

Faculty of Business and Economics Modules open to Erasmus students

Bachelor's Level

updated: March 2026

DISCLAIMER:

Please note that the English translation is provided for information purposes only. The English text is not legally binding. Only the original German document has legal validity. The official language at TU Dresden is German. German jurisdiction applies.

Business Administration

Aktuelle Themen der TU Umweltinitiative
Ausgewählte Probleme des operativen Controllings
Behavioral Finance
Betriebswirtschaftliche Entscheidungslehre
Cases in Management Accounting
Distributionslogistik
Einführung in die Betriebswirtschaftslehre und Organisation
Einführung in die Energiewirtschaft
Energiewirtschaft in der Praxis I
Erneuerbare Energien – Technologie und Potentiale
Ertragsteuern
Essentials of Leadership and Management
Fallstudien in Energie und Umwelt
Financial Modeling
Grundlagen Controlling
Grundlagen des Rechnungswesens
Innovation and Product Management
Internationale Rechnungslegung
Investition und Finanzierung II
Jahresabschluss, Investition und Finanzierung
Konzernrechnungslegung
Kostenorientierte Entscheidungen
Leading People in Innovation
Management Science
Marketing Mix
Marketing und Nachhaltige Unternehmensführung
Nachhaltigkeitsmanagement in der Praxis
Operatives Produktionsmanagement
Praktische Aspekte des Gründungs- und Innovationsmanagements
Produktion und Logistik
Scenario Planning
Selected Topics in Organization and Management
Spezialfragen der internationalen Rechnungslegung
Stakeholdermanagement
Strategisches Produktionsmanagement

Sustainable Entrepreneurship

Trends im Management Accounting – Aktuelle Fragen und Forschungsergebnisse

Unternehmerisches Handeln

Value Chain Management

Economics

Angewandte Wirtschaftspolitik

Applied Econometrics

Einführung in die Makroökonomie

Einführung in die Mikroökonomie

Einführung in die Volkswirtschaftslehre

Empirische Wirtschaftsforschung

Geldpolitik

Implikationen der demographischen Entwicklung

International Trade: Theory and Policy

Introduction to Economic Growth

Ökonometrie – Grundlagen

Ökonometrie – Vertiefung

Ökonomische Theorie der Politik

Ökonomische Ungleichheit

Strategie und Wettbewerb

Business Education and Management Training

Ausgewählte grundlegende Fragestellungen des Personalmanagements

Einführung in das kaufmännische Bildungswesen

Grundlagen des Personalmanagements

Methoden empirischer Sozialforschung in der kaufmännischen Aus- und Weiterbildung

Business Information Systems

Business Process Management

Grundlagen Betrieblicher Anwendungssysteme

Information Systems Success

Informationsmanagement und E-Government

Informationssystementwicklung

Machine Learning for Business Analytics

Engineering Sciences

Adaptive und intelligente Systeme

Aufbau- und Verbindungstechnik der Elektronik

Betrieblich-logistische Strukturen des Luftverkehrs (Air Traffic and Airport Operations)

Communication, Navigation, Surveillance (CNS)
Datenerhebung und -analyse in der Verkehrsplanung
Digitale Signalverarbeitung
Dynamische Netzwerke
Einführung in die Systemtheorie
Einführung in die Verfahrenstechnik und Naturstofftechnik
Elektrische und magnetische Felder
Entwurf und Betrieb virtueller Mobilitätssysteme
Fahrzeugkommunikation und Ortung
Fertigungstechnik und Produktion
Fügetechnik flexibler Materialien
Geräteentwicklung
Grundlagen der Bauausführung
Grundlagen der Elektrotechnik
Grundlagen der Kältetechnik und Wärmepumpen / Principles of Refrigeration and Heat Pumps
Grundlagen der Straßenverkehrstechnik
Grundlagen der Strömungsmechanik
Grundlagen des Verarbeitungsmaschinenbaus
Grundzüge des Leichtbaus
Kinematik und Kinetik – Grundlagen
Konstruktion
Konstruktionslehre
Luftfahrzeugauslegung
Luftfahrzeugeigenschaften (Flight Performance and Aerodynamics)
Luftfahrzeugfertigung
Luftfahrzeuginstandhaltung
Luftfahrzeugkonstruktion
Luftfahrzeugsysteme
Mathematik im ingenieurwissenschaftlichen Kontext
Modellierung von Verkehrssystemen
Physik und Chemie
Produktionsautomatisierung
Raum- und Verkehrsplanung
Raumfahrttechnik
Regenerative Energiequellen

Safety und Airline Management (Safety and Airline Management)
Satellitenkommunikation und positionsbezogene Kommunikationssysteme
Sound Design
Statik und Festigkeitslehre
Structural Use of Glass
Technische Mechanik Vertiefung
Terminal Operations
Theorie und Technik der Informationssysteme
Verkehrs- und Infrastrukturplanung
Verkehrssicherheit
Verkehrstelematiknetze
Virtuelle Realität

Supplementary Qualifications

Analysis im wirtschaftswissenschaftlichen Kontext
Data Management Foundations
Deskriptive Statistik
Einführung in die theoretische Informatik
Grundlagen Verkehrspolitik
Induktive Statistik
Infrastrukturpolitik und Regulierung
Lineare Algebra im wirtschaftswissenschaftlichen Kontext
Planung und Steuerung von Verkehrs- und Logistikprozessen
Privatrecht im wirtschaftswissenschaftlichen Kontext
Rechnernetze
Regional- und Stadtökonomie
Softwaretechnologie
Umwelt und Verkehr

Foreign Languages

Aufbau Berufs- und Wissenschaftssprache C1
Fremdsprache A2
Fremdsprache A2+ – Europa und Mittelmeerraum
Fremdsprache A2+ – Ostasiatische Sprache
Fremdsprache B1 – Europa und Mittelmeerraum
Fremdsprache B1 – Ostasiatische Sprache
Fremdsprache B1+ – Europa und Mittelmeerraum
Fremdsprache B1+ – Ostasiatische Sprache

