ARCHITECTURAL COMPOSITION I

Undergraduate Degree in the Fundamentals of Architecture and Urban Planning
University of Alcalá

Academic Year 2019/20
Year 3 – 1st Year
Architectural Composition I is an obligatory 6 ECTS course that is taken in the 3rd Year of the degree program. It is part of the Design Module, which spans the areas of Composition, Urban Planning and Architectural Design.

The purpose of the Architectural Composition I course is to introduce students to critical reflection and evaluation of the mechanisms of architectural composition, developing their analytic, theoretical and reflective abilities, in order to make judgements as well as make original decisions when it comes to designing. For students, it will be necessary to deal with the study of the compositional process in all its range and complexity, analysing both the formal architectural and artistic aspects as well as the ideas and thoughts that inspired the forms.

Understanding that any work of art is the result of the realization of an earlier abstract idea, it will be essential, therefore, to take a look at the design process in all its creative discourse, from the initial, abstract vision to the concrete, final production, in order to gain a profound understanding of the composition.
In the study of architectural forms and their composition, we will review all the parameters by which they are determined, from the collective thought of a specific era and place to the personal aspirations of the designer. We will also consider conscious and subconscious experience-based data and, from there, all the decisions within the process related to as many aspects as necessary: aesthetics, morphology, structure, materials, textures, colours etc. and the appropriate conditions of the tools used.

The relationship between the Architectural Composition course and the Design and Urban Planning courses is obvious, as this course deals with the theoretical and conceptual bases of the practical design aspect.

2. COURSE AIMS

General Aims:

1. Sufficient knowledge of the general theories of architectural form and types of architecture.
2. General knowledge of aesthetics and fine art theory.
3. Sufficient knowledge of architectural heritage, historic as well as contemporary.
4. Ability to analyse the artistic and architectural form.
5. Ability to apply architectural critique and make informed judgements from data analysis and architectural and artistic forms.
6. Ability to analyse architecture in relation to its moment in history and analyse it in terms of relationships with social, cultural and technological conditions.
7. Ability to develop theory and thought on architectural and artistic form.
8. Bibliographic and documentation management.
9. Communication ability, both written as well as oral and visual. Communication of ideas and critical judgements on art and architecture.

Specific Aims:

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<thead>
<tr>
<th>AREAS</th>
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<tbody>
<tr>
<td>THEORY</td>
<td>• Acquire methodological knowledge on the different theoretical trends in architecture.</td>
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<td>• Undertake studies, analysis and research related to architecture.</td>
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<td>• Encourage cross-curricular approaches and the correlation between architecture and other artistic and aesthetic manifestations.</td>
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<tr>
<td>PRACTICAL</td>
<td>• Develop analytical tools and evaluation of the architectural object.</td>
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<td>• Generate solid, conceptual competence in architectural design.</td>
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<td>• Begin to engage in architectural critique.</td>
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### REFLECTIVE
- Contrast and think abstractly about theoretical concepts and recurring linguistic elements throughout history and the practice of the discipline (link with other courses in the field and link with Design and Urban Planning).
- Evaluation of the ideological features that form designed and constructed architecture.
- Ability to debate and discuss using collected data.

### ETHICAL
- Raise awareness of the role of architecture in society.
- Development of educated and critical attitude towards architectural and urban intervention.

### 3. CONTENTS

**FIRST SECTION: THE FUNDAMENTAL CONCEPTS OF ARCHITECTURAL THEORY**

1. **Introduction to Architectural Design.**
   - Objectives of the course
   - The role of this course in architectural studies.
   - Approaching the concept of architectural design. Brief review of its meaning and evolution throughout history.

2. **From Utilitas to Function. Use and Operation.**
   - The concept of function.
   - The theory of functionalism in architecture. Architectural design and functional programming.
   - Functional analogies in architecture.

3. **From Firmitas to Technology. Material and Technology**
   - The role of technology.
   - Technology and mechanisation.
   - Architecture and machinism.

