

Majors/Minors in Alphabetical Order (Natural Sciences & Engineering)

This document lists the majors and minors offered at Free, Humboldt, and Technical University. Click on the “X” to get more information about the major.

- If you do not see an exact match to your major at UC, look for a closely related field of study. You should also review the entire list of majors because there are some specialized fields of study at these Universities that might offer coursework that is applicable to your UC major.
- Modules refer to general topics taught within a degree, not specific courses. The modules give you a general idea of the structure and focus of the degree; not all of them are necessarily offered every semester. Within each module, new courses become available every semester, and you will need to do additional research in the course catalogues to find out which courses are being offered.
- Course Catalog Links- these catalogues show the courses offered in the current academic term. Courses for the following term will not be posted until about 1-2 months prior to the start of the semester. You should use the current catalogue to get a general idea of the courses that will be offered while you are abroad.
 - o [Free University](#)
 - o [Humboldt University](#)
 - o [Technical University](#)

	Free University	Humboldt University	Technical University
Agricultural (and Horticultural) Sciences		X	
Architecture			X
Astronomy (see Physics)	X		X
Astrophysics (see Physics)	X		X
Biochemistry	X		
Bioinformatics	X		
Biology	X	X	
Biophysics		X	
Biotechnology			X
Brewing Science & Beverage Technology			X
Business Informatics			X
Chemical Engineering			X
Chemistry	X	X	X
Civil Engineering			X
Computer Engineering			X
Computer Science	X	X	X
Ecology & Environmental Planning			X
Electrical Engineering			X

	Free University	Humboldt University	Technical University
Energy Technology & Process Technology			<u>X</u>
Environmental Science & Technology			<u>X</u>
Food Biotechnology & Food Process Engineering			<u>X</u>
Geography	<u>X</u>	<u>X</u>	
Geology	<u>X</u>		
Geotechnical Engineering			<u>X</u>
Industrial Engineering & Management			<u>X</u>
Landscape Architecture			<u>X</u>
Library and Information Science		<u>X</u>	
Materials Science			<u>X</u>
Mathematics	<u>X</u>	<u>X</u>	<u>X</u>
Mechanical Engineering			<u>X</u>
Media Informatics (joint degree)	<u>X</u>		<u>X</u>
Meteorology	<u>X</u>		
Physical Engineering			<u>X</u>
Physics	<u>X</u>	<u>X</u>	<u>X</u>
Sociology & Technology Studies			<u>X</u>
Transport Systems			<u>X</u>
Urban & Regional Planning			<u>X</u>

Agricultural (and Horticultural) Sciences (HU)

https://www.agrar.hu-berlin.de/en/institut-en/standardseite-en?set_language=en (Institute of Agricultural and Horticultural Sciences); <https://www.hu-berlin.de/en/studies/counselling/course-catalogue/programme-descriptions/landgart/> (Agricultural & Horticultural Sciences degree); <https://www.hu-berlin.de/en/studies/counselling/course-catalogue/programme-descriptions/agrar/> (Agricultural Sciences degree)

Horticultural Sciences (HU)

https://www.hu-berlin.de/en/studies/counselling/course-catalogue/programme-descriptions/gart?set_language=en
https://www.agrar.hu-berlin.de/en/start_oben-en?set_language=en

Architecture (TU)

http://www.planen-bauen-umwelt.tu-berlin.de/menue/studium_und_lehre/studiengaenge/lehreinheit_architektur/parameter/en/

Biochemistry (FU)

<http://www.bcp.fu-berlin.de/en/chemie/biochemie/index.html> (Department of Biology, Chemistry, and Pharmacy), <http://www.fu-berlin.de/en/einrichtungen/fachbereiche/fb/bio-chem-pharm/chm/index.html> (Institute of Chemistry and Biochemistry)

Bioinformatics (FU)

<http://www.mi.fu-berlin.de/en/bioinf/> (Institute of Bioinformatics)

Biology (FU)

+ Modules: Zoology and Evolution, Biochemistry and Microbiology, Botany and Biodiversity, Animal & Plant Physiology/Ecology, Evolution and Diversity, Genetics of Plants, Chemistry, Biostatistics, Physics
Biochemistry/Microbiology, Neurobiology and Behavior, Genetics and Cell Biology, Ecology

