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Curriculum for the
Bachelor's Programme in Physics
at the Faculty of Mathematics, Computer Science and Physics
of the University of Innsbruck

(New release 2025)

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§ 1 Allocation of the study programme

Pursuant to §54 para. 1 Universities Act 2002, the Bachelor's Programme in Physics is grouped among the natural science study programmes.

§ 2 Admission

Admission to the programme is granted by the Rectorate in accordance with the provisions of the Universities Act 2002 – UA on admission to bachelor's programmes.

§ 3 Qualification profile

(1) Graduates of the Bachelor's Programme in Physics are capable of independently solving problems in the natural sciences, technology, medicine and economics. An understanding of basic physical concepts and analytical thinking enables students to analyse technical issues, structure them and develop solution strategies.

(2) The Bachelor's Programme in Physics imparts the knowledge and skills in the field of physics that are required for careers in physics and engineering. The main objectives of the programme are to provide students with a basic understanding of key physical theories and an introduction to the use of equipment, software components and working techniques in a physics laboratory. The ability to independently expand physical knowledge and skills is demonstrated in a Bachelor's Thesis.

(3) Graduates are qualified for university-related research, the implementation and supervision of research and development projects in physical-technical economic sectors and in the development departments of companies. Physicists find employment in areas such as measurement and medical technology, information and telecommunications companies, management consultancies and the financial sector. Companies working on quantum technologies in particular employ physicists to develop the technology platforms of the future.

(4) The Bachelor's Programme in Physics prepares students for a Master's Programme in Physics.

§ 4 Scope and duration

The Bachelor's Programme in Physics covers 180 ECTS-Credits. This corresponds to a duration of the study programme of six semesters. One ECTS-Credit corresponds to a workload of 25 hours.

§ 5 Types of courses and maximum number of students per course

(1) Courses without continuous performance evaluation:
Lectures (VO) are courses held in lecture format. They introduce the research areas, methods and schools of thought for a given subject. Maximum number of students: none
Courses with continuous performance evaluation:

1. Practical courses (PR) provide practical experience with concrete scientific tasks, complementing occupational and academic training.

   For the following practical courses, the maximum number of students is 8:

   - Compulsory Module 15: Physics Laboratory I
   - Compulsory Module 16: Physics Laboratory II

   For the following practical course, the maximum number of students is 3:

   - Compulsory Module 17: Advanced Laboratory Class

2. Proseminars (PS) introduce students interactively to scientific literature through the treatment of selected issues. They convey knowledge and methods of academic work. Maximum number of students per course: 25.
3. Seminars (SE) provide in-depth treatment of scientific topics through students' presentations and discussion thereof. Maximum number of students per course: 15.
4. Tutorials (UE) focus on the practical treatment of specific tasks in a specialist area and on practicing specific skills. Maximum number of students per course: 25.

5. Lecture tutorials (VU) focus on the practical treatment of concrete scientific tasks that are discussed during the lecture parts of the course. Maximum number of students 25.

§ 6 Allocation of places in courses with a limited number of participants

In courses with a limited number of participants, course places are allocated as follows:

1. Students for whom the study duration would be extended due to the postponement are to be given priority.
2. If criterion no. 1 does not suffice for regulating the admission, then first, students for whom the course is part of a compulsory module are to be given priority, and second, students for whom the course is part of an elective module.
3. If the criteria in no. 1 and 2 do not suffice for regulating the admission, then the available places are raffled.

§ 7 Studies Induction and Orientation Stage

(1) Within the scope of the Studies Induction and Orientation Stage, which takes place in the first semester, the following courses are to be passed:

1. VO Physics I: Mechanics and Thermodynamics (4 hrs/6 ECTS-Credits),
2. VO Introduction to Physics (1 h/2 ECTS-Credits).

(2) Positive evaluation of all exams of the Studies Induction and Orientation Stage entitles to passing all further lectures and exams as well as to writing the Bachelor's Thesis.

(3) Before completing the Studies Induction and Orientation Stage, courses covering up to 22 ECTS-Credits may be passed from the compulsory modules 1 – 14. The prerequisites specified by the curriculum are to be met.