Business Administration

Module number	Module name	Responsible lecturer
WW-BA-114-ATTU WW-D-114-ATTU	Aktuelle Themen der TU Umweltinitiative	Prof. Dr. Dominik Möst ee2@mailbox.tu-dresden.de
Qualification objectives	The students are proficient in environmentally relevant scientific facts. The students are familiar with the current state of development of various focal points of current environmental topics and are able to transfer this to practical issues.	
Contents	The contents of the module are scientifically sound up-to-date content on different focal points of environmental problems on the ecological, economic and social level of sustainability.	
Teaching and learning methods	Lecture: 4 hours per week Seminar: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	BA WiWi, BA WiPäd, D WiIng, D WiInf: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-106-APOC WW-D-106-APOC	Ausgewählte Probleme des operativen Controllings	Prof. Dr. Thomas Günther lehrstuhl.controlling@tu-dresden.de
Qualification objectives	The students are familiar with selected issues in finance and accounting related to the operational management of companies.	
Contents	The module covers selected issues and methods in operational controlling, such as internal accounting, investment decisions, and risk management methods.	
Teaching and learning methods	Seminar: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner. The seminar is limited to 30 participants, selection based on the order of enrollment.	
Prerequisites for participation	Students are expected to have acquired the skills covered in the modules "Introduction to Business Administration," "Fundamentals of Accounting," and "Financial Statements, Investment, and Financing."	
Usability	BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Complex assesment, 15 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-105-BEFI WW-D-105-BEFI	Behavioral Finance	Prof. Dr. Lars Hornuf arite.schrehardt@tu-dresden.de
Qualification objectives	Students are able to understand and critically classify the explanatory approaches of neoclassical and behavioral capital market theory.	
Contents	In this module, students develop an understanding of the influence psychological factors have on the behaviour of investors and thus on capital markets. In contrast to neoclassical capital market theory, the views and models of behavioral finance are introduced. In particular, important behavioural anomalies and their effects are analysed. Finally, students learn how the concepts of behavioral finance can be used in investment advice and corporate management.	
Teaching and learning methods	Lecture: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	Basic knowledge of the financial industry is required, as taught in the module Annual Financial Statements, Investment and Financing.	
Usability	BA Wiwi, D WiInf, D WiIng: Fields Business Administration and Economics, Presentation and Discussion BA WiPäd: Field Business Administration and Economics Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Complex assesment, 30 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-112-BWEL WW-D-112-BWEL	Betriebswirtschaftliche Entscheidungslehre	Prof. Dr. Rainer Lasch rainer.lasch@tu-dresden.de
Qualification objectives	Students are able to describe basic procedures in various business decision-making situations. They are able to select appropriate procedures for decisions under certainty, risk and uncertainty and to apply them appropriately to economic decision-making situations.	
Contents	The contents of the module are the basics of decision-making theory, decisions in safety, uncertainty, risk and variable information structure, basics of game theory, committee decisions and multi-stage decisions.	
Teaching and learning methods	Lecture: 2 hours per week Tutorial: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Introduction to Business Administration and Organization, Introduction to Economics, Introduction to Business Informatics, Production and Logistics, Analysis in an Economic Context, and Linear Algebra in an Economic Context are required.	
Usability	BA Wiwi, D WiInf, D WiIng: Fields Business Administration and Economics, Methods and Procedures BA WiPäd: Fields Business Administration and Economics, Supplementary Qualifications Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-101-CIMA WW-D-101-CIMA	Cases in Management Accounting	Prof. Dr. Peter Schäfer maac@tu-dresden.de
Qualification objectives	After completing the module, students will be able to identify and structure problems of controlling in corporate practice and its causes, identify and evaluate possible solutions, and develop, present and discuss a suitable solution. On the basis of case studies, students learn to develop solutions to problems of management accounting in corporate practice.	
Contents	The contents of the module are cost accounting systems, budgeting, transfer pricing and variance analyses.	
Teaching and learning methods	Seminar: 2 hours per week Independent study The language of the module is English. The seminar is limited to 16 participants, selection based on the order of enrollment.	
Prerequisites for participation	Basic knowledge of cost accounting and controlling is required, as taught in the Fundamentals of Accounting module, for example.	
Usability	BA Wiwi, D WiInf, D WiIng: Fields Business Administration and Economics, Presenting and Discussing BA WiPäd: Fields Business Administration and Economics Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Combined term paper, 50 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-112-DILO WW-D-112-DILO	Distributionslogistik	Prof. Dr. Rainer Lasch logistik@mailbox.tu-dresden.de
Qualification objectives	The students have in-depth knowledge of logistics. You will be able to apply quantitative methods to design and optimize transportation and transshipment problems, network flow problems, roundtrip and tour problems, and site management. In addition, they can solve tasks in the field of physical distribution. Furthermore, students are able to apply presentation and rhetoric techniques.	
Contents	The contents of the module are transport and transshipment planning, network flow planning, round trip and tour planning, location management and physical distribution.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills to be acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Complex assesment, 15 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-EBWL WW-D-EBWL	Einführung in die Betriebswirtschaftslehre und Organisation	Prof. Dr. Michael Schefczyk mandy.windisch@tu-dresden.de
Qualification objectives	Students know the terms and principles of business administration and the basics of organizational management. They master the methodological tools and systematic orientation. Students are able to successfully deal with business management issues, recognize problems of organizational management and assess the effectiveness of organizational design measures.	
Contents	Contents of the module are the basics of business administration, in particular legal forms, marketing, innovations and property rights, technology management, production and procurement, service management, investment and financing, project management, controlling, theories of organizational design, models of organizational differentiation, models of organizational integration, formal and informal organization, motivational organizational design, organizational culture, organizational change and ethical behaviour in organizations.	
Teaching and learning methods	Lecture: 3 hours per week Practical: 1 hour per week Tutorial: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics It creates the prerequisites for the modules in the compulsory and elective fields, which are listed under "Prerequisites for participation."	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-114-EENW WW-D-114-EENW	Einführung in die Energiewirtschaft	Prof. Dr. Dominik Möst ee2@mailbox.tu-dresden.de
Qualification objectives	Students are able to reproduce basic terms, definitions, concepts and methods of the energy industry and name relevant parameters of energy sources. In addition, students are able to explain techno-economic relationships, concepts and methods of renewable energies and are able to illustrate fundamental relationships in the energy industry, such as ho-telling, and to calculate physical relationships as well as to analyse practi-cal problems against an energy industry background.	
Contents	The contents of the module are basic terms, relationships and market forms in the energy industry Value chains of conventional and renewable energy sources including their effects on the energy industry, in particular the energy sources oil, gas, coal, nuclear energy, renewable energies as well as the final energy sources electricity and heat as well as practical, current topics from the energy industry.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Seminar: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills to be acquired in the modules Fundamentals of Accounting, In-troduction to Business Administration and Organization, Marketing and Sustainable Corporate Management, Annual Financial Statements, In-vestment and Financing, and Production and Logistics are required. Fur-thermore, English language skills at level B2 of the Common European Framework of Reference for Languages are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics, Supplementary Qualifications Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Portfolio, 15 hours	
Workload and Credit points	300 hours, 10 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-114-EWIP WW-D-114-EWIP	Energiewirtschaft in der Praxis I	Prof. Dr. Dominik Möst ee2@mailbox.tu-dresden.de
Qualification objectives	Students are able to prepare, present and discuss practice-relevant questions and challenges with a scientific approach.	
Contents	The content of the module is the examination of changing current issues that are applied in practice from an individual economic point of view in the field of the energy industry.	
Teaching and learning methods	Seminar: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	Basic knowledge of energy industry issues is required.	
Usability	BA Wiwi, D WiInf, D WiIng: Fields Business Administration and Economics, Presenting and Discussing BA WiPäd: Fields Business Administration and Economics Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Combined term paper, 90 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-114-EETP WW-D-114-EETP	Erneuerbare Energien – Technologie und Potentiale	Prof. Dr. Dominik Möst ee2@mailbox.tu-dresden.de
Qualification objectives	Students are able to reproduce basic terms, definitions, concepts and methods of renewable energies and name relevant parameters. Students are also able to explain techno-economic contexts as well as funding instruments and characteristics of individual renewable energy sources. In addition, students are able to classify renewable energies in the overall energy industry system and assess the potentials of renewable energies. The students are able to illustrate fundamental relationships in the field of renewable energies as well as to calculate investment decisions and physical relationships, such as electricity generation costs, and to analyze practical problems against an energy industry background.	
Contents	The content of the module is the technical and economic basics of electricity and heat generation from renewable energies as well as their integration into the overall system of the energy industry and its funding regime. This includes the energy sources wind power, solar power, hydropower, biomass, geothermal energy and, bundled other renewable energies, in particular the current state of potential and technology as well as the economic viability, subsidies and future developments.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Seminar: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills to be acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics are required. Furthermore, English language skills at level B2 of the Common European Framework of Reference for Languages are required.	
Usability	BA Wiwi, BA WiPäd, D WiInf, D WiIng: Fields Business Administration and Economics, Presenting and Discussing Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Portfolio, 60 hours	
Workload and Credit points	300 hours, 10 credit points	

