Syllabus

Course title
Fundamentals of Programming

Course code
42606

Scientific sector
INF/01

Credits of the course
3

Credits lab activity
3

Degree
Professional Bachelor in Wood Technology

Semester
II

Year
I

Academic Year
2022-2023

Modular
no

Total lecturing hours
30 hrs

Total lab hours
30 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 Technology study program

Course page

Specific educational objectives
The course introduces the basic concepts of programming, particularly those topics of fundamental importance to Engineering.

Lecturer
Prof. Karl von Ellenrieder
Facoltà di Scienze e Tecnologie, Building L, Room 6.02
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E-mail: karl.vonellenrieder@unibz.it
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 in-class exercises

Teaching format - Laboratory
Programming exercises conducted in presence, or online
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  

Formative 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>
</tr>
</thead>
<tbody>
<tr>
<td>Final Exam</td>
<td>60</td>
<td>4 hours</td>
<td>1-4,6,8</td>
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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.