How to get through your studies in BEMP: legal aspects and specific information

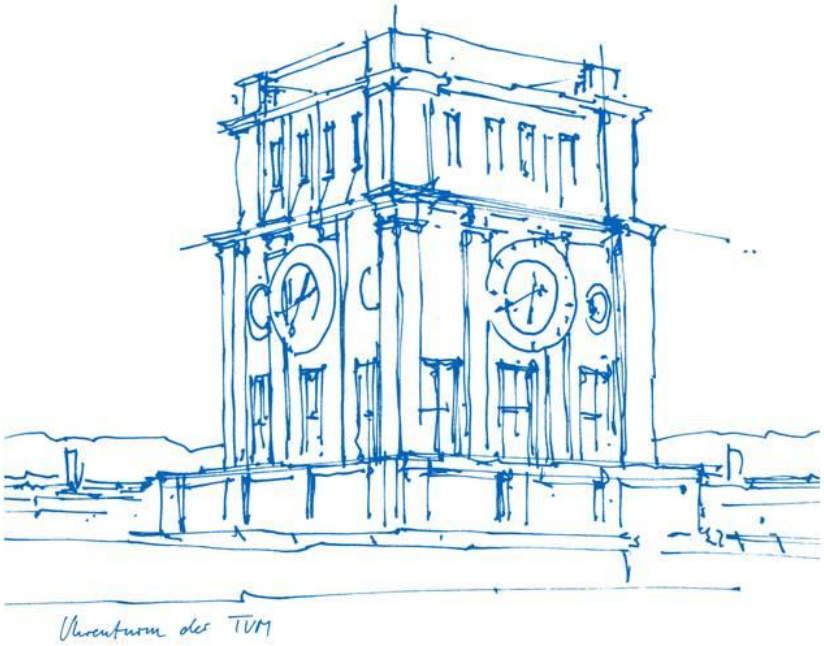
Dr. Marianne Köpf

Technical University of Munich

TUM School of Natural Sciences

Professional Profile Physics

Academic Administration



Academic Counseling @ studium@nat.tum.de

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Management LabCourses BEMP
Disadvantage Compensation

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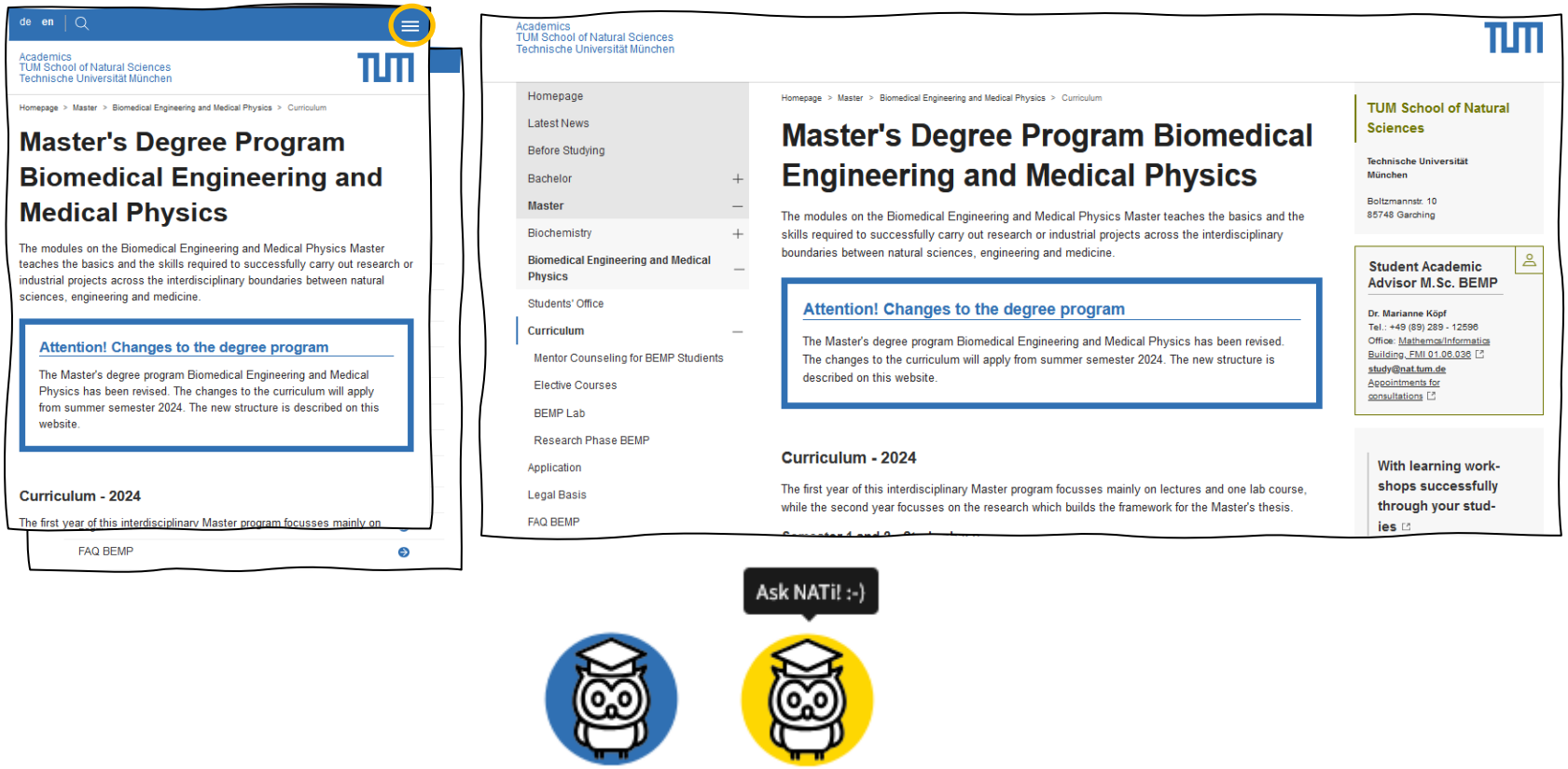
Information about the Degree Program (I/II)