§ 8 Compulsory and elective modules

(1) The following compulsory modules covering a total of 153 ECTS-Credits are to be passed:

1.	**Compulsory Module: Physics I: Mechanics and Thermodynamics, Introduction to Physics and Data Analysis**	**h**	**ECTS-Credits**
a.	**VO Physics I – Mechanics and Thermodynamics** Measurements and measurement units; mechanics of the mass point and the rigid body; deformable bodies and liquids; oscillation and waves; thermodynamics; basic elements of statistical mechanics	4	6
b.	**UE Physics I – Mechanics and Thermodynamics** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content; independent study of selected examples from the field.	2	2
c.	**VO Introduction to Physics** Basic concepts and overviews of various fields of physics; current issues and findings in physics; physics in society	1	2
d.	**VU Data Analysis** Measurement data analysis, error calculation, curve regression, data representation	1	1
	Total	**8**	**11**
	Learning Outcomes: ad a.: Students can describe the concepts of classical mechanics and thermodynamics and explain the related concepts. They are able to independently develop further concepts of mechanics and thermodynamics.		

	ad b.: Students are able to apply their knowledge and independently solve problems in mechanics and thermodynamics. They are able to explain how they solved these problems and present and discuss them in a manner appropriate to the target audience. ad c.: Students can describe and explain the concepts of modern physics. They can independently study similar content and are able to apply this knowledge to solve problems. Additionally, students can present measurement data, analyse and interpret it independently, and apply error models.
	Prerequisites: none

2.	**Compulsory Module: Physics II: Electromagnetism and Optics**	**h**	**ECTS-Credits**
a.	**VO Physics II: Electromagnetism and Optics** Maxwell's equations with applications in electrostatics, magnetostatics and electrodynamics; diffraction gratings and interferometers; optics in isotropic and anisotropic media; (laser) beam propagation	4	6
b.	**UE Physics II: Electromagnetism and Optics** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content; independent study of selected examples from the field.	2	2
	Total	**6**	**8**
	Learning Outcomes: ad a.: Students are able to describe the concepts of electromagnetism and optics and explain related concepts. They are able to independently develop further concepts of electromagnetism and optics. ad b.: Students are able to transfer their knowledge and solve problems in electromagnetism and optics independently. They are able to explain how they solved these problems and present and discuss them in a way that is tailored to the target audience.		
	Prerequisites: none		

3.	**Compulsory Module: Physics III: Quantum and Atom Physics**	**h**	**ECTS-Credits**
a.	**VO Physics III – Quantum and Atom Physics** Wave propagation, interference, diffraction, wave functions, Schrödinger equation, Heisenberg uncertainty principle, hydrogen atom, electron spin, atomic fine and hyperfine structure, Zeeman effect, optical transitions and selection rules	4	6
b.	**UE Physics III – Quantum and Atom Physics** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content; independent study of selected examples from the field.	2	2
	Total	**6**	**8**
	Learning Outcomes: ad a.: Students can describe and explain the most important concepts of quantum and atomic physics as a foundation of physics and are able to independently study similar content. ad b.: Students can generalise the concepts of quantum and atomic physics and are able to apply them independently to solve problems. They are able to explain how to solve these problems and present and discuss them in a way that is tailored to the target audience.		
	Prerequisites: none		

4.	Compulsory Module: Physics IV: Structure of Matter	h	ECTS-Credits
a.	**VO Physics IV: Structure of Matter** Nuclear physics: nuclide chart, nuclear models, nuclear decay, scattering processes, nuclear forces, nuclear reactions Particle physics: particle classification, relativistic kinematics, interactions, accelerators, detectors Atomic and molecular physics: atoms with multiple electrons, periodic table, molecular orbitals, rotation and vibrations Solid state physics: crystal lattices, phonons, electrons in solids, band theory, semiconductors	4	6
b.	**UE Physics IV: Structure of Matter** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content; independent study of selected examples from the field.	2	2
	Total	**6**	**8**
	Learning Outcomes: ad a.: Students can describe and explain the concepts of nuclear, particle, molecular and solid state physics and are able to independently study similar content. Ad b.: Students can generalise the concepts of nuclear, particle, molecular and solid-state physics and are able to apply them independently to solve problems. They are able to explain how they solved these problems and present and discuss them in a way that is tailored to the target audience.		
	Prerequisites: none		

