TU Dresden course overview
– English selection-

The following document contains a summary of offered courses in English at TU Dresden. Depending on the faculty and the department, some courses might be more sustainable than others. Therefore, please check the provided links to the webpages as well. However, unfortunately some faculties do not provide an English translation on their web content. Even though carefully created, this summary does not claim completeness. We will update it as often as possible.

You may use the following links to navigate through this document

School of Science, Faculty of Physics

Available Courses Master Program: **Physics**

Course title	Course type
Theoretical Physics	Seminar
Structure and properties of Solids	Lecture
Atmospheric Physics	Lecture
Cellular Machines II: Molecular Motors	Lecture
Experimental Biophysical Methods	Lecture
Geometry and Topology for Quantum Physics	Lecture
Higgs and Beyond Standard Model Physics	Lecture
Hydrodynamic Theory of Active Matter	Lecture
Introduction to Semiconductor Physics	Lecture
Low temperature physics of quantum materials	Lecture
Machine Learning	Lecture
Magnetism I	Lecture
Many-Body Quantum Dynamics	Lecture
Material Science using Ions	Lecture
Modern Topics in Physical Chemistry of Polymeric Materials	Lecture

School of Science, Faculty of Physics

Available Courses Master Program: **Physics**

Course title	Course type
Nanooptics - MC Nano biophysics	Lecture
Path Integral Formalism for Quantum Matter	Lecture
Quantum Information Theory	Lecture
Rydberg Physics of Atoms, Molecules and Ultracold Gases	Lecture
Semiconductor Quantum Structures	Lecture
Solar Energy Conversion	Lecture
Theoretical Quantum Optics	Lecture
Ultrafast methods of solid-state physics	Lecture
Experimental Physics (Key Concepts for Master in Physics)	Lecture
Theoretical Physics (MA)	Lecture
Extreme Events (MA)	Seminar
Elementary Particle Physics (MA)	Seminar
Topics in Mathematical Physics (MA)	Seminar

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School of Science, Faculty of Chemistry

Available Courses Master Program: **Chemistry**

Course title	Course type
Research Lab Class	Practical Course*
Crystal Structure Determination	Lecture, Seminar and Tutorial
Modern aspects in industrial chemistry	Lecture and Seminar
Physical Chemistry of Solid Forms	Lecture
Physical Chemistry of Modern Materials	Lecture and Seminar
Polymer Materials	Lecture
Environmental- and Actinide chemistry	Lecture
Advanced Functional Materials	Lecture, Seminar and Tutorial
Advanced Theoretical Chemistry	Lecture and Seminar
Colloids and Interfaces	Lecture and Seminar
Functional Polymers	Lecture and Seminar
Batteries and Supercapacitors	Lecture and Seminar
Modern Methods of Electronical Chemistry	Lecture
Polymer Topologies and Polymer Processing	Lecture and Practical Course

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Science, Faculty of Chemistry

Available Courses Master Program: **Chemistry**

Course title	Course type
Radiochemistry	Lecture and Practical Course
Synthetic Two-Dimensional Materials	Lecture, Seminar and Practical Course
Advanced Solid-State Chemistry	Lecture and Seminar
(Bio-)Chemistry of Natural Product Biosynthesis	
Modern Aspects in Coordination and Main-Group Chemistry	Lecture, Tutorial and Seminar
Modern Topics in Theoretical and Computational Chemistry	Lecture, Tutorial and Seminar
Methods of Polymer Synthesis	Lecture, Tutorial and Seminar
Bioinorganic Chemistry and Path Biochemistry	Lecture
Water Chemistry and Treatment	Lecture and Seminar
Heterocyclic Chemistry and Organometallic Synthesis	Lecture
Water Constituents and their Analysis	Lecture and Tutorial
(Bio-)Chemistry of Natural Product Biosynthesis	Lecture and Seminar
Food Chemistry	Lecture
Wood and Plant Chemistry	Lecture and Tutorial
Organic Metal Chemistry	Lecture, Tutorial and Seminar
Principles of Medicinal Chemistry	Lecture and Seminar
Radiopharmaceutical Chemistry	Lecture and Tutorial
Application of Quantum Chemistry	Lecture and Tutorial

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School of Science, Faculty of Chemistry

Available Courses Master Program: **Chemistry**

Course title	Course type
Practical Concepts of Natural Product Biosynthesis	Lecture, Seminar and Practical Course
Biofunctional Polymer Materials for Tissue Engineering	Lecture, Seminar and Practical Course
Biomimetic Material Synthesis	Lecture, Seminar and Practical Course
Chemometrics	Lecture and Practical Course
NMR Spectroscopy in Chemistry, Materials and Life Sciences	Lecture and Seminar
Crystal Structure Determination Advanced Functional Materials	Lecture, Tutorial and Seminar
Concepts of Sustainable Chemistry	Lecture, Seminar and Tutorial
Electrochemistry	Lecture and Seminar
Modern Methods of Analysis	Lecture, Seminar and Tutorial
Advanced Solid-State Chemistry	Lecture and Practical Course
Modern Aspects in Coordination and Main-Group Chemistry	Lecture, Seminar and Tutorial
Methods of Polymer Synthesis	Practical Course
Water Constituents and their Analysis	Lecture and Practical Course
Practical Concepts of Natural Product Biosynthesis	Lecture and Practical Course
Mathematical and Numerical Foundations of Theoretical Chemistry	Lecture and Practical Course
Natural Product Synthesis – Strategies and Synthesis Planning	Lecture, Seminar and Practical Course
General Qualifications in Chemistry	Depending*
Advanced Professional English	Language Course*

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Science, Faculty of Biology

Available Courses Master Program: **Biology in Society**

Course title	Course type
Biology and Human Society	Lecture, Exercise and Seminar
Science in Society	Lecture, Exercise and Seminar
Economically Important Animals and Plants	Lecture and Seminar
Genetics and Developmental Biology	Lecture, Seminar and Practical Course
Organismic Zoology	Lecture, Seminar and Practical Course
Physiology and Endocrinology	Lecture, Seminar and Practical Course

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School of Science, Faculty of Chemistry

Available Courses Master Program: **Biochemistry**

Course title	Course type
Fundamentals of Biological Chemistry and Molecular Cell Biology	Lecture
Enzyme Purification and Characterization	Lecture, Seminar and Practical Course
Gene Expression and Manipulation	Lecture, Seminar and Practical Course
Biochemistry of the Cell	Lecture
Bioanalytics	Lecture, Seminar and Practical Course
Research Lab Class	Seminar and Practical Course*
Concepts of Natural Product Biosynthesis	Lecture
Practical Concepts of Natural Product Biosynthesis	Seminar and Practical Course
Bioinformatics	Lecture and Seminar
Protein Biochemistry and Proteomics	Lecture and Practical Course
Genome Engineering, Genomes and Evolution	Lecture and Practical Course
Drug Discovery	Lecture and Tutorial
Enzymes in Processes	Lecture, Seminar and Practical Course
Anaerobic Microbial Metabolism	Lecture
Medical Biochemistry	Lecture
Cellular Signaling	Lecture and Seminar
Cellular Machines	Lecture and Practical Course
Metabolism of Natural Products and Natural Product Biosynthesis	Lecture and Seminar
Functional Biological Materials	Lecture, Seminar and Practical Course
General Studies	Lecture
Advanced Professional English C1	Language Course*
Current Topics in Materials Science	Lecture, Tutorial and Practical Course

