



Course guide

290202 - ARQBIOC - Bioclimatic Architecture

Last modified: 11/07/2024

Unit in charge: Vallès School of Architecture
Teaching unit: 753 - TA - Department of Architectural Technology.
Degree: DEGREE IN ARCHITECTURE STUDIES (Syllabus 2014). (Optional subject).
Academic year: 2024 **ECTS Credits:** 4.0 **Languages:** Spanish

LECTURER

Coordinating lecturer: ENRIQUE CORBAT DIAZ
Others: Corbat Diaz, Enrique
Muntané Raich, Oriol

PRIOR SKILLS

knowledge of environmental physics

REQUIREMENTS

Semester 4 passed

TEACHING METHODOLOGY

Weekly theoretical classes of 2 hours, weekly correction of coursework 1.50 hours

LEARNING OBJECTIVES OF THE SUBJECT

Analysis of the environment and the environmental pre-existence.
Passive solar energy collection and storage systems.
Passive cooling systems.
Integration of active renewable energy generation systems.
Construction with ecological materials



CONTENTS

bioclimatic architecture

Description:

Sustainable architecture

Specific objectives:

Learn to build with low environmental impact materials.

Learn to design buildings achieving low energy consumption using bioclimatic strategies.

Learn how to supply active systems for the production of renewable energy in buildings.

The final project is proposed under the requirements of international competition 2025 SAINT GOBAIN Architecture Students Contest so that the students may participate in a contest we have participated in the last ten years with great success being finalists in 2012, 2013, 2016, 2017, 2018 and 2020 and winners in 2014, 2015, 2019, 2021 and 2024 in the National Stage, in competition with some of the most prestigious Spanish schools of architecture, and not only earning a significant cash prize but having also the opportunity to participate in the international Stage competing with other universities around the world, traveling at the end of May with all paid expenses to Bratislava, Belgrade, Bucharest, Astana, Madrid, Dubai, Milan, Paris and Helsinki. In 2021 edition Etsav obtained the International second price.

Related activities:

The work done during the course will allow students to apply for the Architecture Students Saint Gobain 2025 competition.

Full-or-part-time: 44h

Theory classes: 20h 40m

Practical classes: 23h 20m

GRADING SYSTEM

Course work project proposed by the Architecture Students Contest Saint Gobain competition 75% exam 25%

BIBLIOGRAPHY

Basic:

- Olgyay, Victor. Arquitectura y clima : manual de diseño bioclimático para arquitectos y urbanistas. Barcelona: Gustavo Gili, 1998. ISBN 9788425214882.
- Neila González, Javier. Arquitectura bioclimática : en un entorno sostenible. Madrid: Munilla-Lería, 2004. ISBN 8489150648.
- Serra Florensa, Rafael, 1941-2012. Les Energies a l'arquitectura : principis de control ambiental arquitectònic [on line]. Barcelona: Edicions UPC, 2009 [Consultation: 14/10/2020]. Available on: <http://hdl.handle.net/2117/169051>. ISBN 9788498807950.
- Yáñez Parareda, Guillermo. Arquitectura solar e iluminación natural : conceptos, métodos y ejemplos. Madrid: Munilla-Lería, 2008. ISBN 9788489150812.