[Link BEMP Website]



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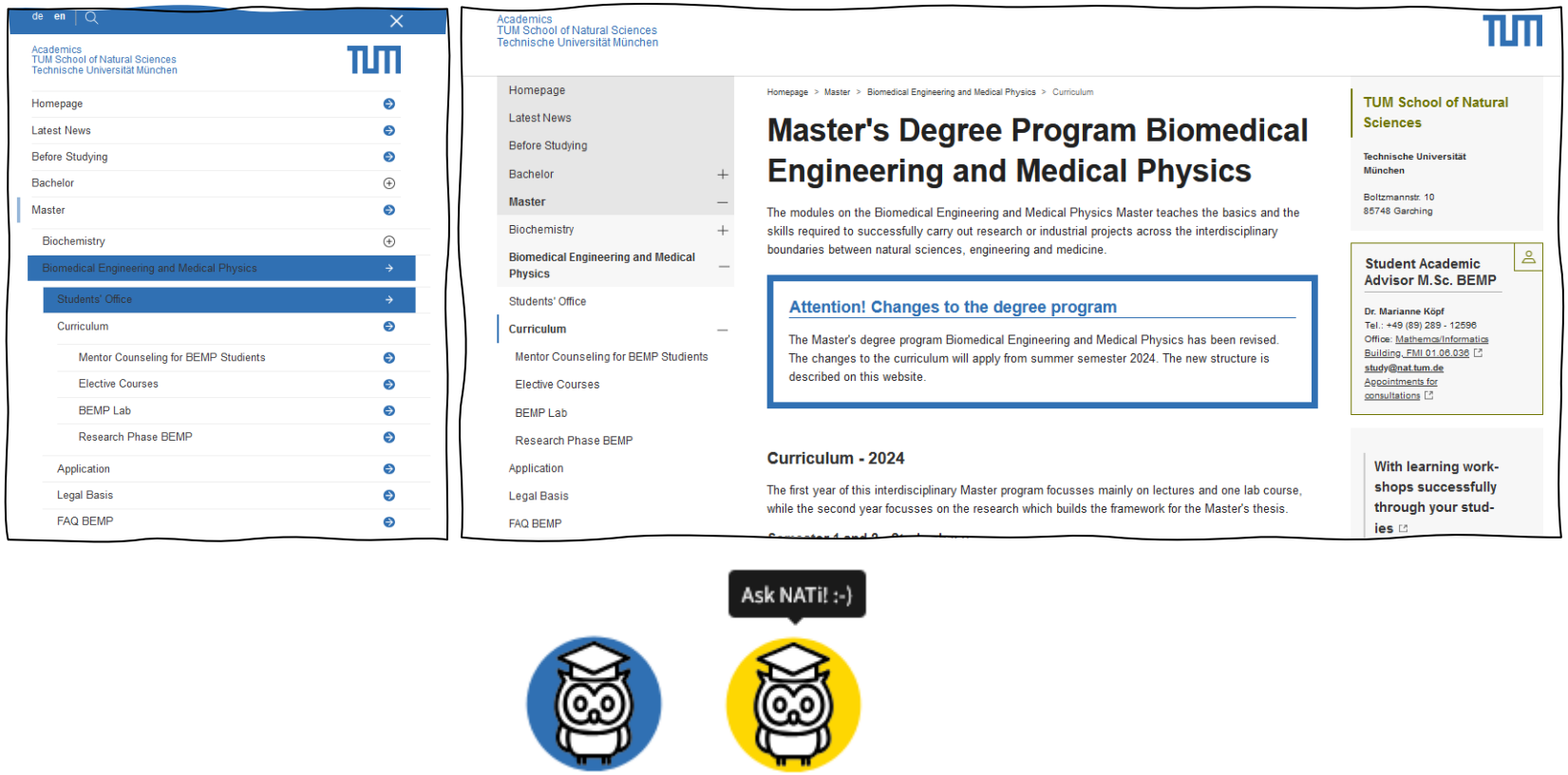
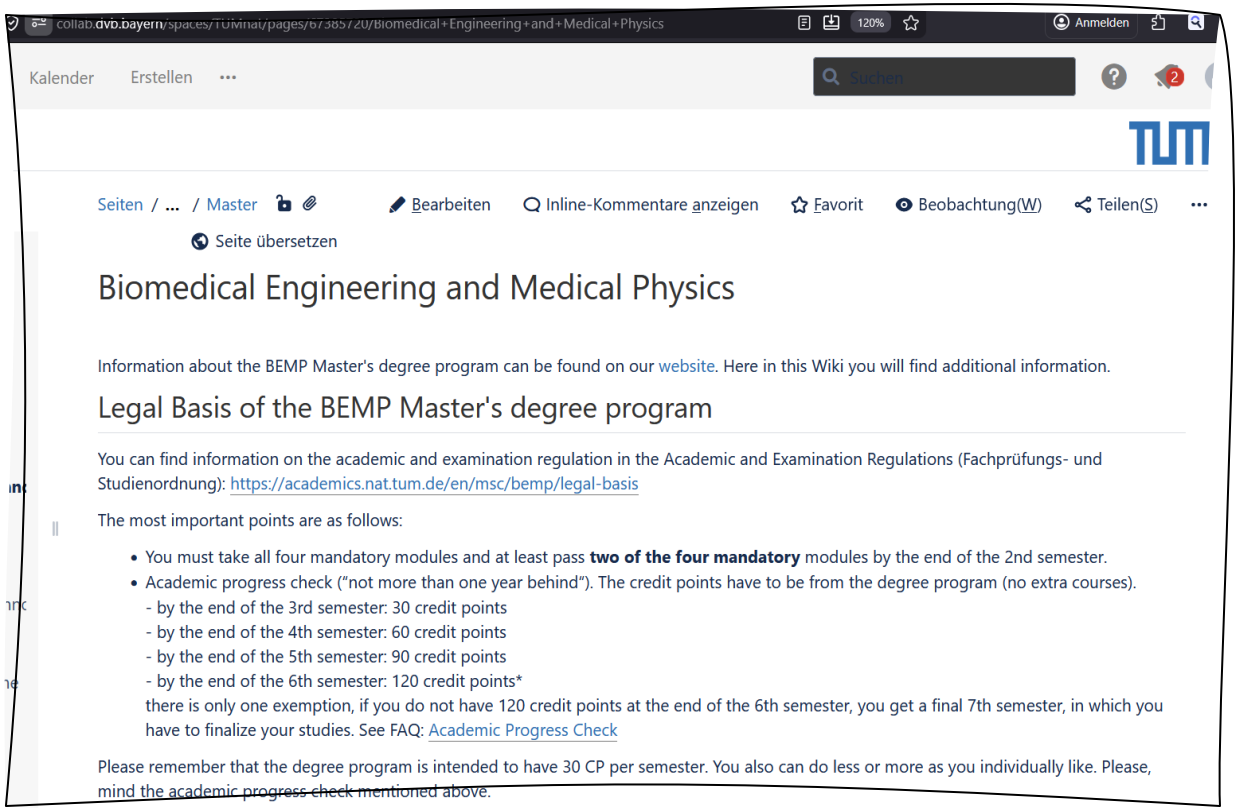