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Science, Faculty of Mathematics

Available Courses Master Program: **Mathematics**

Course Title	Course type
Scientific Research and Writing	Lecture or Seminar
Scientific Literature – Research topics	Seminar
Algebraic Structures	Lecture and Seminar
Model Theory	Lecture and Seminar
Discrete Structures	Lecture and Seminar
Algebra and Number Theory	Lecture and Seminar
Group Theory	Lecture and Seminar
Commutative Algebra	Lecture and Seminar
Noncommutative Geometry	Lecture and Seminar
Algebraic Topology	Lecture and Seminar
Groups and Geometry	Lecture and Seminar
	Lecture and Seminar
Algebraic Methods in Geometry	Lecture and Seminar
Real Algebra	Lecture and Seminar
Functional Analysis	Lecture and Seminar
Methods of Functional Analysis	Lecture and Seminar
Nonlinear Analysis	Lecture and Seminar
Methods of Analysis	Lecture and Seminar
Partial differential Equations	Lecture and Seminar
Methods for partial differential Equations	Lecture and Seminar
Dynamical Systems – Basic Concepts	Lecture and Seminar
Dynamical Systems – Modern Concepts and Applications	Lecture and Seminar
Probability with Martingales	Lecture and Seminar

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School of Science, Faculty of Mathematics

Available Courses Master Program: **Mathematics**

Course Title	Course type
Methods of Financial and actuarial Mathematics	Lecture and Seminar
Stochastic Calculus	Lecture and Seminar
Stochastic Processes	Lecture and Seminar
Mathematical Statistics	Lecture and Seminar
Statistical Methods	Lecture and Seminar
Continuous Optimization	Lecture and Seminar
Discrete Optimization	Lecture and Seminar
Numerical Methods for partial differential Equations – Basic Concepts	Lecture and Seminar
Numerical Methods for partial differential equations – Advanced Concepts	Lecture and Seminar
Mathematical Methods in Continuum Mechanics	Lecture and Seminar
Finite element Methods – Theory, Implementation and Applications	Lecture and Seminar
Scientific Computing – Advanced Concepts	Lecture and Seminar
Scientific Programming – Advanced Concepts	Lecture and Seminar
Models and Methods of Applied Mathematics	Lecture and Seminar
Models and Methods of pure Mathematics	Lecture and Seminar
Operations Research and Logistics	Lecture and Seminar
Decision Support in Transportation Logistics	Lecture and Seminar
Management of Public Transport Systems and Services	Lecture and Seminar
Theoretical Multivariate Statistics	Lecture and Seminar
Applied Multivariate Statistics	Lecture and Seminar
Methods in Data Analytics	Lecture and Seminar
Advanced Methods in Data Analytics	Lecture and Seminar
Applied Data Analysis	Lecture and Seminar

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School of Science, Faculty of Mathematics

Available Courses Master Program: **Mathematics in Business and Economics**

Course Title	Course type
Probability with Martingales	Lecture and Seminar
Methods of Financial and actuarial Mathematics	Lecture and Seminar
Mathematical Statistics	Lecture and Seminar
Continuous Optimization	Lecture and Seminar
Discrete Optimization	Lecture and Seminar
Scientific Research and Writing	Lecture and Seminar
Scientific Literature – Research Topics	Seminar
Stochastic Calculus	Lecture and Seminar
Stochastic Processes	Lecture and Seminar
Statistical Methods	Lecture and Seminar
Algebraic Structures	Lecture and Seminar
Model Theory	Lecture and Seminar
Discrete Structures	Lecture and Seminar
Algebra and Number Theory	Lecture and Seminar
Group Theory	Lecture and Seminar
Commutative Algebra	Lecture and Seminar
Noncommutative Geometry	Lecture and Seminar
Algebraic Topology	Lecture and Seminar
Groups and Geometry	Lecture and Seminar
Algebraic Methods in Geometry	Lecture and Seminar
Real Algebra	Lecture and Seminar
Functional Analysis	Lecture and Seminar

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School of Science, Faculty of Mathematics

Available Courses Master Program: **Mathematics in Business and Economics**

Course Title	Course type
Methods of functional Analysis	Lecture and Seminar
Nonlinear Analysis	Lecture and Seminar
Methods of Analysis	Lecture and Seminar
Partial differential Equations	Lecture and Seminar
Methods for partial differential Equations	Lecture and Seminar
Dynamical Systems – Basic Concepts	Lecture and Seminar
Dynamical Systems – Modern Concepts and Applications	Lecture and Seminar
Stochastic Calculus	Lecture and Seminar
Stochastic Processes	Lecture and Seminar
Statistical Methods	Lecture and Seminar
Numerical Methods for partial differential Equations – Basic Concepts	Lecture and Seminar
Numerical Methods for partial differential Equations – Advanced Concepts	Lecture and Seminar
Mathematical Methods in Continuum Mechanics	Lecture and Seminar
Finite element Methods – Theory, Implementation and Applications	Lecture and Seminar
Scientific Computing – Advanced Concepts	Lecture and Seminar
Scientific Programming – Advanced Concepts	Lecture and Seminar
Models and Methods of Applied Mathematics	Lecture and Seminar
Models and Methods of pure Mathematics	Lecture and Seminar

Course overview website

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School of Science, Faculty of Mathematics

Available Courses Master Program: **Mathematics in Business and Economics**

Course Title	Course type
Operations Research and Logistics	Lecture and Seminar
Decision Support in Transportation Logistics	Lecture and Seminar
Management of Public Transport Systems and Services	Lecture and Seminar
Theoretical Multivariate Statistics	Lecture and Seminar
Applied Multivariate Statistics	Lecture and Seminar
Methods in Data Analytics	Lecture and Seminar
Advanced Methods in Data Analytics	Lecture and Seminar
Applied Data Analysis	Lecture and Seminar

School of Science, Faculty of Biology

Available Courses Master Program: **Molecular Biosciences and Productive Biosystems**

Course title	Course type
Physiological Concepts of Microbe Cultivation	Lecture, Exercise, Seminar and Practical Course
Microbial Expression Hosts and Protein Production	Lecture and Practical Course
Microbial Ecology of Fungi and Protists	Lecture and Exercise
From Genes to Enzymes	Lecture, Seminar and Exercise
Systems Biology and Genomics	Depends*
Introduction to Lab Research Routine	Practical Course and Research Colloquium*
Productive Pathways	Depends*
Application Technologies	Depends
Advanced Lab Research Routine	Practical Course and Research Colloquium*

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Science, Faculty of Biology

Available Courses Master Program: **Organic and Molecular Electronics**

Course Title	Course type
Concepts of Molecular Modelling	Lecture and Practical Course
Semiconductor Technology	Lecture and Seminar
Organic Semiconductors	Lecture and Seminar
Basics - Solid State Science	Lecture, Practical Course and Seminar
Optoelectronics	Lecture
Molecular Electronics	Lecture and Exercise
Materials for Nanoelectronics and Printing Technology	Lecture and Practical Course
Physical Characterization of Organic and Organic-Inorganic Thin Films	Lecture and Practical Course
Work Experience Project*	Practical Course
German	Language Course*
Investing in a Sustainable Future	Lecture
Current Topics in Materials Science	Lecture, Exercise and Seminar
Career Paths	Lecture and Exercise