+ around 10 different courses per semester

+ Links: Institute of Biology: <http://www.bcp.fu-berlin.de/en/biologie/index.html> & <http://www.fu-berlin.de/en/einrichtungen/fachbereiche/fb/bio-chem-pharm/bio/index.html> (Institute of Biology)
<http://www.bcp.fu-berlin.de/en/index.html> (Department of Biology, Chemistry, Pharmacy)

+ Notes: Includes "Botanischer Garten" (largest one in Germany) und "Botanisches Museum" as well as Charité. Institute is linked with numerous non-university research facilities. It specializes primarily in molecular botany, microbiology, neurobiology, ecological processes, and animal and plant evolution and biodiversity in all its different expressions.

Biology (HU)

+ Modules: Animal Physiology and Neurophysiology, Plant Physiology, Genetics and Molecular Cell Biology, Microbiology; Biology, Math, (General and Anorganic) Chemistry, Physics, Biophysics (incl. Theoretical Biophysics), Physical/Organic Chemistry

+ around 50 different courses per semester

+ Links: <https://www.biologie.hu-berlin.de/de> (Institute for Biology; German only); <https://www.hu-berlin.de/en/studies/counselling/course-catalogue/programme-descriptions/biomono/> (Biology degree)

+ Notes: Includes Charité and "Museum für Naturkunde" // Offers wide-ranging basic training in organismic biology (botany, zoology), physiology, microbiology, molecular cell biology and ecology, combined with mathematics as well as chemistry and physics. Close link with Biophysics course and focus on basic immunology. Possible electives: parasitology, developmental biology, theoretical biology.

Biophysics (HU)

<https://www.biologie.hu-berlin.de/de/gruppenseiten/bpi> (Institute of Biophysics); <https://www.hu-berlin.de/en/studies/counselling/course-catalogue/programme-descriptions/biophy/> (Biophysics degree)

Biotechnology (TU)

https://www.tu-berlin.de/fak_3/menue/studium_und_lehre/studienrichtungen/biotechnologie/bsc_bt/

Brewing Science & Beverage Technology (TU)

https://www.tu-berlin.de/fak_3/menue/studium_und_lehre/studienrichtungen/brauen/bsc_bgt/http://www.brauwesen.tu-berlin.de/menue/homepage/parameter/en/

Business Informatics (TU)

http://www.eecs.tu-berlin.de/menue/studium_und_lehre/studiengaenge/wirtschaftsinformatik/wirtschaftsinformatiku_berlin/

Chemical Engineering (TU)

https://www.chemie.tu-berlin.de/menue/studium_und_lehre/studiengaenge/bachelor_chemieingenieurwesen/

Chemistry (FU)

+ Modules: Inorganic Chemistry, Organic Chemistry, Chemical Synthesis, Physical Chemistry, Theoretical Chemistry, Math & Physics, Radio Chemistry, Bioorganic Chemistry, Biochemistry, Environmental Chemistry, Macromolecular Chemistry, Molecular Dynamics, Electrochemistry

+ around 20 courses per semester

+ Links: <http://www.bcp.fu-berlin.de/en/chemie/chemie/index.html> & <http://www.fu-berlin.de/en/einrichtungen/fachbereiche/fb/bio-chem-pharm/chm/index.html> (Institute of Chemistry and Biochemistry)

+ Notes: Institute linked with numerous non-university research facilities. Main fields of research: structural formation, function and chemical reactivity, stereoselective and macromolecular synthesis, molecular and medical biochemistry, and structural biochemistry. A degree program in Bioinformatics is offered jointly with the Institute of Computer Science.