4. **From Venustas to Delight. Form and Perception of Architecture.**
   - On the concept of *venustas* in architecture.
   - Material and form. Processes of conceptual abstraction of the tangible world. Form and formal structure.
   - Psychological theories of form. The laws of *gestalt*: simplicity, precision (appeal), parts and the whole, similarity and difference, harmony and contrast. Visual dynamics. Strength, weight, tension, balance.
   - Sensory qualities: sensory overload, stimulation strategies and attraction mechanisms. Artistic experience versus ordinary perception.
5. **Light, Shade, Colour and Sound in Artistic and Architectural Design.**

- Perceptive phenomena of light and colour. Qualities and interaction of colour.
- Symbolism and cultural connections in the use of light and colour. Light and shade. From the plan to the model. Natural light and artificial light.
- Qualities of sound. Architectural acoustics. Architectural relationship between sound and form. The number as a link between music and architecture.

6. **Geometry and Mathematics as the Basis of Art and Architecture.**

- The concept of symmetry. Symmetry in nature and in art. The anthropomorphic sense in art and architecture.
- The idea of movement: the quality of time. The concept of rhythm. Rhythm and movement in art and architecture.

7. **Drafts, Archetypes, Prototypes and Models.**

- On the concept of drafts in architecture.
- Archetypes and ideal values.
- Drafts and industrialisation: the prototype.
- Drafts and models in the history of architecture.

8. **Space and Place**

- Different ideas and understandings of space. Existential space.
- Space in aesthetic theory
- The relationship between space and time in architecture.
- Place and context.

SECOND SECTION: THE STUDY AND ANALYSIS OF TRADITIONAL ARCHITECTURAL DESIGN SYSTEMS

9. **Design Mechanisms in Classical Architecture**

- The concept of beauty as a reflection of “the absolute”.
- Unity, totality and harmony. The regulations and standards
- Hierarchy, symmetry and axiality. Intellectual control through numbers and geometry: regular figures, proportion, proportional units and flow. Statism and special monocentrism.

10. **Distortion Strategies of the Renaissance Spatial System**

- Crisis of “absolute models”. Permanence of the compositional unit for the division and subdivision of itself. The geometric impulse and oblique geometry.
- The ornament as an alteration mechanism of traditional regularity. Illusionary effects such as *Trompe l’oeil* and scenography.
- From “intellectual control” to the “feeling” of space. Alteration of monocentric space. The central floor and its morphological alterations. Mass versus line.
11. **Architecture and Rationalism: Design Mechanisms behind the Architecture of Illustration.**

- A revision of traditional styles as design instruments. Crisis of the proportional hierarchy system and the anthropomorphic model.
- Search for universal designs laws: arrangement and rationalist mathematical geometric system. Units through fragments and parts. Sequences, interchangeability and modular extension.
- First refusal of perspective: descriptive geometry and the “scientifically” represented space. The journey and sequence of spaces. Assertion of temporal quality: from traditional monocentrism to illustrated polycentrism.

12. **Dissolution of traditional design: from romantic classicism to eclecticism**

- The picturesque and the sublime.
- The concept of character in architecture.
- Formal experimentation versus design rules. Asymmetry, addition and division.
- Feeling and empathy

### Course Content Layout

<table>
<thead>
<tr>
<th>Section</th>
<th>Topics</th>
<th>Total number of class hours, credits or dedicated time</th>
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<tr>
<td>I</td>
<td>1, 2, 3, 4</td>
<td>2 ECTS</td>
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<tr>
<td>I</td>
<td>5, 6, 7, 8</td>
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<tr>
<td>II</td>
<td>9, 10</td>
<td>1 ECTS</td>
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<tr>
<td>II</td>
<td>11, 12</td>
<td>1 ECTS</td>
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</table>
### Week / Session