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Science, Faculty of Biology

Available Courses Master Program: **Organismic and Molecular Biodiversity**

Course Title	Course type
Applied Ecology	Lecture, Exercise and Seminar
Basic Molecular Approaches in Biodiversity Research	Lecture and Practical Course
Collecting and Analysing Biodiversity Data	Lecture and Exercise
Diversity and Ecology of Vascular Plants	Lecture, Exercise and Practical Course
Diversity and Ecology of Animals	Lecture, Exercise and Seminar
Diversity and Ecology of Soil Animals	Lecture, Exercise and Practical Course
Botany – Special Aspects of Collection Management	Seminar and Practical Course
Zoology – Special Aspects of Collection Management	Seminar and Practical Course
Geology and Paleoecology - Special Aspects of Collection Management	Seminar and Practical Course
Science and Society	Seminar and Practical Course
Floral Biology	Seminar and Practical Course
Plant-Microbial Interactions	Lecture, Seminar and Practical Course
The Biomaterials of Arthropods	Lecture and Seminar

School of Science, Faculty of Biology

Available Courses Master Program: **Organismic and Molecular Biodiversity**

Course Title	Course type
Fruit Morphology and Seed Dispersal	Seminar and Practical Course
Scanning Electron Microscopy	Seminar and Practical Course
Morphology	Lecture and Practical Course
Advanced Molecular Approaches in Biodiversity Research	Lecture, Seminar and Practical Course
Vintage Molecular Biology	Seminar and Practical Course
Population and Conservation Genetics	Lecture, Seminar and Practical Course
Barcoding of Life	Exercise and Seminar
Cytogenomics	Lecture, Seminar and Practical Course
Data Visualization in Biodiversity	Lecture, Exercise and Seminar
Plant (Phylo-)Genomics	Lecture, Exercise and Seminar
Environmental and Fungal Genomics	Lecture, Exercise and Seminar
Environmental Analysis	Lecture, Seminar and Practical Course
Fungi, Protists and Microbial Ecology	Lecture
Intercultural Communication and Foreign Language Skills	Lecture, Exercise and Seminar
Biological Drawing	Seminar and Practical Course

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School of Science, Faculty of Mathematics

Available Courses Master Program: **Technomathematics**

Course Title	Course type
Numerical Methods for Partial differential equations – Basic Concepts	Lecture and Exercise
Finite element Methods – Theory, Implementation and Applications	Lecture and Exercise
Modelling Seminar	Seminar and Project*
Research Project	Project*
Scientific Literature – Research Topics	Seminar
Algebraic Structures	Lecture and Exercise
Model Theory	Lecture and Exercise
Discrete Structures	Lecture and Exercise
Algebra and Number Theory	Lecture and Exercise
Group Theory	Lecture and Exercise
Commutative Algebra	Lecture and Exercise
Noncommutative Geometry	Lecture and Exercise
Algebraic Topology	Lecture and Exercise
Groups and Geometry	Lecture and Exercise
Algebraic Methods in Geometry	Lecture and Exercise
Real Algebra	Lecture and Exercise
Functional Analysis	Lecture and Exercise

Course overview website

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Science, Faculty of Mathematics

Available Courses Master Program: **Technomathematics**

Course Title	Course type
Methods of Functional Analysis	Lecture and Exercise
Nonlinear Analysis	Lecture and Exercise
Methods of Analysis	Lecture and Exercise
Partial differential Equations	Lecture and Exercise
Methods for partial differential Equations	Lecture and Exercise
Dynamical Systems – Basic Concepts	Lecture and Exercise
Dynamical Systems – Modern Concepts and Applications	Lecture and Exercise
Probability with Martingales	Lecture and Exercise
Methods of Financial and actuarial Mathematics	Lecture and Exercise
Stochastic Calculus	Lecture and Exercise
Stochastic Processes	Lecture and Exercise
Mathematical Statistics	Lecture and Exercise
Statistical Methods	Lecture and Exercise
Continuous Optimization	Lecture and Exercise
Discrete Optimization	Lecture and Exercise
Numerical Methods for partial differential Equations – Advanced Concepts	Lecture and Exercise
Real Algebra Mathematical Methods in Continuum Mechanics	Lecture and Exercise
Scientific Computing – Advanced Concepts	Lecture and Exercise
Scientific Programming – Advanced Concepts	Lecture and Exercise

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School of Science, Faculty of Mathematics

Available Courses Master Program: **Technomathematics**

Course Title	Course type
Models and Methods of Applied Mathematics	Lecture and Exercise
Models and Methods of Pure Mathematics	Lecture and Exercise
Basics of Electrical Engineering	Lecture and Exercise
Electrical and Magnetic Fields	Lecture and Exercise
Dynamical Networks	Lecture and Exercise
Communications Engineering	Lecture and Exercise
Systems Theory	Lecture and Exercise
Electronic Systems Design	Lecture and Exercise
Circuit Design	Lecture and Exercise
Signal Theory	Lecture and Exercise
Information Theory	Lecture and Exercise
Automation and Measurement Technology	Lecture and Exercise
Basics Electromagnetic Theory	Lecture and Exercise
Advanced Electromagnetic Theory	Lecture and Exercise
Technologies and Components of Microelectronics	Lecture and Exercise
Programming and Robo-Lab	Lecture and Exercise*

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School of Science, Faculty of Mathematics

Available Courses Master Program: **Technomathematics**

Course Title	Course type
Algorithms and Data Structures	Lecture and Exercise
Software Technology	Lecture and Exercise
Computer Architecture	Lecture and Exercise
Computer Architecture and Hardware Laboratory	Lecture and Exercise
Operating Systems	Lecture and Exercise
Security	Lecture and Exercise
Formal Systems	Lecture and Exercise
Artificial Intelligence	Lecture and Exercise
Electronic Systems Design	Lecture and Exercise
Theoretical Computer Science and Logics	Lecture and Exercise
Computer Networks	Lecture and Exercise
Databases and Information Systems	Lecture and Exercise
Software Technology Project	Lecture and Exercise
Machine Learning and Data Mining	Lecture and Exercise
Parallel Programming and High-Performance Computing	Lecture and Exercise
Data Visualization	Lecture and Exercise
Technical Mechanics – Statics	Lecture and Exercise
Technical Mechanics – Theory of Strength of Materials	Lecture and Exercise
Technical Mechanics – Kine- matics and Kinetics	Lecture and Exercise

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School of Science, Faculty of Mathematics