Information about the Degree Program (II/II)

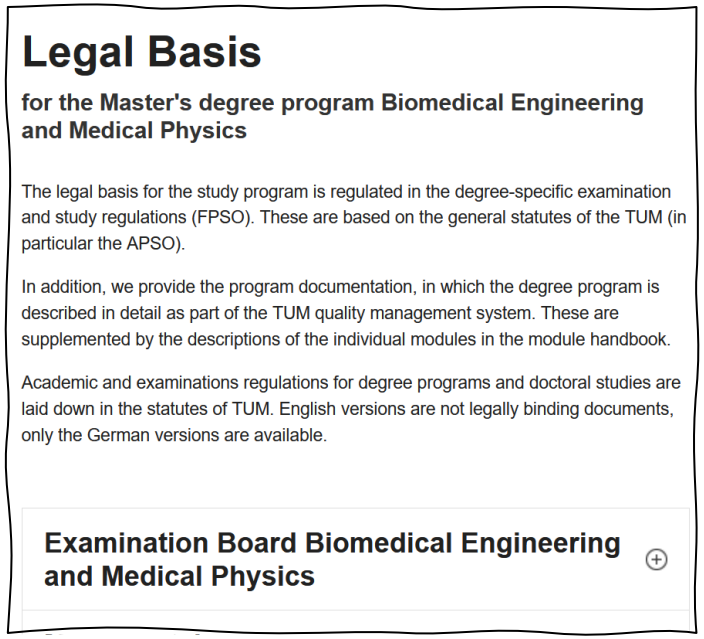
https://collab.dvb.bayern/display/TUMnat/Biomedical+Engineering+and+Medical+Physics

=> „Beobachten“



Academic and Examination Regulations (FPSO)

The **Academic and Examination Regulations (FPSO)** are, together with the General Academic and Examination Regulations (APSO), the contract you signed with the university at the time of enrolment. It is very important that you are familiar with the contents of these regulations. => Link



Legal Basis

for the Master's degree program Biomedical Engineering and Medical Physics

The legal basis for the study program is regulated in the degree-specific examination and study regulations (FPSO). These are based on the general statutes of the TUM (in particular the APSO).

In addition, we provide the program documentation, in which the degree program is described in detail as part of the TUM quality management system. These are supplemented by the descriptions of the individual modules in the module handbook.

Academic and examinations regulations for degree programs and doctoral studies are laid down in the statutes of TUM. English versions are not legally binding documents, only the German versions are available.

Examination Board Biomedical Engineering and Medical Physics

Fachprüfungs- und Studienordnung für den Masterstudiengang Biomedical Engineering and Medical Physics an der Technischen Universität München

Vom 22. Januar 2024

Aufgrund von Art. 9 Satz 1 und 2 in Verbindung mit Art. Art. 90 Abs. 1 Satz 2 des Bayerischen Hochschulinnovat Universität München folgende Satzung:

Inhaltsverzeichnis:

§ 34 Geltungsbereich, akademischer Grad
§ 35 Studienbeginn, Regelstudienzeit, ECTS
§ 36 Qualifikationsvoraussetzungen
§ 37 Modularisierung, Modulprüfung, Lehrveranstaltu

Verbindlich ist allein die amtlich veröffentlichte Version

ALLGEMEINE PRÜFUNGS- UND STUDIENORDNUNG für Bachelor- und Masterstudiengänge an der Technischen Universität München

Vom 18. März 2011

Lesbare Fassung in der Fassung der 9. Änderungssatzung vom 13. Februar 2024

Aufgrund von Art. 13 Abs. 1 Satz 2 in Verbindung mit Art. 58 Abs. 1 Satz 1 und Art. 61 Abs. 2 Satz 1 des Bayerischen Hochschulgesetzes (BayHSchG)* erlässt die Technische Universität München folgende Satzung:

Vorbemerkung zum Sprachgebrauch:

Curriculum - Overview

	Semester	Module				Credits in total
study phase	1.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 20 CP			30
	2.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 10 CP	BEMP Lab Course 6 CP	Genera Education Subjects 4 CP	30
research phase	3.	Master's Seminar 15 CP	Master's Work Experience 15 CP			30
	4.	Master's Thesis 30 CP				30