5.	Compulsory Module: Analysis 1	h	ECTS-Credits
a.	**VO Analysis 1** Introduction to analysis; the necessary basic concepts of mathematics; real numbers; functions; differential and integral calculus in one variable	3	4.5
b.	**UE Analysis 1** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of mathematical content.	1.5	2.5
	Total	**4.5**	**7**
	Learning Outcomes: ad a.: Students are able to explain the significance of real numbers for analysis and explain key terms and concepts in analysis; explain and illustrate the concept of limits in general for functions and specifically for sequences and series; explain the concepts of continuity, differentiation and integration and important theorems in analysis; describe the relationship between the concepts of differentiation and integration; check functions for key properties (continuity, differentiability, extrema and inflection points, integrability); calculate derivatives and integrals of real functions ad b.: Students can generalise the concepts of analysis and are able to apply them independently to solve problems. They are able to explain how to solve these problems and present and discuss them in a way that is tailored to the target audience.		
	Prerequisites: none		

6.	Compulsory Module: Analysis 2	h	ECTS-Credits
a.	**VO Analysis 2** Fundamental topological concepts; differential calculus in several variables; integration on manifolds	4	6
b.	**UE Analysis 2** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of mathematical content.	2	4
	Total	**6**	**10**
	Learning Outcomes: ad a.: Students are able to check the continuity, differentiability and integrability of functions in several variables; distinguish between the conceptual changes in differential and integral calculus in one variable and in several variables; explain basic topological concepts of $\mathbf{R}^n$; discuss curves and surfaces as initial examples of differential geometry; use various integral theorems. ad b.: Students can independently apply differential and integral calculus as well as integral theorems to solve problems. They are able to explain how to solve these problems and present and discuss them in a manner appropriate for the target audience.		
	Prerequisites: none		

7.	Compulsory Module: Linear Algebra	h	ECTS-Credits
a.	**VO Linear Algebra** Matrix calculus; systems of linear equations; vector spaces; linear mappings; eigenvalue problems	3	4.5
b.	**UE Linear Algebra** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of mathematical content.	1.5	2.5
	Total	**4.5**	**7**
	Learning Outcomes: ad a.: Students are able to use matrix calculus and the Gauss algorithm; explain and illustrate the concept of vector space based on linear equation systems; understand the connection between the abstract algebraic concepts of vector space and linear mappings, as well as the concrete concept of linear equation systems; explain the significance of a scalar product for a more in-depth geometric interpretation of vector spaces; use determinants and eigenvalues to analyse and classify linear mappings and matrices; apply basic concepts of linear algebra to practical contexts; distinguish between different levels of abstraction in linear algebra. ad b.: Students can independently apply the concepts of linear algebra to solve problems. They are able to explain how to solve these problems and present and discuss them in a way that is tailored to the target audience.		
	Prerequisites: none		

8.	Compulsory Module: Calculation Methods	h	ECTS-Credits
a.	**VO Calculation Methods** Vector calculus, matrix calculus, eigenvalues, space curves, fields, curve integrals, curvilinear coordinates, power series, Fourier series and Fourier transforms, ordinary differential equations, Gauss's and Stokes's theorems	4	4.5
b.	**UE Calculation Methods** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content.	2	2.5
	Total	**6**	**7**
	Learning Outcomes: ad a.: Students can describe and apply concepts and methods of fundamental calculation techniques required for physics. ad b.: Students have acquired the ability to independently apply their knowledge of calculation techniques for the practical and computationally sound solution of mathematical problems.		
	Prerequisites: none		