Available Courses Master Program: **Technomathematics**

Course Title	Course type
Design Theory	Lecture and Exercise
Software Technology	Lecture and Exercise
Fundamentals of Fluid Mechanics	Lecture and Exercise
Continuum Mechanics and Multifunctional Structures	Lecture and Exercise
Analytical Methods of Solid Mechanics	Lecture and Exercise
Elastic Structures and Technical Fluid Mechanics	Lecture and Exercise
Numerical Methods and Structural Durability	Lecture and Exercise
System Dynamics and Structural Vibrations	Lecture and Exercise
Data Processing and Experimental Model Analysis	Lecture and Exercise
Experimental Physics – Mechanics and Thermodynamics	Lecture and Exercise
Experimental Physics – Electromagnetism and Optics	Lecture and Exercise
Experimental Physics – Waves and Quanta	Lecture and Exercise
Computational Methods of Physics	Lecture and Exercise
Theoretical Mechanics	Lecture and Exercise
Theoretical Electrodynamics	Lecture and Exercise
Introductory Lab Course and Basic Lab Course – Mechanics and Heat	Lecture, Exercise and Practical Course*
Theoretical Electrodynamics	Lecture and Exercise
Basics of Quantum Theory	Lecture and Exercise
Particle and Nuclear Physics	Lecture and Exercise
Solid-State Physics	Lecture and Exercise
Basic Lab Course – Electromagnetism, Optics	Lecture, Exercise and Practical Course*

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Science, Biotechnology Center TU Dresden (BIOTEC)

Available Courses Master Program: **Molecular Bioengineering**

Course title	Course type
Application in Biomedicine	Lecture, Lab Course* and Seminar
Application in Technology	Lecture, Lab Course* and Seminar
Bioinformatics	Lecture and Tutorial
Bio-Nanotechnology	Lecture and Practical Course
Biophysics	Lecture, Seminar and Practical Course
Cellular Machines	Lecture, Seminar and Lab Course*
Chemistry with Biomolecules	Lecture and Lab Course*
Protein Networks and Protein Engineering	Lecture and Lab Course*
Genome and Stem Cell Engineering	Lecture and Practical Course
Genomes and Evolution	Lecture and Practical Course
Structural and Computational Biology	Lecture and Seminar
Surface Chemistry	Lecture
Introduction to Proteomics	Lecture and Practical Course
Lab Project	Lab Course*

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Science, Biotechnology Center TU Dresden (BIOTEC)

Available Courses Master Program: **Physics of Life**

Course title	Course type
Advanced Biophysics	Lecture, Tutorial and Seminar
Introductory Biological Physics	Lecture and Exercise
Physical Chemistry and Experimental Methods	Lecture, Exercise and Seminar
Statistical Principles and Experimental Design	Lecture and Seminar
Molecular Biology and Biochemistry of Cells and Tissues	Lecture, Practical Course and Seminar
Elements of Nanobiotechnology	Lecture, Seminar and Practical Course
Advanced Biological Physics	Lecture and Exercise
Pattern Formation and Active Matter Hydrodynamics	Lecture
Research Lab Project	Lab Course*
Applied Biophysics	Lecture, Tutorial and Seminar
Computational Biophysics	Lecture, Tutorial and Seminar
Advanced Theoretical Biophysics	Lecture, Tutorial and Seminar
Applied Nanotechnology	Lecture, Tutorial and Seminar
Advanced Nanotechnology	Lecture, Tutorial and Seminar
Lab Rotation	Lab Course*
Extended Biophysics	Lecture, Seminar, Tutorial and Exercise

course catalog PDF

Master program overview

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Science, Biotechnology Center TU Dresden (BIOTEC)

Available Courses Master Program: **Regenerative Biology and Medicine**

The whole Master Program is taught in English

Course title	Course type
Clinical Translation and Trials in Practice	Lecture
Cell Separation, Isolation and Analysis	In block*: Lecture and Practical Course
Electron Microscopy	In block*: Lecture and Practical Course
Model Organism Research	Lecture
Molecular Biology Research	Lecture
Organ Systems and Disease	Lecture
Scientific Working Methods and Conduct	Seminar and Practical Course
Stem Cells, Development and Regeneration	Lecture, Seminar and Tutorial
Techniques to Modify Gene Expression	In block: Lecture and Practical Course
Advanced Methods and Human Cell Technologies	Lecture and Seminar
Aging and Senescence	Lecture and Seminar
Cell, Organ and Model Organism Based Research	Lecture, Tutorial and Practical Course
Molecular Biology Research	Lecture, Tutorial and Practical Course
Developmental and Regenerative Biology: Model Organisms	Lecture
Developmental and Regenerative Biology: Concepts and Methods	Lecture
Principles of Neuroscience	Lecture
Neurobiology and Regeneration	Lecture and Seminar
Hematologic, Immunological and Vascular Systems and Disease	Lecture
Peripheral Organ Systems and Disease	Lecture and Seminar
Quantitative Biology	Lecture and Practical Course
Cell and Tissue Analysis and Transgenesis	in block*: Lecture and Practical Course

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Civil and Environmental Engineering, Faculty of Business and Economics

BA course overview

Course title	Course type
Management Accounting & Control Consists of: Cases in Management Accounting	Lecture
Sustainability Management and Environmental Accounting Consists of: Sustainability in Practice, Stakeholder Management, Scenario Planning and Sustainable Entrepreneurship	Lectures and Seminars
Econometrics Consists of: Bachelor's Seminar, Applied Econometrics and empirical Economy Research	Lectures and Seminars
Business Information Systems Consists of: Health Information Management	Lecture

MA course overview

Course title	Course type
Business Engineering Consists of: Digital Business Engineering, Case Study Research (CSR)	Lectures and Seminars
Information Management Consists of: Corporate Communications and Designing E-Learning Arrangements	Lecture and Seminar
Management Analytics Consists of: Analytics Application Development and Research Seminar in Management Analytics	Lecture and Seminar
Information Systems in Industry and Trade	Course in block*
FG / RG Digital Health	Lecture

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Civil and Environmental Engineering, Faculty of Business and Economics

MA Course overview

Course title	Course type
Energy Economics	Lecture
Technology Management	Lecture and Seminar
Finance and Financial Technology	Lecture
Industrial Management	Lecture
Sustainability Management and Environmental Accounting	Lecture and Project*
Sustainability Assessment and Policy	Lecture
Management Science	Lecture
Logistics	Lecture and Project
Marketing	Lecture
Organization	Lecture
Human Resources Management	Lecture
Auditing and Taxation	Lecture
Marketing-Mix	Lecture and Exercise
New Economic Geography	Lecture and Exercise
Quality Management	Lecture
Relationship Marketing	Lecture
Business Education and Management Training Consists of: New Theories of Learning and Teaching, Multimedia Learning	Lectures and Seminars
Public Economics	Lecture
International Monetary Economics Consists of: Financial Stability and Regulation of Financial Markets, Exchange Rates and Financial Crises	Lectures and Seminars
International Economics Consists of: Empirical Economics, Academic Writing and Research Seminar	Lectures and Seminars
International Economic Policy Consists of: Microeconomic Perspectives on Development Economics and Current Topics in Empirical Economic Research	Lectures and Seminars
Economic Policy and Economic Research Consists of: Topics in Economic Policy and Public and International Economic Theory	Lectures and Seminars

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Civil and Environmental Engineering, Faculty of Environmental Science

Available Courses Master Program: **Hydro Science and Engineering**

The whole Master Program is taught in English

Course title	Course type
Aquatic Ecology and Ecotoxicology	Lecture and Practical Course
Biotechnology	Lecture, Tutorial and Practical Course
Circular Economy	Lecture and Tutorial
Climate Change	Lecture and Seminar
Climate Systems and Climate Modelling	Lecture and Tutorial
Climatology and Hydrology	Lecture
Communication and Conflict Management	Lecture, Tutorial and Practical Course
Drinking Water Supply	Lecture, Tutorial and Practical Course
Ecology	Lecture, Tutorial and Practical Course
Flood Risk Management II	Lecture and Tutorial
Geodesy	Lecture and Tutorial
Ground Water	Lecture and Tutorial
Hydraulic Engineering	Lecture, Tutorial and Practical Course
Hydrochemistry	Lecture and Exercise
Hydrodynamics	Lecture, Tutorial and Practical Course
International Water Issues	Lecture and Tutorial
Soil Water	Lecture, Tutorial and Practical Course

