris

IV. AGREEMENTS OR CONVENTIONS

Yes

NO

(If yes, transmit the agreements and/or conventions in the paper training file)

[BACK]

STANDARD LETTER OF INTENT

(In the case of a master's degree co-sponsored by another university establishment)

(Official paper on the header of the university establishment concerned)

Subject: Approval of co-sponsorship of the master's degree entitled:

The university (or university center) hereby declares that it co-sponsors the above-mentioned master's degree throughout the accreditation period of this master's degree.

To this end, the university (or university center) will assist this project by:

- Giving his point of view in the development and updating of teaching programs,
- Participating in seminars organized for this purpose,
- By participating in defense juries,
- By working to pool human and material resources.

SIGNATURE of the legally authorized person:

FUNCTION :

Date :

STANDARD LETTER OF INTENT

(In the case of a master's degree in collaboration with a company in the user sector)

(Official company letterhead)

OBJECT :Approval of the project to launch a master's degree course entitled:

Dispensed to:

The company hereby declares its willingness to demonstrate its support for this training as a potential user of the product.

To this end, we confirm our support for this project and our role will consist of:

Give our point of view in the development and updating of educational programs,

Participate in seminars organized for this purpose,

Participate in defense juries,

Facilitate as much as possible the reception of interns either as part of end-of-study theses or as part of tutored projects.

The means necessary to carry out the tasks incumbent on us to achieve these objectives will be implemented on a material and human level.

Mr. (or Madam)……is designated as external coordinator of this project.

SIGNATURE of the legally authorized person:

FUNCTION :

Date :

OFFICIAL STAMP or COMPANY SEAL

V. CURRICULUM VITAE OF THE MANAGEMENT TEAM

(8 to 10 and Comply with the attached model)

[BACK]

Name and first name: BELAKEHAL Azeddine

Date and place of birth : April 10, 1967 in Biskra

Email and telephone: a.belakehal@biskra-univ.dz/ 0772944222

Grade : Teacher

Establishment or institution of connection: Department of Architecture, Faculty of Science and Technology, Mohamed KHIDER University, Biskra, Algeria.

Diplomas obtained (graduation, post-graduation, etc.) with date and place of obtaining and specialty:

- Architect, Institute of Architecture of Biskra, June 1991
- Master's degree in Architecture with very honorable mention, Option Architecture of arid and semi-arid environments, Institute of Architecture of Biskra, June 1996.
- Doctorate in Sciences with very honorable mention, architecture sector, Department of Architecture, Mohamed KHIDER University, Biskra, January 2007.
- University accreditation, Department of Architecture, Mohamed KHIDER University, Biskra, October 2009.

Professional teaching skills (subjects taught in graduation)

- **'**Project theory' (2nd Year License): since 2009-2010.
- 'Project' (2nd Year License): since 2009-2010.
- 'Ambiances' (2nd Year Master Urban and Architectural Heritage in the Sahara): since 2013-2014.
- Morphological analysis' (2nd Year Master Urban and Architectural Heritage in the Sahara): 2016-2017.

Brief CV

Name and first name: ZEMMOURI Noureddine

Date and place of birth : April 22, 1960 Oued Taga

Email and telephone: zemmouri.n@univ-biskra.dz Tel:0550856373

Grade : Teacher

Establishment or institution of connection: Department of Architecture, Faculty of Science and Technology, Mohamed KHIDER University, Biskra, Algeria.

Diplomas obtained (graduation, post-graduation, etc.) with date and place of obtaining and specialty:

- State Architect Diploma June 1984 University of Constantine.
- Mphil Architecture and Building Engineering November 1987 University of Bath England.
- State doctorate in Architecture October 2005 University of Sétif.

Professional teaching skills (subjects taught, etc.)

- Project theory 1 & 2.
- Architecture and Urban Planning Modeling 1 &2.
- CAD.
- Urban planning.
- 1st year Architecture Workshop.
- 3rd Year Architecture Workshop.

Brief CV

Name and first name: BOUZAHER Soumia

Date and place of birth :23-10-1975 Biskra

Email and telephone: Lalouanisoumia@yahoo.fr/ telephone: 0662177954

Grade : Lecturer “A”

Establishment or institution of connection: Department of Architecture, Faculty of Science and Technology, Mohamed KHIDER University, Biskra, Algeria.

Diplomas obtained (graduation, post-graduation, etc.) with date and place of obtaining and specialty:

- **July 1992**Bachelor of Natural Science.
- **September 1999.**Architect diploma.
- **December 2004**obtaining a Master's degree in architecture under the title "The elements of visual identification and spatial orientation in the street"
- **March 2015**Obtaining a “state doctor” diploma. under the title “Sustainable development through an ecotourism project; Case of the ksour of the Ziban micro region. The recovery of an ecotourism circuit. » at the Department of Architecture of Mohamed Khider Biskra University.
- **December 2016**Obtaining a diploma in “Accreditation to direct university research”. at the Department of Architecture of Mohamed Khider Biskra University.