9.	Compulsory Module: Mathematical Methods	h	ECTS-Credits
a.	**VO Mathematical Methods** Partial differential equations, complex analysis, distributions, Hilbert spaces, special functions, probability theory	2	3
b.	**UE Mathematical Methods** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of mathematical content.	2	2
	Total	**4**	**5**
	Learning Outcomes: ad a.: Students are able to describe and explain advanced mathematical methods used in physics. In particular, they have acquired the ability to apply advanced mathematical methods required for theoretical physics and to independently develop similar content. ad b.: Students can independently apply advanced mathematical methods of physics to solve problems. They are able to explain how they solved these problems and present and discuss them in a manner appropriate to the target audience.		
	Prerequisites: none		

10.	Compulsory Module: Theoretical Physics 1: Mechanics	h	ECTS-Credits
a.	**VO Theoretical Physics 1: Mechanics** Newtonian mechanics, Lagrange mechanics, Hamilton mechanics: one-dimensional motion, motion in central potential, symmetries and conservation laws, rigid bodies, special theory of relativity	4	7
b.	**UE Theoretical Physics 1: Mechanics** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content.	2	3
	Total	**6**	**10**

	Learning Outcomes: ad a.: Students can describe and explain advanced concepts of mechanics as a basis of theoretical physics and are able to independently study similar content. ad b.: Students can generalise the concepts of theoretical mechanics and are able to apply them independently to solve complex problems. They are able to explain how to solve these problems and present and discuss them in a manner appropriate to the target audience.
	Prerequisites: none

11.	Compulsory Module: Theoretical Physics 2: Electrodynamics	h	ECTS-Credits
a.	**VO Theoretical Physics 2: Electrodynamics** Maxwell's equations, electrodynamics in matter and matter models, electrostatics and magnetostatics, wave propagation, radiation, covariant formulation of electrodynamics	4	7
b.	**UE Theoretical Physics 2: Electrodynamics** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content.	2	3
	Total	**6**	**10**
	Learning Outcomes: ad a.: Students can describe and explain advanced concepts of electrodynamics as a basis of theoretical physics and are able to independently study similar content. ad b.: Students can generalise the concepts of theoretical electrodynamics and are able to apply them to solve complex problems. They are able to explain how to solve these problems and present and discuss them in a way that is tailored to the target audience.		
	Prerequisites: none		

12.	Compulsory Module: Theoretical Physics 3: Quantum Theory	h	ECTS-Credits
a.	**VO Theoretical Physics 3: Quantum Theory** Schrödinger equation, postulates of quantum mechanics, spin, Hilbert space and operators, potential well, harmonic oscillator, angular momentum algebra, symmetries, Coulomb problem, time-independent perturbation theory	4	7
b.	**UE Theoretical Physics 3: Quantum Theory** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content.	2	3
	Total	**6**	**10**
	Learning Outcomes: ad a.: Students can describe and explain the concepts of quantum theory as a foundation of theoretical physics and are able to independently study similar content. ad b.: Students can generalise the concepts of quantum theory and are able to apply them to solve complex problems. They are able to explain how to solve these problems and present and discuss them in a way that is tailored to the target audience.		
	Prerequisites: none		

13.	Compulsory Module: Theoretical Physics 4: Statistical Physics	h	ECTS-Credits
a.	**VO Theoretical Physics 4: Statistical Physics** Ensemble theory, thermodynamics, phase transitions, Ising model, quantum gases	4	7
b.	**UE Theoretical Physics 4: Statistical Physics** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content.	2	3
	Total	**6**	**10**
	Learning Outcomes: ad a.: Students can describe and explain the concepts of statistical physics as a basis of theoretical physics and are able to independently study similar content. ad b.: Students can generalise the concepts of theoretical statistical physics and are able to apply them to solve complex problems. They are able to explain how to solve these problems and present and discuss them in a way that is tailored to the target audience.		
	Prerequisites: none		

14.	Compulsory Module: Programming for Physics Students	h	ECTS-Credits
	VU Programming for Physics Students Learning practical programming for physics students using a modern high-level compiler language and a modern scripting language.	3	5
	Total	**3**	**5**
	Learning Outcomes: Students are able to explain the concepts of modern programming and can independently apply their knowledge to solve complex problems in physics.		
	Prerequisites: none		

15.	Compulsory Module: Physics Laboratory 1	h	ECTS-Credits
	PR Physics Laboratory 1 Conducting experiments in the fields of mechanics, thermodynamics, electrodynamics, electronics and optics	4	7
	Total	**4**	**7**
	Learning Outcomes: Students can demonstrate the experimental approach of physics and are able to carry out basic experiments in classical physics on the topics of mechanics and thermodynamics, electromagnetism and optics under supervision, and evaluate data using error calculation. They have the competence to work in a structured, reliable and successful manner within a team. Students can reproduce and record the experiments and their results in reports in a structured and comprehensible manner.		
	Prerequisites: positively passed compulsory modules 1 and 2.		