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Civil and Environmental Engineering, Faculty of Environmental Science

Available Courses Master Program: **Hydro Science and Engineering**

The whole Master Program is taught in English

Course title	Course type
Modelling of Wastewater Systems	Lecture and Practical Course
Water Quality and Water Treatment	Lecture and Practical Course
Statistics	Lecture and Tutorial
Integrated Water Resources Management I	Lecture
Study Project Integrated Water Resources Management	Lecture and Practical Course
International Water Issues	Seminar
Watershed Management I	Lecture, Tutorial
Watershed Management II	Lecture and Practical Course
Urban Water Management	Lecture and Practical Course

School of Civil and Environmental Engineering, Faculty of Environmental Science

Available Courses Master Program: **Forestry**

The whole Master Program is taught in English

Course title	Course type
Climate Change and Tropical Forestry E-Learning	Exercise
Communication and Conflict Management	Lecture, Seminar and Project Work*
Assessment and Evaluation of Forest Resources	Lecture and Exercise
Economics and Management of Forest Resources	Lecture, Seminar and Exercise
Research Planning	Seminar and Exercise
Management Systems of Forest Plantations and Rehabilitation of the Landscape in the Tropics	Lecture, Seminar, Exercise and Field Trip*
Forest related Development Policy and Culture	Lecture, Seminar and Exercise
Management Systems and Restoration in Natural Forest of the Tropics	Lecture, Seminar, Exercise and Field Trip*
Forest Utilization and Product Chains	Lecture, Seminar and Exercise
Management of Vegetation and Soil in Watersheds	Lecture, Seminar, Project Work and Field Trip*
Modelling	Lecture and Exercise
Organisation and Management Systems	Lecture, Seminar, Exercise and Field Trip*
Preparing Field Work in the Tropics	Exercise
Silviculture and Biodiversity in Natural Forests of the Tropics	Lecture, Seminar and Exercise
Silviculture in Forest Plantations and Agroforestry in the Tropics	Lecture, Seminar and Exercise
Tropical Climate and Ecology	Lecture, Seminar and Exercise
Planning at Project and Landscape Scales	Lecture, Exercise and Project*
Urban Tree Management in the Tropics	Lecture, Seminar, Exercise and Field Trip*

Course overview website

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Advanced Computational and Civil Engineering Structural Studies (ACCESS)**

The whole Master Program is taught in English

Course title	Course type
Building Materials	Lecture and Tutorial
Connection Technology in Glass Structures	n.a.*
Continuum Mechanics, Tensor Calculus	Lecture and Tutorial
Earthquale and Unvertain Data	n.a.*
Effective Elastic Material Parameters of Composites	n.a.*
Energy Methods	Lecture and Tutorial
Evaluation of Structural overheating Risk – Theory, Project, Examples, Exercise	n.a.*
Experimental and Numerical Analysis for Textile Reinforced Wood Construction	n.a.*
Meachnistic Design of Asphalt Pavements	n.a.*
Numerical Methods	Lecture and Tutorial
Numerical Modelling of Masonry Sructures	n.a.*
Precast Concrete Structures	n.a.*
Shells	n.a.*
Slope Stability	n.a.*
Stability Analysis of Beams and Columns with Calculation Software DRILL	n.a.*

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Air Transport and Logistics**

The whole Master Program is taught in English

Course title	Course type
Operations Research and Logistics	Lecture and Exercise
Material Flow Analysis and Optimization	Lecture and Exercise
Methods in Transportation Econometrics and Statistics	Lecture and Exercise
Decision Making in Enterprise Logistics	Lecture and Exercise
Flight Performance and Aerodynamics	Lecture, Exercise and Practical Course
Flight Planning and Aircraft Operations	Lecture, Exercise and Practical Course
Air Traffic and Airport Operations	Lecture and Exercise
CNS and tactical ATM	Lecture, Exercise and Practical Course
Safety and Airline Management	Lecture and Exercise
Terminal Operations	Lecture and Exercise
Aircraft Engines	Lecture and Exercise
Helicopter Technology	Lecture
Aircraft Design	Lecture
Methods in Data Analytics	Lecture and Exercise
Theoretical Multivariate Statistics	Lecture and Exercise
Material Handling and Storage Systems	Lecture and Exercise
Applied Multivariate Statistics	Lecture and Exercise
Data-Driven Multivariate Statistics	Lecture and Exercise
Management of Public Transport Systems and Services	Lecture and Exercise
Applied Computer Sciences	Lecture and Exercise
Advanced Theory of Air Transportation Systems and Simulation	Lecture and Exercise

School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Air Transport and Logistics**

The whole Master Program is taught in English

Course title	Course type
Advanced Theory of Transportation Systems	Lecture and Exercise
Actual Aspects in Optimization of Processes in Transportation and Logistics	Lecture and Exercise
Transportation Telematics Networks	Lecture and Exercise
Theory of Communication Traffic and Information Transfer Security	Lecture and Exercise
Satellite-based and Position-based Communication	Lecture, Exercise and Practical Course
Sensor Technology in Transport Systems	Lecture and Tutorial
Transport and Infrastructure Planning	Lecture and Exercise
Basics of traffic Modelling	Lecture and Exercise
Visual Perception and Lighting Engineering	Lecture and Practical Course
Traffic and Transportation Psychology	Lecture and Seminar
Quality and RAMS Management	Lecture and Exercise

School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Cartography**

The whole Master Program is taught in English

Course title	Course type
Mobile Cartography	Lecture, Exercise and Practical Course
Subject-specific GIS Applications and Case Studies	Lecture, Exercise and Practical Course
Remote-Sensing-based Environmental Mapping	Lecture and Exercise
Laser Scanning and Digital Terrain Model Generation	Lecture and Exercise
Geodata Infrastructures	Lecture and Exercise
3D Virtual Landscapes	Lecture and Practical Course

Course overview website

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School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Ecosystem Services**

Course title	Course type
Applied Ecology	Lecture, Exercise and Seminar
Intercultural Communication and Foreign Language Skills	Lecture, Exercise and Seminar
Resource Management and Sustainability	Lecture and Practical Course
Biodiversity Management and Sustainability	Lecture and Seminar
Environmental Law	Lecture and Exercise
Environmental Chemistry	Lecture and Seminar
Environmental and Fungal Genomics	Lecture, Exercise and Seminar
Environmental Analysis	Lecture, Seminar and Practical Course
Applied Microbiology	Lecture, Seminar and Practical Course
Collecting and Analysing Biodiversity Data	Lecture and Exercise
Zoology – Special Aspects of Collection Management	Practical Course and Tutorial
Circular Economy	Lecture and Exercise
Foresight and Integrated Assessment in Environmental Development	Lecture and Seminar
Strategic Sustainability Management	Lecture, Exercise and Practical Course

Course overview website

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School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Public and International Economics**

