Teaching guide

IDENTIFICATION DETAILS

Degree:	Architecture
Scope	Architecture, construction, building and urban planning, and civil engineering
Faculty/School:	Higher Polytechnic School
Course:	INFORMATION TECHNOLOGY I
Type:	Basic Training
ECTS credits:	6
Year:	1
Code:	3719
Teaching period:	Second semester
Subject:	Computing
Module:	Propaedeutical
Teaching type:	Classroom-based
Language:	Spanish
Total number of student study hours:	150

SUBJECT DESCRIPTION

Mastering the digital environment is essential for shaping the professional profile of 21st century architects. Computing has established itself as the main tool for working and as a key medium for communicating. During the first course, the student is trained in the use of basic computer applications for the generation of architectural graphic documents. His training ranges from the rigor of two-dimensional drawing to the elaboration of three-dimensional models, and ends with the expression of spaces through collage. When carrying out the proposed works, the student realizes that computer science constitutes a powerful ally, both for the rigorous communication of the project and for the free, fresh and intuitive expression of architectural space. Teaching-learning strategies are aimed at allowing students to be able to extend their competencies beyond the programs that currently exist. This way it can be successfully updated and evolved in the future.

GOAL

Experimenting with computer procedures such as basic graphic documentation for the representation of architectural plans, diagrams and spaces helps to communicate an architectural project from the initial stages of ideation.

PRIOR KNOWLEDGE

It is advisable to have passed the course of Descriptive Geometry.
This course is given in parallel with Technical Drawing, with which the subject matter and content of the statements are coordinated.

COURSE SYLLABUS

INTRODUCTION: Thinking with your hands, global vision.
TOPIC I: Two-dimensional representation of space (AutoCAD) > Criteria, rigor and precision.
THEME II: Flat three-dimensional representation and applications (Rhinoceros and AutoCAD) > Volume and space using three-dimensional and two-dimensional tools.
THEME III: The outline in architecture (Rhinoceros and AutoCAD) > The meaning of the architectural program.
THEME IV: Architectural space from a three-dimensional model: collage (Photoshop and Rhinoceros) > The first encounter with architectural space.
THEME V: Photomontage in architecture (Photoshop and Rhinoceros) > Possibilities of the project on site.

EDUCATION ACTIVITIES

1. In-person activities.
1.1. Expository classes: Presentation of content and activities by the teacher with the participation of students in the debate and resolution of doubts about the topics proposed in class.
1.2. Carrying out exercises: Solve, individually, on the blackboard or on the table exercises proposed in class to apply the fundamental knowledge received.
1.3. Project workshop: Correction in groups of different sizes of the projects that students carry out in the classroom or at home, and they clarify in the light of the exercises of their classmates and the instructions of their teachers.
1.4. Evaluation: Carrying out knowledge assimilation checks throughout the course and with the greatest possible continuity.
1.5. Mentoring:
1.5.1. Personalized: Individual attention to the student with the objective of reviewing and discussing the topics presented in class and clarifying doubts that the student cannot understand in their personal study.

1.5.2. Group: Attention to a small group of students who need additional help to follow the subject.

2. Non-face-to-face activities.
2.1. Preparing projects for class discussion: Design and prepare a public presentation of a proposed exercise in class.
2.2. Group work: Group design and development of works.
2.3. Virtual Networking: Virtual space designed by the teacher where the student can work together with other classmates, participate in forums organized by the teacher and maintain tutoring.

DISTRIBUTION OF WORK TIME

TEACHER-LED TRAINING ACTIVITIES	INDIVIDUAL WORK
60 Horas	90 Horas

SKILLS

Basic Skills

Students must have demonstrated knowledge and understanding in an area of study that is founded on general secondary education. Moreover, the area of study is typically at a level that includes certain aspects implying knowledge at the forefront of its field of study, albeit supported by advanced textbooks

Students must be able to apply their knowledge to their work or vocation in a professional manner and possess skills that can typically be demonstrated by coming up with and sustaining arguments and solving problems within their field of study.

Students must have the ability to gather and interpret relevant data (usually within their field of study) in order to make judgments that include reflections on pertinent social, scientific or ethical issues

Students must be able to convey information, ideas, problems and solutions to both an expert and non-expert audience

Students must have developed the learning skills needed to undertake further study with a high degree of independence

Ability to solve problems and to take decisions.

Ability to apply procedures.

General Skills

Ability to solve problems and to take decisions.

Ability to apply procedures.

Specific skills

Appropriate and applied knowledge to architecture and urban planning of spatial representation systems.

Appropriate and applied knowledge to architecture and urban planning of the analysis and theory of form and the laws of visual perception.

Appropriate and applied knowledge of metric and projective geometry to architecture and urban planning.

Appropriate and applied knowledge to architecture and urban planning of graphic survey techniques in all its phases, from drawing notes to scientific restitution.

LEARNING RESULTS

Structure basic floor plans and sections of a building, adapting the graphics to the scale of representation in different formats.