Chemistry (HU)

+ Modules: General Chemistry, Inorganic Chemistry, Complex Chemistry, Metal Chemistry, Chemical Synthesis, Chemical Thermodynamics, Analytical and Physical Chemistry, Chemical Bonding, Vibrational Spectroscopy, Mass Spectrometry, Organic Chemistry, Bioorganic Chemistry, Natural Products Chemistry, optional: Quantum Theory, Statistical Thermodynamics, Math

+ around 18 courses per semester

+ Links: https://www.chemie.hu-berlin.de/en/forschung-en/standardseite-en?set_language=en (Department of Chemistry); <https://www.hu-berlin.de/en/studies/counselling/course-catalogue/programme-descriptions/chemiemono/> (Chemistry degree)

+ Notes: Home to many well-known chemists and Nobel Prize laureates, incl. August Wilhelm von Hofmann, Emil Fischer, Walther Nernst and Max Bodenstein. Moved to new Adlershof campus in 2001; student guides rank Chemistry at Adlershof amongst the best courses in Germany for teaching. Special feature: separate discipline of Analytical and Environmental Chemistry. *Functionally-structured materials*

and catalysts and *chemical biology* as two promising fields for research internships. Science hub at Adlershof also enables direct cooperation between department (e.g. Physics, Mathematics, Computer Science); there are internship partnerships with companies and research institutes.

Chemistry (TU)

+ Modules: Physical Chemistry, Kinetics & Spectroscopy, Analytical Chemistry, Structural Chemistry, Math, Macromolecular Chemistry, Organic Chemistry, Inorganic Chemistry, Chemical Engineering, Thermodynamics, Electrochemistry, Physics, Bioanalysis, Biochemistry, Polymer Chemistry, Colloid Chemistry, Theoretical Chemistry, Quantum Chemistry

+ around 25 courses per semester

+ Links: Institute of Chemistry: http://www.chemie.tu-berlin.de/menue/institut_fuer_chemie/parameter/en/ (Institute of Chemistry)

Civil Engineering (TU)

http://www.bau.tu-berlin.de/menue/ueber_das_institut/ (Civil Engineering Institute);

[http://www.studienberatung.tu-](http://www.studienberatung.tu-berlin.de/menue/studium/studienangebot/faecher_bachelor/bauingenieurwesen)

[berlin.de/menue/studium/studienangebot/faecher_bachelor/bauingenieurwesen](http://www.studienberatung.tu-berlin.de/menue/studium/studienangebot/faecher_bachelor/bauingenieurwesen) (Civil Engineering Degree)

Computer Engineering (TU)

[http://www.eecs.tu-](http://www.eecs.tu-berlin.de/menue/studium_und_lehre/studiengaenge/technische_informatik_computer_engineering/bachelor/)

[berlin.de/menue/studium_und_lehre/studiengaenge/technische_informatik_computer_engineering/bachelor/](http://www.eecs.tu-berlin.de/menue/studium_und_lehre/studiengaenge/technische_informatik_computer_engineering/bachelor/) (in German; see “Module” on left-hand side for list of different requirements and electives for this field)

Computer Science (FU)

+ Modules: Algorithms & Programming; Technical/Practical/Theoretical Computer Science; Math for Computer Science; Scientific Work in Computer Science; Advanced Computer Science

+ around 70 courses per semester

+ Link: <http://www.mi.fu-berlin.de/en/inf/index.html> & <http://www.fu-berlin.de/en/einrichtungen/fachbereiche/fb/mathe-inf/inf/index.html> (Institute of Computer Science)

+ Notes: Science of transmitting, storing, and automated processing of data, principles behind the construction and programming of computers therefore make up majority of research. However, evolution of computer science is largely determined by requirements based on real-world applications and is also reflected in a scientifically diverse research profile. Wide range of research made possible through integration of non-university partners, in particular the Zuse Institute Berlin and the Max Planck Institute for Molecular Genetics. Partners from other universities and independent research institutions are involved in projects funded by the European Union and the Germany Federal Ministry of Education and Research.

