

Course file

Study cycle	BACHELOR IN CIVIL ENGINEERING		
Course	URBANISM AND TRANSPORTATION	Mandatory	<input checked="" type="checkbox"/>
		Optional	<input type="checkbox"/>
Course scientific area	CIVIL ENGINEERING	Category	B

Course category: B - Basic; C - Core Engineering; E - Specialization; P - Complementary.

Year: 1st	Semester: 2nd	ECTS: 4,0		Total: 108
Contact time	T: 22,5	TP: 22,5	PL:	S: OT:

T - Lectures; TP - Theory and practice; PL - Lab Work; S - Seminar; OT - Tutorial Guidance.

Course Director	Title	Position
Carmen Carvalheira	Doutor	Assistente

Learning objectives (knowledge, skills and competences to be developed by students)

(max. 1000 characters)

Set of skills essential for interdisciplinary articulation of civil engineering and architecture.

Skills in collaboration, and even coordination teams, where the architecture and / or town planning is present in both design environment and in work.

Learn to analyze the various components of a transport system and identify / interpret the functions / actions of key actors / stakeholders within the system over the Territory, on Environment and Society in General.

Observe and evaluate Traffic Systems. Interpret their components, diagnose their failures and identify solutions to (re) design appropriate.

Analyze and interpret results of studies of modal choice in studies of transport demand.

Know how to create computer models that enable the case study and develop projects, including its analysis and interpretation in the light of the objectives and theoretical skills acquired.

Syllabus

(max. 1000 characters)

1. ARCHITECTURE AND CIVIL ENGINEERING.
2. INTRODUCTION TO URBANISM AND LAND PLANNING.

3. TYPES IN URBAN AND REGIONAL PLANNING. Regional Planning Plans (PROT), Municipal Planning Plans (PMOT) Municipal Master Plans (PDM), Urban Plans (UP), Urban Detail Plan (PP), Allotment operations.
4. URBAN ANALYSIS IN EXPANSION AREAS / URBAN REGENERATION. Elements of morphology / soil landscape. Legal constraints: easements and public utility easements, RAN, REN.
5. URBANISM AND URBAN DESIGN METHODOLOGY"
- 6 Introduction to Transportation: Basics, modes of transport and multi-modal systems
7. Transportation System: transportation networks. Comparative analysis of the characteristics of transportation. Transport demand.
8. Urban Road Network, Pedestrian and Cycle Network,
9. Functional design of priority junctions and roundabouts and semaphoric junctions

Demonstration of the consistency between the syllabus and the course objectives

(max. 1000 characters)

Provides a set of information that will enable the student's ability to articulate an interdisciplinary civil engineering and architecture.

The URBANISM module is set forth the method for preparing an Urban Plan, through its various components, giving competencies that will allow the student, colabor professionally, or even coordinate teams in urban development, both in design environment and in work.

Provide the fundamental concepts relating to various transport systems. Introduction to concepts, theories and methods used in Civil Engineering for the conception, design and operation of transport systems. Deepening of specific concepts and technical expertise in the planning and management of transport systems, including the use of computer tools applied.

Teaching methodology (evaluation included)

(max. 1000 characters)

ASSESSMENT OF KNOWLEDGE::

TEST (Urbanism)

TEST	DURATION TEST
Yes	1.5H

EVALUATION: 1 Test (Urbanism) + TRANSPORTATION PRATICAL WORK (both with minimum grade of 10)

PRATICAL WORK

TIPOLOGIA	N. of works	DISCUSSION	ORAL PRESENTATION	MINIMUM GRADE
Group (3/4 person.)	1	Yes	Yes	10

EXAMS

1º EXAM	2º EXAM	DURATION TEST
Yes	Yes	1.5 h

EVALUATION:

EXAM X 50% + WORK GRADE X 50%

CONTINUOUS EVALUATION : 1 Test (Urbanism) + ASSESSMENT OF KNOWLEDGE::

TEST (Urbanism)

TEST	DURATION TEST
Yes	1.5H

Students who have ≥ 10 values in testing and practical work are exempt from examination. all others (and note that pretend to) have to have to undergo the examination.

Demonstration of the consistency between teaching methodology and the course learning objectives

(max. 3000 characters)

All the theoretical exposition of the architectural methodologies analysis, constructive, historical and cultural context, is framed by the urban and practical context of the rehabilitation intervention, inventorying, and what are its potential deficiencies within the hypothesis of the present work. Drawing on constant exemplification of case studies of international importance in the Western world, but also referencing examples in Portugal, particularly recognizable buildings in the Lisbon area.

This proximity to the objects of study will allow the recognition of architectural features arising from the act projectual and as such, represents the joint interdisciplinary skills of civil engineering and architecture, enabling collaboration, or coordination teams, where the architecture and / or urbanism is present.

Building models to support design and decision making, using advanced software like GIS and transport modeling software for creating models of planning and transportation management and allocation of network traffic in multi-modal transport. Analysis of the models (at the previous study) in connection with the intervention of civil engineering in the design and management of transport systems.

Main Bibliography

(max. 1000 characters)

ZEVI, Bruno: Saber ver a Arquitectura, Arcádia, Lisboa

BENEVOLO, Leonardo: Diseno de la Ciudad –5- El arte y la ciudad Contemporânea, Ed. Gustavo Gili AS, Barcelona, 1982

PEREIRA, Luz Valente: A forma Urbana no Planeamento Físico, LNEC,ICT,1309 Lisboa, 1983

MORAIS, António José: A Morfologia das Estruturas na Concepção Arquitectónica ,Lisboa, 1997

OLIVEIRA, Ricardo Girão, MATEUS, Adalberto Mascaranhas: Técnicas de Engenharia de Trânsito, ESTUDOS– 2, GEPT, Lisboa, 1970

Course Notes

Manuals and notes of support for the program ArcGIS 10