

# Master of Science ETH in Physics (16.9.2014)

## Curriculum Structure

Students must obtain 90 ECTS to qualify for a Master's degree; at least 60 ECTS of which must be acquired at ETH Zurich. The curriculum is structured in five categories. In each category a given number of credit points must be attained.

## Core Courses

A minimum of 30 ECTS must be completed in the Core Course category. This is equivalent to three Core Courses, at least one of which has to be in theory and one in experimental physics. The Core Courses supplement fundamental subjects at an advanced level that have already been introduced at the Bachelor level.

## Elective Courses

The courses in this category (20 ECTS) should be used to add depth to theoretical and experimental knowledge related to the chosen Core Courses. A minimum of 10 ECTS must be covered by courses that are closely related to the research activities at the Departments of Physics and Mathematics. Those courses are also a good preparation for a Master's thesis. The remaining ECTS can be chosen from courses offered by other departments. Four courses usually cover the requirements in this category.

## Compulsory Electives in Humanities, Social and Political Sciences

Courses in humanities, social and political sciences integrate scientific and technical knowledge with the corresponding social, economic, political and cultural environment. Courses on law and management are available in this category as well.

## Semester Project

The Semester Project provides working experience in a research environment. The project consists either of a guided self-study of original papers in theoretical physics or it covers the carrying out of physics experiments followed by the analysis and interpretation of the results that have to be presented in front of an audience.

## Master's thesis

The Master's thesis concludes the Master's programme and constitutes a maximum six-month, full-time project aimed at advancing the skills and capabilities of students to work independently and creatively toward the solution of an independent research problem, which has been agreed upon in advance.

| Category  | ECTS | Description   |
|---|------|---|
| Core Courses  | 30   | Foundation of the Master's programme, complementing core knowledge acquired in the BSc program.   |
| Elective Courses  | 20   | Deepening scientific knowledge or enlarging acquired skills.  |
| Compulsory Electives in Humanities, Social and Political Sciences | 2    | General education courses in humanities, social and political sciences.   |
| Semester Project  | 8    | Individual research project, which allows becoming proficient in research. The project is carried out under the supervision of a faculty member and results in the presentation of the achieved outcomes. |
| Master's Thesis   | 30   | Independent scientific work.  |

## Mobility

In addition to institutional partnerships and exchange programmes with European, American, Australian and Asian universities, professors at the Department of Physics have contacts with other universities and may offer the possibility to write a Master's thesis as part of a research project conducted outside of ETH Zurich.

## Admission

The Master in Physics is a consecutive Master, meaning that students with an ETH Bachelor in Physics are automatically admitted without going through the admission process.

Other students must apply according to the application terms and deadlines, and produce documents as listed by the ETH Zurich Admissions Office and according to the Department admission rules:

<https://www.ethz.ch/en/studies/registration-application/master/application.html>