Frequency	Offered each summer semester
Duration	One semester

Module number	Module name	Responsible lecturer
WW-BA-107-ERST WW-D-107-ERST	Ertragsteuern	Prof. Dr. Michael Dobler wus@mailbox.tu-dresden.de
Qualification objectives	After completing the module, students will be able to present and explain the basics of income taxation. They are able to carry out central calculations of the income taxes of individuals, individuals and other entities on the basis of the Income Tax Act, the Corporate Income Tax Act and the Trade Tax Act.	
Contents	The contents of the module are the basics, normative regulations, principles and systematics of German income tax, corporation tax and trade tax.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Annual Financial Statements, Investment and Financing, and Linear Algebra in an Economic Context are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 60 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-111-ELAM WW-D-111-ELAM	Essentials of Leadership and Management	Prof. Dr. Stefan Razinskas orga.wiwi@tu-dresden.de
Qualification objectives	Students are able to reproduce basic terms, definitions and concepts of leadership and management theory as well as to recognize and assess central management approaches in their economic and behavioral science conditions, effects and limits. In addition, they are able to illustrate fundamental relationships between the four management functions of planning, organization, leadership and control, to analyze practical management problems against a social science background and to make appropriate design decisions in the leadership context.	
Contents	The contents of the module are the basics of management theory. These are based on the four basic management functions of planning, organization, leadership and control.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is English.	
Prerequisites for participation	English language skills at basic course Abitur level as well as the skills to be acquired in the module Introduction to Business Administration and Organization are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-114-FSEU WW-D-114-FSEU	Fallstudien in Energie und Umwelt	Prof. Dr. Dominik Möst ee2@mailbox.tu-dresden.de
Qualification objectives	Students can present the contents of a practical case study in writing and illustrate the independently developed results and compare them with current results from research and practice. The students are able to calculate the questions of the case study independently, to organize themselves independently in a group and to work out solutions together. In addition, students are able to differentiate between different aspects of the energy industry and sustainable corporate management and to analyze them using methods used in these departments.	
Contents	The content of the module is current issues in the fields of energy management and sustainable corporate management.	
Teaching and learning methods	Seminar: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills to be acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics are required. Furthermore, English language skills at level B2 of the Common European Framework of Reference for Languages are required.	
Usability	BA Wiwi, D WiInf, D WiIng: Fields Business Administration and Economics, Presenting and Discussing BA WiPäd: Fields Business Administration and Economics Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Combined term paper, 90 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-101-FIMO WW-D-101-FIMO	Financial Modeling	Prof. Dr. Peter Schäfer maac@tu-dresden.de
Qualification objectives	After successful completion of the module, students will know and master concepts of business and financial planning and will be able to apply them in practice. They are able to use this knowledge to solve business decision-making problems. Students are familiar with various aspects of the modeling of integrated financial plans as well as their financial evaluation.	
Contents	The module covers concepts of business and financial planning and aspects of modelling financial plans.	
Teaching and learning methods	Seminar: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner. The seminar is limited to 12 participants, selection based on the order of enrollment.	
Prerequisites for participation	Basic knowledge of cost accounting and finance is required, as taught in the Basics of Accounting module, for example.	
Usability	BA Wiwi, D WiInf, D WiIng: Fields Business Administration and Economics, Presenting and Discussing BA WiPäd: Fields Business Administration and Economics Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Combined term paper, 20 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-106-GRCO WW-D-106-GRCO	Grundlagen Controlling	Prof. Dr. Thomas Günther lehrstuhl.controlling@tu-dresden.de
Qualification objectives	The students understand the tasks and goals of controlling and its organizational embedding in the company. You will have an overview of the various subsystems of controlling and will be able to carry out basic company analyses using suitable controlling instruments.	
Contents	The content of the module is the basics of controlling, its subsystems and embedding in the company.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German. The module is limited to 100 participants, selection based on the order of enrollment.	
Prerequisites for participation	Business knowledge is required, as taught for example in the modules Introduction to Business Administration and Organization, Basics of Accounting, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Non-public oral examination as a group examination, 15 minutes for the individual examination supervisor	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-GREW WW-D-GREW	Grundlagen des Rechnungswesens	Prof. Dr. Peter Schäfer maac@tu-dresden.de
Qualification objectives	Students are familiar with internal and external accounting. They know how cost and performance accounting in companies can be designed to suit the problem, understand how individual business transactions are mapped in financial accounting and know the relationships between the balance sheet and income statement.	
Contents	The module covers cost and activity accounting in companies and the methods of cost type, cost center and cost unit accounting.	
Teaching and learning methods	Lecture: 3 hours per week Practical: 3 hour per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics It creates the prerequisites for the modules in the compulsory and elective fields, which are listed under "Prerequisites for participation."	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-113-IAPM WW-D-113-IAPM	Innovation and Product Management	Prof. Dr. Michael Schefczyk mandy.windisch@tu-dresden.de
Qualification objectives	After completing the module, students will be able to independently analyze complex questions from the areas of product development and innovation management in groups and apply them to relevant practice-related questions in a situation-appropriate manner in order to develop targeted solutions.	
Contents	The content of the module is the basics of innovation and product management, in particular the different phases of the innovation process, from idea generation to the exploitation of technologies.	
Teaching and learning methods	Lecture: 2 hours per week Seminar: 3 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The competencies to be acquired in the module Introduction to Business Administration and Organization are required. Furthermore, English language skills at level B2 of the Common European Framework of Reference for Languages are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations. It creates the groundwork for the module "Practical Aspects of Start-up and Innovation Management."	
Examination	Term paper, 50 hours Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-107-INRL WW-D-107-INRL	Internationale Rechnungslegung	Prof. Dr. Michael Dobler wus@mailbox.tu-dresden.de
Qualification objectives	After completing the module, students will be able to present and explain the basics, instruments and central regulations of accounting according to International Financial Reporting Standards (IFRS). You will be able to apply this knowledge in the preparation and interpretation of IFRS financial statements.	
Contents	The content of the module is the institutional foundations, purposes and instruments of international accounting according to IFRS as well as the requirements for accounting for material balance sheet items according to IFRS.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Annual Financial Statements, Investment and Financing, and Linear Algebra in an Economic Context are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 60 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-105-INFI WW-D-105-INFI	Investition und Finanzierung II	Prof. Dr. Lars Hornuf arite.schrehardt@tu-dresden.de
Qualification objectives	The students internalize the relationship between risk and return in the evaluation of financial flows from the capital market to the securities level. They can determine efficient securities portfolios, the choice of an adequate discount rate, the optimal debt of a company and the value of an indebted company and project. You can anticipate the rational behavior of individual stakeholders and find incentive-compatible solutions.	
Contents	Students are familiarized with the following important financial models of efficient capital and securities markets: modern portfolio theory, the capital asset pricing model, and capital structure theory. Rational decisions and a set of instruments for investors and companies are derived from this. Solution strategies for relevant incentive problems from information asymmetries round off the event.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Tutorial: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The knowledge and skills to be acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Linear Algebra in an Economic Context and Annual Financial Statements, Investment and Financing are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 60 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-JIFI WW-D-JIFI	Jahresabschluss, Investition und Finanzierung	Prof. Dr. Michael Dobler wus@mailbox.tu-dresden.de
Qualification objectives	Students are familiar with the purposes and instruments of the annual financial statements staff function, understand the central regulations on annual financial statements under German commercial and tax law, are proficient in various methods of investment appraisal, understand the methods of financial planning and are familiar with the possibilities of external and internal financing of the financial and capital requirements of companies. They are able to apply this knowledge in a problem-oriented manner when preparing and analyzing annual financial statements, calculating the profitability of investment projects and preparing financial plans.	
Contents	The module covers the theoretical principles of external accounting, the commercial law regulations for merchants and corporations, the main differences in accounting between German commercial law and German tax law, the theoretical and financial mathematical principles and methods for investment decisions and the possibilities of corporate financing.	
Teaching and learning methods	Lecture: 3 hours per week Practical: 2 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization and Analysis in an Economic Context are assumed.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The module creates the prerequisites for the elective modules listed under "Prerequisites for participation."	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-107-KRLG WW-D-107-KRLG	Konzernrechnungslegung	Prof. Dr. Michael Dobler wus@mailbox.tu-dresden.de
Qualification objectives	Upon completion of the module, students will have mastered the normative, procedural, and accounting fundamentals of consolidated financial reporting based on International Financial Reporting Standards (IFRS). They will be able to apply this knowledge in the preparation and analysis of consolidated financial statements.	
Contents	The module covers the economic and legal fundamentals as well as processes and methods, including accounting techniques for consolidated financial reporting in accordance with IFRS.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Annual Financial Statements, Investment and Financing, and Linear Algebra in an Economic Context are required. The course is designed to provide students with an understanding of the economic and social significance of accounting and financial management. The course covers the following topics: - The role of accounting and financial management in the economic and social context - The role of accounting and financial management in the economic and social context	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 60 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-101-KOEN WW-D-101-KOEN	Kostenorientierte Entscheidungen	Prof. Dr. Peter Schäfer maac@tu- dresden.de
Qualification objectives	Students can prepare decisions using cost information and other internal accounting information. They are able to perform quantitative analyses based on such information and use the results to derive strategic measures and decisions, as well as compare different cost allocation methods and select appropriate methods for different decision-making problems. In addition, they can explain the goals and challenges of decentralized control and develop decentralized control systems and implement them in organizations.	
Contents	The module covers topics such as results analysis including variance analysis, activity-based costing, target costing, and the management of decentralized units using transfer prices.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	Business management knowledge is required, as taught in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 60 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-111-LPII WW-D-111-LPII	Leading People in Innovation	Prof. Dr. Stefan Razinskas orga.wiwi@tu-dresden.de
Qualification objectives	Students will be able to reproduce basic terms, definitions and concepts of innovation management and recognize and assess central approaches to organizational innovation management in terms of their behavioral science conditions, effects and limitations. In addition, they are able to illustrate fundamental management issues of innovative companies, analyze practical problems of innovation management against a social science background and make appropriate design decisions for innovation-promoting behavior management.	