Computer Science (HU)

+ Modules: Theoretical Computer Science, Programming, Algorithms & Data Structures, Digital Systems, Analysis, Logic of CS, Software Engineering, Communication Systems, Applied Math for CS & Special Topics/Electives (Compiler Construction, Operating Systems)

+ around 25-30 different courses per semester

+ Links: https://www.informatik.hu-berlin.de/en/standardseite-en?set_language=en (Department of Computer Science); <https://www.hu-berlin.de/en/studies/counselling/course-catalogue/programme-descriptions/infmono/> (Computer Science degree)

+ Notes: Scientific foundations taught in several modular courses that start in the first semester; relevant methodological fundamentals combined with practical orientation. Semester project undertaken as a team. Professional orientation reinforced through practice-oriented events. Promote interdisciplinarity through subsidiary subject in addition to CS. Some prep courses during the first semesters, and tutors. Attractive study location: new buildings, excellent library, computer pools, lively scene of research institutes and range of young companies-Adlershof campus.

Computer Science (TU)

+ Modules: Technological Foundations of CS, Methodological & Practical Foundations of CS, Theoretical Foundations of CS, Mathematics, Software Engineering, Communication Engineering, Application-oriented Studies, CS and Society.

+ around 50 different courses per semester

+ Links: [http://www.eecs.tu-](http://www.eecs.tu-berlin.de/menue/studium_und_lehre/studiengaenge/informatik_computer_science/informatiktu_berlin/parameter/en/)

[berlin.de/menue/studium_und_lehre/studiengaenge/informatik_computer_science/informatiktu_berlin/parameter/en/](http://www.eecs.tu-berlin.de/menue/studium_und_lehre/studiengaenge/informatik_computer_science/informatiktu_berlin/parameter/en/) (Computer Science at TU); http://www.eecs.tu-berlin.de/menue/fakultaet_iv/parameter/en/?no_cache=1 (Electrical Engineering and Computer Science)

Ecology and Environmental Planning (TU)

[http://www.planen-bauen-umwelt.tu-](http://www.planen-bauen-umwelt.tu-berlin.de/menue/studium_und_lehre/studiengaenge/lehreinheit_oekologie_und_umweltplanung/parameter/en/)

[berlin.de/menue/studium_und_lehre/studiengaenge/lehreinheit_oekologie_und_umweltplanung/parameter/en/](http://www.planen-bauen-umwelt.tu-berlin.de/menue/studium_und_lehre/studiengaenge/lehreinheit_oekologie_und_umweltplanung/parameter/en/) (in English), http://www.studienberatung.tu-berlin.de/menue/studium/studienangebot/faecher_bachelor/oekologie_und_umweltplanung (in German)

Electrical Engineering (TU)

http://www.eecs.tu-berlin.de/menue/fakultaet_iv/parameter/en/?no_cache=1

[http://www.eecs.tu-](http://www.eecs.tu-berlin.de/menue/studium_und_lehre/studiengaenge/elektrotechnik/elektrotechniktu_berlin/)

[berlin.de/menue/studium_und_lehre/studiengaenge/elektrotechnik/elektrotechniktu_berlin/](http://www.eecs.tu-berlin.de/menue/studium_und_lehre/studiengaenge/elektrotechnik/elektrotechniktu_berlin/)

School with six different institutes: 1) Energy Management & Automation Technology 2) High Frequency & Semiconductor System Technology 3) Telecommunication Systems 4) Computer Engineering & Microelectronics 5) Software Engineering & Theoretical Computer Science 6) Business Informatics & Quantitative Methods

Energy Technology & Process Technology (TU)

http://www.tu-berlin.de/fak_3/menue/studium_und_lehre/studienrichtungen/energie-und_prozesstechnik/bsc_ept/ (Energy Technology & Process Technology degree)

[http://www.studienberatung.tu-](http://www.studienberatung.tu-berlin.de/menue/studium/studienangebot/faecher_bachelor/energie_und_prozesstechnik)

[berlin.de/menue/studium/studienangebot/faecher_bachelor/energie_und_prozesstechnik](http://www.studienberatung.tu-berlin.de/menue/studium/studienangebot/faecher_bachelor/energie_und_prozesstechnik)

Environmental Science & Technology (TU)

https://www.itu.tu-berlin.de/menue/institut_fuer_technischen_umweltschutz/parameter/en/

Food Biotechnology & Food Process Engineering (TU)

[http://www.foodtech.tu-](http://www.foodtech.tu-berlin.de/menue/food_biotechnology_and_process_engineering/parameter/en/)