The whole Master Program is taught in English

Course title	Course type
Principles of Public and International Economics	Lecture and Exercise
Microeconometrics	Lecture and Exercise
Empirical Economics	Lecture and Exercise
Academic Writing	Workshop
Research Design	Seminar
Development Economics	Lecture and Exercise
International Public Economics	Lecture and Exercise
Economics of the Welfare State	Lecture and Exercise
International Financial Markets	Lecture and Exercise
Economics of Migration	Lecture and Exercise
Exchange Rates	Lecture and Exercise
Theory of Taxation	Lecture and Exercise
Financial Stability and Regulation of Financial Markets	Lecture
Microeconomic Perspectives on Development Economics	Lecture and Seminar
Introduction to Geographic Information Systems	Lecture and Exercise
Empirical Research Task	Lecture, Exercise and Project*
Topics in International Economics	Seminar
Current Topics in Public Economics	Seminar
Topics in Economic Policy	Seminar
Current Topics in International Monetary Economics	Seminar
Current Topics in Empirical Economic Research	Seminar

Course overview website

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Public and International Economics**

The whole Master Program is taught in English

Course title	Course type
Strategic Sustainability Management	Lecture and Tutorial
Advanced International Financial Reporting	Lecture
Theoretical Multivariate Statistics	Lecture and Exercise
Applied Multivariate Statistics	Lecture and Exercise
Data-Driven Multivariate Statistics	Lecture
German Language Skills Beginners	Language Course*

School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Transportation Economics**

The whole Master Program is taught in English

Course title	Course type
Operations Research and Logistics	Lecture and Exercise
Methods in Transport Policy	Lecture and Exercise
Spatial Economics and the Environment	Lecture and Exercise
Theoretical Multivariate Statistics	Lecture and Exercise
Methods in Data Analytics	Lecture and Exercise
Decision Support in Transportation Logistics	Lecture and Exercise
Management of Public Transport Systems and Services	Lecture and Exercise
Cost-Benefit Analysis in Transport	Lecture and Exercise
Cost and Prices in Transport	Lecture and Exercise
Empirical Research in Spatial and Environmental Economics	Lecture and Exercise
Urban Economics	Lecture and Exercise
Applied Multivariate Statistics	Lecture and Exercise
Data-Driven Multivariate Statistics	Lecture
Advanced Methods in Data Analytics	Lecture and Exercise
Application of Data Analytics	Seminar
Research Task in Computational Logistics	Seminar
Research Task in Transport Policy	Seminar
Research Task in Spatial and Environmental Economics	Seminar
Research Task in Statistics	Seminar

School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Transportation Economics**

The whole Master Program is taught in English

Course title	Course type
Research Task in Data Analytics in Transportation	Seminar
Decision Support in Transportation Logistics	Lecture and Exercise
Management of Public Transport Systems and Services	Lecture and Exercise
Cost-Benefit Analysis in Transport	Lecture and Exercise
Cost and Prices in Transport	Lecture and Exercise
Empirical Research in Spatial and Environmental Economics	Lecture and Exercise
Urban Economics	Lecture and Exercise
Applied Multivariate Statistics	Lecture and Exercise
Data-Driven Multivariate Statistics	Lecture and Exercise
Advanced Methods in Data Analytics	Lecture and Exercise
Application of Data Analytics	Seminar
Current Topics in Transport Policy	Seminar
Cost-Benefit Evaluation of Infrastructure Projects and Traffic Law	Lecture
Current Topics in Spatial and Environmental Economics	Seminar
Methods in Transportation Econometrics and Statistics	Lecture and Exercise
Traffic Flow Dynamics and Simulation	Lecture and Exercise
Applied Computer Science	Lecture and Exercise
Safeguarding Railway Operation	Lecture and Exercise
Railway Signalling	Lecture
Operational Processes and Operational Planning in Public Passenger Transport	Lecture and Exercise
Planning, Construction and Operation of Local Traffic Systems, Special Lectures	Lecture

Course overview website

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School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Transportation Economics**

The whole Master Program is taught in English

Course title	Course type
Railway Construction	Lecture and Exercise
Management of Plant Construction Projects	Lecture and Exercise
Operational Planning and Operational Management in Public Transport	Lecture and Exercise
Operation of Urban and Regional Public Transport	Lecture and Exercise
Planning and Design of Railway Systems	Lecture and Exercise
Planning of Signalling Facilities	Lecture and Exercise
Flight Performance and Aerodynamics	Lecture and Exercise
CNS and Tactical ATM	Lecture and Exercise
Flight Planning and Aircraft Operations	Lecture, Exercise and Lab Project*
Safety and Airline Management	Lecture and Exercise
Terminal Operations	Lecture and Exercise
Helicopter Technology	Lecture
Road Traffic Control Technology	Lecture and Exercise
Optimal Control Methods and Algorithms for Decision Making Problems	Lecture, Exercise and Seminar
Transportation Telematics Networks	Lecture and Exercise
Theory and Technology of Information Systems	Lecture and Exercise
Vehicle Communications and Positioning	Lecture and Exercise
Technology Assessment	Lecture and Exercise
Design and Operation of Virtual Mobility Systems	Lecture and Exercise
Transport Ecology	Seminar
Methods of Transport Ecology	Lecture and Exercise

Course overview website

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Transportation Economics**

The whole Master Program is taught in English

Course title	Course type
Road Design	Lecture and Exercise
Special Problems in Traffic Flows Science	Lecture and Exercise
Special Problems in Traffic Flow Science and Logistic	Lecture and Exercise
Evaluation Procedures for Traffic Facilities	Lecture, Exercise and Seminar
Transport and Infrastructure Planning, City Planning	Lecture and Exercise
Geodata Infrastructures	Lecture and Exercise
Basics in Psychology and Behavioural Economics	Seminar
Advanced Issues in Psychology and Behavioural Economics	Seminar
Basic of Electrical Engineering for Transport Engineering	Lecture and Exercise
Electric Railways	Lecture and Exercise
Electric Urban Transport Systems	Lecture and Exercise
Contact Lines	Lecture and Exercise
Supply Management	Lecture and Exercise
Inventory Management	Lecture and Exercise
Power System Economics	Lecture and Exercise
Financing with Venture Capital	Lecture and Project
Relationship-Marketing	Lecture
Technology Management	Lecture
Environment-Oriented Production Planning	Lecture and Exercise
Sustainability Management and Controlling	Lecture and Seminar
Ressource Management	Lecture and Project*

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Transportation Economics**

The whole Master Program is taught in English

Course title	Course type
Economics of Innovation	Lecture and Exercise
Theory of Taxation	Lecture and Exercise
Theory of the Welfare State	Lecture and Exercise
Resource Economics	Lecture and Exercise
Game Theory and Behavioural Economics	Lecture and Exercise
Economics of Migration	Lecture and Exercise
Computable General Equilibrium Analysis	Lecture and Exercise
Exchange Rates	Lecture and Exercise
Economics of European Integration	Lecture and Exercise
Environmental Economics	Lecture and Exercise
Financial Stability and Regulation of Financial Markets	Lecture
Business Engineering	Lecture and Seminar
Enterprise Modeling	Lecture and Seminar
ERP-supported Business Processes	Project*
IT-Management and IT-Architecture	Lecture and Exercise
Corporate Communications	Lecture, Exercise, Seminar and Language Course*
Knowledge Management	Lecture, Exercise, Seminar and Language Course*
Basic Principles of Information Systems	Lecture and Exercise
Elementary Level Foreign Language (CEFR A2)	Language Course*
Advanced Elementary Level Foreign Language (CEFR A2+)	Language Course*
Extension Module Intermediate Level Foreign Language (CEFR B1)	Language Course*