Contents	Behavioral science principles of innovation management. These are based on the work of individuals and teams in innovative companies and the organizational framework conditions in which they carry out their creative activities.	
Teaching and learning methods	Lecture: 2 hours per week, Practical: 2 hours per week, Independent study The language of the module is English.	
Prerequisites for participation	English language skills at basic A-level and the skills to be acquired in the module Introduction to Business Administration and Organization.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-103-MGSC WW-D-103-MGSC	Management Science	Prof. Dr. Udo Buscher bwlim@tu-dresden.de
Qualification objectives	The students are familiar with basic tasks and methods of operations research. They are able to select appropriate decision-support procedures and apply them in an appropriate manner to the business problems.	
Contents	Contents of the module are the basics of decision support in operational practice, linear optimization and simplex methods, sensitivity analyses, integer programming, heuristic solution methods and metaheuristics, simulation and data-driven methods.	
Teaching and learning methods	Lecture: 2 hours per week Tutorial: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Introduction to Business Administration and Organization, Introduction to Economics, Introduction to Business Informatics, Production and Logistics, Analysis in an Economic Context, and Linear Algebra in an Economic Context are required.	
Usability	BA WiWi, D WiIng, D WiInf: Fields Business Administration and Economics, Methods and Procedures BA WiPäd: Fields Business Administration and Economics, Supplementary Qualifications Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-104-MAMI WW-D-104-MAMI	Marketing Mix	Prof. Dr. Florian Siems florian.siems@tu-dresden.de
Qualification objectives	After completing the module, students will understand the various marketing mix instruments. You will be able to apply the analysis tools of the marketing mix instruments, formulate goals based on them and plan and implement the measures.	
Contents	The content of the module is the instruments of the marketing mix, in particular communication, pricing and product policy. This includes the main institutional specificities of these instruments (e.g. specificities for industrial goods and services).	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The skills to be acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics are required. Furthermore, English language skills at level B2 of the Common Euro-pean Framework of Reference for Languages are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 60 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-MNUF WW-D-MNUF	Marketing und Nachhaltige Unternehmensführung	Prof. Dr. Florian Siems florian.siems@tu-dresden.de
Qualification objectives	Students know the most important fundamentals and principles of sustainable corporate management and marketing. They will be able to define terms in marketing and sustainable corporate management and will be able to apply selected theories and approaches to practical issues and real companies.	
Contents	Contents of the module are basic theories, approaches, concepts of marketing and marketing strategies as well as informational basics, in particular consumer behavior and market research, basics of sustainable corporate management related to the three dimensions "economy", 'ecology' and "social/society", concepts for the implementation of sustainable development in the company and methods of sustainability assessment.	
Teaching and learning methods	Lecture: 3 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the module Analysis in an economic context are assumed. The following online course is suitable for preparation: Virtual Academy for Sustainability, University of Bremen, https://oncourse.uni-bremen.de .	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The module creates the prerequisites for the elective modules listed under "Prerequisites for participation."	
Examination	Complex assesment, 16.5 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-102-NMPR WW-D-102-NMPR	Nachhaltigkeitsmanagement in der Praxis	Prof. Dr. Remmer Sassen lehre_bu@mailbox.tu-dresden.de
Qualification objectives	Students are able to apply various methods of sustainability assessment, in particular life cycle analysis, to products in a simple form. They can thus make ecologically-oriented decisions in a wide range of issues in the entrepreneurial environment.	
Contents	The content of the module is sustainability management instruments, such as life cycle assessment procedures or life cycle analysis according to ISO 14040.	
Teaching and learning methods	Lecture: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics are required. Furthermore, English language skills at level B2 of the Common European Framework of Reference for Languages are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-103-OPPM WW-D-103-OPPM	Operatives Produktionsmanagement	Prof. Dr. Udo Buscher bwlim@tu-dresden.de
Qualification objectives	The students are familiar with the various problems of operational production planning and control and can analyze them in depth. They are able to apply quantitative methods, model practical problems and solve them using suitable mathematical methods. They can assess the benefits, but also the weaknesses and limitations of problem-solving approaches in production planning.	
Contents	The contents of the module are demand forecasting, production program planning, material requirements planning, short-term capacity balancing and process planning.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills to be acquired in the modules Introduction to Business Administration and Organization, Basics of Accounting, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	More than three registered students: written exam, 90 minutes Up to three registered students: non-public oral examination, 20 minutes duration as an individual examination	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-113-PAGI WW-D-113-PAGI	Praktische Aspekte des Gründungs- und Innovationsmanagements	Prof. Dr. Michael Schefczyk mandy.windisch@tu-dresden.de
Qualification objectives	Students are able to understand a scientific or practical problem of a young company/innovation management in a multi-layered way. The students can independently develop materials for all important planning areas and develop a structured solution according to the task. Students have the ability to work independently and solve problems in a structured way.	
Contents	The contents of the module are relevant aspects of starting a business and innovation management. These include, for example, new business models, market and competition analyses, market entry strategies, marketing strategies, personnel, financing and intellectual property rights aspects. These are considered scientifically and/or practically.	
Teaching and learning methods	Project: 3 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner. The project is limited to 16 participants, selection based on the order of enrollment.	
Prerequisites for participation	The start-up-related knowledge and skills acquired in the modules Innovation and Product Management and Entrepreneurial Action are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Term paper, 90 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-PRLG WW-D-PRLG	Produktion und Logistik	Prof. Dr. Udo Buscher udo.buscher@tu-dresden.de
Qualification objectives	The students are familiar with essential tasks in the areas of production and logistics. You will understand the theoretical basis for the analysis of production processes and cost changes. They are able to carry out production program planning as well as to design production processes effectively and efficiently, taking into account the selected manufacturing organization. The students are familiar with analysis and design principles for the logistics system and for the subsystems as well as rules for the coordination of logistics processes. They are able to apply quantitative methods in logistics, model practical logistics problems and solve them using suitable mathematical methods.	
Contents	Contents of the module are production and cost theory, program planning, supply planning, implementation planning, building blocks of corporate logistics, basics of optimization in networks, special use cases of distribution logistics and basics of procurement logistics.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Introduction to Business Administration and Organization, Fundamentals of Accounting and Analysis in an Economic Context and Linear Algebra in an Economic Context are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The module creates the prerequisites for the elective modules listed under "Prerequisites for participation."	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-102-SCPL WW-D-102-SCPL	Scenario Planning	Prof. Dr. Remmer Sassen Lehre_bu@mailbox.tu-dresden.de
Qualification objectives	After completing the module, students will be able to analyze and strategically prepare future developments that cannot be planned. You will know the methodological basics of scenario planning and apply them successively to real situations.	
Contents	The content of the module is the application of the management tool scenario planning, the identification of trends based on current social issues, the development of future scenarios and the development of solution strategies for organizations.	
Teaching and learning methods	Seminar: 2 hours per week Independent study The language of the module is English. The seminar is limited to 20 participants, selection based on the order of enrollment.	
Prerequisites for participation	The skills to be acquired in the modules Introduction to Business Administration and Organization, Basics of Accounting, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics are required. Furthermore, English language skills at level B2+ of the Common European Framework of Reference for Languages are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Term paper, 90 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-111-STOM WW-D-111-STOM	Selected Topics in Organization and Management	Prof. Dr. Stefan Razinskas orga.wiwi@tu-dresden.de
Qualification objectives	The students are familiar with fundamental questions of organization and management. They are able to prepare, represent, analyze and discuss these questions in teams using scientific methods. Students have key qualifications in the areas of rhetoric, presentation and presentation techniques as well as social skills and the ability to work in a team.	
Contents	The contents of the module are theoretical and empirical research contributions of an application-oriented nature to annually changing, fundamental problems of organizational and management theory.	
Teaching and learning methods	Seminar: 3 hours per week Independent study The language of the module is English. The seminar is limited to 20 participants, selection based on the order of enrollment.	
Prerequisites for participation	The module requires knowledge and skills as taught in the module Introduction to Business Administration and Organization. Furthermore, English language skills at level B2 of the Common European Framework of Reference for Languages are required.	
Usability	BA WiWi, D WiIng, D WiInf: Fields Business Administration and Economics, Presenting and Discussing BA WiPäd: Field Business Administration and Economics Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Complex assesment, 90 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-107-SIRL	Spezialfragen der internationalen Rechnungslegung	Prof. Dr. Michael Dobler wus@mailbox.tu-dresden.de
Qualification objectives	After completing the module, students will have in-depth knowledge of accounting according to International Financial Reporting Standards (IFRS). You will be able to work on and solve selected special problems and application-oriented issues of accounting in accordance with IFRS. Students are able to contrast and appreciate normative concepts of accounting.	
Contents	The module focuses on special regulatory cases as well as practice-relevant special features of accounting according to IFRS.	
Teaching and learning methods	Lecture: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Financial Statements, Investment and Financing, Linear Algebra in an Economic Context and International Accounting are required.	
Usability	BA Wiwi: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 60 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-102-STHM WW-D-102-STHM	Stakeholdermanagement	Prof. Dr. Remmer Sassen Lehre_bu@mailbox.tu-dresden.de
Qualification objectives	<p>Upon completion, students will be able to analyze the macro and micro environment of a company. To this end, they will be able to analyze political, economic, social, technological, ecological, and legal influences as well as the stakeholders of organizations or companies and integrate them using the example of company-specific decisions . In addition, students are able to solve problems appropriately and present their proposed solutions in written form. They can identify, classify, and analyze stakeholders. Students understand scientific texts and can apply theory to current topics. Students are able to transfer theoretical approaches to practical examples in interactive group work. Students are able to analyze the macro- and micro-environment of a company.</p>	
Contents	<p>The module covers the basics of stakeholder management, including stakeholder theory, stakeholder identification, and stakeholder management, with a particular focus on environmental and social issues and a focus on corporate interaction and communication as well as learning and change processes, in particular the influence of framework conditions and stakeholder groups on decision-making in companies, the decision-making process in companies, and concepts for stakeholder participation and their implementation in practice. The module is taught in English.</p>	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics are required. Furthermore, English language skills at level B2 of the Common European Framework of Reference for Languages are required.</p>	

