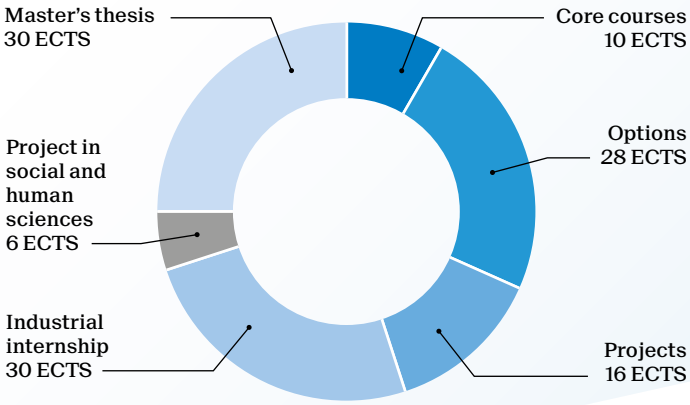
Master of Science in

CHEMICAL ENGINEERING AND BIOTECHNOLOGY

2-year program - 120 ECTS



Students can opt for a 30 ECTS minor instead of the industrial internship.
Recommended minors with this program:

- Management, technology and entrepreneurship
- Science, technology and area studies

	Credits
Core courses	**10**
Management and safety	
Safety of chemical processes	2
Chemical engineering	
Advanced diffusional processes	4
Heterogeneous reaction engineering	4
Options	**28**
Energy	
Advanced materials for photovoltaics and lighting	2
Catalysis for emission control and energy processes	3
Catalysis for energy storage	3
Electrochemical engineering	3
Modeling and optimization of energy systems	4
Nanomaterials for chemical engineering application	3
Process intensification and green chemistry	3
Solid state chemistry and energy applications	3
Thermodynamics of energy conversion and storage	3
Biotechnology	
Biomaterials	4
Bioprocesses and downstream processing	4
Biotechnology lab	4
Food biotechnology	2
Nanobiotechnology and biophysics	3
Pharmaceutical biotechnology	3
Principles and applications of systems biology	3
Selected topics in life sciences	3
Materials and food engineering	
Advanced food chemistry	2
Advanced materials for photovoltaics and lighting	2
Chemistry of food processes	2
Chimie des denrées alimentaires	2
Food biotechnology	2
Organic electronic materials - synthesis, applications, properties	3
Physical and chemical analyses of materials	3
Physical chemistry of polymeric materials	3
Polymer chemistry and macromolecular engineering	3
Risk management	2
Solid state chemistry and energy applications	3
Projects	**16**
Chemical engineering lab and project	4
Chemical engineering product design	4
Process development	8

School of Basic Sciences
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