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<thead>
<tr>
<th>Week / Session</th>
<th>Theoretical Content (24 contact hours and 51 student self-study hours)</th>
<th>Practical Content (24 contact hours y 51 of student self-study)</th>
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</thead>
<tbody>
<tr>
<td>01ª</td>
<td>Introduction to Course.</td>
<td>Introduction to Practical Content.</td>
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<tr>
<td>02ª</td>
<td>Topic 1.</td>
<td>Practical Session</td>
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<td>03ª</td>
<td>Topic 2.</td>
<td>Practical Session</td>
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<td>04ª</td>
<td>Topic 3.</td>
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<td>05ª</td>
<td>Topic 4.</td>
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<td>06ª</td>
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<td>07ª</td>
<td>Topic 6.</td>
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<td>08ª</td>
<td>Topic 7.</td>
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<td>09ª</td>
<td>Topic 8.</td>
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<td>10ª</td>
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<tr>
<td>12ª</td>
<td>Topic 11.</td>
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<td>13ª</td>
<td>Topic 12.</td>
<td>Practical Session</td>
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<tr>
<td>14ª</td>
<td>Final recap.</td>
<td>Practical work hand-in.</td>
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### 4. TEACHING AND LEARNING METHODS, EDUCATIONAL ACTIVITIES

**Total Number of Hours: 150 (for 6 credit courses)**

| Number of contact hours: 48 | 24 hours for theory classes. 24 hours for practical classes. |
| Number of student self-study hours: 102 | 51 hours of independent self-study, completion of assignments and exercises. 51 hours of practical work. |

**Methodological Strategies**

| In-person theoretical classes | Theoretical classes on different topics, taught by teacher. Simultaneously, tests and questions will be proposed to students. Students will also improve their knowledge of the subject through assignments aimed at certain subjects. |
In-person practical classes

Practical sessions will be aimed at improving document handling, exploring and analysing the architectural form, making critical judgements, explaining and communicating. It is important to teach students about the critical aspects of each architectural typology that must be determined and defined. The practical sessions are a necessary accompaniment to the theoretical classes.

The main aim of the practical seminars on the Architectural Design I course is to introduce students to the analysis of architectural ideas and their representations and objectifications, exploring the way and manner by which architecture has encoded specific values into that which is invented, organised and constructed.

As part of their practical training, students must undertake a central assignment on the analysis of architectural works, in which they will have to familiarise themselves with obtaining documentation and bibliographic, graphic and reference information. Students will also train in the detailed analysis of architectural works, both from a graphic standpoint as well as coming to partial and general theoretical conclusions. Students will be advised on the following analytical categories: Historic Settlements; Context Analysis; Programmatic Analysis; Analysis of Movements; Structural Analysis; Volumetric Analysis; Analysis of Membranes; Analysis of Architectural Language; Analysis of Geometric Composition; Conclusions and Independent Theses.

Along with the previously-mentioned main practical assignment, students will undertake practical exercises in class related to architectural, aesthetic or artistic texts, as well as rapid analysis or exercises based on understanding the architectural form.
### Independent Work
- Readings.
- Completion of activities: exercises, conceptual maps, examples, searching for information.
- Participation on forums/blog etc.

### Individual Tutorials
- Working with individual students in tutorial sessions, in order to ensure student is keeping up with the work.

### Materials and resources
- Course handbooks
- Virtual classroom platform

### 5. ASSESSMENT

#### Assessment Procedures:

1. Students will be continually evaluated throughout the year, considering their contribution and preparation of the class topics (through tests or questions in class), their contribution in the theory and practical classes and the documents contributed in practical assignments.

2. The grade will be supplemented by the completion of a theoretical research assignment based on any topic whose content needs to be reinforced in the student’s mind.

3. A theoretical and practical final exam will be timetabled, which will complete the student’s grade.

#### Assessment Criteria:

The final grade will be calculated through an amalgamation of the weightings of the different contributions described above, the final marks of the practical assignments, the exam, and a minimum of 80% class attendance, having justified any absences.

The final grade will obtained as follows:

- 40% of the final grade will be obtained in the final exam, which is based on both the theory and practical aspects of the course.
- The other 60% of the final grade will be obtained through the grades throughout the course, which are broken down as follows:
  - 40% comes from the assignment corresponding to the critical seminar on architectural analysis.
  - 20% comes from short practical tests.

The minimum grade that will be accepted is 4 out of 10 in either of the two parts of the course structure. Students must obtain a minimum of 4 out of 10 in the theory exam in order to get their final grade.

### Theory Section
This course lasts for one semester, so the exam period will be in the month of January, and the final exam will cover all of the course content and the overall assessment of the continuous evaluation.