Usability	BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.
Examination	Written exam, 60 minutes
Workload and Credit points	150 hours, 5 credit points
Frequency	Offered each winter semester
Duration	One semester

Module number	Module name	Responsible lecturer
WW-BA-103-STPM WW-D-103-STPM	Strategisches Produktionsmanagement	Prof. Dr. Udo Buscher bwlim@tu-dresden.de
Qualification objectives	The students know the strategic tasks that have to be fulfilled in the context of production management. They are able to propose solutions to the planning problems in question on the basis of quantitative decision models and to analyse them. They can assess the benefits, but also the weaknesses and limitations of the problem-solving approaches in strategic planning.	
Contents	The contents of the module are basic instruments of strategic management, strategic development planning, site selection and layout planning.	
Teaching and learning methods	Lecture: 2 hours per week Practical 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills to be acquired in the modules Introduction to Business Administration and Organization, Basics of Accounting, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics are required.	
Usability	BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	More than three registered students: written exam, 90 minutes Up to three registered students: non-public oral examination, 20 minutes duration as an individual examination	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-121-SUES WW-D-121-SUES	Sustainable Entrepreneurship	Jun.-Prof. Dr. Samantha Dijkstra-Silva Sustainability@tu-dresden.de
Qualification objectives	Students are familiar with the fundamentals of sustainable entrepreneurship and can understand this in the context of sustainability management. They understand the various dimensions that a sustainable company takes into account and can apply them.	
Contents	The module covers current findings in sustainability research and specific case studies from corporate practice with a focus on sustainable entrepreneurship.	
Teaching and learning methods	Seminar: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner. The module is limited to 20 participants, selection based on the order of enrollment.	
Prerequisites for participation	The skills acquired in the modules Introduction to Business Administration and Organization as well as Marketing and Sustainable Business Management are required. Furthermore, English language skills at level B2+ of the Common European Framework of Reference for Languages are required.	
Usability	BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Complex assessment, 90 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-101-TMAC WW-D-101-TMAC	Trends im Management Accounting – Aktuelle Fragen und Forschungsergebnisse	Prof. Dr. Peter Schäfer maac@tu-dresden.de
Qualification objectives	Students are familiar with current issues in management accounting research and can classify them in scientific discourse. They are able to compare research designs, critically evaluate methodological approaches, and interpret research results. In addition, they can apply these findings to optimize controlling systems in business practice.	
Contents	The module covers current issues in management accounting research. It offers a variety of topics, e.g., in the areas of sustainability controlling, experimental controlling research, and ethics and management accounting. In addition, the module includes the analysis and discussion of relevant scientific literature from international journals as well as the discussion of research methods and designs.	
Teaching and learning methods	Seminar: 2 hours per week Independent study The language of the module is German. The module is limited to 12 participants, selection based on the order of enrollment.	
Prerequisites for participation	Knowledge of accounting and methodological principles, as taught in modules such as Fundamentals of Accounting and Statistics, is required. In addition, basic knowledge of scientific work is required, as taught in modules such as Scientific and Practical Work.	
Usability	BA Wiwi, D WiInf, D WiIng: Fields Business Administration and Economics, Presenting and Discussing BA WiPäd: Field Business Administration and Economics Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Complex assessment, 20 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-113-UNHA WW-D-113-UNHA	Unternehmerisches Handeln	Prof. Dr. Michael Schefczyk mandy.windisch@tu-dresden.de
Qualification objectives	After completing the module, students will be able to independently analyze complex issues from the field of entrepreneurship in groups and apply them to practice-related issues in a situation-appropriate manner in order to develop targeted solutions. They understand the requirements and contents of a business plan and are able to evaluate business models from the business idea to market launch.	
Contents	The contents of the module include the basics of entrepreneurial action. These include the entrepreneur as a person, the process of entrepreneurship and the planning and development of start-up projects.	
Teaching and learning methods	Lecture: 2 hours per week Project: 3 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner. The module is limited to 130 participants, selection based on the order of enrollment.	
Prerequisites for participation	The competencies to be acquired in the modules Introduction to Business Administration and Organization and Marketing and Sustainable Corporate Management are required.	
Usability	BA Wiwi, BA WiPäd, D WiInf, D WiIng; Field Business Administration and Economics The selection must be made in accordance with the examination regulations. It creates the prerequisites for the module "Practical Aspects of Start-up and Innovation Management."	
Examination	Term paper, 100 hours Written exam, 90 minutes	
Workload and Credit points	300 hours, 10 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-102-VACM WW-D-102-VACM	Value Chain Management	Prof. Dr. Remmer Sassen lehre_bu@mailbox.tu-dresden.de
Qualification objectives	Upon completion, students will be familiar with the primary and secondary stages of the value chain of organizations or companies and will be able to apply them to company-specific decisions. In addition, students are able to work in teams, solve problems independently, present their proposed solutions in written form and present and defend them orally.	
Contents	The contents of the module are social and environmental aspects in the context of management systems in the functional areas of procurement, production, sales, disposal, research and development, logistics, personnel and organization, marketing and controlling, in particular the importance of the individual stages of the global value chain with regard to the value creation of the company, the influence of the value chain on decision-making in companies as well as concepts for value chain management and their implementation in practice.	
Teaching and learning methods	Lecture: 1 hour per week Practical: 1 hour per week Seminar: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills to be acquired in the modules Fundamentals of Accounting, Introduction to Business Administration and Organization, Marketing and Sustainable Corporate Management, Annual Financial Statements, Investment and Financing, and Production and Logistics are required. Furthermore, English language skills at level B2 of the Common Euro-pean Framework of Reference for Languages are required.	
Usability	BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Term paper, 90 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Economics

