EXERCISES 1 AND 2

Architectural and Urban Analysis, Diagnosis and Design

EXERCISE 1: ANALYSIS, DIAGNOSIS AND DESIGN OF A PUBLIC FACILITY

1. General Context

The exercise consists of analysing an existing public facility and its immediate environment in order to understand its **architectural, functional, urban, environmental, social and landscape** characteristics, as well as its conditions of use.
The analysis of the existing situation should identify the **qualities, constraints, dysfunctions and potentialities** of the site and facility, in order to establish a diagnosis.
Based on this diagnosis, students will develop a **new architectural design on the same site**, incorporating the lessons drawn from the analysis.

Approach:

EXISTING SITUATION → ANALYSIS → DIAGNOSIS → DESIGN PRINCIPLES → NEW ARCHITECTURE

Work Organisation

The **theoretical research** and **field analysis** will be carried out in **subgroups of 3 to 4 students**.

2. Facilities Studied

- University conference rooms or Amphitheatres A and B;
- CALZADA Garden;
- Moudjahid Museum;
- EL NADA School;
- Library;
- Covered Market.

3. Learning Objectives

Overall Objective

Develop students' ability to **design a public facility integrated into its context**, considering its **urban, architectural, environmental, social and landscape** dimensions.

Specific Objectives

- Analyse the site, the facility, its environment and its uses;
- Identify the **constraints, qualities and potentialities** of the context;
- Take into account users' needs and the different **comfort parameters**: hygrothermal, lighting, visual, acoustic, aeraulic, olfactory, ergonomic and psychospatial comfort, as well as outdoor-space comfort conditions;
- Understand the relationships between the project and its built, natural and social environment;

- Establish a **diagnosis** and derive design principles;
- Translate these principles into a **coherent, context-sensitive architectural proposal adapted to users and uses**.

4. Exercise Process

Phase 1 — Theoretical Research and Preparation

This phase will be carried out in **subgroups of 3 to 4 students** and comprises two components.

1. Theoretical Research on the Project Typology

- Operation and spatial organisation;
- Functional requirements and users' needs;
- Principles of integration into the site, climate and topography;
- Materials and architectural solutions;
- Algerian and international references.

2. Presentation on a Comfort Parameter Related to the Selected Project

Selection of one or more comfort parameters relevant to the facility studied, from among:

- hygrothermal comfort;
- lighting comfort;
- visual comfort;
- acoustic comfort;
- aeraulic comfort;
- olfactory comfort;
- ergonomic comfort;
- psychospatial comfort;
- climatic and landscape comfort of outdoor spaces.

The presentation should cover the **theoretical principles** and **architectural solutions** that can improve the selected type of comfort.

Deliverable: a comparative and illustrated dossier of **5 to 10 boards**.

Phase 2 — Analysis of the Existing Situation and Diagnosis

Context and site analysis: location, accessibility, urban environment, topography, orientation, solar exposure, winds, vegetation, views, relationships with surrounding buildings, public and outdoor spaces, pedestrian and vehicular flows.

Architectural analysis: siting, massing, spatial organisation, distribution, hierarchy of spaces, access, circulation, indoor/outdoor relationships, façades, materials and structure.

Use analysis: users, practices, routes, frequently used spaces, meeting places, potential conflicts, and relationships between users and the environment.

Comfort analysis: thermal and hygrothermal comfort, ventilation and air quality, acoustic comfort, visual comfort, lighting, glare, shading, vegetation, outdoor-space quality and climatic comfort.

Diagnosis: cross-analysis to identify qualities, constraints, dysfunctions, potentialities, users' needs, and architectural and environmental issues.

Phase 3 — New Architectural Design

Based on the diagnosis, students will develop a new architectural proposal on the same site. The proposal must integrate the urban context, topography, orientation, flows, uses, functional needs, comfort, indoor/outdoor relationships, and environmental principles.

Main scale: 1:100. Additional scales may be used for certain details.

