

Course/Subject/Unit Description

1. General Information			
School		School of Design Sciences	
Department		INTERIOR ARCHITECTURE	
STUDY LEVEL		Undergraduate	
CODE OF SUBJECT	EA102	SEMESTER	1
SUBJECT TITLE		Structural Art I	
Teaching Content	Weekly (Hrs)	Credits	
Lectures, Essays, Design Workshops/Exercises, Design Project – Portfolio of work.	2	3	
Type of Subject	Obligatory		
PREREQUIRED COURSES	No		
Teaching and Exams Language	Greek		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes		
Course website (URL)			

2. Aims and Objectives – Methods – Skills

a. Learning Outcomes

An introductory course which allows students to study the materials such as the natural stone, cement products, clay products, wood, metals, glass, fabric, plastic materials, linked to basic concepts of physical and mechanical behavior. There are three more distinct groups of materials, which while not used in the main body of the structures, however are applied either as a substrate, or as a binder, or as a coating to protect their surface, or even to address specific problems. These groups that are considered particularly important for the accuracy or failure of constructions are the binders - such as mortars, coatings, adhesives, insulation materials - soundproofing, thermal and sealing materials, and varnishes and paints. Special reference is made to materials that are friendly to humans and the environment, with the development of parameters and methods of their evaluation with bioclimatic design criteria.

b. Skills

- Research, analysis and synthesis of structural art materials
- Application of construction techniques for the construction of buildings
- Ability to adapt to new building techniques
- Ability to make a decision due to excellent knowledge of the properties of building materials
- Ability to combine options
- Knowledge and application of bioclimatic architecture with respect to the natural environment

3. Subject Context

The course is developed with a series of lectures by the teacher of the course using visual material, where the topics presented with the active participation of students are analyzed and discussed. The lectures present the properties and technical characteristics of natural stone, the exterior of the buildings and

their construction details, the frame of the buildings, the structural specifications, construction elements and basic elements such as the construction of roofs, floors, ceilings, openings, frames. , glass and other building elements.

Also presented are all related to the masonry, materials and structural elements of the water supply, sewerage and electrical installations of buildings. The types of coatings and the materials of which they are composed are analyzed, special reference is made to the color proposals of the exterior and interior of the buildings.

4. Teaching and learning methods – Evaluation and assessment

<ul style="list-style-type: none"> - Theory of construction art - examples of structural art/ Site visits to building sites - Group evaluation / Analysis of building construction issues - Group assessment on questions asked to students - Student mid-term assessments in construction topics discussed and analyzed in the course 	<p>After the professor's lesson, students are given exercises in the classroom which are evaluated. Then questions related to the exercises are solved. The answers to the exercises are improved and the properties of the building materials (positive and negative) and the application techniques are better understood.</p> <p>Students in this way of teaching gain excellent knowledge about the subject of structural art that in the future will help them in submitting realistic proposals of interior architecture.</p>													
<p>Use of Information and Communication Technologies</p>	<p>Weblinks, e-learning uploading of notes, communication via email, zoom meetings, etc.</p>													
<p>Teaching organization</p>	<table border="1"> <thead> <tr> <th>Activity</th> <th>Semester Credits</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>20</td> </tr> <tr> <td>Theory Essay (Research and Analysis of Bibliography)</td> <td>10</td> </tr> <tr> <td>Exercises in construction of buildings and building materials</td> <td>15</td> </tr> <tr> <td>Main Design Project</td> <td>25</td> </tr> <tr> <td>Total</td> <td>75</td> </tr> </tbody> </table>	Activity	Semester Credits	Lectures	20	Theory Essay (Research and Analysis of Bibliography)	10	Exercises in construction of buildings and building materials	15	Main Design Project	25	Total	75	
Activity	Semester Credits													
Lectures	20													
Theory Essay (Research and Analysis of Bibliography)	10													
Exercises in construction of buildings and building materials	15													
Main Design Project	25													
Total	75													
<p><i>Student assessment</i></p>	<p>Written Theory Examinations / Theory Essay Multiple choice questions and / or development of specific issues Exercises for building materials and details of building art</p>													

5. Recommended Bibliography

- Aldinger, E., Bauman, G., Ignatowitz, E., Kluge, M., Lammin, G., Steinmuller, A., & Weinstock, H., μτφ. Βούλγαρη, Δ., (1998). *Τεχνολογία Υλικών Κατασκευών*, Αθήνα: Ευρωπαϊκές Τεχνολογικές Εκδόσεις.
- Baden- Powel, Ch., Hetreed, J., & Ross, A., (2013) Αποστολοπούλου, Τ., (μτφρ.).
 - *The manual of Architect. Athens: Papasotiriou* Παπασωτηρίου.
 - Wenderhorst, R., (1981), Τουλιάτος, Δ., Λεονταρίτης, Μ., Παπαγιάννης, Δ.,

- &Μπίσμος, Χ., (μτφρ). *ΔομικάΥλικά*.Αθήνα: ΕκδόσειςΜ., Γκιούρδας
- Βουλγαρίδης, Η., Β., (2007). *Ευρωπαϊκά και Τροπικά Ξύλα με Εμπορική Σημασία. Δομή, Ιδιότητες και Χρήσεις*. Διδακτικό βοήθημα. Σχολή Δασολογίας και Φυσικού Περιβάλλοντος. Θεσσαλονίκη: Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης.
 - Γεωργιάδου, Ζ, (2017). *Δομικά και διακοσμητικά Υλικά*. Αθήνα: Πανεπιστημιακές Εκδόσεις Νημερτής.
 - Λεγάκης Α. (1997). *Τεχνολογία Δομικών Υλικών*
 - Μαλινδρέτος, Μ., (2005). *Η Τεχνολογική Διάσταση του Σχεδιασμού*. Θεσσαλονίκη: University Studio Press.
 - Παπανικολάου, Γ., & Μουζάκης, Δ., (2007). *Σύνθετα υλικά*. Αθήνα: Κλειδάριθμος.
 - Τριανταφύλλου, Αθ., (2017). *Δομικά Υλικά*. Αθήνα: Γκότσης Συναφή επιστημονικά περιοδικά
 - Κτίριο, Θεσσαλονίκη: Εκδόσεις κτίριο.
 - Δομές, Αθήνα: Πρόδρομος Παπαδόπουλος.
 - Neufert, Architects Data, , John Wiley and Sons Ltd, Fifth Edition, 2019
 - Georgiadou, Building and Decorative materials, Ianos, 2005
 - Architecture, Form, Space and Order, Francis D.K. Ching, 1996
 - Mitchell's, Structure and Fabric, J S Foster, Part 1, 7th Edition, Routledge, 2007
 - Mitchell's, Structure and Fabric, J S Foster, Part 2, 7th Edition, Routledge, 2007
 - Polyravas, Architectural design, Electronic design (B.I.M.), Concrete molds, Building impressions, Serres, 2019
 - Polyravas & Polyravas, Building and seismic design of homes and businesses, Serres, 2021