The exam will cover the theory aspects of the course, and students will answer questions that will show that they have acquired all the necessary knowledge and the ability to make judgments and reflections, as well as the ability to present ideas.

In the June exam period, a resit exam will take place, covering the contents from the entire year.

**Practical section**

The practical part of the course will be evaluated with a final grade, which will be the result of a continuous assessment of the student and their progress throughout the year.

In order to obtain this final grade, students must complete practical assignments, as laid out in the program.

The practical assignments will be evaluated provided that they have been presented on the dates indicated by the faculty.

The completion and submission of practical work is mandatory in order for students to be allowed to take the exam. In order to receive a practical grade in class, students must have completed at least 80% of the set exercises.

It is expected that all students will take part in the outlined method of evaluation, unless they express otherwise, submitting a written notice to the Director of the School that has been explained and signed, following the terms established by the current UAH regulations. In this case, such students will have the right to a final exam, independent of the personalised exam that goes along with the continuous assessment. This exam may contain as many tests as considered necessary and students will obtain a course grade out of 10.

Students who do not pass the course during the first exam period will have the opportunity to resit the exam. This resit will consist of a test in which the student must respond to questions, at a time and place determined by established UAH norms.

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**6. BIBLIOGRAPHY**

**BASIC BIBLIOGRAPHY:**


**SPECIFIC BIBLIOGRAPHY:**

**AESTHETICS:**


**TREATIES:**


**FORM AND PERCEPTION:**


PALLASMAA, Juhani, Los ojos de la piel: la arquitectura y los sentidos, Gustavo Gili, Barcelona, 2008.
PANOFSKY, Erwin, La perspectiva como forma simbólica, Tusquets, Barcelona, 1991.

NUMBER, GEOMETRY AND THE THEORY OF PROPORTIONS:

BLANCO ALTOZANO, Pilar, Fundamentos de la composición pictórica, Gobierno de Canarias, Consejería de Educación, Cultura y Deportes, Dirección General de Universidades e Investigación, Santa Cruz de Tenerife, 1996.
CHING, Frank, Arquitectura: forma, espacio y orden, Gustavo Gili, Barcelona, 2010 (3ª ed. rev. y act.).
THOMPSON, D'Arcy Wentworth, Sobre el crecimiento y la forma, Hermann Blume, Madrid, 1980.
GHYKA, Matila Costiescu, Estética de las proporciones en la naturaleza y en las artes, Poseidón, Barcelona, 1983.
KEPES, Gyorgy, Module, proportion, symétrie, rythme, La Connaissances, Bruselas, 1968.
MARCH, Lionel, Architectonics of humanism: essays on number in architecture, Academy, Londres, 1998.
PANOFSKY, Erwin, La vida y el arte de Alberto Durero, Alianza Editorial, Madrid 1982.
PLEYNET, Marcellin, La enseñanza de la pintura, Gustavo Gili, Barcelona, 1978.
PURINI, Franco, La arquitectura didáctica, Colegio Oficial de Aparejadores y Arquitectos Técnicos de Murcia, Murcia, 1984.
SCHOLFIELD, P. H., Teoría de la proporción en arquitectura, Labor, Barcelona, 1971.

TYPOLOGY:

MARTÍ ARÍS, Carlos, Las variaciones de la identidad: ensayo sobre el tipo en arquitectura, Demarcación de Barcelona del Colegio Oficial de Arquitectos de Cataluña y Ediciones del Serbal, Barcelona, 1993.
MONEO, Rafael, Sobre el concepto de tipo en arquitectura, Escuela Técnica Superior de Arquitectura de Madrid, Madrid, 1982.
PEVSNER, Nikolaus, Historia de las tipologías arquitectónicas, Gustavo Gili, Barcelona, 1980.

SPACE, TIME AND ARCHITECTURE:

VEN, Cornelis van de, El espacio en arquitectura: la evolución de una idea nueva en la teoría e historia de los movimientos modernos, Cátedra, Madrid, 1981.


**SUPPLEMENTARY BIBLIOGRAPHY ON THE HISTORY OF ARCHITECTURE:**