5. Deliverables for Exercise 1

- Plans, sections and elevations.
- Outdoor site-development plan.
- Perspectives and 3D views.
- Design diagrams.
- Summary of the diagnosis and architectural principles.
- Justification of design choices and consideration of comfort parameters.
- Physical model at 1:100 scale.
- Architectural details at appropriate scales, if necessary.

The proposal must be accompanied by a **summary of the architectural choices**, showing how the project responds to the findings of the analysis and diagnosis and how it integrates into its **urban, architectural, environmental, social and landscape context**, while addressing the different **comfort parameters**.

EXERCISE 2: ANALYSIS, DIAGNOSIS AND GUIDELINES FOR A HOUSING PROJECT

1. General Context

The exercise consists of analysing a **residential urban site** in order to understand its **historical, physical, morphological, functional, social, socio-economic, landscape and environmental** characteristics.
The analysis will cover different housing contexts: **collective, semi-collective and individual housing**.
The objective is to understand the relationships between **urban form, housing forms, density, public and private spaces, mobility, uses and the environment**, in order to establish a well-supported urban diagnosis.
This exercise provides a basis for reflection for the **housing project developed in Semester 2 (S2)**.

2. Learning Objectives

- Develop critical and structured observation of a residential urban site;
- Understand the relationships between **site, urban form, housing forms and density**;
- Analyse different housing typologies and their spatial organisation;
- Identify relationships between **public, private and intermediate spaces**;
- Understand uses, spatial practices, flows and mobility;
- Integrate the **social, socio-economic, landscape and environmental** dimensions;
- Take into account the different **comfort parameters**;
- Establish an urban diagnosis and derive principles for the S2 housing project.

3. Site Analysis

The analysis will be organised around several complementary dimensions:

Historical Analysis

Origin, formation and evolution of the site.

Morphological and Functional Analysis

Street network, plots, urban blocks, built fabric, open spaces, **housing forms and typologies, densities**, topography, urban functions, facilities, public and private spaces, access, flows and mobility.

Social and Socio-economic Analysis

Users, population, practices, activities, temporalities, modes of appropriation, social relations and socio-economic characteristics of the site. A **survey on the use of space** may complement field observations.

Landscape and Picturesque Analysis

Views, perceptions, sequences, landmarks, urban silhouettes, perspectives, colours and distinctive landscape elements.

Environmental and Comfort Analysis

Orientation, solar exposure, winds, vegetation, topography, climatic conditions and different comfort parameters: **hygrothermal, lighting, visual, acoustic, aeraulic, olfactory, ergonomic and psychospatial comfort**, as well as outdoor-space comfort.

4. Synthesis and Urban Diagnosis

The different analyses will be **cross-referenced and interpreted** in order to arrive at an overall diagnosis of the site.

The diagnosis will identify:

- **strengths and qualities**;
- **weaknesses and dysfunctions**;
- **opportunities and potentialities**;
- **constraints and threats**.

It should lead to the definition of the site's **priority issues**.

5. Principles and Guidelines for the Housing Project

Based on the diagnosis, students will develop guidelines focusing mainly on:

- **housing forms and typologies** suited to the site;
- **density and building heights/massing**;
- the **siting and integration of the built fabric** into its context;
- relationships between **housing and public, private and intermediate spaces**;
- **mobility, meeting spaces and uses**;
- the project's **comfort and environmental qualities**;
- **landscape, vegetation and outdoor-space quality**.

These guidelines will constitute a **basis for reflection for the S2 housing project**.

6. Work Organisation and Deliverables

The work will be carried out in **groups of 3 to 5 students**, based on field observations and surveys, cartographic documents, and available data.

Students will produce **maps, diagrams, sections, charts, annotated photographs and other graphic representations**, prioritising analysis and interpretation rather than simple description.

Deliverables

- **Final presentation: 15 to 20 boards**, including site presentation, the different analyses, synthesis, diagnosis, issues and guidelines for the housing project;
- **Collective oral presentation** supported by graphic materials;
- **Site model** at **1:500 or 1:200 scale**, allowing an understanding of topography, urban structure, built forms, open spaces, roads, pathways and relationships between different housing forms.