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Civil and Environmental Engineering, Faculty of Civil Engineering

Available Courses Master Program: **Transportation Economics**

The whole Master Program is taught in English

Course title	Course type
Extension Module Intermediate Level Foreign Language (CEFR B1+)	Language Course*
Introduction to Professional and Academic Language: Working with Texts and Oral Communication (CEFR B2+)	Language Course*
Introduction to Professional and Academic Language: Written Communication and Application Training plus one Profile Course (CEFR B2+)	Language Course*
Professional Competencies in a Foreign Language (CEFR C1/C2)	Language Course*
Introduction to Professional and Academic Language: Working with Texts and Oral Communication (CEFR C1)	Language Course*
Introduction to Professional and Academic Language: Written Communication and Application Training plus one Profile Course (CEFR C1)	Language Course*
Additional General Qualifications for Transportation Economists	Depending*

Course overview website

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Civil and Environmental Engineering, Faculty Forestry

Available Courses Master Program: **Tropical Forestry**

The whole Master Program is taught in English

Course title	Course type
Tropical Climate and Ecology	Lecture, Seminar and Exercise
Forest related Development Policy and Culture	Lecture, Seminar and Exercise
Urban Tree Management in the Tropics	Lecture, Seminar, Exercise and Field Trip*
Forest Utilization and Product Chains	Lecture, Seminar and Exercise
Assessment and Evaluation of Forest Resources	Lecture and Exercise
Economics and Management of Forest Resources	Lecture, Seminar and Exercise
Organisation and Management Systems	Lecture, Exercise and Seminar
Management of Vegetation and Soil in Watersheds	Lecture, Seminar and Project Work*
Silviculture and Biodiversity in Natural Forest of the Tropics	Lecture, Seminar and Exercise
Silviculture in Forest Plantations and Agroforestry in the Tropics	Lecture, Seminar and Exercise
Designing and Planning the Research	Lecture, Seminar and Exercise
Planning at Project and Landscape Scales	Lecture, Exercise and Project Elaboration*
Modelling	Lecture, Exericse
Management Systems and Restoration in Natural Forest of the Tropics	Lecture, Seminar, Exercise and Field Trip*
Management Systems of Forest Plantations and Rehabilitation of the Landscape in the Tropics	Lecture, seminar, Exercise and Field Trip*
Climate Change and Tropical Forestry	Exercise E-Learning
Research Planning	Seminar and E-Learning

Course overview website

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Engineering Sciences, Faculty of Computer Science

Available Courses Master Program: **Nanoelectronic Systems**

The whole Master Program is taught in English

Course title	Course type
Academic and Scientific Work	Lecture, Tutorial, Lab* and Seminar
Communications	Lecture and Tutorial
Computer Arithmetic	Lecture and Tutorial
Electro-mechanical Networks	Lecture and Tutorial
Fundamentals of Estimation and Detection	Lecture and Tutorial
German Language and Culture	Language Course*
Hardware/ Software Co-design	Lecture and Tutorial
Hardware/ Software Co-design Lab	Tutorial and Practical Training*
Innovative Concepts for Active Nanoelectronic Devices	Lecture and Exercise
Integrated Circuits for Broadband Optical Communications	Lecture and Tutorial
Integrated Photonic Devices for Communications and Signal Processing	Lecture and Practical Course
Investing in a Sustainable Future	Lecture and Seminar
Lab Sessions*	Lecture and Practical Course
Lab VLSI Processor Design	Tutorial*
Materials for Nano-Electronics and Vacuum Technology	Lecture and Tutorial
Memory Technology	Lecture and Tutorial
Modeling and Characterization of Electron Devices	Lecture, Tutorial and Practical Training
Modelling and Simulation of Telecommunication Systems	Lecture and Tutorial
Molecular Electronics	Lecture and Tutorial

Course overview website

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Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Engineering Sciences, Faculty of Computer Science

Available Courses Master Program: **Nanoelectronic Systems**

The whole Master Program is taught in English

Course title	Course type
Nanotechnology and Material Science	Lecture, Tutorial and Practical Course
Optoelectronics	Lecture and Tutorial
Project Work*	Self-Study
Principles of Dependable Systems	Lecture and Tutorial
Radio Frequency Integrated Circuits	Lecture, Tutorial and Practical Course
Real-Time Systems	Lecture and Tutorial
Semiconductor Technology	Lecture and Practical Training
Software-Fault Tolerance	Lecture and Tutorial
System Engineering	Lecture and Tutorial
Stochastic Signals and Systems	Lecture and Tutorial
Theory of Nonlinear Networks	Lecture and Tutorial
Ubiquitous Information Systems	Lecture and Tutorial
Wireless Sensor Networks	Lecture and Tutorial

Course overview website

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Engineering Sciences

Available Courses from the **Faculty of Electrical and Computer Engineering**

Course title	Course type
Analysis and Description of Non-Linear Systems	Lecture and Exercise
Biomedical Laser Systems and Optogenetics	Lecture
Cellular Nonlinear Networks	Lecture
Circuit Technology	Lecture
ComNets - Problem Based Learning	Lecture and Practical Course
Communication Networks 2	Lecture and Exercise
Communication Networks 3	Lecture and Exercise
Communications	Lecture and Exercise
Cooperative Communication Systems	Lecture, Seminar and Practical Course
Deep Neural Network Hardware	Lecture and Exercise
Design and Programming of Embedded Multicore Architectures	Lecture, Exercise and Lab*
Digital Holography and Image Processing	Lecture and Practical Course
Distributed Systems	Lecture
Electro-mechanical Networks	Lecture and Exercise
Embedded Hardware Systems Design	Lecture and Exercise
Foundations of Certified Programming Language and Compiler Design	Lecture
Fundamentals of Estimation and Detection	Lecture and Seminar
Future Computing Strategies in Nanoelectronic Systems	Lecture

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Engineering Sciences

Available Courses from the **Faculty of Electrical and Computer Engineering**

Course title	Course type
German Language and Culture	Language Course*
Hardware Modeling and Simulation	Lecture, Tutorial and Exercise
Hardware/Software Codesign for Signal Processors	Lecture and Practical Course
Hardware/Software Codesign Lab	Lecture and Lab*
Innovative Semiconductor Devices	Lecture, Tutorial and Lab Course*
Integrated Circuits for Broadband Optical Communications	Lecture and Tutorial
Integrated Photonic Devices	Lecture
Introduction to Optical Non-Classical Computing: Concepts and Devices	Lecture
Joint Communications and Sensing Systems for 6G Networks	Lecture and Exercise
Lab Embedded Hardware Systems Design	Lecture
Machine Learning in Signal Processing	Lecture and Practical Course
Materials for Nanoelectronics	Lecture
Memory Technology 1	Lecture
Memory Technology 2	Lecture
Micro-/Nanomaterials and Reliability Aspects	Lecture and Exercise
Mobile Communication and Mobile Computing	n.a.*
Molecular Electronics	Lecture and Exercise
Nanooptics	Lecture
Nanostructured Materials	n.a.*
Nanotechnology	n.a.*
Neural Networks and Memristive Hardware Accelerators	Lecture