Make three-dimensional models of buildings and spaces, adapting the degree of detail and construction precision to the purpose for which it is designed.

Design schemes capable of representing volumetric and functional aspects of an existing building through the development of axonometry and three-dimensional models.

Represent interior spaces through a digital collage made from a three-dimensional model that is capable of synthesizing the spatial values of existing projects.

Compose presentations in which plans and images are integrated, taking into account the layout of the different elements and the output format.

LEARNING APPRAISAL SYSTEM

A. EVALUATION IN AN ORDINARY CALL
This course is based on continuous evaluation. Periodically, an exercise will be carried out in relation to the

contents of the course. To pass the subject per course, it will be mandatory to submit all the exercises on time. The exercises will be graded from 0 to 10 and general corrections will be made on a regular basis. In addition, the following should be taken into account:
A.1. CRITERIA FOR APPROVING
The student will pass per course if: - Attend at least 80% of the classes. - Submit the course exercises on the date and time indicated. To pass per course, ALL internships must be submitted. A work is considered delivered when it meets all the format requirements (paper and digital) indicated in the statement. All exercises will be delivered in the corresponding CANVAS task. Suspended internships can be compensated with others that are approved, since the average prevails. - You get an average rating of 5 to 10 for such jobs. Papers submitted after the deadline will be graded on 5 points. The distribution of ratings will be as follows:
-- E1 'Data taking and drawing' > 20%
-- E2 'Sectional Axonometry and Program Scheme' > 45%
-- E3 'Perspectives with flat inks and interior space through collage' > 35%
A.2. QUALIFICATION CRITERIA AND JOB IMPROVEMENTS
No work can be improved after the delivery date. Any improvement can be made by TEACHING, CORRECTING AND ATTENDING OTHER CORRECTIONS during the course of the practice through classes and tutoring. Any note made in class about one student's work will affect the rest; therefore, it will not be necessary to repeat to each student what should be improved if these improvements are repeatedly exposed in the context of public correction. Students with internships delivered will NOT be able to deliver improvements. It is recommended that corrections be made on paper. The qualification of the internships will be subject to evaluation criteria, which the student will know in advance in the statements. The corrections of the papers before delivery will respond to the steps that the student must take, which may vary depending on where their work is located.
B. EVALUATION IN AN EXTRAORDINARY CALL
Students who do not pass the course or do not complete it will be eligible for an exam in the extraordinary call. To carry out this exam, it will be necessary to submit ALL the exercises of the course, which will be evaluated on the same criteria set out in the statements and will have the same evaluation rates as in the ordinary call. The remaining 15% of the grade will result from a 2-hour exam in which you will be asked about the most relevant procedures of the course.
Clarification: Plagiarism, as well as the use of illegitimate means in evaluation tests, will be sanctioned in accordance with those established in the Evaluation Regulations and the University's Coexistence Regulations.

ETHICAL AND RESPONSIBLE USE OF ARTIFICIAL INTELLIGENCE

1.- The use of any Artificial Intelligence (AI) system or service shall be determined by the lecturer, and may only be used in the manner and under the conditions indicated by them. In all cases, its use must comply with the following principles:
a) The use of AI systems or services must be accompanied by critical reflection on the part of the student regarding their impact and/or limitations in the development of the assigned task or project.
b) The selection of AI systems or services must be justified, explaining their advantages over other tools or methods of obtaining information. The chosen model and the version of AI used must be described in as much detail as possible.
c) The student must appropriately cite the use of AI systems or services, specifying the parts of the work where they were used and describing the creative process followed. The use of citation formats and usage examples may be consulted on the Library website(https://www.ufv.es/gestion-de-la-informacion_biblioteca/).
d) The results obtained through AI systems or services must always be verified. As the author, the student is responsible for their work and for the legitimacy of the sources used.
2.- In all cases, the use of AI systems or services must always respect the principles of responsible and ethical use upheld by the university, as outlined in the Guide for the Responsible Use of Artificial Intelligence in Studies at UFV. Additionally, the lecturer may request other types of individual commitments from the student when deemed necessary.
3.- Without prejudice to the above, in cases of doubt regarding the ethical and responsible use of any AI system or service, the lecturer may require an oral presentation of any assignment or partial submission. This oral evaluation shall take precedence over any other form of assessment outlined in the Teaching Guide. In this oral defense, the

student must demonstrate knowledge of the subject, justify their decisions, and explain the development of their work.

BIBLIOGRAPHY AND OTHER RESOURCES

Basic

Geoffrey Baker Le Corbusier: Gustavo Gili Form Analysis. 2001

Geoffrey Baker Form Analysis - Architecture and Urbanism Gustavo Gili. 2000

Detail International Journal of Architecture and Construction Details [www.detail.de]
(Detail International Journal of Architecture and Construction Details [www.detail.de] , ||El Croquis Architecture magazine [www.elcroquis.es])