

Purpose of and reason for the admission requirements Chemical Engineering, specialization Molecular Systems and Materials Chemistry (MSMC)

We require a Bachelor of Science degree (or equivalent) in Chemistry, Chemical Engineering or Molecular (Life) Sciences.

Please review the program information carefully with regards to the two tracks:

- Molecular Systems and Materials Chemistry
- Chemical and Process Technology

Since the program is taught in English, the level of English when entering the program needs to be at sufficient level as well.

Subject- Related Knowledge & Skills

The criterium used is

A Bachelor of Science degree (or equivalent) in Chemistry, Chemical Engineering or Molecular (Life) Sciences

The norm is

In your previous education you should have gained knowledge in the following areas:

- Mathematics: Calculus, Linear Algebra and Statistics (10 ECTS).
- Physics: Conservation laws of classical mechanics, fluid and thermodynamics, simple harmonic motion, electric and magnetic fields, Maxwell's equations (7.5 ECTS).
- Physical Chemistry: Chemical bonding including quantum chemical description, spectroscopy, thermodynamics, kinetics, phase equilibria and chemical equilibria in one and multi component systems (12.5 ECTS).
- Molecular Chemistry: Organic (10 ECTS) and Inorganic chemistry (5 ECTS) (15 ECTS).
- Materials Science: Knowledge of the various classes of materials (Metals, Ceramics, Polymers, Composite materials), and the relationship between structures and features, on the molecular level as well as on mesoscopic level. Knowledge of the relationship between processing and mesoscopic structure and thus the properties of materials (5 ECTS).
- Lab Experience: Formal training in laboratory techniques including organic chemistry (at least 5 ECTS) (10 ECTS). Academic training including research project (15 ECTS).

Method of assessment (by the department admissions board)

Assessment of transcript of records displaying the content of previous course subjects and project work.

Score

Sufficient/ insufficient/ conditional; under the condition* that the student gets the defined requirement of homologation during the master (max 15 Credits).

**The conditional situation always depends on educational feasibility.*