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

School of Engineering Sciences

Available Courses from the **Faculty of Electrical and Computer Engineering**

Course title	Course type
Neuromorphic VLSI Systems	Lecture and Exercise
Optoelectronics Devices and Systems	Lecture
Organic Field Effect Devices	Lecture
Paper Reading Group "Seminal Discoveries & Developments"	Lecture and Seminar
Physical Design	Lecture and Practical Course
Plasma Technology	Lecture and Practical Course
Practical Implementations of Network Coding	Lecture
Principles of Dependable Systems	Lecture and Exercise
Python for Engineers	Lecture
Quantum and Solid-State Physics	Lecture
Radio Frequency Integrated Circuits	Lecture
Requirements and Methodologies for Design of integrated Circuits from Industrial Production Perspective	Lecture
Resource Management	Lecture
RoboLab	Lab Course*
Semiconductor Technology 1	Lecture
Semiconductor Technology 2	Lecture
Semiconductor Technology Lab	Lab Course*
Semiconductor Quantum Structures	n.a.
Software Fault-Tolerance	Lecture and Exercise
Stochastic Signals and Systems	Lecture and Exercise
Systems Engineering 1	Lecture and Exercise
VLSI Processor Design	Lecture and Oractical Course
Wireless Sensor Networks	n.a.*

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

Center of International Studies

Available courses Master Program: **International Relations**

Course title	Course type
Current Problems of international Relations	Seminar
Critical Theory and Global Political Economy	Seminar
Current Developments in Nation and European Rights	Lecture
Strategic Aspects of International Economy	Lecture
International Law and Contemporary Conflicts	Seminar
International Political Economy	Seminar
Interdisciplinary Module “Risks”	Seminar
The Politics of Financial Crisis	Lecture
United Nations System	Lecture
Constitutional History and Theory of the European Union	Seminar
Topics in International Trade	Seminar
International Criminal Law as a Means of Remedying the Enforcement Deficit in International Law	Seminar

Course overview website

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

School of Humanities and Social Sciences, Faculty of Education

Available Courses Master Program: **Vocational Education and Personnel Capacity Building**

Course title	Course type
Management of Vocational Training	Seminar
Media Education	Lecture

Faculty of Linguistics, Literature and Cultural Studies, Department of English and American Studies

Available Courses

Course title	Course type
Linguistics (English Studies)	Lecture and Practical Course
Introduction to Synchronic Linguistics	Lecture and Tutorial
Exploring the Sounds of English	Practical Course
Medieval England	Practical Course
What's in a Name	Practical Course
Old English	Seminar
Art of Translation	Seminar
Pidgins and Creoles	Seminar
English in Pop Culture	Lecture
Discourse Markers	Seminar
English in South Asia: Past, Present and Future	Seminar
Language: The First 20 Years	Seminar
English Literary Studies	Lecture and Tutorial
Fantastic England(s): Critical Perspectives on British Fantasy Literature	Seminar and Practical Course
Between Self-Destruction and Mars Attacks: H. G. Wells' Scientific Romances and the Problem(s) of Civilisation	Seminar and Practical Course
Introduction to Poetry: Poets, Poems, and Poetics	Seminar and Practical Course
Children's Literature and Perceptions of the World	Seminar and Practical Course
(r)Age: Negotiating Later Life in Popular Media	Seminar
Issues in American Literature: Nature and Technology	Lecture
Shakespeare's Relevance for Literary and Cultural Studies	Seminar

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Faculty of Linguistics, Literature and Cultural Studies, Department of English and American Studies

Available Courses

Course title	Course type
English Cultural Studies	Lecture
Screening Yorkshire: Regional Identity, Heritage and the Politics of 'Race', Class and Gender	Seminar
Culture, Power and Identity	Seminar
The Smell of Culture	Seminar
British Horror	Seminar
Gender across Disciplines: Current Perspectives	Lecture
The Big Picture: Diagnosing the Present, Thinking the Totality	Seminar
Shakespeare's Relevance for Literary and Cultural Studies	Seminar
Introduction to Digital Cultures	Lecture
American Literary Studies	Lecture
Introduction to Literary Studies	Lecture and Tutorial
Modernism, Postmodernism and Beyond: 20th and 21st Century Directions in the American Short Story	Seminar
Energy and Politics in Speculative Fiction	Seminar
Issues in American Literature: Nature and Technology	Lecture
Transnational (Hi-)Stories in American Literature	Seminar
Politics of Intimacy: The Drama of Tennessee Williams	Seminar
North American Studies Colloquium	Colloquium*

Course overview website

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*

Faculty of Linguistics, Literature and Cultural Studies, Department of English and American Studies

Available Courses

Course title	Course type
American Cultural Studies	Lecture
Introduction to American Cultural Studies	Lecture and Tutorial
American Myths Then and Now	Seminar and Practical Course
Howdy, Partner! The American Frontier and its Representations in Various Media	Seminar and Practical Course
Gender across Disciplines: Current Perspectives	Lecture
Methods and Theories in American Studies: Select Aspects of Critical Media Studies	Seminar
Love My Naps, But Stay Woke: The Rhetoric of Self-Care	Seminar
North American Studies Colloquium	Colloquium*
Introduction to Digital Cultures	Lecture
Language Courses*	Seminar
Option: Error Analysis	Seminar
Pronunciation/Intonation British English	Seminar
Pronunciation/Intonation American English	Seminar
Listening and Speaking	Seminar
Advanced Essay Writing	Seminar
Classroom English in the Primary School	Seminar
Grammar	Seminar
Writing	Seminar
Classroom English (Sec. Schools)	Seminar
Advanced Translation	Seminar
Vocabulary	Seminar
Links Abroad	Seminar

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*Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.

Faculty of Linguistics, Literature and Cultural Studies, Department of English and American Studies

Available Courses

Course title	Course type
Theatre Workshop*	Seminar
International Business Management	Seminar
International Negotiations	Seminar
Public Speaking, Debating and Ethics	Seminar
English Language, Didactics and Literature	Lecture
Reflected Practice of Teaching English – Survey	Lecture
Advanced Practice of Teaching English – Units (phase 1: pre-SPB)	Seminar
Advanced Practice of Teaching English – Units (phase 2: while-SPB)	Seminar
Advanced Practice of Teaching English – Units (phase 3: post-SPB)	Seminar
Advanced Practice of Teaching English – Individualized Teaching (GS/GY/OS/BS)	Seminar
Reflected Practice of Teaching English – Lessons (GS)	Seminar
Reflected Practice of Teaching English – Lessons (OS/GY/BS)	Seminar
Advanced Practice of Teaching English – Cross-curricular Teaching (GS/OS/GY/BS)	Seminar
Reflected Practice of Teaching English – Lessons (OS/GY/BS)	Seminar
Advanced Practice of Teaching English – Virtual Teaching (GS/OS/GY/BS)	Seminar
Advanced Practice of Teaching English –Teaching Linguistic Means (GS/OS/GY/BS)	Seminar

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**Please consult with the lecturer of the course . Due to low availability, sometimes these types of courses only grant restricted access.*