Module number	Module name	Responsible lecturer
WW-BA-201-AWIP WW-D-201-AWIP	Angewandte Wirtschaftspolitik	Prof. Dr. Alexander Kemnitz alexander.kemnitz@tu-dresden.de
Qualification objectives	The students are familiar with current economic policy issues. They are able to analyze and discuss these questions using theoretical and empirical methods.	
Contents	The contents of the module are theoretical and empirical research contributions to current applied problems of economic policy.	
Teaching and learning methods	Seminar: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	English language skills at basic course Abitur level as well as the skills to be acquired in the modules Introduction to Microeconomics and Introduction to Macroeconomics are required.	
Usability	BA WiWi, D WiInf, D WiIng: Fields Business Administration and Economics, Presenting and Discussing BA WiPäd: Field Business Administration and Economics Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Combined term paper, 90 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-205-APEC WW-D-205-APEC	Applied Econometrics	Prof. Dr. Kamila Cygan-Rehm wiwi-econometrics@tu-dresden.de
Qualification objectives	Students are able to apply common methods of empirical economic research and propose solutions to typical challenges of data analysis in an economic policy and business context. They are able to analyze specific questions, propose suitable analysis methods, deal critically with the central assumptions and assess the quality of empirical analyses. Students will be able to work with statistical software.	
Contents	Basic methods of applied econometrics, such as multiple linear regression models, linear probability models, hypothesis tests, as well as an intuitive introduction to causal analysis (difference-in-differences, regression discontinuity, etc.).	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is English. Participation is limited to 40 participants; selection based by lottery.	
Prerequisites for participation	Basic knowledge of statistics and econometrics as taught, for example, in the modules Deductive Statistics, Inductive Statistics and Econometrics - Fundamentals; knowledge of English at level B2.	
Usability	BA Wiwi, D WiInf, D WiIng: Fields Business Administration and Economics, Methods and Procedures, Supplementary Qualifications BA WiPäd: Fields Business Administration and Economics, Supplementary Qualifications Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-EMAK WW-D-EMAK	Einführung in die Makroökonomie	Prof. Dr. Stefan Eichler stefan.eichler@tu-dresden.de
Qualification objectives	After completing the module, students will be able to analyze macroeconomic relationships within the framework of models and interpret and graphically present the results. They will be able to derive the economic consequences of changes in economic policy or exogenous framework conditions in the context of models and explain them in practice.	
Contents	The module covers the basics of macroeconomic analysis. This includes national accounts, the interaction of supply and demand on goods and money markets in open and closed economies, the mechanisms of interaction between monetary and fiscal policy measures and economic growth processes.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	Students of the Bachelor's degree programs in Economics, Business Education and International Relations as well as the Diploma degree programs in Business Informatics and Industrial Engineering are required to have the skills acquired in the Introduction to Economics module. Students on the Bachelor's degree course in Transport Economics are required to have the skills acquired in the module Fundamentals of Economics and Transport Economics.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics It creates the prerequisites for the elective modules listed under "Prerequisites for participation."	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-EMIK WW-D-EMIK	Einführung in die Mikroökonomie	Prof. Dr. Christian Leßmann christian.lessmann@tu-dresden.de
Qualification objectives	After completing the module, students will be familiar with basic concepts of microeconomics. They will be able to understand and analyze the microeconomic decisions of households and companies and transfer them to other contexts.	
Contents	The module covers the basics of household and production theory as well as welfare economics.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Tutorial: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	Students of the Bachelor's degree programs in Economics, Business Education and International Relations as well as the Diploma degree programs in Business Informatics and Industrial Engineering are required to have the skills acquired in the Introduction to Economics module. Students on the Bachelor's degree course in Transport Economics are required to have the skills acquired in the module Fundamentals of Economics and Transport Economics.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics It creates the prerequisites for the elective modules listed under "Prerequisites for participation."	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-EVWL WW-D-EVWL	Einführung in die Volkswirtschaftslehre	Prof. Dr. Marcel Thum marcel.thum@tu-dresden.de
Qualification objectives	Students are familiar with economic concepts and procedures. They recognize economic problems and are able to present them appropriately.	
Contents	The module covers central economic concepts as well as basic microeconomic and macroeconomic problems and methods.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics It creates the prerequisites for the modules in the compulsory and elective fields, which are listed under "Prerequisites for participation."	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-205-EMWF WW-D-205-EMWF	Empirische Wirtschaftsforschung	Prof. Dr. Kamila Cygan-Rehm wiwi-econometrics@tu-dresden.de
Qualification objectives	The students are familiar with the methodological foundations of empirical economic research and its possible applications to current issues from the economic policy and business context. They improve their communicative, intercultural and social skills. In addition, they can assess the quality of empirical studies with regard to the methods used and the database.	
Contents	The content of the module is common quantitative methods of empirical economic research, esp. randomized studies, multiple linear regression, so-called natural experiments, as well as their applications to practical operational and economic policy issues, e.g. from the fields of personnel economics, education policy, family economics.	
Teaching and learning methods	Seminar: 2 hours per week Independent study The language of the module is English. The project is limited to 16 participants, selection based on the order of enrollment.	
Prerequisites for participation	Basic knowledge of statistics is required, as taught in modules such as Inductive Statistics, Introduction to Economics, Econometrics - Fundamentals, and Applied Econometrics. Furthermore, English language skills at level B2 of the Common European Framework of Reference for Languages are required.	
Usability	BA Wiwi, D WiInf, D WiIng: Fields Business Administration and Economics, Methods and Procedures, Presenting and Discussing, Supplementary Qualifications BA WiPäd: Fields Business Administration and Economics, Supplementary Qualifications Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Combined term paper, 100 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-204-GEPO WW-D-204-GEPO	Geldpolitik	Prof. Dr. Stefan Eichler stefan.eichler@tu-dresden.de
Qualification objectives	Students have a basic knowledge of monetary policy. They know the causes of inflation from a theoretical and empirical perspective as well as measures to combat it by central banks. Students recognize the role of monetary policy time inconsistency in the emergence of inflation. They understand the influence of monetary policy decisions on financial markets and are able to measure strategic changes in monetary policy, for example with regard to their independence and transparency, and to assess their impact on the inflation rate.	
Contents	The content of the module is the basics of monetary policy. This includes the role of central banks, in particular the European Central Bank, their independence and transparency, the causes of inflation and how to combat it, the effects of monetary policy on interest rates and pricing on financial markets.	
Teaching and learning methods	Lecture: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Introduction to Micro-economics and Introduction to Macroeconomics are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 60 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-207-IMDE WW-D-207-IMDE	Implikationen der demographischen Entwicklung	Prof. Dr. Joachim Ragnitz ragnitz@ifo.de
Qualification objectives	Students are familiar with the main features of demographic development and can classify its economic effects with the help of relevant economic theories.	
Contents	The module covers the main features of demographic development and the economic implications of population decline and aging Population.	
Teaching and learning methods	Lecture: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Introduction to Economics, Introduction to Microeconomics, and Introduction to Macroeconomics are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 60 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-203-ITTP WW-D-203-ITTP	International Trade: Theory and Policy	Prof. Dr. Christian Leßmann christian.lessmann@tu-dresden.de
Qualification objectives	Students are familiar with traditional and new theories of international trade. They are familiar with their mechanisms and implications and are able to apply them independently to questions of international trade.	
Contents	The module focuses on traditional and newer explanatory approaches to international trade flows, their characteristics as well as distributional and welfare effects. Various market structures and relevant instruments of international trade policy are examined.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is English.	
Prerequisites for participation	English language skills at basic course Abitur level as well as the skills to be acquired in the modules Introduction to Microeconomics and Introduction to Macroeconomics are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-201-IGRO WW-D-201-IGRO	Introduction to Economic Growth	Prof. Dr. Alexander Kemnitz alexander.kemnitz@tu-dresden.de
Qualification objectives	After completing the module, students will understand the basics of the theory and empirical evidence of economic growth and will have an overview of the determinants of long-term economic growth processes. They are able to analyse growth and income differences between economies and can communicate technical results in English.	
Contents	Contents of the module are mechanisms and areas of application of neoclassical and endogenous growth theories, growth accounting, technical progress as well as external and internal determinants of economic development.	
Teaching and learning methods	Lecture: 2 hours per week Tutorial: 1 hour per week Independent study The language of the module is English.	
Prerequisites for participation	English language skills at basic course Abitur level as well as the skills to be acquired in the modules Introduction to Microeconomics and Introduction to Macroeconomics are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-208-ÖKOG WW-D-208-ÖKOG	Ökonometrie – Grundlagen	Prof. Dr. Bernhard Schipp econometrics@tu-dresden.de
Qualification objectives	After completing the module, students will be able to interpret basic econometric models. They are able to apply these models to economic issues and interpret the results.	
Contents	Contents of the module are interval estimators and hypothesis tests, linear multiple regression models, hypothesis testing in the multiple linear regression model, structural breaks and indicator variables as well as forecast models.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Introduction to Economics, Analysis in an Economic Context, Linear Algebra in an Economic Context, Descriptive Statistics and Inductive Statistics are required.	
Usability	BA WiWi, D WiIng, D WiInf: Field Methods and Procedures BA WiPäd: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-208-ÖKOV WW-D-208-ÖKOV	Ökonometrie – Vertiefung	Prof. Dr. Bernhard Schipp econometrics@tu-dresden.de
Qualification objectives	Students are proficient in the application and interpretation of basic econometric models. They can independently analyze the assumptions that are necessary for the correct application of econometric models, select the appropriate methodology and interpret the results.	
Contents	Contents of the module are extensions of the multiple linear regression model: autocorrelation, heteroskedasia, multicollinearity, structural breaks and regression diagnostics.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Introduction to Economics, Analysis in an Economic Context, Linear Algebra in an Economic Context, Descriptive Statistics and Inductive Statistics are required.	
Usability	BA WiWi, D WiIng, D WiInf: Field Methods and Procedures BA WiPäd: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations.	
Examination	More than ten registered students: written exam, 90 minutes Up to ten registered students: non-public oral examination as an individual examination, 20 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-207-ÖKTP WW-D-207-ÖKTP	Ökonomische Theorie der Politik	Prof. Dr. Marcel Thum marcel.thum@tu-dresden.de
Qualification objectives	Students understand the basics of state intervention in economic processes. They are familiar with the fundamental analytical concepts of political economy and are able to transfer them to real economic policy issues.	
Contents	The content of the module is state intervention in economic policy from a positive perspective as well as the motives of various political actors.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Introduction to Economics, Introduction to Microeconomics and Introduction to Macroeconomics are required. Furthermore, English language skills at level B2 of the Common European Framework of Reference for Languages are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-201-ÖUNG WW-D-201-ÖUNG	Ökonomische Ungleichheit	Prof. Dr. Alexander Kemnitz alexander.kemnitz@tu-dresden.de
Qualification objectives	After completing the module, students will understand the fundamental determinants of income distribution. They are familiar with the normative foundations and possibilities of distributively motivated state interventions and are able to classify and analyse fundamental distributional policy issues.	
Contents	The module covers the basics of measuring income inequality and poverty, alternative approaches to explaining and evaluating the functional and personal distribution of income, and instruments of distributional policy.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Introduction to Micro-economics and Introduction to Macroeconomics are required.	
Usability	BA WiWi, BA WiPäd, D WiInf, D WiIng: Field Business Administration and Economics The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-STWE WW-D-STWE	Strategie und Wettbewerb	Prof. Dr. Alexander Kemnitz alexander.kemnitz@tu-dresden.de
Qualification objectives	Students understand the fundamentals of price and competition theory. They are able to explain the results of market processes depending on the number and level of information of market participants and have a basic understanding of the analysis of strategic decision-making situations.	
Contents	Contents of the module are basics of monopolistic and monopsonistic pricing, oligopoly and monopolistic competition, game theory and asymmetric information.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Tutorial: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	Students of the Bachelor's degree programmes in Business and Economics, Business Education and International Relations as well as the Diploma programmes in Business Informatics and Industrial Engineering are required to acquire the skills to be acquired in the Introduction to Economics module. For students of the Bachelor's degree in Transport Economics, the skills to be acquired in the module Fundamentals of Economics and Transport Economics are required.	
Usability	BA Wiwi, BA WiPäd, D WiInf, D WiIng; Field Business Administration and Economics The module creates the prerequisites for the elective modules listed under "Prerequisites for participation."	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Business Education and Management Training

