### 1st year

<table>
<thead>
<tr>
<th>TU</th>
<th>Common program</th>
<th>ECTS</th>
</tr>
</thead>
</table>
| SEMESTER 1 | Electrical Machines  
Design and Synthesis of Power Converters  
Electrical Grids  
Control of Linear Systems  
Soft and Human Skills | 30 |
| SEMESTER 2 | Nonlinear Control of the Systems  
Architecture and Control of Electrical Systems  
Real Time Control  
Soft and Human Skills | |
| | Program 1 Mechatronic Systems :  
- Materials for Actuation  
- Analytical Tools and Physics of Mechatronics | |
| | Program 2 Electrical Systems of the Future :  
- Design of Static Converters  
- Renewable Energies and FACTS | 30 |

### 2nd year

<table>
<thead>
<tr>
<th>TU</th>
<th>Advanced Power Electronics</th>
<th>ECTS</th>
</tr>
</thead>
</table>
| SEMESTER 3 | Systems and Power Grids  
Design of Static Converters  
Advanced Systems and Static Converters | |
| | Actuators and Generators  
Smart Grids and Micro Grids  
Soft & Human Skills | 30 |
<table>
<thead>
<tr>
<th>SEMESTER</th>
<th>Course</th>
<th>Modules</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New Energy Technologies</td>
<td>Systemic Design, Storage and Hydrogen Vector, Renewable Energies</td>
<td>30</td>
</tr>
<tr>
<td>SEMESTER 4</td>
<td>Practical semester</td>
<td>Diploma Internship, i.e. “End-of-study Project”: 6 months in Academic Research Laboratories or in Industry Research &amp; Development Centers – legally paid internship.</td>
<td>30</td>
</tr>
</tbody>
</table>