16.	Compulsory Module: Physics Laboratory 2	h	ECTS-Credits
	PR Physics Laboratory 2 Conducting experiments in the fields of mechanics, thermodynamics, electrodynamics, optics, solid state physics, electronics and semiconductor physics.	4	7
	Total	**4**	**7**
	Learning Outcomes: Students can demonstrate the experimental approach of physics and are able to independently conduct basic experiments in modern physics and evaluate data using error calculation. They have the competence to work in a structured, reliable and successful manner within a team. Students can present the experiments and their results orally and in writing.		
	Prerequisites: positively passed compulsory module 15		

17.	Compulsory Module: Advanced Laboratory Class	h	ECTS-Credits
	PR Advanced Laboratory Class Experiments related to the main areas of research in physics, including laser optics, precision spectroscopy, ion physics, solid state physics, particle physics and astrophysics.	4	8
	Total	**4**	**8**
	Learning Outcomes: Students can demonstrate the experimental approach of physics and are able to independently carry out challenging physics experiments in modern research related to the main areas of research in physics. They have the skills to work successfully in a team and communicate effectively. Students can present and record the experiments and their results in reports in a structured and comprehensible manner.		
	Prerequisites: positively passed compulsory modules 3, 4 and 16.		

18.	Compulsory Module: Seminar with Bachelor’s Thesis	h	ECTS-Credits
	SE Seminar with Bachelor’s Thesis Introduction to scientific working methods; research for own research; in-depth examination of a physical problem in the form of a seminar and a Bachelor's Thesis. Presentation and discussion of the Bachelor's Thesis with peers.	2	4 + 11
	Total	**2**	**15**
	Learning Outcomes: Students can independently carry out theoretical or practical work on a topic from physics. They are able to present and discuss their work in writing and orally in a clear and comprehensible manner that complies with good scientific practice. They can communicate information, ideas and problems in a way that is tailored to the target audience. They are able to develop the learning strategies they need to continue their studies in a results-oriented manner within a given time frame and with a high degree of autonomy. They have an understanding of a subfield of physics to an extent that enables them to develop and apply creative and innovative ideas.		

	Prerequisites: positively passed 110 ECTS-Credits from the compulsory modules 1 – 16 and the elective modules 1 – 4, whereby a maximum of 12 of the 110 ECTS-Credits may be from elective modules 1-4.

(2) Elective modules covering a total of 12 ECTS-Credits are to be passed from elective modules 1 to 4:

1.	**Elective Module: Astrophysics 1**	**h**	**ECTS-Credits**
a.	**VO Astrophysics 1** Methods and instruments, units and scales, stellar structure, stellar evolution, interstellar matter, Milky Way, galaxies and galaxy structure, galaxy clusters, distance determination, expansion of the universe, cosmology, dark matter and dark energy, early universe	3	4
b.	**UE Astrophysics 1** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content.	2	2
	Total	**5**	**6**
	Learning Outcomes: ad a.: Students can describe and explain advanced concepts in astrophysics and are able to independently study similar content. ad b.: They are able to generalise advanced concepts in astrophysics and apply them independently to solve complex problems. They are able to explain how they solved these problems and present and discuss them in a manner appropriate to the target audience.		
	Prerequisites: none		