7. Sites Selected for Analysis

1. **375 Housing Estate**
2. **Moussaoui Messaouda Housing Estate**
3. **Bourmel Subdivision**
4. **The 32 Housing Units**
5. **A City-Centre Block**
6. **AYOUF WEST**

PEDAGOGICAL ARTICULATION OF THE TWO EXERCISES

The two exercises are part of the same pedagogical approach.
EXERCISE 1 — Architectural scale: Existing facility → Analysis → Diagnosis → Design principles → New architecture
EXERCISE 2 — Urban and residential scale: Residential site → Analysis → Urban diagnosis → Issues → Urban principles → S2 housing project

Schedule of Exercises and Architectural Project Phases – Semester 1

Exercise	Phase	Period	Display Date	Duration
Exercise 1 – Public Facility	Phases 1 & 2: Theoretical Acquisition + On-Site Analysis	28 September → 8 November 2026	**Monday, 9 November 2026**	≈ 6 weeks
Exercise 2 – Residential Urban Site	Comprehensive Analysis of the Residential Site	28 September → 6 December 2026	**Monday, 7 December 2026**	≈ 10 weeks
Exercise 1 – Public Facility	Phase 3: Architectural Proposal	9 November 2026 → 3 January 2027	**Monday, 4 January 2027**	≈ 8 weeks

IMPORTANT NOTE — GRAPHIC DOSSIER

For second-year students, **plans, sections and elevations must be drawn by hand on Canson paper, in ink**.
Analysis diagrams, charts, analytical maps and conceptual representations may be produced **in pencil and colour**, to facilitate reading, analysis and the highlighting of different types of information.
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The use of drawing or CAD software is **prohibited for the production of the graphic dossier**.

Annexe

PROGRAMME DE LA DEUXIEME ANNEE : SEMESTRE 3

Semestre 3	
Unité d'enseignement	**EF3**
Matière	**Atelier de projet 3**
Coefficient	**4**
Note éliminatoire	**Note inférieure à 10/20**

OBJECTIFS GENERAUX DE LA MATIERE D'ENSEIGNEMENT

Ce semestre est consacré à l'étude et à l'intégration d'un projet architectural dans son contexte général selon les déterminants physiques, environnementaux et socioculturels, dans une optique de durabilité :

• Relief
• Climat
• Cadre bâti et non bâti (environnement sensible)
• Usages et pratiques

CONTENU DE LA MATIERE D'ENSEIGNEMENT

Les exigences d'intégration et de confort étant très variables d'un usage à un autre, une variété de types de bâtiments (bibliothèque, musée, restaurant …) à répartir entre différents groupes d'étudiants dans un but d'enrichissement mutuel est à privilégier. Le semestre est organisé en trois grandes étapes : une étape d'acquisition théorique, une étape d'analyse en situation et une étape de conception architecturale. Il ne faut pas perdre de vue qu'il s'agit d'emblée de relier dans une opérationnalité immédiate l'analyse et le projet.

• **L'acquisition théorique**, en complément de la matière théorie de projet, consiste à faire travailler des groupes d'étudiants sur des projets, en Algérie et dans le monde, qui traitent les questions de contexte et de confort, avec une préférence pour les matériaux basiques et écologiques.

• **Analyse en situation :** sur des exemples (de préférence concrets), observer et vérifier l'influence des différents paramètres de confort et de site, manipulés par une conception architecturale, sur l'usage de l'espace.

• **Mise en pratique** à travers deux projets séparés ou un projet unique pour synthétiser les deux étapes précédentes.

MODE D'EVALUATION

Nature du contrôle de connaissances	**Pondération en %**
Examen	00

Continu	100
Total	**100**

REFERENCES & BIBLIOGRAPHIE

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paysage, J-J. PAUVERT, 1974.

LYNCH, K., L'image de la cité Paris, Dunod, 1969.