Module number	Module name	Responsible lecturer
WW-BA-115-AGFP WW-D-115-AGFP	Ausgewählte grundlegende Fragestellungen des Personalmanagements	Prof. Dr. Bärbel Fürstenau sekretariat.wipaed@mailbox.tu-dresden.de
Qualification objectives	The students are familiar with selected aspects from the subject areas of human resources functions, apply theoretical knowledge to practical questions of human resources work, assess the suitability of instruments for human resources functions and, based on this, make well-founded decisions regarding human resources work.	
Contents	The content of the module is selected aspects from the topics of personnel planning and recruitment, personnel selection, personnel deployment and development, and staff reduction and redundancy.	
Teaching and learning methods	Seminar: 2 hours per week Project: 1 hour per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner. The seminar is limited to 30 participants, selection based by lottery.	
Prerequisites for participation	The module requires knowledge and skills as taught in the module Introduction to Business Administration and Organization.	
Usability	BA WiPäd: Fields Business Administration and Economics, Business Education and Management Training BA WiWi, D WiIng, D WiInf: Fields Business Administration and Economics, Supplementary Qualifications Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Complex assesment, 90 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WPW-BA-EKBW WW-BA-115-EKBW WW-D-115-EKBW	Einführung in das kaufmännische Bildungswesen	Prof. Dr. Bärbel Fürstenau sekretariat.wipaed@mailbox.tu- dresden.de
Qualification objectives	Students are familiar with and understand the vocational education system in Germany and in selected other countries. They are familiar with current educational policy and organizational issues and can explain them. They have mastered techniques of information research and scientific work and are able to apply these when working on a business education issue and to present and discuss its contents.	
Contents	The module covers the organization of vocational education and training in Germany, in particular its legal and institutional structures, its integration into the overall national education system, selected international vocational education and training systems, and current education policy issues. Reference is always made to the specific concerns of commercial education and training. Furthermore, the module covers the fundamentals of scientific work.	
Teaching and learning methods	Lecture: 1 hour per week Seminar: 1 hour per week Tutorial: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	BA WiPäd: Field Business Education and Management Training BA Wiwi, D WiInf, D WiIng: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations. The module creates the prerequisites for the school internship module.	
Examination	Complex assessment, 90 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-115-GRPM WW-D-115-GRPM	Grundlagen des Personalmanagements	Prof. Dr. Bärbel Fürstenau sekretariat.wipaed@mailbox.tu-dresden.de
Qualification objectives	Students understand the functions of human resource management. explain theories and models in the context of human resource management and apply them to concrete case studies.	
Contents	The contents of the module are fundamental questions, concepts and theories of personnel management, especially in the context of personnel planning and controlling, personnel recruitment, personnel selection, personnel deployment and development as well as staff reduction and redundancy.	
Teaching and learning methods	Lecture: 2 hours per week Tutorial: 1 hour per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The module requires knowledge and skills as taught in the module Introduction to Business Administration and Organization.	
Usability	BA WiPäd: Fields Business Administration and Economics, Business Education and Management Training BA WiWi, D WiIng, D WiInf: Fields Business Administration and Economics, Supplementary Qualifications Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-115-MESF WW-D-115-MESF	Methoden empirischer Sozialforschung in der kaufmännischen Aus- und Weiterbildung	Prof. Dr. Bärbel Fürstenau sekretariat.wipaed@mailbox.tu-dresden.de
Qualification objectives	Students are able to describe the fundamentals of scientific theory. They understand the process of empirical research, such as planning, data collection, and data analysis, and can apply this to various issues, such as commercial education and training. They can describe various methods of data collection and distinguish between them, taking into account their advantages, disadvantages, and areas of application. They can select and apply data analysis methods for the respective objective and are able to analyze data using statistical software.	
Contents	The module covers the fundamentals of scientific theory, the process of empirical research, including planning, data collection, data analysis, data collection methods, and procedures and statistical software for data analysis that can be used in the teaching and learning context of commercial education and training.	
Teaching and learning methods	Lecture: 2 hours per week Seminar: 1 hour per week Tutorial: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The knowledge acquired in the modules Deductive Statistics and Inductive Statistics is required.	
Usability	BA WiPäd: Fields Business Administration and Economics, Business Education and Management Training BA WiWi, D WiIng, D WiInf: Fields Business Administration and Economics, Supplementary Qualifications Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Business Information Systems

Module number	Module name	Responsible lecturer
WW-BA-305-BPMA WW-D-305-BPMA	Business Process Management	Prof. Dr. Martin Wiener martin.wiener@tu-dresden.de
Qualification objectives	After completing the module, students will be familiar with the essential phases of business process management as well as phase-specific management approaches, techniques and technologies. In addition, they have basic skills in the practical use of modeling tools and can apply them to model, analyze, and improve simple business processes.	
Contents	The subject of the module is the in-depth examination of individual life cycle phases of business process management.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is English.	
Prerequisites for participation	Knowledge as taught in the modules Introduction to Business Informatics and Introduction to Business Administration and Organization is required.	
Usability	BA WiWi, BA WiPäd: Fields Business Administration and Economics, Supplementary Qualifications D WiInf, D WiIng: Field Business Information Systems Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	More than 15 registered students: written exam, 90 minutes Up to 15 registered students: non-public oral examination as a group examination, 15 minutes for the individual examination supervisor	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-301-GBAS WW-D-301-GBAS	Grundlagen Betrieblicher Anwendungssysteme	Prof. Dr. Susanne Strahringer susanne.strahringer@tu-dresden.de
Qualification objectives	Students are familiar with the functioning of business application systems, in particular enterprise resource planning systems (ERP systems). They can use an exemplary ERP system selectively from an end-user perspective. They understand the basic implementation process for such systems and can apply some techniques that support this process.	
Contents	The module covers types of business application systems, the basic functioning of ERP systems, the advantages and disadvantages of using standard business software, and the implementation processes, divided into the sub-processes of system selection, implementation, and operation.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	Competencies from the modules Introduction to Business Informatics and Fundamentals of Accounting as well as Production and Logistics are required. The module is designed as a lecture with a focus on practical application.	
Usability	D WiInf: Field Business Information Systems BA WiPäd, BA WiWi: Fields Business Administration and Economics, Supplementary Qualifications D WiIng: Fields Business Information Systems The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-301-SISS WW-D-301-SISS	Information Systems Success	Prof. Dr. Susanne Strahringer susanne.strahringer@tu-dresden.de
Qualification objectives	Students are able to adapt a research model based on common theories for assessing the success or acceptance of technologies in a context-specific manner. They can justify and explain the derived models and are also proficient in communicating their technical and theoretical knowledge in English.	
Contents	The module covers information system success and technology acceptance research, as well as the derivation, contextualization, and operationalization of research models and the corresponding formulation of hypotheses.	
Teaching and learning methods	Seminar: 2 hours per week Independent study The language of the module is English. The seminar is limited to 16 participants, selection based on the order of enrollment.	
Prerequisites for participation	The skills acquired in the modules Introduction to Business Administration and Organization, Scientific and Practical Work, and Introduction to Business Informatics are required. Furthermore, English language skills at level B2 of the Common European Framework of Reference for Languages are required.	
Usability	BA Wiwi: Fields Business Administration and Economics, Supplementary Qualifications, Presenting and Discussing D WiInf, D WiIng: Fields Business Information Systems, Presenting and Discussing BA WiPäd: Fields Business Administration and Economics, Supplementary Qualifications Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Combined term paper, 90 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-301-IMEG WW-D-301-IMEG	Informationsmanagement und E-Government	Prof. Dr. Susanne Strahringer susanne.strahringer@tu-dresden.de
Qualification objectives	Students are familiar with the basics of strategic IT planning and the practical implications in the context of public administration. You will understand the basic concepts, methods and instruments of strategic IT planning as well as the framework conditions, strategies and systematics of e-government and public information processing. Students are able to determine the benefits and risks of technologies from the perspective of private organizations as well as public IT and e-government. In addition, you will be able to apply strategic IT planning and IT implementation to the specific context of administrative modernization in the context of e-government.	
Contents	The module covers concepts, methods and instruments of IT governance, strategic IT planning, e-government and public information processing.	
Teaching and learning methods	Lecture: 2 hours per week Project: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The competencies to be acquired in the modules Introduction to Business Administration and Organization, Introduction to Economics and Introduction to Business Informatics are required.	
Usability	BA WiWi, BA WiPäd: Fields Business Administration and Economics, Supplementary Qualifications D WiInf, D WiIng: Field Business Information Systems Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	Complex assesment, 70 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-INSE WW-D-INSE WW-BA-301-INSE WW-D-301-INSE	Informationssystementwicklung	Prof. Dr. Susanne Strahringer susanne.strahringer@tu-dresden.de
Qualification objectives	Students are able to analyze the support of operational processes by information systems from a development perspective. In this context, they are familiar with classic and agile project management techniques and typical process models. They will be able to develop and adapt simple analytical information systems on low-code platforms.	
Contents	The module covers the basics of information systems and their life cycle, agile and classic project management techniques and typical process models with their special features, the development of information systems with special consideration of analytical information systems and modern development concepts and technologies such as citizen development and low-code development platforms.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the Introduction to Information Systems module are a prerequisite.	
Usability	D WiInf: Field Business Information Systems BA WiPäd (II) BA WiPäd (I), BA WiWi: Fields Business Administration and Economics, Supplementary Qualifications D WiIng: Fields Business Information Systems, Business Administration and Economics Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.	
Examination	More than 20 registered students: written exam, 90 minutes Up to 20 registered students: non-public oral examination, 15 minutes as a group examination	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-304-MLBA WW-D-304-MLBA	Machine Learning for Business Analytics	Prof. Dr. Patrick Zschech patrick.zschech@tu-dresden.de
Qualification objectives	<p>Students can describe the fields of application of business analytics and classify basic technologies, methods, and concepts. They are able to classify and distinguish between basic terms, functionalities, and principles of predictive modeling and, in particular, machine (supervised) learning. Building on this, they have a comprehensive understanding of the structure and functioning of predictive models based on machine learning methods. Students are able to explain the basic steps for developing an understanding of domains and data, for exploring and preprocessing data, and for developing and evaluating machine learning models using a systematic approach. Furthermore, they master the basic methods and principles of various machine learning models and can apply them to different practical examples and evaluate, interpret, and critically question the results. In addition, they are able to implement data analysis approaches and machine learning models using the Python programming language to address real-world problems.</p>	
Contents	<p>The module covers basic concepts and process models in the field of business analytics (e.g., CRISP-DM), basic principles of predictive modeling and how it differs from explanatory modeling, various forms of machine learning with a particular focus on supervised learning (especially classification and regression tasks), methodological steps for developing an understanding of domains and data, procedures and tools for data exploration, data visualization, and data preprocessing (especially feature engineering), basic principles and procedures for model development and model training using selected classes of machine learning methods (e.g., linear/logistic regression, decision trees, ensemble methods, artificial neural networks), as well as basic principles and procedures for model evaluation and diagnosis.</p>	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills acquired in the Programming and Databases module are required.</p>	