2.	**Elective Module: Atom and Molecule Physics**	**h**	**ECTS-Credits**
a.	**VO Atom and Molecule Physics** Multi-electron atoms, atomic structure, light-matter interaction, Bloch equations, high-resolution spectroscopy, molecular states, molecular rotation and vibration, multi-atom molecules, symmetries, molecular spectra, selection rules, NMR spectroscopy, infrared and Raman spectroscopy, photochemistry, chemical reaction kinetics, chemical equilibrium, thermochemistry, reaction dynamics	3	4
b.	**UE Atom and Molecule Physics** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content.	2	2
	Total	**5**	**6**
	Learning Outcomes: ad a.: Students can describe and explain advanced concepts of atomic and molecular physics and are able to independently study similar content. ad b.: They can generalise advanced concepts of atomic and molecular physics and are able to independently apply them to solve complex problems. They are able to explain how to solve these problems and present and discuss them in a manner appropriate to the target audience.		
	Prerequisites: none		

3.	Elective Module: Solid State Physics	h	ECTS-Credits
a.	**VO Solid State Physics** Phonons in solids, electrons in solids, band structure, semiconductors, semiconductor devices, magnetism, dielectric properties of solids, superconductivity	3	4
b.	**UE Solid State Physics** Discussion, in-depth study and practice of lecture content; practice in scientific argumentation and presentation of physics content.	2	2
	Total	**5**	**6**
	Learning Outcomes: ad a.: Students can describe and explain advanced concepts in solid state physics and are able to independently study similar content. ad b.: They are able to generalise advanced concepts of solid state physics and apply them independently to solve problems. They are able to explain how they solved these problems and present and discuss them in a manner appropriate to the target audience.		
	Prerequisites: none		

4.	Elective Module: High-Energy Physics	h	ECTS-Credits
a.	**VO High-Energy Physics** Experimental methods in HEP, particle systematics, symmetries and conservation laws, strong interaction, weak interaction, electroweak unification, neutrino oscillations, standard model of elementary particle physics, heavy ion physics, nucleosynthesis from BBN to r- & s-process	3	4
b.	**UE High-Energy Physics** Discussion, in-depth study and practice of the lecture content; practice in scientific argumentation and presentation of physics content	2	2
	Total	**5**	**6**
	Learning Outcomes: ad a.: Students can describe and explain advanced concepts in high-energy physics and are able to independently study similar content. ad b.: They are able to generalise advanced concepts of high-energy physics and apply them independently to solve problems. They are able to explain how they solved these problems and present and discuss them in a manner appropriate to the target audience.		
	Prerequisites: none		

(3) Elective modules covering a total of 15 ECTS-Credits are to be passed from the following elective modules:

1.	Elective Module: Individual Choice of Specialisation I	h	ECTS-Credits
	Courses covering a total of 5 ECTS-Credits are to be passed from the curricula of the bachelor's programmes at the Faculties of Biology, Chemistry and Pharmacy, Geo and Atmospheric Sciences, Mathematics, Computer Science and Physics and Engineering Sciences at the University of Innsbruck, but not from courses offered in the Bachelor's Programme in Physics.		5
	Total		**5**

	Learning Outcomes: Students are able to apply and explain interdisciplinary concepts from the fields of engineering sciences, biology, chemistry and pharmacy, geo and atmospheric sciences, mathematics and computer science that go beyond the scope of the Bachelor's Programme in Physics.
	Prerequisites: The prerequisites specified by the respective curricula are to be met.

2.	Elective Module: Individual Choice of Specialisation II	h	ECTS-Credits
	Courses covering a total of 5 ECTS-Credits are to be passed from the curricula of the bachelor's programmes at the Faculties of Biology, Chemistry and Pharmacy, Geo and Atmospheric Sciences, Mathematics, Computer Science and Physics and Engineering Sciences at the University of Innsbruck.		5
	Total		**5**
	Learning Outcomes: The students are able to apply and explain interdisciplinary concepts from the fields of engineering sciences, biology, chemistry and pharmacy, geo and atmospheric sciences, or interdisciplinary concepts or advanced concepts of one or several subfields of physics, mathematics or computer studies.		
	Prerequisites: The prerequisites specified by the respective curricula are to be met.		