[berlin.de/menue/food_biotechnology_and_process_engineering/parameter/en/](http://www.foodtech.tu-berlin.de/menue/food_biotechnology_and_process_engineering/parameter/en/)

Geography (FU)

+ Modules: Fundamentals of Geography, Geographical and Academic/Scientific Methods, Special and

Project-Related Topics in Geography (Physical, Human, and Applied Geography; Geographic Practice)
+ around 5-12 courses per semester

+ Links: <http://www.geo.fu-berlin.de/en/geog/index.html> & <http://www.fu-berlin.de/en/einrichtungen/fachbereiche/fb/geowiss/geog/index.html> (Institute of Geographical Sciences)

+ Study the surface of the Earth from the perspectives of spatial differentiation and physical characteristics, as well as considering it as the space and site of human life and activity. Models and methods drawn from the natural sciences, economics, and social sciences. Research profiles of the Institute's four divisions (Physical Geography, Human Geography, Applied Geography, and Remote Sensing & Geoinformatics) show pronounced focus on assessing interactions between humankind and the environment. Reconstruction of environmental changes is investigated as a key to a better understanding of current processes. Resource topics of global importance, such as the sustainable use of scarce resources (e.g., water), or the occurrence of natural disasters and the management of such risks, are based on this fundamental knowledge. In parallel, current political, sociocultural, and economic developments and transformation processes are analyzed with a focus on marginalization processes and survival conditions.

Geography (HU)

+ Modules: Geology and Geomorphology, Cultural and Social Geography, Empiricism and Statistics, Climatology, Economic Geography

+ around 35-40 courses per semester

+ Links: https://www.geographie.hu-berlin.de/en/portraet-en?set_language=en (Geography Department); <https://www.hu-berlin.de/en/studies/counselling/course-catalogue/programme-descriptions/geomono/> (Geography degree)

+ Notes: Combines humanities and science; interest in understanding, analyzing and finding solutions for complex relationships between people and their environment. Geographers concentrate on the components of nature (soils, climate, the water cycle, flora and fauna); at the same time they are also interested in population development in Germany and across the world, economic networks in different spatial contexts, mega cities, and human consumption behavior; examine global questions. Because of the diversity of the subject and its interdisciplinary nature, studies include student projects in teams, internships, special courses on technical methods in geomatics and computer modelling, and field trips.

Geology/Geological Sciences (FU)

+ Modules: Fundamentals of Geology, Natural Sciences, Advanced Courses (e.g. Hydrogeology, Petrology, Paleoecology, Biostratigraphy), Geological Mapping & Geological Methods

+ around 15-20 courses per semester

+ Links: <http://www.geo.fu-berlin.de/en/geol/index.html>; <http://www.fu-berlin.de/en/einrichtungen/fachbereiche/fb/geowiss/geol/index.html> (Institute of Geological Sciences)

+ Notes: Institute studies Earth's resources and the processes and risks that affect our planet. Long-term goals: achieve better understanding of processes involved in evolution of the Earth, such as the motion of the Earth and changes in its surface in different spatial and time scales (plate tectonics, mantle convection, orogeny, erosion); development and maintenance of life (biodiversity); and formation of planet in our solar system. This understanding finds application in variety of activities with high social relevance, from improved predictability of changes in the Earth system (e.g., climate change, earthquakes, and volcanoes) to targeted search for energy resources, raw materials, water, and metals.

Geotechnical Engineering (TU)

http://www.geo.tu-berlin.de/menue/studium_und_lehre/geotechnologie/uebersicht/
<http://www.studienberatung.tu-berlin.de/>

berlin.de/menue/studium/studienangebot/faecher_bachelor/geotechnologie

Industrial Engineering and Management (TU)

http://www.gkwi.tu-berlin.de/v_menue/aktuelles/ (Industrial Engineering and Management degree);
http://www.gkwi.tu-berlin.de/fileadmin/f15/regelwerk/gkwi-lesefassung_en-stupo_bsc.pdf (Study and Examination Regulations for Bachelor's program in English)

Landscape Architecture (TU)

<http://www.tu-berlin.de/?id=155099&L=1>

Library and Information Science (HU)

