Course guide
290605 - MATII14 - Calculus

Unit in charge: Vallès School of Architecture
Teaching unit: 753 - TA - Department of Architectural Technology.
Degree: DEGREE IN ARCHITECTURE STUDIES (Syllabus 2014). (Compulsory subject).
Academic year: 2022  ECTS Credits: 6.0  Languages: Catalan

LECTURER
Coordinating lecturer: JORGE RECASENS FERRES
Others: DIONIS BOIXADER IBAÑEZ
JORGE RECASENS FERRES

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
EAB1G. An aptitude for applying graphic skills to the representation of spaces and objects (T).
EAB2G. An aptitude for conceiving and representing the visual attributes of objects and mastering proportion and drawing techniques in general, including computer drawing techniques (T).
EAB3G. Adequate knowledge of spatial representation systems applied to architecture and urbanism.
EAB6G. Adequate knowledge of graphic surveying techniques at all stages, from sketching to scientific restitution, applied to architecture and urbanism.
EAB7G. Adequate knowledge of the principles of general mechanics, statics, mass geometry and vector and tensor fields applied to architecture and urbanism.
EAB11G. Applied knowledge of numerical calculus, analytic and differential geometry and algebraic methods.

Generical:
CE8. An understanding of structural, construction and engineering design problems related to building design.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

To pose and solve problems of areas, volumes, masses, balances and moments using integrals and differential equations. Model aspects of form and tangency through the derivative of graphic design problems. Summarize numerically and graphically data populations and interpret the results qualitatively. Answer questions and solve written exercises in a synthetic, structured and understandable way.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Self study</td>
<td>84,0</td>
<td>56.00</td>
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<tr>
<td>Hours large group</td>
<td>33,0</td>
<td>22.00</td>
</tr>
<tr>
<td>Hours medium group</td>
<td>33,0</td>
<td>22.00</td>
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Total learning time: 150 h
CONTENTS

Syllabus

Description:
The course is focused on a mathematical view on curves and surfaces and its applications, such as functional modelling and optimisation.

Full-or-part-time: 66h
Theory classes: 33h
Practical classes: 33h

GRADING SYSTEM

BIBLIOGRAPHY

Basic: