International Master Course Physics

Prof. Dr. Götz Seibold
Director of studies

Brandenburgische Technische Universität Cottbus - Senftenberg

Faculties

FACULTY 1

Mathematics, Computer Science, Physics, Electrical Engineering and Information Technology

FACULTY 2

Environment and Natural Sciences

FACULTY 3

Mechanical Engineering, Electrical and Energy Systems

FACULTY 4

Social Work, Health Care and Music

FACULTY 5

Business, Law and Social Sciences

FACULTY 6

Architecture, Civil Engineering and Urban Planning

Welcome to the Institute of Physics @ BTU!

Brandenburgische Technische Universität Cottbus - Senftenberg

Prof. H. Schenk
Micro- and Nano Systems
BTU + Fraunhofer IPMS

Prof. G. Seibold
Computational Physics

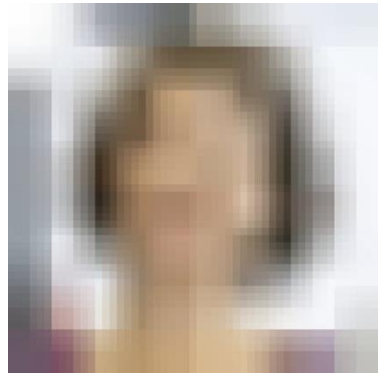
Prof. I. Flege
Applied Physics and
Semiconductor Spectroscopy

Prof. D. Gorelova
Computational Materials
Modeling

Prof. C. Wenger
Semiconductor Materials
BTU + IHP

Prof. C. Ruffert
BTU + Fraunhofer IPMS

Prof. I. Fischer
Experimental Physics and
Functional Materials



N.N.
Nanostructures, 2D-Systems
and Layers

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Specialization Phase		Research Phase	
Semester 1	*Semester 2*	*Semester 3*	*Semester 4*
• Advanced Seminar (6 LP) • Specialization (18 LP) • Minor Subject (6 LP)	• Advanced Seminar (6 LP) • Specialization (12 LP) • Minor Subject (6 LP) • General Studies (6 LP)	Research Project (30 LP) *(Preparation of the research project for the master thesis)*	Master Thesis (30 LP)
30 CP	*30 CP*	*30 CP*	*30 CP*

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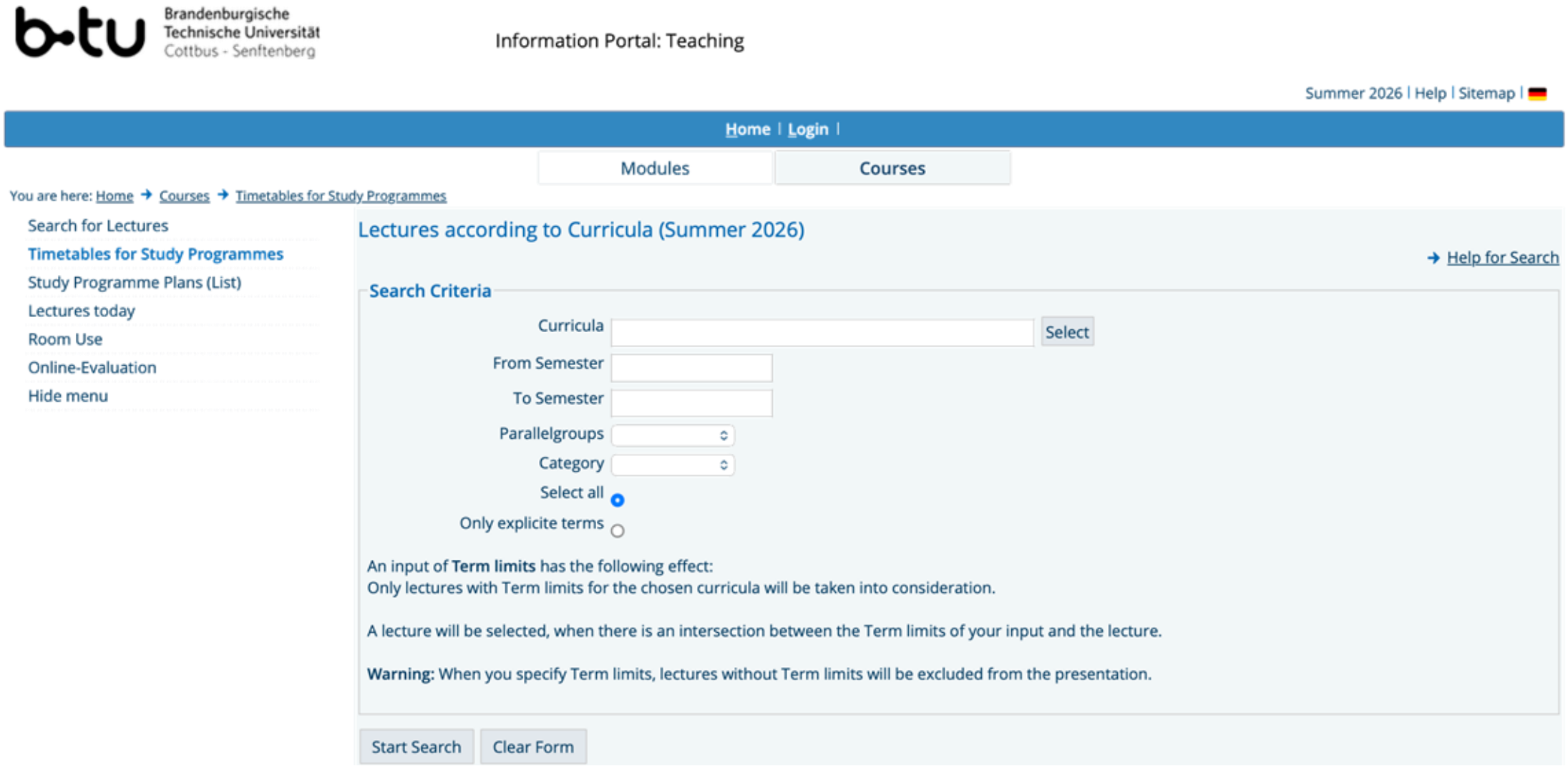
Timetable:



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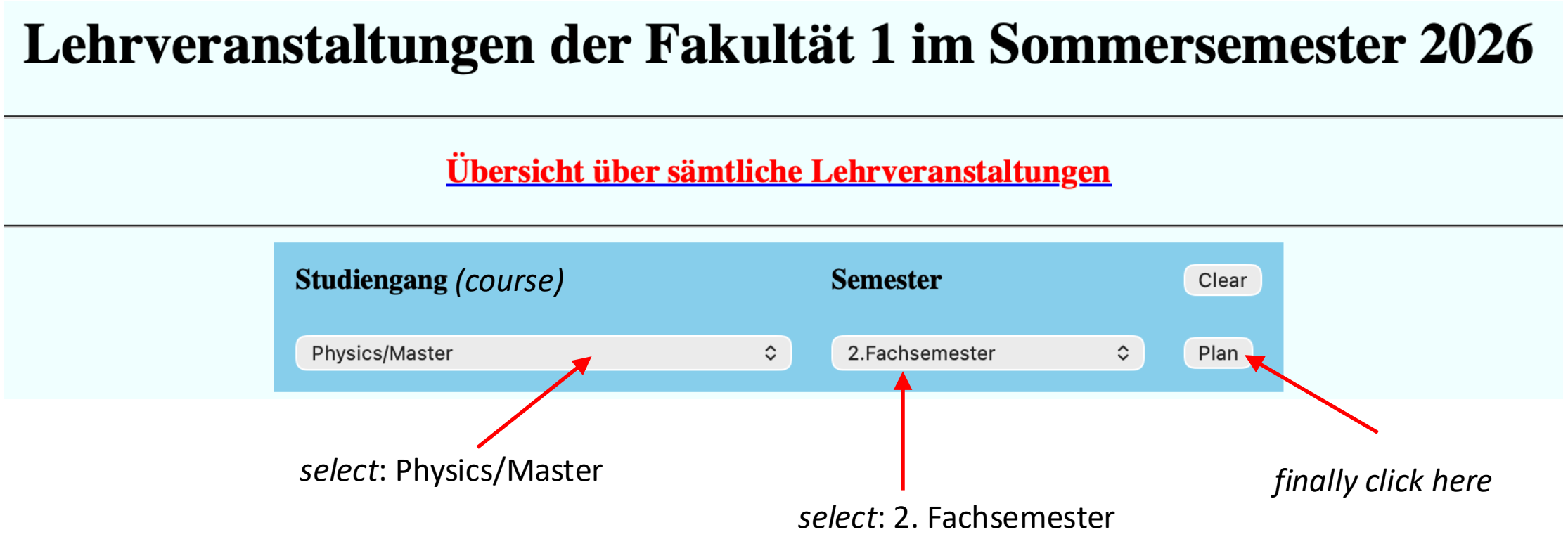
Timetable:

Lectures of faculty 1 within the summer term 2026



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Zeit	Montag	Dienstag	Mittwoch	Donnerstag	Freitag
1. Block					**Functional material systems for micro sensors and actuators** SE, , H.Schenk
2. Block	**Principles of Superconductivity** VL, HG2.45, G.Seibold	**1.Experimental techniques in physics supported with AI/ML** VL, HG0.17, I.Jablonski **2.Signal/Power Integrity and Electromagnetic Compatibility** UE, HG0.20, R.Stöcker **3.Applied Spectroscopy and Microscopy** SE, LG1A/121, R.Sanchez, Flege	**Surface Physics and 2D Materials** VL, LG1A/121, Flege, Morales Sanchez	**1.Neural Networks and Learning Theory** VL, ZHG/HSB, K.Meer **2.Surface Physics and 2D Materials** VL, LG1A/121, Flege, Morales Sanchez **3.Particle and Astroparticle Physics** UE, HG2.44, N.Moreira	**Antennas II** UE, LG3A/016, R.Stöcker
3. Block	**Principles of Superconductivity** VL, HG2.45, G.Seibold	**Light and Matter: Interaction in Nanostructures** VL, HG0.19, I.Fischer	**1.Neural Networks and Learning Theory** VL, ZHG/HSB, K.Meer **2.Surface Physics and 2D Materials** UE, HG2.44, Morales Sanchez **3.Light and matter: quantum** VL, LG10/212, D.Gorelova	**1.Experimental techniques in physics supported with AI/ML** PR, VG1C/0.03, I.Jablonski **2.Signal/Power Integrity and Electromagnetic Compatibility** VL, LG3A/016, I.Ndip **3.Light and Matter: Interaction in Nanostructures** VL, HG3.45, I.Fischer	**1.Advanced Seminar Theoretical Physics** SE, HG2.45, U.Wulf **2.Neural Networks and Learning Theory** UE, ZHG/HSC, A.Wurm **3.Advanced Seminar: Metrology and its Applications** SE, HG0.19, K.Verma
4. Block	**1.REGEN (Regenerative Energien: Grundlagen und Anwendungen)** SE, LG1A/121, Flege **2.Oberseminar Experimentalphysik und Funktionale Materialien** SE, LG10/122, I.Fischer	**Nanoelectronics** VL, HG0.18, U.Wulf	**1.Light and matter: quantum** UE, LG10/212, D.Gorelova **2.Partikelbasierte Mikrofluidik** VL/UE, , C.Ruffert **3.Radio Frequency Integrated Circuit Design Lab** VL, HG0.20, G.Kahmen	**1.Antennas II** VL, HG0.20, I.Ndip **2.Particle and Astroparticle Physics** VL, LG1A/121, W.Lohmann **3.Principles of Superconductivity** UE, HG2.44, D.Grigorovich	**Advanced Seminar Theoretical Physics** SE, HG2.45, U.Wulf
5. Block	**1.Light and Matter: Interaction in Nanostructures** UE, HG2.45, N.N. **2.Advanced Seminar Experimental Physics: Nanophotonics** SE, LG10/212, I.Fischer **3.REGEN (Regenerative Energien: Grundlagen und Anwendungen)** SE, LG1A/121, Flege	**Nanoelectronics** UE, HG2.45, U.Wulf	**1.Neuromorphic Computing and Engineering** VL, HG0.19, C.Wenger, E.Perez **2.Advanced Microsystems, Focus: Microsensors** SE, , H.Schenk (B-Woche) **3.Light and matter: quantum** SE, LG10/212, N.Moreira **4.Advanced Microsystems, Focus: Microsensors** VL, ZHG/SR1, H.Schenk (A-Woche)	**1.Advanced Laboratory Techniques and Metrology** VL, HG0.19, K.Verma **2.Physikalisches Kolloquium** KOL, ZHG/SR1, alle Dozenten der Physik **3.Particle and Astroparticle Physics** VL, HG2.45, W.Lohmann	
6. Block			**Advanced Microsystems, Focus: Microsensors** VL, ZHG/SR1, H.Schenk (A-Woche)	**Advanced Laboratory Techniques and Metrology** SE, HG0.19, K.Verma (B-Woche)	

summer school:

Blockveranstaltungen/Veranstaltungen nach Vereinbarung:
150360 Flege, Zschech: Characterization of micro- and nano-materials

Lecture times:

1. Block	07.30-09.00
2. Block	09.15-10.45
3. Block	11.30-13.00
4. Block	13.45-15.15
5. Block	15.30-17.00
6. Block	17.30-19.00

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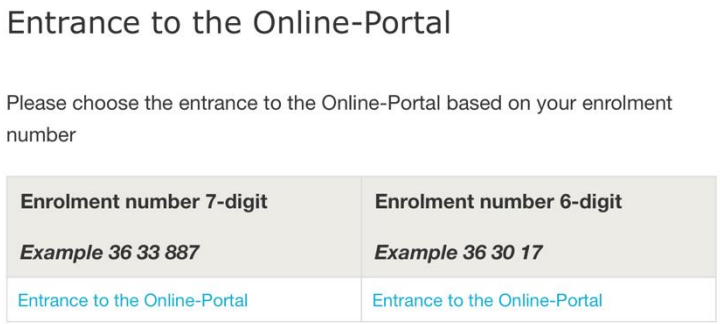
When and how to register for the modules?

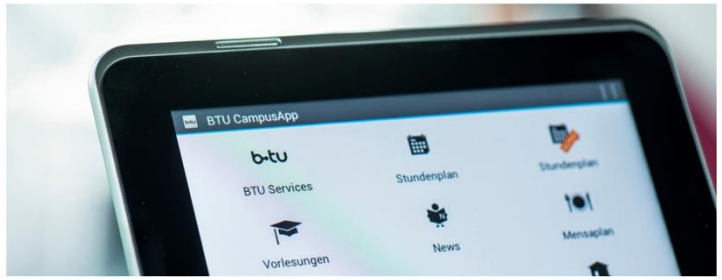
- Register online within the first 3 weeks of the semester:

  Link to online portal



- You may cancel the registration up to one week before the begin of the examination period

  Exception: Modules with continuous assessment (e.g. seminars) can only be cancelled within the first 3 weeks of the semester



see also:

https://www-docs.b-tu.de/studierende/public/termine-fristen/SAP_SoSe_2026.pdf

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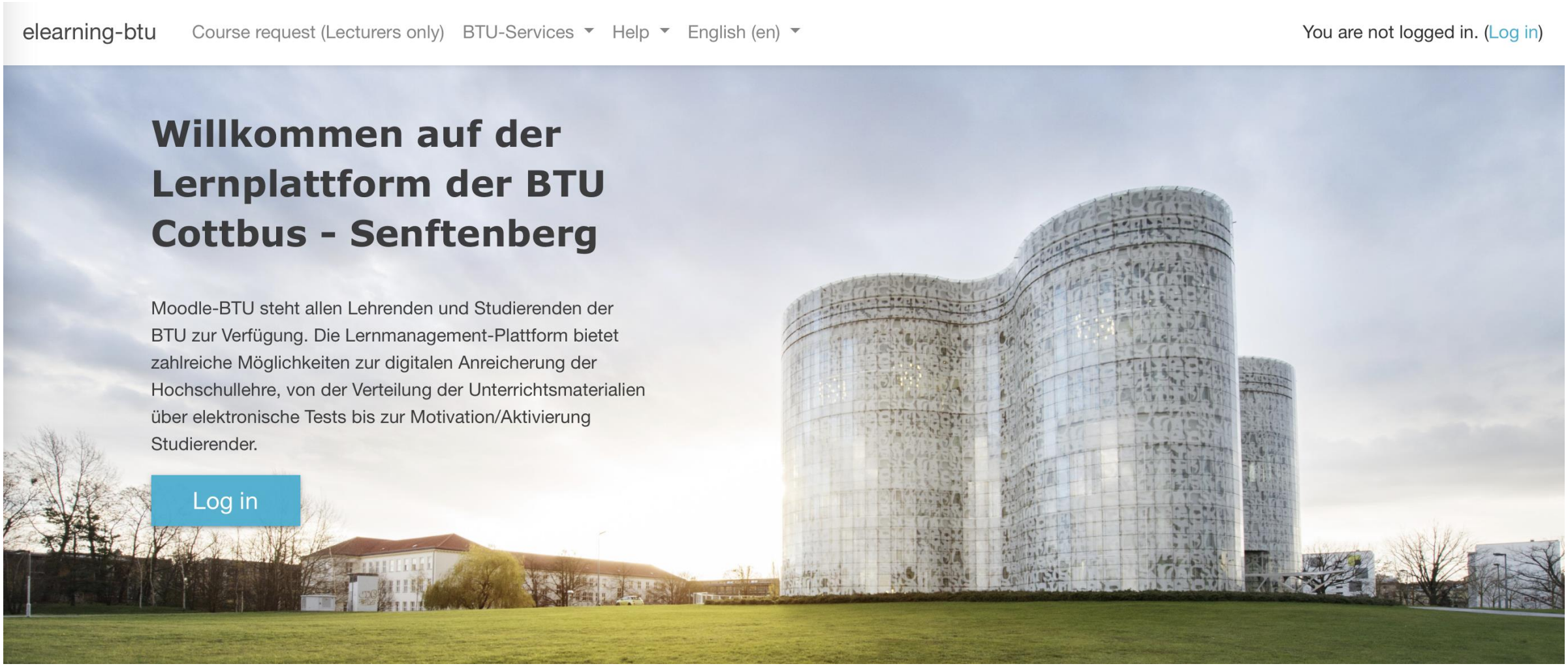
E-learning-platform moodle https://www.b-tu.de/elearning/btu/?lang=en



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Brandenburgische Technische Universität Cottbus - Senftenberg

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International Master Course Physics: Essential Infos

Brandenburgische Technische Universität Cottbus - Senftenberg

Two advanced seminars (6 CP each): Experimental Physics **and** Theoretical Physics

Check also on moodle

Experimental Physics: *Module description*: https://www.b-tu.de/modul/13012

A) Applied Spectroscopy

Tuesday 09:15 – 10:45
Room: LG1A 121
Prof. I. Flege (*flege@b-tu.de*)

B) Nanophotonics

Monday 13:45 – 15:15
Room: LG10 212
Prof. I. Fischer (inga.fischer@b-tu.de)

International Master Course Physics: Essential Infos

Brandenburgische Technische Universität Cottbus - Senftenberg

Two advanced seminars (6 CP each): Experimental Physics **and** Theoretical Physics

Experimental Physics:

Module description: https://www.b-tu.de/modul/13012

C) Metrology and ist applications

Friday, 11:30 – 13:00

Dr. K. Verma (satish.verma@ipms-extern.fraunhofer.de)

D) Functional Material Systems for Micro Sensors and Actuators

Friday, 07:30 – 09:00 (online only)

Prof. Dr. H. Schenk (*harald.schenk@b-tu.de*)

Theoretical Physics:

Module description: https://www.b-tu.de/modul/13014

General Topics in Theoretical Physics

Friday, 11:30 – 13:00
Room: HG 2.45

Dr. U. Wulf (*ulrich.wulf@b-tu.de)*

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Brandenburgische Technische Universität Cottbus - Senftenberg

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International Master Course Physics: Essential Infos

Brandenburgische Technische Universität Cottbus - Senftenberg

- Choose specialization modules with an amount of 18+12 CP‘s
- Specialization modules have an experimental (and/or) theoretical focus
- Choose at least one from each category.

This semester:

Nanoelectronics (https://www.b-tu.de/modul/13038) Dr. U. Wulf (ulrich.wulf@b-tu.de)
Focus: theo./exp.
Lecture: Tuesday 13:45-15:15, Room HG 0.18
Exercise: Tuesday 15:30 - 17:00, Room HG 2.45

Principles of superconductivity (https://www.b-tu.de/modul/13028) Prof. G. Seibold (seibold@b-tu.de)
Focus: exp./theo.
Lecture: Monday 09:15 - 10:45 (Room HG 2.45) and Monday 11:30 - 13:00 (Room HG 2.45)
Exercise: Thursday 13:45-15:15 (Room HG 2.44)

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Advanced Microsystems. Focus: Microsensors (https://www.b-tu.de/modul/13752)

Prof. Dr. H. Schenk (*harald.schenk@b-tu.de*)

Focus: exp.
Lecture: Wednesday 15:30 - 17:00 and 17:30 - 19:00 (A weeks),
Room: ZHG SR 1, starts on 22.04.26
Seminar: Wednesday 15:30 – 17:00 (B-weeks), tba

Partikelbasierte Mikrofluidik (https://www.b-tu.de/modul/13773)

Prof. Dr. C. Ruffert
(christine.ruffert@b-tu.de)

Focus: exp.
Lecture: Wednesday, 13:00 – 15:00 (online and german only)
Please contact Dr. Ruffert for participation

Light and Matter: Quantum (https://www.b-tu.de/modul/14499)

Prof. Dr. D. Gorelova
(daria.gorelova@b-tu.de)

Focus: theo.
Lecture: Wednesday 11:30-13:00, Room LG 10 212
Exercise: Wednesday 13:45-15:15, Room: LG 10 212
Seminar: Wednesday 15:30-17:00, Room: LG 10 212

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Light and Matter, Interaction in Nanostructures (https://www.b-tu.de/modul/13025) Prof. I. Fischer (inga.fischer@b-tu.de)
Focus: exp.
Lecture: Tuesday 11:30-13:00, Room HG 0.19
Exercise: Monday 15:30-17:00, Room HG 2.45

Journal Club: Thursday 11:30-13:00, Room: HG 3.45

Particle and Astroparticle Physics (https://www.b-tu.de/modul/13015) Prof. W. Lohmann (wolfgang.lohmann@desy.de)
Focus: exp.
Lecture: Thursday 13:45-15:15, LG1A, 121
Exercise: Thursday 15:30-17:00, HG, 2.45

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Brandenburgische Technische Universität Cottbus - Senftenberg

Surface Physics and 2D materials (https://www.b-tu.de/modul/13021) Prof. I. Flege (*flege@b-tu.de)*

Focus: exp.
Lecture: Wednesday 09:15-10:45, Room: LG1A/121 (Morales-Sanchez)
Thursday 09:15-10:45, Room: LG1A/121 (Flege)
Exercices: Wednesday 11:30-13:00, Room: HG 2.44

Advanced Laboratory Techniques and Metrology (https://www.b-tu.de/modul/14490) Dr. S. Verma (*vermas@b-tu.de*)

Focus: exp.
Lecture: Thursday 15:30-17:00, Room: HG 0.19
Seminar: Thursday 17:30-19:00, Room: HG 0.19 (B-weeks)

Summer school: Characterization of Micro- and Nanomaterials: 04.09.2026 – 11.09.2026 Prof. I. Flege (*flege@b-tu.de)*

Block course with lectures and lab (see here for details)

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Brandenburgische Technische Universität Cottbus - Senftenberg

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30 CP	*30 CP*	*30 CP*	*30 CP*

International Master Course Physics: Essential Infos

Brandenburgische Technische Universität Cottbus - Senftenberg

Minor subject: Choose two modules within the first 2 semester or internship over 9 weeks

This semester:

Experimental Techniques in Physics supported with AI/ML (https://www.b-tu.de/modul/13908)

Lecture: Tuesday 09:15 – 10:45, Room HG 0.17
Lab: Thursday 11:30 – 13:00, Room VG 1C/0.03

Dr. habil. I. Jablonski (ireneusz.jablonski@b-tu.de)

Neuromorphic Engineering (https://www.b-tu.de/modul/14446)

Lecture: Wednesday 15:30 — 17:00, Room HG 0.19

Prof. Dr. C. Wenger
(christian.wenger@b-tu.de)

Mathematical Data Science (https://www.b-tu.de/modul/12826)

Lecture: Monday 09:15 — 10:45, Room HG 0.17
Thursday 13:45 – 15:15, ZHG SR 1
Exercise Tuesday 15:30 – 17:00, Room LG 1A 304
or Friday 09:15 – 10:45, Room LG 1A 304

Prof. Dr. C. Hartmann
(carsten.hartmann@b-tu.de)

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Neural Networks and Learning Theory (https://www.b-tu.de/modul/13874)

Lecture: Wednesday 11:30 – 13:00, Room ZHG HS B
Thursday 09:15 – 10:45, Room ZHG HS B
Exercises: Friday 11:30 –13:00, Room ZHG HS C

Prof. K. Meer
(klaus.meer@b-tu.de)

Image based measurement techniques for fluid mechanics
(https://www.b-tu.de/modul/13518)

Lecture+Lab: Thursday 13:45– 17:00

please susbscribe to the Moodle group

Prof. A. Schröder
(andreas.schroeder@b-tu.de)

Introduction to Numerical Linear Algebra (https://www.b-tu.de/modul/13874)

Lecture: Tuesday 11:30 – 13:00, Room ZHG SR 4
Exercises: Wednesday 09:15 –10:45, Room HG 3.35
Wednesday 13:45 –15:15, Room HG 3.35

Prof. M. Oevermann
(michael.oevermann@b-tu.de)

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Signal Power Integrity and electromagnetic compatibility (https://www.b-tu.de/modul/14320)

Prof. Dr. I. Ndip
(ivan.ndip@b-tu.de)

Lecture: Thursday 11:30 – 13:00, Room LG 3A/016
Exercise: Tuesday 09:15 – 10:45, Room HG 0.20

Hardware-Software Co-Design for embedded Systems (https://www.b-tu.de/modul/12406)

Dr. C. Herglotz
(herglchr@b-tu.de)

Lecture: Tuesday 11:30– 13:00, Room VG 1C 1.24

Radio Frequency Integrated Design Lab (https://www.b-tu.de/modul/14442)

Prof. Dr. G. Kahmen
(gerhard.kahmen@b-tu.de)

Lecture: Wednesday 09:15 – 10:45, Room HG 2.45

Antennas II (https://www.b-tu.de/modul/14317)

Prof. Dr. I. Ndip
(ivan.ndip@b-tu.de)

Lecture: Thursday 13:45 – 15:15, Room HG 0.20
Exercise: Friday 09:15 – 10:45, Room LG 3A 016

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Porous Materials (https://www.b-tu.de/modul/13929)

Lab: Tuesday 09:15 – 12:15, Room LG 1B/315
Lecture: Video based teaching material (please contact Prof. Klepel)

Prof. O. Klepel
(olaf.klepel@b-tu.de)

International Master Course Physics: Essential Infos

Brandenburgische Technische Universität Cottbus - Senftenberg

Minor subject: can also be accomplished as 9-week internship

- Internship should be related to the field of physics
- Should be done at an institute outside the university
- Some possibilities are listed on the next pages
- If you have decided on your preferences contact the institutions via email and submit an application
- Mention in your application that you intend to do the internship within the International Physics Master at BTU.

International Master Course Physics: Essential Infos

Brandenburgische Technische Universität Cottbus - Senftenberg

Minor subject: can also be accomplished as 9-week internship

Possibilities:

IHP Frankfurt/Oder

Contact: Prof. Christian Wenger
click here for application

DESY Zeuthen

Contact: Prof. Wolfgang Lohmann
wolfgang.lohmann@desy.de

International Master Course Physics: Essential Infos

Brandenburgische Technische Universität Cottbus - Senftenberg

Minor subject: can also be accomplished as 9-week internship

Possibilities:

Fraunhofer IPMS Dresden

Contact: Prof. Harald Schenk
harald.schenk@ipms.fraunhofer.de

IKZ Berlin

Contact: Prof. Thomas Schröder
thomas.schroeder@ikz-berlin.de

International Master Course Physics: Essential Infos

Brandenburgische Technische Universität Cottbus - Senftenberg

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30 CP	*30 CP*	*30 CP*	*30 CP*

International Master Course Physics: Essential Infos

Brandenburgische Technische Universität Cottbus - Senftenberg

In case of questions:

Student Council Physics: fsr-physik@b-tu.de

Prof. G. Seibold (seibold@b-tu.de) Phone: +49 (0)355 693006

International Relations Office

Enjoy!