Curriculum - Overview

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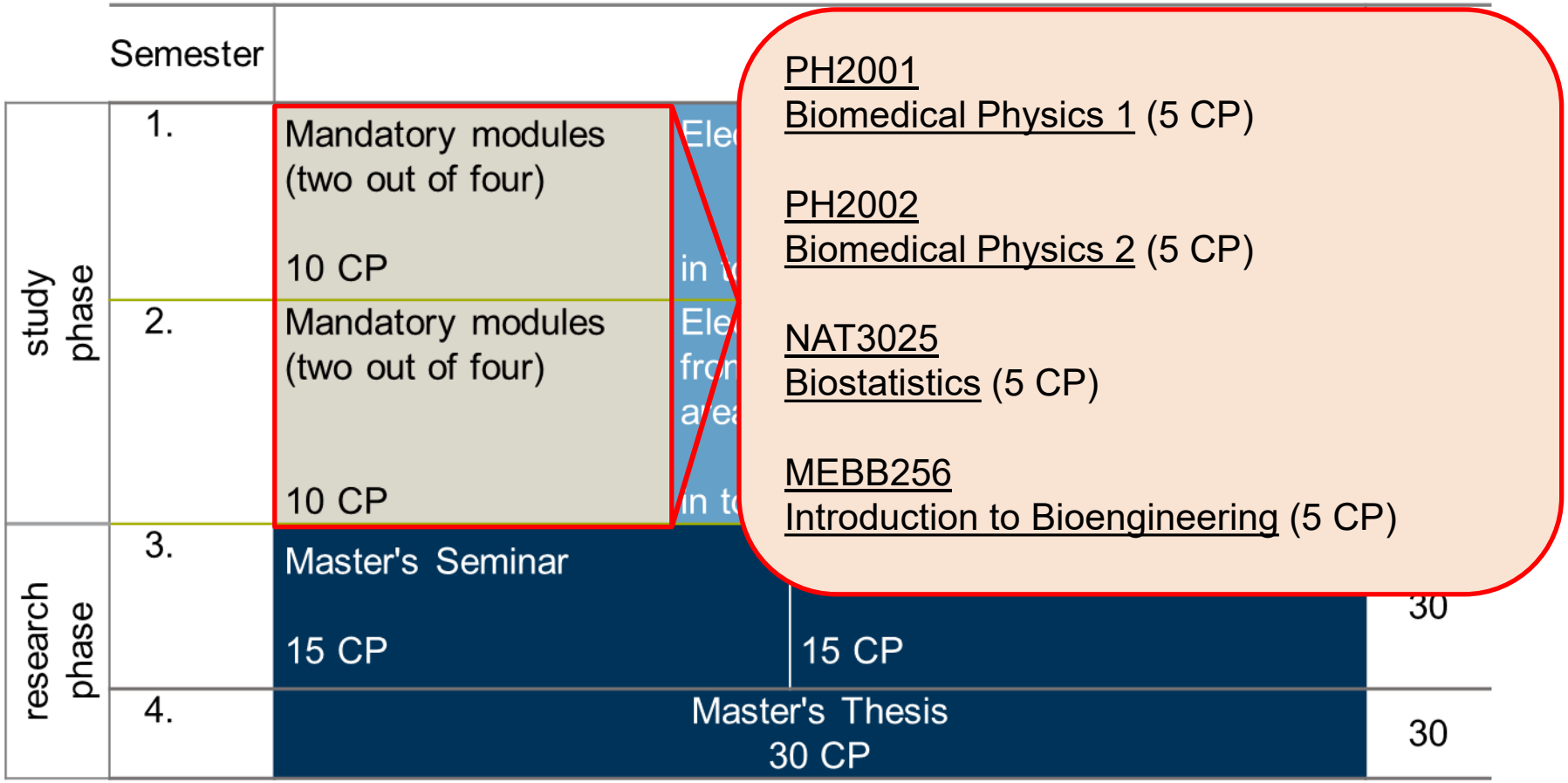
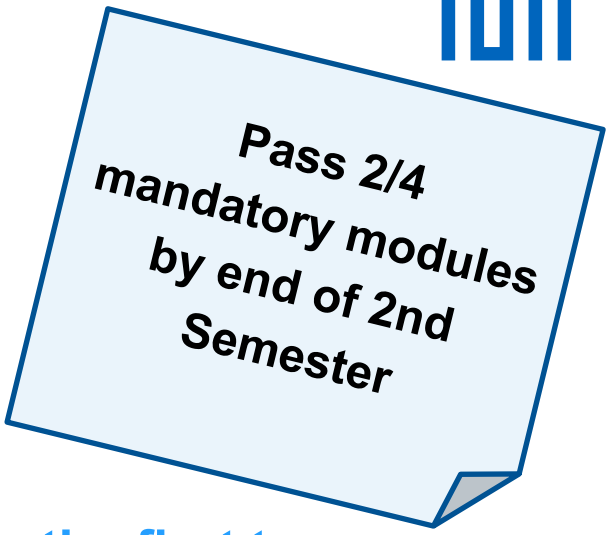
Mandatory Modules (graded)



Credit Limit



There is a credit limit for the mandatory modules

- **you must pass two mandatory modules within the first two semesters, otherwise you will be disenrolled by end of the second semester.**
- The exams are written exams (Klausur).
  They will take place in person.
- **For every semester there is one exam date for each mandatory module.**
- **Pre-course for Biostatistics!**

Focus Areas – Elective Modules (graded)

	Semester	Module				Credits in total
study phase	1.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 20 CP			30
	2.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 10 CP	BEMP Lab Course 6 CP	Genera Education Subjects 4 CP	30
research phase	3.	Master's Seminar 15 CP	Master's Work Experience 15 CP			30
	4.	Master's Thesis 30 CP				30

Focus Areas – Elective Modules (graded)

The modules are assigned to the following three categories:

