# Syllabus

## Course description

<table>
<thead>
<tr>
<th>Course title</th>
<th>Fundamentals of Programming</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course code</td>
<td>42307</td>
</tr>
<tr>
<td>Scientific sector</td>
<td>INF/01</td>
</tr>
<tr>
<td>Degree</td>
<td>Bachelor in Wood Engineering</td>
</tr>
<tr>
<td>Semester</td>
<td>II</td>
</tr>
<tr>
<td>Year</td>
<td>I</td>
</tr>
<tr>
<td>Academic Year</td>
<td>2021-2022</td>
</tr>
<tr>
<td>Credits</td>
<td>6</td>
</tr>
<tr>
<td>Modular</td>
<td>no</td>
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</tbody>
</table>

| Total lecturing hours | 36 hrs                                                           |
| Total lab hours       | 24 hrs                                                           |
| Total exercise hours  |                                                                 |

**Attendance**
Attendance at assigned laboratory sections is required; lecture attendance is very strongly recommended.

**Prerequisites**
Registration in the Bachelor in Wood Engineering study program

**Course page**
The course introduces the basic concepts of programming, particularly those topics of fundamental importance to Engineering.

**Lecturer**
Prof. Karl von Ellenrieder  
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Web: https://www.unibz.it/faculties/person/37038-karl-dietrich-von-ellenrieder

**Scientific sector of the lecturer**
ING-INF/04 - Automatica

**Teaching language**
English

**Office hours**
As listed on Cockpit or by appointment

**Laboratory Instructor**

**Teaching Assistant**

**Office hours**
As listed on Cockpit or by appointment

**List of topics covered**
The course covers the following topics:
1. Basic programming syntax and structure in Python  
2. Functions  
3. Conditional control structures  
4. Arithmetic, comparison and Boolean operators  
5. Data types

**Teaching format**
Classroom lectures and laboratory exercises
Learning outcomes (ILOs)

Knowledge and understanding
1. Basic software design procedures.
2. How to develop simple Python programs.

Applying knowledge and understanding
3. Laboratory exercises complement lectures and require you to devise and sustain arguments.

Making judgements
4. On the choice of the right tools such as data types and programming approaches. The labs will also require you to generate and interpret relevant data.

Communication skills
5. Lab reports will require you to present information, ideas, problems and solutions in clear and simple language.

Learning Skills
6. Basic foundations for further study in more advanced courses in Engineering.

Assessment

<table>
<thead>
<tr>
<th>Form</th>
<th>%</th>
<th>Length /duration</th>
<th>ILOs assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labs</td>
<td>40</td>
<td>24 hours total</td>
<td>1-7</td>
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Summative assessment

<table>
<thead>
<tr>
<th>Form</th>
<th>%</th>
<th>Length /duration</th>
<th>ILOs assessed</th>
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</thead>
<tbody>
<tr>
<td>Final Exam</td>
<td>60</td>
<td>4 hours</td>
<td>1-4,6,8</td>
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</table>

Assessment language

English

Evaluation criteria and criteria for awarding marks

Labs: Completeness and correctness of reports; quality
Written Final Exam: Completeness and correctness of answers.

Students must receive an overall grade of greater than 60/100 points in order to pass the course.

Required readings

Supplementary readings
Instructor-provided notes.