3.	Elective Module: Interdisciplinary Skills I	h	ECTS-Credits
	Provided that places are available, courses covering 5 ECTS-Credits are to be passed from the curricula of other bachelor’s and/or diploma programmes offered at the University of Innsbruck.		5
	Total		**5**
	Learning Outcomes: Students are able to understand theories, methods and perspectives from other subjects/fields of study. Against the backdrop of their own discipline, they are able to identify challenges at the interfaces between disciplines and formulate interdisciplinary questions.		
	Prerequisites: The prerequisites specified by the respective curricula are to be met.		

4.	Elective Module: Interdisciplinary Skills II	h	ECTS-Credits
	Provided that places are available, courses covering 5 ECTS-Credits are to be passed from the curricula of other bachelor’s and/or diploma programmes offered at the University of Innsbruck. One course from the field of Gender Studies, Women’s and Gender Research is compulsory.		5
	Total		**5**
	Learning Outcomes: Students are able to understand theories, methods and perspectives from other subjects/fields of study. Against the backdrop of their own discipline, they are able to identify challenges at the interfaces between disciplines and formulate interdisciplinary questions. Students can recognise the relevance of gender issues in the context of scientific work in physics and other natural sciences and can interpret and discuss them. They can critically and independently argue questions in this field and can recognise connections.		

	Prerequisites: The prerequisites specified by the respective curricula are to be met.

(4) Instead of the elective modules specified in para. 3, no. 1-4, Minors for bachelor's programmes or parts thereof may be completed subject to availability. Minors are fixed modules from the student's own and other disciplines covering 30 ECTS-Credits; they are announced in the University of Innsbruck Bulletin.

§ 9 Bachelor's Thesis

(1) A Bachelor's Thesis covering 11 ECTS-Credits is to be written within the scope of compulsory module 18.

(2) The Bachelor Thesis must be submitted in the form specified by the course instructor. It must be accompanied by an affidavit confirming that the rules of good scientific practice have been followed.

(3) The topic of the Bachelor Thesis can be chosen from the areas offered in the bachelor's programme: astrophysics, particle physics, high-energy physics, solid-state physics, atomic physics, molecular physics, quantum physics, experimental physics, applied physics and theoretical physics.

§ 10 Examination regulations

The performance assessment of a module is to be carried out in one of the following ways:

(1) Compulsory module 1 is passed by positive evaluation of its courses through course examinations. The overall grade for the module is determined using the weighting defined in the "Study Law Regulations" section of the statutes.

(2) The performance assessment of compulsory modules 2 – 13 and the elective modules acc. to §8 para. 2 no. 1 – 4, which consist of one lecture and one or several courses with continuous performance evaluations, is carried out by the evaluation of the courses with continuous performance evaluation and by an overall examination over the subject matter of all courses of the module. The positive evaluation of the courses with continuous performance evaluation is a precondition for being admitted to the overall examinations. The overall grade for the module is calculated using the weighting defined in the "Study Law Regulations" section of the statutes.

(3) Elective modules containing courses from other study programmes are subject to the examination regulations of the curriculum they are taken from.

(4) In the case of course examinations, the course instructor has to define the examination method (written/oral/exam paper) before the start of the semester.

(5) In the case of courses with continuous performance evaluation, the evaluation is based on at least two written, oral and/or practical contributions of the participants.

§ 11 Academic degree

The graduates of the Bachelor's Programme in Physics are awarded the academic degree "Bachelor of Science", abbreviated "BSc".

§ 12 Coming into force

This curriculum comes into force on 1 October 2025.

§ 13 Transitional provisions

(1) This curriculum applies to all students starting the Bachelor's Programme in Physics in the 2025/26 winter semester or later.

(2) Regular degree students, who started the Bachelor's Programme in Physics, published in the University of Innsbruck Bulletin of 23 April 2007, Issue 31, No. 195, last amended on 2 May 2016, Issue 24, No. 377 before 1 October 2025, are entitled to finish this study programme within a maximum of 8 semesters.

(3) If the Bachelor's Programme in Physics, published in the University of Innsbruck Bulletin of 23 April 2007, Issue 31, No. 195 is not finished in time, the students will be subject to this curriculum.

(4) In any case, the students are entitled to subject to this curriculum on a voluntary basis anytime.