- Advanced Fundamentals

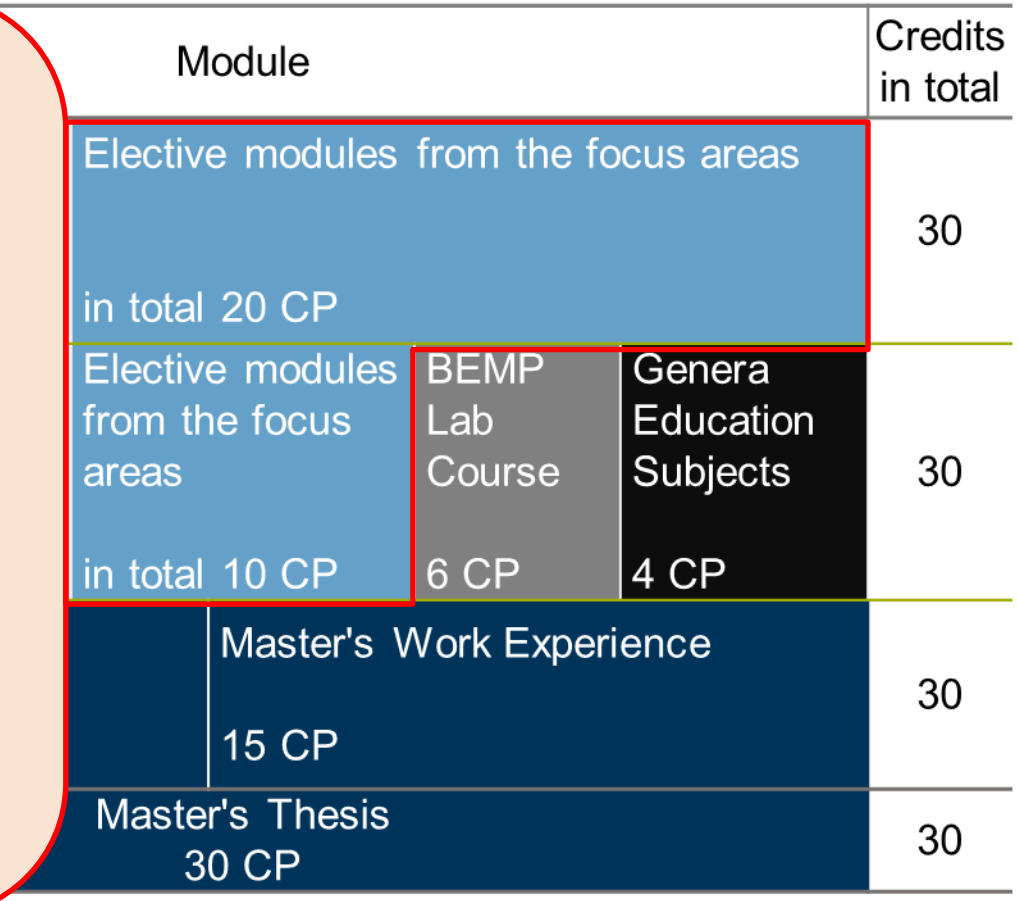
- Methods

- Computing

The modules in these categories are in themselves assigned to the two focus areas:

- Imaging and

- Biosensors.

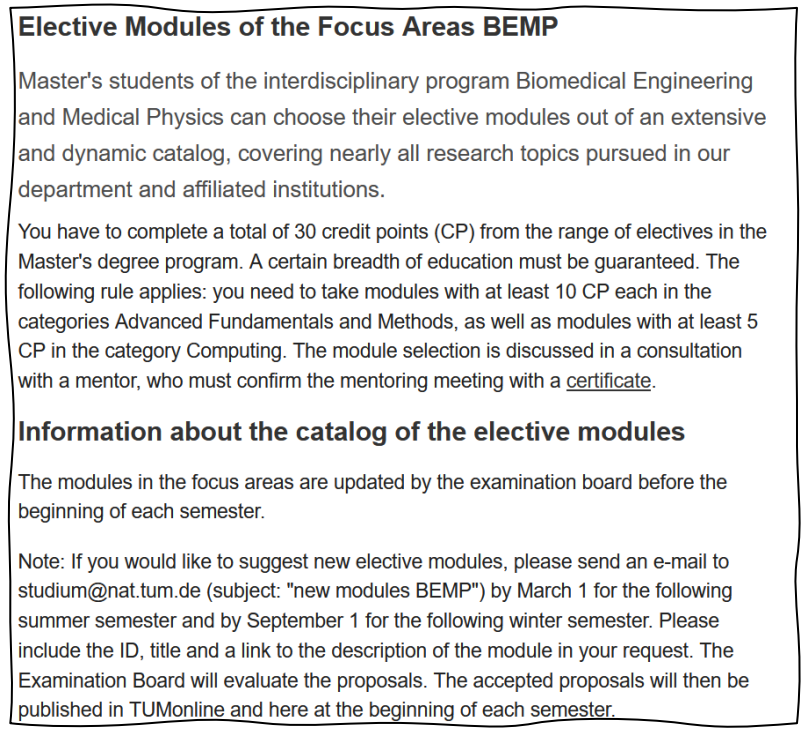


Focus Areas

- You have to earn at least **30 credit points** in the focus areas.
- The modules are assigned to the following three categories:
  Advanced Fundamentals (at least 10 CP)
  Methods (at least 10 CP)
  Computing (at least 5 CP)
- The modules in these categories are in themselves assigned to the two focus areas of **Imaging** and **Biosensors**. You are **free to choose** from both focus areas regardless of which focus area you choose.
- The catalogs are updated by the Examination Board. You may suggest new modules by March 1 or September 1 for the next following semester.
- You can take more modules than necessary. The best ones count towards your GPA

Focus Areas

- All offered modules are listed on the website: Link



Elective Modules of the Focus Areas BEMP

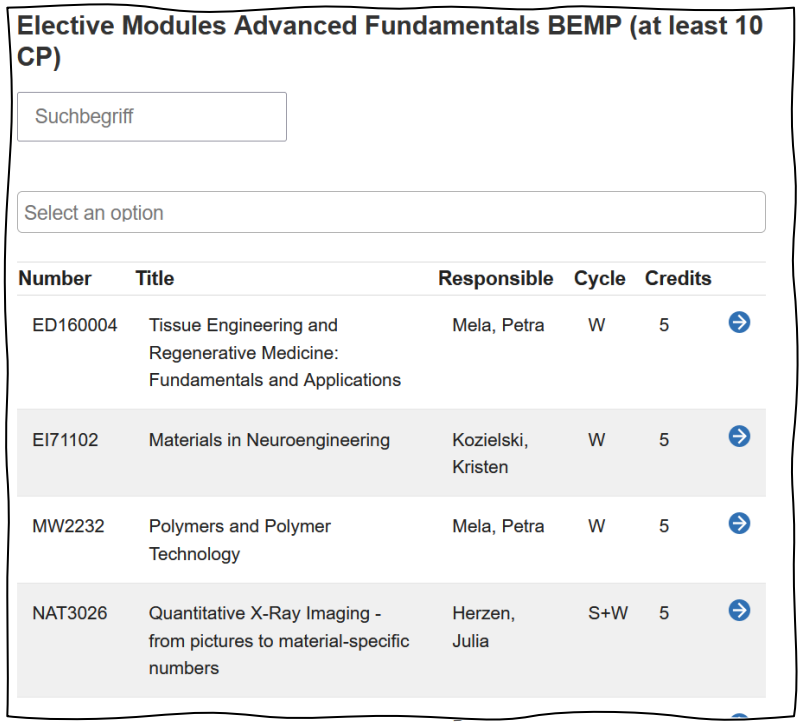
Master's students of the interdisciplinary program Biomedical Engineering and Medical Physics can choose their elective modules out of an extensive and dynamic catalog, covering nearly all research topics pursued in our department and affiliated institutions.