PANERAI, P., DEMORGON M., DEPAULE J-P., Analyse urbaine, Parenthèses, 1999.

PANERAI, P., CASTEX J., DEPAULE J-P., Formes urbaines de l'îlot à la barre, Parenthèses, 2001.

GIVONI, B., L'homme l'architecture et le climat, Le Moniteur, 1978.

WRIGHT, D., Soleil, nature, architecture, Parenthèses, 1979.

3. SEMESTRE 3 :

Nature des enseignements	Intitulé de la matière	VHS	Volume hebdomadaire				Mode d'évaluation		Coefficient	Note éliminatoire
			Atelier	Cours	TD	TP	Stage	Continu	Examen		
EF 3	Atelier de projet 3	180h	12h					100 %		4	< 10/20
	Histoire de l'Architecture 3	45h		1h30	1h30			40 %	60 %	2	< 07/20
	Théorie de projet 3	22h30		1h30					100 %	2	< 07/20
EA 3	Construction 1	45h		1h30	1h30			40 %	60 %	2	< 05/20
	RDM 1	45h		1h30	1h30			40 %	60 %	2	< 05/20
	DAO	45h		1h30		1h30		40 %	60 %	1	< 05/20
ERF 3	Analyse spatiale et cartographie	45h		1h30	1h30			40 %	60 %	1	< 05/20
	Sociologie et anthropologie de l'espace	22h30		1h30					100 %	1	< 05/20
SP 3	Stage découverte 3	45h					3h	100 %		1	< 05/20
Total		**495h**	**12h**	**10h30**	**6h**	**1h30**	**3h**			**16**	

Salles de conférence ou Amphithéâtres A et B de l'Université



Figure 1 University conference rooms or Amphitheatres A and B



Figure 2 : Covered Market and The city-centre block



Figure 3 : Moudjahid Museum;



Figure 4 : CALZADA Garden



Figure 5 : Library



Figure 6 : École EL NADA

Sites proposés



Figure 7 : 375 Housing Estate

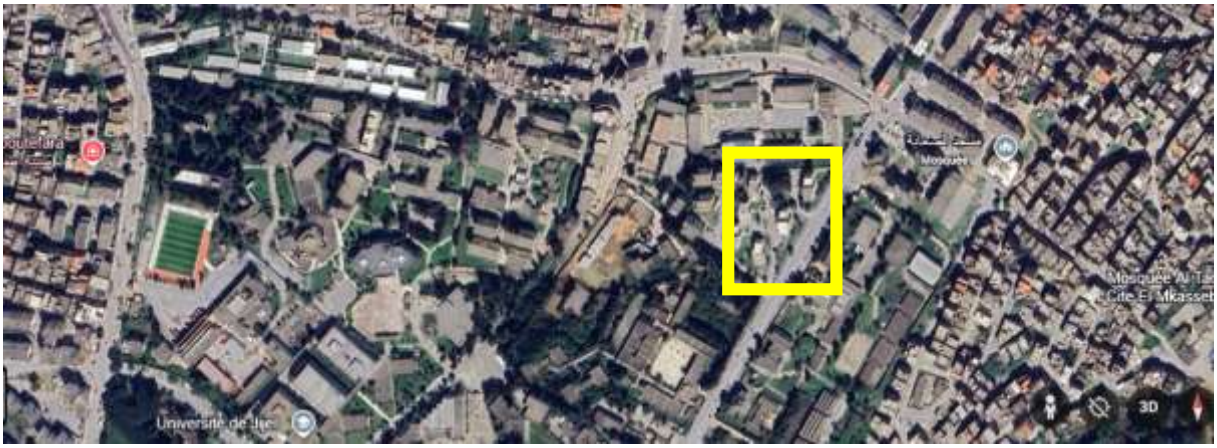


Figure 8 : The 32 Housing Units



Figure 9 : Bourmel Subdivision



Figure 10 : Moussaoui Messaouda Housing Estate



Figure 11 :AYOUF OUEST