



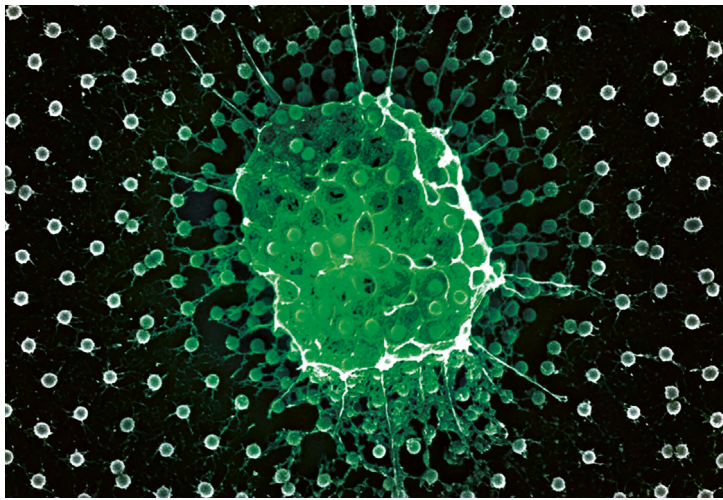
UNIVERSITÄT  
BAYREUTH

Master of Science

# Polymer Science

*an interdisciplinary master's programme*





*The master's programme Polymer Science addresses cutting-edge polymer systems.*

## New materials for the 21st century

Meeting the technological and related social challenges of the 21st century in areas such as mobility, energy, information, safety, and medicine requires the investigation of synthetic polymers and biomacromolecules and the construction of new multi-functional polymers with a view to complex structures. Systems based on macromolecular materials are essential for key technologies and provide the means to ensure communication, comfort, health, and quality of life in society, both at present and in the future.



*Students work under the close supervision of their professors.*

## The master's programme Polymer Science

The master's programme Polymer Science at the University of Bayreuth is based on the natural sciences and includes elements of engineering. It covers all the key areas of modern polymer science: polymer synthesis, polymer analytics, polymer and colloid chemistry, polymer physics, polymer processing, polymer technology, catalyst design, biomacromolecules, and biomaterials.

Students are introduced to current research topics at an early stage. They develop their basic and practical skills in all fields of polymer science with the benefit of small teams and personal contact to their lecturers.



*The highest demands are placed on practical, research-oriented learning.*

## Who is a good fit for the programme?

The master's programme Polymer Science is geared to students who are interested in issues relating to materials science and the natural sciences, who want to work on a pioneering class of materials, and who hope to one day take on a high level of responsibility in a company, research institute, or higher education institution. Admission requirements for the master's programme include a first cycle degree (Bachelor of Science) in chemistry, polymer and colloid chemistry, biochemistry, physics, materials science, or a related discipline.



*Teamwork is crucial – everyone's contribution counts*

## Doctoral research and career prospects

The doctoral programme Polymer Science offered by the Bayreuth Graduate School of Mathematical and Natural Sciences (BayNAT) gives successful graduates of master's programmes the opportunity to pursue a doctoral degree. Especially talented students are given the opportunity to take part in the elite degree programme Macromolecular Science parallel to the master's or doctoral programme. Graduates of the master's programme Polymer Science – especially those who go on to complete a doctorate – are particularly sought after in the chemical industry and related industrial sectors.





*Our modern campus with short paths and the award-winning International Office provide an ideal environment for internationally oriented degree programmes.*

# Programme Outline

The master’s programme begins with fundamental aspects and covers recent developments in the field along with applications of polymer materials and biomacromolecules. The programme is research-oriented and introduces students to current research topics in polymer science at an early stage. It is taught by reputable scholars who are active in the field and who are experienced in teaching the various aspects of polymer science.

<b>1st Semester</b>  <b>Basic modules</b> P 101 - P 107  Choice: 4 out of 7 modules	Module P 101 <b>Polymer Synthesis</b>  7 CP	Module P 102 <b>Physical Chemistry of Polymers</b>  7 CP	Module P 103 <b>Colloids and Surfaces</b>  7 CP	Module P 104 <b>Polymer Materials and Technology</b>  7 CP
	Module P 105 <b>Polymer Physics I</b>  7 CP	Module P 106 <b>Organometallic Chemistry and Polymerization Catalysts</b>  7 CP	Module P 107 <b>Biomaterials</b>  7 CP	
<b>2nd Semester</b>  <b>Advanced modules</b> P 201 - P 207  Choice: 3 out of 7 modules	Module P 201 <b>Polymer Architectures</b>  9 CP	Module P 202 <b>High Performance and Speciality Polymers</b>  9 CP	Module P 203 <b>Advanced Methods in the Physical Chemistry of Polymers</b>  9 CP	Module P 204 <b>Current Topics in Colloid, Polymer, and Interface Science</b>  9 CP
	Module P 205 <b>Polymer Engineering</b>  9 CP	Module P 206 <b>Polymer Physics I</b>  9 CP	Module P 207 <b>Catalyst Design</b>  9 CP	Module P 210 <b>Research Proposal</b>  5 CP
<b>3rd and 4th Semester</b>	Module P 301 <b>Advanced Laboratory I</b>  15 CP	Module P 302 <b>Advanced Laboratory II</b>  15 CP	Module P 400 <b>Master Thesis</b>  30 CP	

Designed for up to 30 students, the master’s programme Polymer Science is embedded in the focus area Polymer & Colloid Science. Newcomers can enter the programme in the winter term (standard start date) or in the summer term, which is particularly interesting for transfer students and students changing their subject. To be admitted to the programme, all applicants are required to undergo an aptitude assessment process. The standard period of study is four semesters. The degree Master of Science (M.Sc.) is awarded for successful completion of the programme.



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## Application

Admission requirements for the master's programme Polymer Science are a first cycle degree (Bachelor of Science) in chemistry, polymer and colloid chemistry, biochemistry, physics, materials science, or a related discipline in addition to successful completion of an aptitude assessment process.

Application forms and additional information on the degree programme:

<http://www.polymerscience.master.uni-bayreuth.de>

## Application period:

15 February - 1 July  
for admission in the winter term

15 October - 15 January  
for admission in the summer term

## Contact us:

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Master's Programme Polymer Science

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