You have to complete a total of 30 credit points (CP) from the range of electives in the Master's degree program. A certain breadth of education must be guaranteed. The following rule applies: you need to take modules with at least 10 CP each in the categories Advanced Fundamentals and Methods, as well as modules with at least 5 CP in the category Computing. The module selection is discussed in a consultation with a mentor, who must confirm the mentoring meeting with a certificate.

Information about the catalog of the elective modules

The modules in the focus areas are updated by the examination board before the beginning of each semester.

Note: If you would like to suggest new elective modules, please send an e-mail to studium@nat.tum.de (subject: "new modules BEMP") by March 1 for the following summer semester and by September 1 for the following winter semester. Please include the ID, title and a link to the description of the module in your request. The Examination Board will evaluate the proposals. The accepted proposals will then be published in TUMonline and here at the beginning of each semester.



Elective Modules Advanced Fundamentals BEMP (at least 10 CP)

Suchbegriff

Select an option

Number	Title	Responsible	Cycle	Credits
ED160004	Tissue Engineering and Regenerative Medicine: Fundamentals and Applications	Mela, Petra	W	5
EI71102	Materials in Neuroengineering	Kozielski, Kristen	W	5
MW2232	Polymers and Polymer Technology	Mela, Petra	W	5
NAT3026	Quantitative X-Ray Imaging - from pictures to material-specific numbers	Herzen, Julia	S+W	5

BEMP Lab Course

	Semester	Module				Credits in total
study phase	1.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 20 CP			30
	2.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 10 CP	BEMP Lab Course 6 CP	Genera Education Subjects 4 CP	30
research phase	3.	Master's Seminar 15 CP	Master's Work Experience 15 CP			30
	4.	Master's Thesis 30 CP				30

BEMP Lab Course (pass/fail)

- advanced experiments dealing with different topics from the research area of Biomedical Engineering and Medical Physics
- research areas of the different institute from the physics department and the Munich Institute of BioEngineering (MIBE), thus facilitating future decisions regarding choices of specialization or topics for Master's theses
- students perform **one experiment**, which can be freely chosen from the offered catalog
- each experiment takes about 60 hours of laboratory work.
  In total each Lab Course has 6 Credit Points and so the total workload is 180 hours.

There is a moodle course on this topic every semester!
Please, be aware students in higher semesters have first right of access to the places on offer.

General Education Subjects

	Semester	Module				Credits in total
study phase	1.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 20 CP			30
	2.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 10 CP	BEMP Lab Course 6 CP	Genera Education Subjects 4 CP	30
research phase	3.	Master's Seminar 15 CP	Master's Work Experience 15 CP			30
	4.	Master's Thesis 30 CP				30

General Education Subjects (pass/fail)

- At least 4 credit points
- Elective courses – please see our website

  choose for example from TUM School of Managment, the Carl-von-Linde Academy or the Language Center

Mobility Window

	Semester	Module				Credits in total
study phase	1.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 20 CP			30
	2.	Mandatory modules (two out of four) Mobility Window 10 CP	Elective modules from the focus areas in total 10 CP	BEMP Lab Course 6 CP	Genera Education Subjects 4 CP	30
research phase	3.	Master's Seminar 15 CP	Master's Work Experience 15 CP			30
	4.	Master's Thesis 30 CP				30

Going Abroad

Dr. Eliza Gemel
International students
(incoming),
going abroad

Tel.: +49 (0)89 289 14610

- Detailed Information about possibilities for a stay abroad (for example ERASMUS, TUMexchange)

  https://academics.nat.tum.de/en/global/out-ph

  TUMexchange application deadline October 31 (10 a.m.)

  Erasmus+ SMS and SEMP application deadline usually January 15

- To follow international activities of the TUM NAT:
  https://collab.dvb.bayern/display/TUMnat/Study+Abroad

Research Phase

	Semester	Module				Credits in total
study phase	1.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 20 CP			30
	2.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 10 CP	BEMP Lab Course 6 CP	Genera Education Subjects 4 CP	30
research phase	3.	Master's Seminar 15 CP	Master's Work Experience 15 CP			30
	4.	Master's Thesis 30 CP				30

Seminar + Work Experience: pass/fail, Master‘s Thesis: graded

Research Phase

- Full time => 60 Credit Points in total => 40 hours per week, 12 months
- One **inseparable** entity (only formally divided into parts)
- One year of research in a group of or in a specialist field
  such as the Chair of Cell Biophysics, Physics of Biomedical Imaging, Applied Biophysics, Physics of Synthetic Biosystems, Radiology, etc.
- Find a supervisor during the first year.
  Please, see also the list of possible thesis supervisors on the website
- **Register once you start it!**
  You can start your research phase also within the semester, you do not have to wait until the beginning of your third semester. Also, your study phase can be longer than two semesters in total.
- Additional information event every semester.
  You will get informed about this meeting via e-mail.