Berlin School of Library & Information Science: https://www.ibi.hu-berlin.de/en/startpage?set_language=en; <https://www.hu-berlin.de/en/studies/counselling/course-catalogue/programme-descriptions/bibinf/>

Materials Science (TU)

http://www.tu-berlin.de/fak_3/menue/studium_und_lehre/studienrichtungen/werkstoffwissenschaften/

Mathematics (FU)

+ Modules: Analysis, Linear Algebra, Computer-Oriented Mathematics, Numerics, Complex Analysis, Stochastics, Algebra and Number Theory, Geometry, Differential Equations, Discrete Mathematics, Higher Analysis, Functional Analysis, Data Structure & Data Abstraction with Applications, Topology, Higher Algorithmics with Applications, Visualization, Academic Work/Current Topics/Special Topics in a) Mathematics b) Pure Mathematics c) Applied Mathematics
+ around 20-25 different courses per semester
+ Links: <http://www.mi.fu-berlin.de/en/math/index.html> & <http://www.fu-berlin.de/en/einrichtungen/fachbereiche/fb/mathe-inf/mat/index.html> (Institute of Mathematics)
+ Research activities of focus on several areas: analysis and dynamic systems, discrete mathematics and theoretical computer science, as well as numerical mathematics and scientific computing. Institute also home to active working groups with high international profile in fields of algebra and number theory, logic and set theory as well as stochastics and topology. Institute closely related to Matheon research center, which specializes in applied mathematics and maintains a high international profile. At Institute, "Space – Time – Matter" collaborative research center, where participating mathematicians analyze the geometry of matter and the evolution of geometric structures.

Mathematics (HU)

+ Modules: Analysis, Linear Algebra and Analytical Geometry, Algebra/Functional Analysis, Numerical Linear Algebra, Numerical Mathematics & Optimization, Academic Calculations; Differential Geometry, Topology, Algebra, Number Theory, Functional Analysis, Partial Differential Equations, Nonlinear Optimizations, Variational Calculus, Numerics, Stochastics, Statistics
+ around 15-25 different courses per semester
+ Links: https://www.mathematik.hu-berlin.de/en/front-page-en?set_language=en (Department of Mathematics); <https://www.hu-berlin.de/en/studies/counselling/course-catalogue/programme-descriptions/mathemono/> (Mathematics degree)
+ Notes: Diverse professorial staff, who teach and research in many projects along with other Berlin universities: at the DFG MATHEON research center, in the special research field 'space, time, matter', in the Berlin Mathematical School, and more. This yields wide range of classes during the bachelor's

program and provides opportunity to specialize in many areas. Active student representatives support their fellow students, especially at the start of their studies.

Mathematics (TU)

+ Modules: Analysis, Computer-oriented Mathematics, Linear Algebra, Numerics, Theory of Probability, Differential Equations, Algebra, Differential Geometry, Functional Analysis, Geometry, Geometrical Foundations of Linear Optimization, Numerical Mathematics, Nonlinear Optimization, Measure and Integration Theory, Discrete Geometry, Discrete Structures, Complex Analysis, Topology, Theory of Numbers

+ around 45 different courses per semester

+ Link: <http://www.math.tu-berlin.de/menue/home/parameter/en/> (Institute of Mathematics)

+ Additional fields at TU: Mathematics & Mathematical Economics & Engineering Mathematics

Mechanical Engineering (TU)

http://www.vm.tu-berlin.de/menue/fakultaet_v/parameter/en/

Media Informatics (FU+TU joint degree)

http://www.eecs.tu-berlin.de/menue/studium_und_lehre/studiengaenge/medieninformatik/bachelor/
& http://www.polsoz.fu-berlin.de/kommwiss/studieninteressierte/bsc_medieninformatik/index.html

Meteorology (FU)

+ Modules: Synoptics/Climatology, Physics/Dynamics, Mathematics, Statistics/Programming, Radiation and Remote Sensing

+ around 10-20 courses per term

+ Links: <http://www.geo.fu-berlin.de/en/met/index.html> & <http://www.fu-berlin.de/en/einrichtungen/fachbereiche/fb/geowiss/met/index.html> (Institute of Meteorology)

+ Notes: Research focuses on understanding and modeling of weather and climate processes and their interactions with the environment. In addition to research on the physics and chemistry of the atmosphere, interactions with the surface of the Earth, vegetation, and oceans play an important role. Primary fields of research: climate variability from paleoclimates to decadal predictions, meteorological extreme events and their effects on weather and climate, and the exploration of the upper atmosphere and its interactions with the lower atmosphere. Urban environmental research with focus on Berlin offers many opportunities for inter- and transdisciplinary collaborations. Another major area of research focuses on the development of remote sensing techniques for monitoring environmental and climate-related variables.

