Bachelor Program
Computational Science and Engineering

http://www.cse.ethz.ch/
Basic studies (1st year) to be chosen from:

- Civil, Environmental and Geomatics Engineering
- Mechanical and Process Engineering
- Information Technology and Electrical Engineering
- Computer Science
- Mathematics and Physics
- Chemistry and Applied Biosciences
- Biology
- Earth Sciences
- Environmental Sciences
- Agriculture and Food Sciences

Choose your favorite subject.

Prerequisite: Passed basic exam.
Without passed basic exam: Tentative admission only.
**Basic principles:**

**Basic Courses:** Basic knowledge in Mathematics, Science and Engineering, Computer Science

**Core Courses:** Methodology in Mathematics and Computer Science

**Field of Specialisation:** Specialisation in one computational application area

**Elective Courses:** CSE related

**Bachelor Thesis:** Application oriented work in a team, typically in the field of specialisation
## Bachelor in Computational Science and Engineering (2nd and 3rd year)

KP = Minimum number of Credit Points

<table>
<thead>
<tr>
<th>Course type</th>
<th>KP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Courses</td>
<td>61</td>
</tr>
<tr>
<td>Core Courses</td>
<td>17</td>
</tr>
<tr>
<td>Field of Specialisation</td>
<td>6</td>
</tr>
<tr>
<td>Elective Courses</td>
<td>6</td>
</tr>
<tr>
<td>Case Studies</td>
<td>6</td>
</tr>
<tr>
<td>GESS</td>
<td>4</td>
</tr>
<tr>
<td>Bachelor Thesis (4 weeks)</td>
<td>8</td>
</tr>
<tr>
<td>Requirement for Bachelor</td>
<td>120</td>
</tr>
</tbody>
</table>
Core Courses:

a. Numerical methods in differential equations
b. Software design

Both core courses have to be taken.
List of fields of specialisation:

- Astrophysics
- Physics of the atmosphere
- Chemistry and biology
- Fluid dynamics
- Control theory
- Robotics
- Theoretical physics
- Financial engineering

Bachelor: 2 courses to be taken in one field of specialisation.
Elective courses:

• 2 courses to be chosen
• Choice out of more than 60 courses

Case studies:

Case studies in application areas; seminars by experts from ETH and from outside (to be chosen twice after the 2nd year)

Students have to give short seminar talks