

EDUCATION

Master of Science

II PROCESS ORIENTED MATERIALS RESEARCH / PROZESSORIENTIERTE MATERIALFORSCHUNG – PROMAT



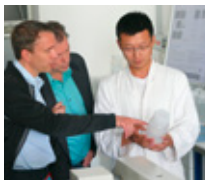
professional aim: academic researcher

The goal of the master programme ProMat is to prepare students for a future scientific career within the scope of the MAPEX research landscape. The novel concept of this interdisciplinary programme, starting in October 2018, emerges from MAPEX and is carried out by the five STEM faculties of the University of Bremen.

Individual curriculum tailored to the personal research interests

Although all modules in ProMat are compulsory, the courses and lectures available in the modules of foundations and the modules of specialization are elective. The students can choose from more than 350 different courses offered by the five STEM faculties of the University of Bremen. This provides them with the opportunity of designing an individual curriculum around their research interests within the MAPEX research landscape and according to their educational background.

		Foundation Modules (45 CP)	Specialization Modules (24 CP)		Research experience (21 CP)	Master thesis (30 CP)
Semester	I	Mathematics, 9 CP Physics, 9 CP			Research processes, 12 CP	
	II	Chemistry, 9 CP Engineering, 9 CP Computer science tools, 9 CP	Theory-oriented specialization, 12 CP	Application-oriented specialization, 12 CP		
	III			Research stay abroad, 12 CP		
	IV	In the foundation and specialization modules you can choose out of more than 350 courses.				



1:1 supervision by personal mentor

Within ProMat, a personal mentor is guiding every student and advising him/her while creating the individual curriculum keeping in focus the student's research topic. The students are integrated into their mentor's working group and they actively participate in ongoing research projects. All MAPEX members and scientists teaching at the University of Bremen are eligible to be a mentor.



Create a first scientific network

The mentor is the student's first link to a professional network, introducing him/her into the broad field of materials science at the Bremen location, and encouraging and supporting the students to present their own research results in the national and international scientific community.

The module research processes represents a central platform for exchange of ideas and experiences among the ProMat students of all years and is a direct link to the MAPEX community. Participation in MAPEX activities such as workshops and symposia is organized within the course. Furthermore, the students will get familiar with the tools, methods, and (soft) skills they will need as researchers and get to know the science system and its rules.

Early research experience – in the mentor's group and abroad

Integrated into their mentors' research groups, ProMat students are encouraged to develop their own research questions, to methodically carry out their research, and to interpret their acquired results in an interdisciplinary scientific context. The curriculum-based compulsory research stay abroad emphasises the importance of networking and international experience. This, in addition, builds up the students' competencies in a foreign language and intercultural interaction inside and outside of science. Supported by the research processes module, research experience is actively growing from the first semester until graduation.

Study profile:

- Title: Master of Science (M.Sc.)
- Length of study: 4 semesters (120 CP)
- Programme language: German and English

Application requirements (extract)

- above average first degree in the STEM-field,
- proficient use of English and German language,
- clear motivation to study research-oriented within the scope of the MAPEX research landscape,
- a clear vision of the personal research goals, expressed in a letter of motivation and a 2-pages essay.

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