340366 - FOMA-I1O43 - 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

Requirements

Degree competences to which the subject contributes

Specific:
1. CEFC6. CEFC6. Basic knowledge and application of algorithmic processes, informatic techniques to design solutions of problems, analyzing if proposed algorisms 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

Learning objectives of the subject


### Study load

<table>
<thead>
<tr>
<th>Total learning time: 187h 30m</th>
<th>Hours large group: 75h 40.00%</th>
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<tr>
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<td>Hours medium group: 0h 0.00%</td>
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<td>Hours small group: 0h 0.00%</td>
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<td>Guided activities: 0h 0.00%</td>
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<td>Self study: 112h 30m 60.00%</td>
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### Content

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<thead>
<tr>
<th></th>
<th><strong>Learning time:</strong> 11h 20m</th>
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<tbody>
<tr>
<td></td>
<td>Theory classes: 7h</td>
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<td>Self study: 4h 20m</td>
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<tr>
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<th><strong>Learning time:</strong> 15h 30m</th>
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<tr>
<td></td>
<td>Theory classes: 8h</td>
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<td>Self study: 7h 30m</td>
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<thead>
<tr>
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<th><strong>Learning time:</strong> 27h</th>
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<tr>
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<td>Theory classes: 9h</td>
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<td>Practical classes: 0h</td>
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<td>Self study: 18h</td>
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### 3. Vector spaces

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<table>
<thead>
<tr>
<th></th>
<th><strong>Related activities:</strong></th>
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<th><strong>Specific objectives:</strong></th>
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### 4. Expansion of matrix algebra

**Learning time:** 39h 20m  
- **Theory classes:** 17h  
- **Practical classes:** 0h  
- **Self study:** 22h 20m

**Description:**
- 
**Related activities:**
- 
**Specific objectives:**
- 

### 5. Differential calculus

**Learning time:** 54h 40m  
- **Theory classes:** 21h  
- **Practical classes:** 0h  
- **Self study:** 33h 40m

**Description:**
- 
**Related activities:**
- 
**Specific objectives:**
- 

### 7. Integral Calculus

**Learning time:** 40h  
- **Theory classes:** 13h  
- **Practical classes:** 0h  
- **Self study:** 27h

**Description:**
- 
**Related activities:**
- 
**Specific objectives:**
- 

### Qualification system

- 

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Last update: 02-09-2019

Universitat Politècnica de Catalunya
340366 - FOMA-I1043 - Fundamentals of Mathematics

Regulations for carrying out activities

Bibliography

Complementary:

Others resources:
- http://www.geogebra.org

Octave

Computer material
Geogebra
Resource