Physical Engineering (TU)

<https://www.vm.tu-berlin.de/pi/>

Physics (FU)

+ Modules: Electrodynamics & Optics, Fundamentals of Measuring Techniques & Laboratory Techniques, Structure of Matter (e.g. Solid-state Physics, Atom Physics, Molecule Physics), Analytical Mechanics, Theoretical Electrodynamics, Analysis, Astronomy and Astrophysics, Nuclear Physics & Elementary Particle Physics, Quantum Mechanics, Linear Algebra, Biophysics, Computer Physics

+ around 10 courses per semester

+ Link: <http://www.physik.fu-berlin.de/en/index.html> & <http://www.fu-berlin.de/en/einrichtungen/fachbereiche/fb/physik/index.html> (Department of Physics)

+ Notes: Traditionally rooted in fundamental research, the department is divided into the areas of

Experimental Physics, Theoretical Physics, and Physics Education. Major areas of focus in the research activities include solid-state physics, cluster physics, surface physics, biophysics, and physics education. Joint professorships, together with the Helmholtz Zentrum Berlin (HZB) and the Max Born Institute, expand the spectrum of topics covered to include research on solar energy and rapid nonlinear processes involving surfaces and the solid state. The department is characterized by dedicated teaching; through the Physics Education Unit, the department also has numerous connections to secondary schools and has set up a special laboratory for use by secondary school students and teachers.

Physics (HU)

+ Modules: Mechanics, Thermodynamics, Electromagnetism, Optics, Quantum Physics, Nuclear Physics, Molecular Physics, Theory of Relativity, Electrodynamics, Quantum Mechanics, Linear Algebra, Computer Applications, Solid-State Physics, Elementary Particle Physics

+ around 20-25 courses per semester

+ Links: https://www.physics.hu-berlin.de/en/home-en?set_language=en (Department of Physics);
<https://www.hu-berlin.de/en/studies/counselling/course-catalogue/programme-descriptions/phymono/>
(Physics degree)

+ Notes: Renowned scientists such as Max Planck, Erwin Schrödinger and Einstein all taught here. Experimental and theoretical aspects are taught as a unit; students are included in research at early stage. Adlershof campus: Physics is embedded in unique environment of other disciplines, young high-tech companies and non-university research institutes. Particular areas of interest include elementary particle physics, solid-state physics, macromolecules and complex systems, as well as optics/photonics as a potential specialization.

Physics (TU)

+ Modules: Experimental Physics (Mechanics, Thermodynamics, Electrodynamics, Optics, Nuclear Physics, Quantum Physics), Advanced Experimental Physics (Nuclear Physics, Solid-State Physics), Advanced Lab, Theoretical Physics (Mechanics, Quantum Mechanics, Electrodynamics, Thermodynamics/Statistical Physics), Math (Analysis, Linear Algebra, Differential Equations, Functional Theory) & Electives (astronomy, astrophysics, chemistry, electronics, technical optics)

+ around 20-25 courses per semester

+ Link: <http://www.physics.tu-berlin.de/home/parameter/en/> (Physics Department)

Sociology & Technology Studies (TU)

http://www.soz.tu-berlin.de/menue/studium_lehre/parameter/en/ („Soziologie
technikwissenschaftlicher Richtung“)

Transport Systems (TU)

http://www.vm.tu-berlin.de/menue/studium_und_lehre/studiengaenge/verkehrswesen/info/bachelor_studiengang/

Urban and Regional Planning (TU)

<http://www.isr.tu-berlin.de/menue/home/parameter/en/>