# Theory of Scientific Method

## Course description

<table>
<thead>
<tr>
<th>Course title</th>
<th>Theory of Scientific Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course code</td>
<td>46000</td>
</tr>
<tr>
<td>Scientific sector</td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td>PhD Mountain Environment and Agriculture, PhD Sustainable Energies and Technologies, PhD Food Engineering and Biotechnology</td>
</tr>
<tr>
<td>Semester</td>
<td>1°</td>
</tr>
<tr>
<td>Year</td>
<td>/</td>
</tr>
<tr>
<td>Academic year</td>
<td>2017-2018</td>
</tr>
<tr>
<td>Credits</td>
<td>3</td>
</tr>
<tr>
<td>Modular</td>
<td>NO</td>
</tr>
</tbody>
</table>

### Total lecturing hours
16

### Total lab hours

### Total exercise hours
8 (distributed along the course)

### Attendance
75% of classes
The participation at the final mock conference (both days) is compulsory

### Prerequisites

### Course page

### Specific educational objectives
Main objective of the course is to provide the students with an overview of the scientific method. During the class, the instructor will show examples on how to apply it in order to achieve professional soundness.

### Module 1

### Lecturer
Dr. Francesca Scandellari, K303, email: francesca.scandellari@unibz.it, Phone: +39 0471 017809

### Scientific sector of the lecturer
AGR03

### Teaching language
English

### Office hours
For the official office, hours see the course schedule. However, I suggest the students to contact me in case of need and to fix an appointment.

### Teaching assistant (if any)

### Office hours

### List of topics covered
1. Short history of scientific method
2. Planning and performing the scientific research
3. Mention to experimental design
4. Scientific theories: definition, use, how to reject
5. Cooperation and competition in the scientific society
6. Written and oral dissemination of technical and scientific results
7. Bibliographic tools
Teaching format
The course is based on lectures and practical activities, with topics presented by the professor and discussed within the class. Power Point presentations will generally be available in the course reserve collection database of the Faculty. Additional material will be provided by the professor.

Learning outcomes
By the end of the course, students will be able to:
1) understand the nature of scientific research and the values involved in the practice of science;
2) plan and perform scientific research;
3) critically read and evaluate scientific works and publications;
4) communicate and publish the result of their own scientific work;
5) use the main tools available for scientific research.

Assessment
Students will be evaluated based on the activities performed during the course.
The participation at the final Mock conference is compulsory.

Assessment language
English

Evaluation criteria and criteria for awarding marks
33% written assay (preparation of an abstract)
33% mock conference
33% participation and activities in class

Required readings
The material that will be given during class by the instructor

Supplementary readings