Professional teaching skills (subjects taught, etc.)

- French terminology Directed Work (1st year classic).
- Workshop (introduction to drawing and architecture) (1st year classic).
- Workshop (analysis, integration and design of habitat) (classic 2nd year).
- Workshop (analysis, design of equipment) (3rd year classic).
- Urban Planning Course + tutorial (5th year classic).
- Workshop (analysis, integration and design of habitat) (2nd year license).
- Workshop (model and architectural survey) (2nd year license).
- Urban planning and spatial development (3rd year license).
- History of Cities Course + tutorial (1st year Master, urban project option).
- Urban ecology TD (1st year Master, urban project option).
- The seminar subject (2nd year Master, urban project option).

Brief CV

Name and first name: SELATNIA Khaled

Date and place of birth :08/19/1981 in Souk Ahras

Email and telephone:ar_kaled@yahoo.fr/ 0556 83 81 21

Grade : Lecturer “A”

Establishment or institution of connection: Department of Architecture, Faculty of Science and Technology, Mohamed KHIDER University, Biskra, Algeria.

Diplomas obtained (graduation, post-graduation, etc.) with date and place of obtaining and specialty:

- State engineering diploma in architecture (architect), from Mohamed Kheider University - Biskra, specialty: architecture, promotion: June 2005. Honors.
- Master's degree in Architecture. Option: human settlements in arid and semi-arid zones, faculty of science and technology, Mohamed Kheider Biskra University, year 2009/2011. Honors .
- Doctoral degree in Architecture, Option: human settlements in arid and semi-arid zones, faculty of science and technology, Mohamed Kheider University, Biskra.2015. Very honorable mention.
- Habilitation led research work, Mohamed Kheider University, Biskra. December 2016.

Professional teaching skills (subjects taught, etc.)

- Architectural project 1st year LMD
- Architectural project 2nd year LMD
- Models and 2nd year LMD report
- Urban planning and spatial planning 3rd year LMD
- Urban planning 4th year classic.
- Supervision of more than ten state architects.
- Supervision of fifteen Master theses, option: Urban project.

Brief CV

Name and first name: SEKHRI Adel

Date and place of birth : November 14, 1979 in M'chedallah (Bouira)

Email and telephone:sekhri.adel@yahoo.fr/ 0661147956

Grade : Class "A" Assistant Master

Establishment or institution of connection: Department of Architecture, Faculty of Science and Technology, Mohamed KHIDER University, Biskra, Algeria.

Diplomas obtained (graduation, post-graduation, etc.) with date and place of obtaining and specialty:

- **June 1997:**Baccalaureate: Natural Science Series, High School: Kérouani - SETIF.
- **December 2002:**Diploma of State Architect,Department of Architecture, Ferhat Abbas University, Sétif.
- **June 2005:**Magister Diploma in Architecture, Option: architecture, history and society, mention "GOOD", Department of Architecture, Ferhat Abbas University, Sétif.

Professional teaching skills (subjects taught, etc.)

- **Workshop**– 1st year architecture (Classical System).
- **Workshop**– 2nd year architecture (Classical System).
- **Workshop**– 3rd year architecture (Classical System).
- **Workshop**– 4th year architecture (Classical System).
- **Workshop**– 5th year architecture (Classical System).
- **Codified drawing of architecture 1**& 2 (Semester 1 & 2) – 1st year Architecture license (LMD System).
- **Discovery of architectural tools**(Semester 1) / Introduction to the project (Semester 2) – 1st year Architecture license (LMD System).
- **Project 1**& 2 (Semester 1 & 2) – 1st year Architecture license (LMD System).
- **Project 1 + Memory**(Semester 3) / Project 2 + Dissertation (Semester 4) – 2nd year Master, Specialty: Urban and Architectural Heritage in the Sahara (M2 PUAS).

VI. OPINIONS AND VISAS FROM ADMINISTRATIVE AND ADVISORY BODIES

[BACK]

VISA DU CHEF DE DEPARTEMENT + RESPONSABLE DE L'EQUIPE DE DOMAINE

DATE et VISA

DR.SELATNIA Khaled
Maitre de Conférences -A-

رئيس قسم الهندسة المعمارية
سخري عـــادل

VISA DU DOYEN DE LA FACULTE /DIRECTEUR D'INSTITUT

DATE et VISA

CHEF D'ETABLISSEMENT UNIVERSITAIRE

DATE et VISA

مديـــر الجامعـــة

أحمـــد بوطرفايـــة

VII. NOTICE AND ENDORSEMENT FROM THE REGIONAL CONFERENCE

(Only in the final version sent to the MESRS)

VIII. OPINION AND ENDORSEMENT OF THE NATIONAL EDUCATIONAL COMMITTEE OF THE DOMAIN

(Only in the final version sent to the MESRS)