Research Phase

Students' Office

Please hand in your registration file to Erika Macias-Wenhart

Students' Office Physics, Quantum Science and Technology, and Biomedical Engineering and Medical Physics

Erika **Macias-Wenhart**

Tel +49 89 289 12343
Room 5101.EG.052
Visiting hours
7 - 13Uhr (Mo-Do). Freitags - Home Office

Academic progress check (FPSO)

1. You must pass two of the mandatory modules within the first two semesters

2. You must achieve the following minimum number of credit points in the specified semesters: Only modules minimum needed for your degree program count! No additional ones.

   - by the end of the 3rd semester: 30 credit points
   - by the end of the 4th semester: 60 credit points
   - by the end of the 5th semester: 90 credit points
   - by the end of the 6th semester: 120 credit points

There is one exemption, in case you do not have 120 CP by the end of the 6th semester another 7th semester is granted within which you have to finalize your studies!
This exemption does not apply for the earlier semester!

Academic progress check (FPSO)

	Semester	Module				Credits in total
study phase	1.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 20 CP			30
	2.	Mandatory modules (two out of four) 10 CP	Elective modules from the focus areas in total 10 CP	BEMP Lab Course 6 CP	Genera Education Subjects 4 CP	30
research phase	3.	Master's Seminar 15 CP	Master's Work Experience 15 CP			30
	4.	Master's Thesis 30 CP				30

W/S	SoE	APC
24S	1	min. two of the mand. modules
24W	2	
25S	3	30
25W	4	60
26S	5	90
26W	6	120
(27S)	*(7)*	*120 (!)*

In case you elongate your study phase longer than the third semester and until the end of your forth semester, you have to finalize all modules from the study phase until the end of your fourth semester and you have to register immediately your research phase at the end of your forth semester or right in the beginning of your fifth semester.

=> come for consultation with Marianne Köpf as soon as you think you might get in trouble!

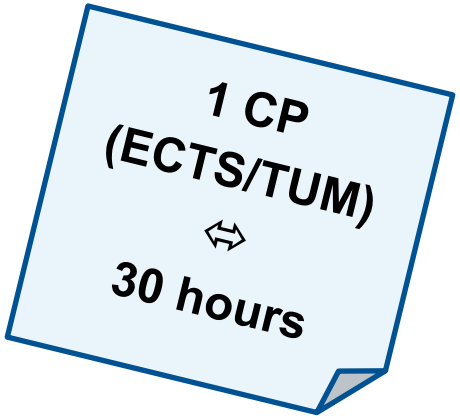
If you do not meet the APC, you will be disenrolled.

- Please check regularly your grade report within TUMonline yourself and let us know if there are unassigned exams.

- Rankings are provided only for the semesters 1, 2, 3 and 4 due to the standard duration of study!

At TUM one credit point values one ECTS credit point.

=> For a 10 CP module the workload is 300 hours!



Registration for lectures and excercises

- Not mandatory, but useful.
- Lecturers can contact students.
- Course will appear in your TUMonline-schedule.
- Access for online material may be coupled to registration.

Exams

- Exams are individual to each module.
  Have a look into the module description.

  - Non passed modules are not part of the transcript of records.
  - The number of attempts is not part of the final documents.
  => Therefore, deregistration is not possible after the deregistration period.
  - Retake exams are done at the following exam period or within the following semester.

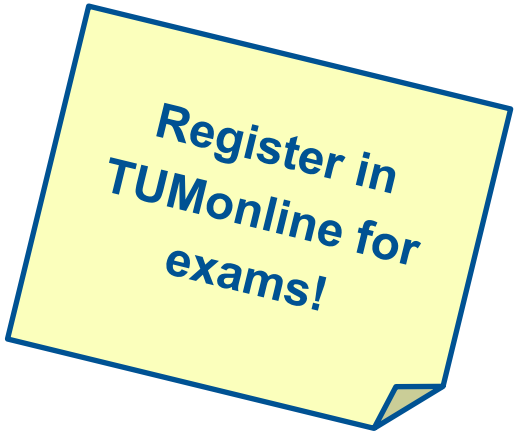
- Written exams, often 60 to 90 minutes duration
  You must use a document-proof pen—not a pencil!
  If you failed an exam, go to the review of the exams. This might help you to improve.

- Oral exams, often 20 to 45 minutes duration
  In case you cannot go for the oral exam, please contact the examiner and let her/him know!

- Presentations, Project work, and others – they are also exams!
  Talk to your examiner so you might get to know, what is expected for these exams.

Registration for exams

- To take an exam **you must register in TUMonline!**
  Five weeks after the start of the lecture period, you will receive an information e-mail that you can register for the exams. Registration is required for seminars or other course work as well!
- Only passed exams will be listed in the final transcript.
- There is no limit to the number of attempts for failed exams
  within the academic progress checks.
- Once passed, exams cannot be repeated.
- TUMonline Manual Registration Exams



How to… register for courses and exams

Courses

TUM: TUMonline

Exams

TUMonline Manual Registration Exams

Additional requirement for integrative German skills

- Those who still have to prove their knowledge of German might take a German course at the TUM Language Center, which can also be considered a general education subject. Please register to it as a general education subject, it then will count automatically for the requirement as well.

- Also, other certificates are accepted. If you already have a certificate stating your level of German language knowledge, please send it as a pdf to master@ph.tum.de

- **The A1.1 level is sufficient.**

- **Visa issues? Please, let Marianne Köpf know!**

Additional Courses

- You might take other modules (optional courses) than mentioned in your curriculum or more than needed.
- They do not count into your degree program! – Neither the grades nor the amount of CP
- They will be listed in the appendix of your transcript of records
- Modules you take additional to the minimum of modules you have to do in the elective areas will be handled like additional courses. The less good ones will appear in the appendix. **And so, they do not count for the academic progress check!**

For example:
6+6 CP of Advanced Fundamentals,
5+5+5 CP of Methods
5+6 CP of Computing

Deadlines – I/II

Exam registration periods

- Examinations normally take place accompanying the corresponding semester of study. Each module has **two examination dates within an academic year.**
- Regularly there are two time periods for module exams at TUM. The first follows immediately the lecture period, the second is just before the lecture period of the following semester begins. The exact dates for the current and following semesters are given on the Website TUM NAT.
- The registration periods are defaults – please keep in mind that there might be small deviations and possibly different dates in other departments
- There will be an information e-mail when the registration periods starts for TUM NAT.

