

## 340366 - FOMA-I1043 - Fundamentals of Mathematics

Coordinating unit:	340 - EPSEVG - Vilanova i la Geltrú School of Engineering
Teaching unit:	749 - MAT - Department of Mathematics
Academic year:	2019
Degree:	BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2018). (Teaching unit Compulsory) BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2010). (Teaching unit Compulsory)
ECTS credits:	7,5
Teaching languages:	Catalan

### Teaching staff

Coordinator:	Joan Gómez i Urgellés
Others:	Joan Gómez i Urgellés

### Opening hours

Timetable: .

### Prior skills

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### Requirements

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### Degree competences to which the subject contributes

Specific:

I\_CEFC6. CEFC6. Basic knowledge and application of algorithmic processes, informatic techniques to design solutions of problems, analyzing if proposed algorithms are apt and complex.

Transversal:

2. SELF-DIRECTED LEARNING - Level 1. Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.

05 TEQ N1. TEAMWORK - Level 1. Working in a team and making positive contributions once the aims and group and individual responsibilities have been defined. Reaching joint decisions on the strategy to be followed.

04 COE N1. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 1. Planning oral communication, answering questions properly and writing straightforward texts that are spelt correctly and are grammatically coherent.

05 TEQ. TEAMWORK. Being able to work as a team player, either as a member or as a leader. Contributing to projects pragmatically and responsibly, by reaching commitments in accordance to the resources that are available.

07 AAT N2. SELF-DIRECTED LEARNING - Level 2: Completing set tasks based on the guidelines set by lecturers.

Devoting the time needed to complete each task, including personal contributions and expanding on the recommended information sources.

### Teaching methodology

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### Learning objectives of the subject

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### Study load

Total learning time: 187h 30m	Hours large group:	75h	40.00%
	Hours medium group:	0h	0.00%
	Hours small group:	0h	0.00%
	Guided activities:	0h	0.00%
	Self study:	112h 30m	60.00%

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### Content

<p>.</p>	<p>Learning time: 11h 20m Theory classes: 7h Self study : 4h 20m</p>
<p>Description: . Related activities: . Specific objectives: .</p>	
<p>.</p>	<p>Learning time: 15h 30m Theory classes: 8h Self study : 7h 30m</p>
<p>Description: . Related activities: . Specific objectives: .</p>	
<p>3. Vector spaces</p>	<p>Learning time: 27h Theory classes: 9h Practical classes: 0h Self study : 18h</p>
<p>Description: . Related activities: . Specific objectives: .</p>	

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<p>4. Expansion of matrix algebra</p>	<p>Learning time: 39h 20m Theory classes: 17h Practical classes: 0h Self study : 22h 20m</p>
<p>Description: . Related activities: . Specific objectives: .</p>	
<p>5. Diferential calculus</p>	<p>Learning time: 54h 40m Theory classes: 21h Practical classes: 0h Self study : 33h 40m</p>
<p>Description: . Related activities: . Specific objectives: .</p>	
<p>7. Integral Calculus</p>	<p>Learning time: 40h Theory classes: 13h Practical classes: 0h Self study : 27h</p>
<p>Description: . Related activities: . Specific objectives: .</p>	

### Qualification system

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### Regulations for carrying out activities

### Bibliography

#### Complementary:

Boadas Elvira, Joan. Funcions reals d'una variable real [on line]. Vilanova i la Geltrú: Escola Universitària Politècnica de Vilanova i la Geltrú, Universitat Politècnica de Catalunya, 2001 [Consultation: 27/11/2014]. Available on: <<http://hdl.handle.net/2099.3/36440>>. ISBN 8483016575.

Gómez i Urgellés, Joan. Matemáticos, espías y piratas informáticos : codificación y criptografía. Barcelona: RBA, 2010. ISBN 9788447366248.

#### Others resources:

- <http://www.geogebra.org>

Octave

Computer material

Geogebra

Resource