Deadlines – II/II

Re-registration

- Do not forget to **re-register for the next semester**

  Deadlines: **February 15 for summer semester**
  August 15 for winter semester

Key Websites

Wiki:
https://collab.dvb.bayern/display/TUMnat/Biomedical+Engineering+and+Medical+Physics -> „beobachten“

School of Natural Sciences:
https://www.nat.tum.de/

https://academics.nat.tum.de

TUMonline: https://campus.tum.de

Some more information/advices/etc.

Our Advice and Counselling Network: Studierendenwerk München Oberbayern (studierendenwerk-muenchen-oberbayern.de)

https://www.nat.tum.de/en/nat/about/diversity/

https://www.zv.tum.de/en/diversity/home/

To gain access to the Studi TUM building you need to activate it in your TUMonline account!

Upcoming Events

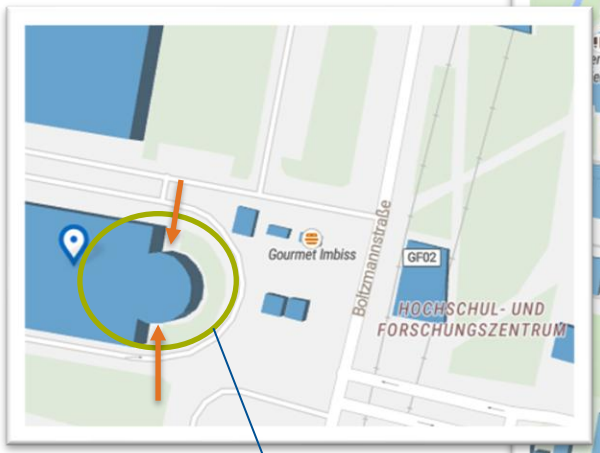
Welcome Event

April 13, 10.00-12.00 a.m. - in person on site!

Prof. Julia Herzen will welcome you at TUM, campus Garching.

https://nav.tum.de/room/5701.EG.026

Welcome Event and Lecture Halls of the Physics Building



Lecture halls, Physics building

Welcome Event
April 13,
10.00 a.m.

https://nav.tum.de/room/5701.EG.026

Questions?

If you have questions or problems...

Let us know!

study@nat.tum.de

Please, include the shortcut „BEMP“ within the subject and within the text your number of enrollment.

Do not write to several e-mail adresses. The people answering them are the same.

Dr. Marianne Köpf
M.Sc. QST/M.Sc. BEMP

Tel.: +49 (0)89 289 12596

Office: 5606.01.036
(Mathematics/Informatics building)

Consultation Hour:

Please schedule via Moodle
https://www.moodle.tum.de/course/view.php?id=90475

Be Smart, Get Support

How TUM can support you

Here you can find support at TUM:

www.tum.de/en/studies/support-and-advice

Information & advice about studying

- Student Information
- General Student Advising (interdisciplinary)
- Departmental Student Advising (subject-specific)

Learning, stress, motivation, career

- Academic Coaching
- Career Service
- Studyskills
- TUM4Mind
- Learning Workshops

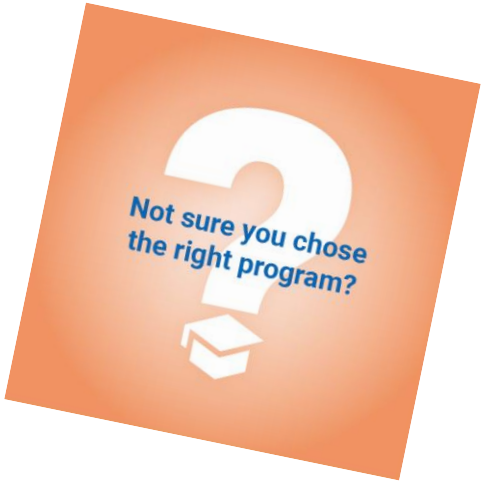
Studying with a disability or illness

- General Student Advising
- Subject-specific support in the schools

General Student Advising

- Concerns: e.g.

- doubts about studying
- dissatisfaction or performance pressure during studies
- failed examination
- change of subject or university



- Registration:

www.tum.de/en/studies/support-and-advice/support-during-studies/studentadvising

Procedure:

- Confidential counseling sessions in German or English (approx. 45 min) at the main campus or via video consultation or telephone

Studying with Special Needs

for students with a chronic illness or disability

- Concerns: e.g.
  - Disadvantage Compensation
  - Extention of the Study Period
  - Economic Support (technical & financial)

- Registration:

  via Email to: disability@cst.tum.de

- Procedure:

  Personal counseling sessions in German or English (approx. 45 min)
  at the main campus or via video consultation or telephone

Academic Coaching

Concerns:

- Learning difficulties
- Self-doubt and feelings of being overwhelmed
- Dealing with stress and high nervousness in exams
- Not getting into learning, procrastination
- Lack of motivation or willpower
- The feeling of being alone in your studies

Registration: coaching@cst.tum.de

Procedure: Personal meetings in German or English (60 - 90 minutes)

at the main campus Arcisstaße 21 or via video

More Info: www.tum.de/academic-coaching

ProLehre | Media and Didactics: Studyskills

Workshops

- Topics:
- How does learning work? Dos & Don'ts
- Mastering final theses
- AI tools, and much more

Advising

- 1:1 learning advice in case of learning difficulties during studies

Online-Offers

- Moodle-course: Plan your Studying!
- Electronic learning coach
- Tips on Instagram
- Podcast “The learning consultation hour”

More Info: ProLehre: Studyskills - ProLehre Media and Didactics

Learning-Workshops |

https://www.tum.de/en/studies/support-and-advice/support-during-studies/learning-workshops

Find support from the Student Union here

We wish you all a good start into the semester!

- Student Advising and Information Center for Study and Teaching

Open Day 2026