Usability	<p>BA Wiwi: Fields Business Administration and Economics, Methods and Procedures, Supplementary Qualifications</p> <p>BA WiPäd: Fields Business Administration and Economics, Supplementary Qualifications</p> <p>D WiInf, D WiIng: Fields Business Information Systems, Methods and Procedures, Supplementary Qualifications</p> <p>Students must choose according to the respective examination regulations. The choice is only permitted for one of the fields mentioned.</p>
Examination	Written exam, 90 minutes
Workload and Credit points	150 hours, 5 credit points
Frequency	Offered each summer semester
Duration	One semester

Engineering Sciences

Module number	Module name	Responsible lecturer
WW-D-666-AISY	Adaptive und intelligente Systeme	Prof. Dr.-Ing. Oliver Michler oliver.michler@tu-dresden.de
Qualification objectives	Students will master the theoretical fundamentals and procedures of data filtering techniques from estimation theory. They will be able to classify, specify, and design filter algorithms. They can apply adaptive and intelligent filter techniques to traffic data processing in intelligent transport systems, integrate filter algorithms, and assess and evaluate the use of filter methods in selected transport-specific applications.	
Contents	The module covers the theoretical and numerical fundamentals of data filtering techniques and algorithms, as well as their practical application in adaptive and intelligent systems. Other topics include numerical fundamentals, the method of least squares, the chain rule, Kalman filters and their variants, filter bank techniques, and the computer implementation of algorithms.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills to be acquired in the modules Communications Engineering and Information Theory and Communication, Navigation and Surveillance (CNS) are required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	More than 15 registered students: written exam, 90 minutes Up to 15 registered students: non-public oral examination, 30 minutes duration as an individual examination	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-612-AVTE	Aufbau- und Verbindungstechnik der Elektronik	Prof. Dr.-Ing. Karlheinz Bock karlheinz.bock@tu-dresden.de
Qualification objectives	Students acquire specialized knowledge, skills, and practical abilities for assembling packaged and unpackaged electronic components and for manufacturing wiring carriers. They can apply the theoretical principles of material bonding techniques such as bonding, soldering, and gluing, as well as subtractive and additive structuring techniques for wiring carriers. They are familiar with the technologies and equipment used to apply these processes.	
Contents	The module covers trends in electronics assembly and interconnection technology, assembly and interconnection techniques for semiconductor devices, assembly technologies for semiconductor devices, thin-film wiring carrier technologies, thick-film wiring carrier technologies, printed circuit board technologies, surface techniques for electronic components, and optical connection techniques for printed circuit boards.	
Teaching and learning methods	Lecture: 2 hours per week Tutorial: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Fundamentals of Electrical Engineering and Physics and Chemistry are required.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Complex assesment, 20 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-681-ATAO	Betrieblich-logistische Strukturen des Luftverkehrs (Air Traffic and Airport Operations)	Prof. Dr.-Ing. Hartmut Fricke hartmut.fricke@tu-dresden.de
Qualification objectives	Students are familiar with the specific process characteristics of aircraft operation from the perspective of air traffic control and airport operators, as well as the restrictions resulting from international and national legislation. They are familiar with air traffic control and airports as companies operating under safety-related, economic, and environmental constraints. Students are able to assign the individual system elements and structures holistically.	
Contents	The module covers the structure and organization of airspace, rules, procedures, services, and instruments of air traffic control, operational and environmental conditions of airport operations, current and future forms of airport organization taking into account international trends, sources of income for an airport, the structure of national and international aviation law, the content and significance of important legal provisions in aviation, and authorities and their tasks in aviation.	
Teaching and learning methods	Lecture: 6 hours per week Practical: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation		
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 240 minutes	
Workload and Credit points	300 hours, 10 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-681-CNSV	Communication, Navigation, Surveillance (CNS)	Prof. Dr.-Ing. Hartmut Fricke hartmut.fricke@tu-dresden.de
Qualification objectives	Students master the methods of radio, inertial, and satellite navigation and are familiar with technical navigation equipment and its functions, structure, and mode of operation. They understand how air traffic control works and are familiar with the operational and technical systems required for communication and monitoring air traffic.	
Contents	The module covers geodetic and cartographic fundamentals, radio navigation/positioning technology, inertial navigation, satellite navigation, and onboard and ground-based communication and surveillance systems and technologies.	
Teaching and learning methods	Lecture: 4 hours per week Practical: 1 hour per week Internship: 0,5 hours per week Independent study The language of the module is English.	
Prerequisites for participation	The skills acquired in the module Operational and Logistical Structures of Air Transport are required. In addition, English language skills at the UNICert B2 level are required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 180 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-654-DEAV	Datenerhebung und -analyse in der Verkehrsplanung	PD Dr. Rico Wittwer rico.wittwer@tu-dresden.de
Qualification objectives	<p>tudents have in-depth knowledge of the design and implementation of data collection in transportation system and mobility planning, as well as in the preparation, evaluation, visualization, and interpretation of data. They are able to define research questions within the framework of project studies using existing data and advanced statistical analysis methods, select and prepare suitable data, design appropriate methodological approaches and apply methods, carry out analyses, and present and critically reflect on the results.</p> <p>They are able to work independently and collaboratively in a team, and to communicate and present their findings to a wider audience.</p>	
Contents	The module covers methods for collecting, processing, analyzing, visualizing, and interpreting data in transportation system and mobility planning.	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 2 hours per week Independent study</p> <p>The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	The skills to be acquired in the Spatial and Transport Planning module are required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	Term paper, 50 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-666-DISV	Digitale Signalverarbeitung	Prof. Dr.-Ing. Oliver Michler oliver.michler@tu-dresden.de
Qualification objectives	Students will acquire fundamental knowledge of digital sampling systems, stochastic signal processing, and analysis and design methods in the time and frequency domains, as well as their evaluation with regard to practical implementation possibilities in relation to traffic telematics. They will gain an understanding of the fundamental relationships between practical requirements, specification, modeling, and implementation for signal processing systems.	
Contents	The module covers the theoretical and technical fundamentals of digital signals and systems, including necessary functional transformations, sampling rate conversions, and digital signal filtering. Other topics include the significance and application of digital systems in the context of traffic telematics.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills acquired in the modules Communications Engineering and Information Theory and Communication, Navigation, and Surveillance (CNS) are required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	More than five registered students: written exam, 90 minutes Up to five registered students: non-public oral examination, 30 minutes duration as an individual examination	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-ETDN	Dynamische Netzwerke	Dr. Andreas Mögel andreas.moegel@tu-dresden.de
Qualification objectives	<p>After completing the module, students will have mastered methods for analyzing linear dynamic circuits when excited with periodic signals or in the transient behavior of steady states. They will be able to describe, model, and calculate linear two-port networks.</p> <p>They will be able to determine the transfer function, analyze behavior in the frequency domain, and represent it graphically, as well as calculate simple filters. They will have mastered phasor representations and locus curves. They can determine the transfer function, analyze and graphically represent the behavior in the frequency domain, and calculate simple filters. They will master phasor representations and place curves.</p>	
Contents	The module covers the calculation of linear dynamic networks.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	Knowledge of electrical engineering and mathematics is required, as taught in the modules Fundamentals of Electrical Engineering, Electrical and Magnetic Fields, Analysis in an Economic Context, and Mathematics in an Engineering Context.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations. It creates the prerequisites for the modules in the compulsory and elective areas, which are listed under "Prerequisites for participation."	
Examination	Written exam, 150 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	

Duration	One semester
-----------------	--------------

Module number	Module name	Responsible lecturer
WW-D-TVST	Einführung in die Systemtheorie	Prof. Dr.-Ing. Rafael F. Schaefer rafael.schaefer@tu-dresden.de
Qualification objectives	Students are familiar with the general conceptual and methodological principles for describing dynamic processes in nature and technology. They can view static and dynamic systems from a unified systems theory perspective and describe and analyze them mathematically. They are familiar with the properties of time-continuous and time-discrete systems in the time and image domains and are proficient in the application of signal transformations for effectively describing system behavior in the image domain.	
Contents	The module covers selected fundamentals of systems theory, focusing on analog signals and continuous-time systems, analog signals and discrete-time systems, digital systems, and selected applications.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Analysis in an Economic Context, Mathematics in an Engineering Context, Fundamentals of Electrical Engineering, and Dynamic Networks are required.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 150 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-TVVN	Einführung in die Verfahrenstechnik und Naturstofftechnik	Prof. Dr. André Wagenführ andre.wagenfuehr@tu-dresden.de
Qualification objectives	Students have a basic knowledge of various specialized areas of process engineering and natural materials technology, as well as the subjects of technical chemistry, food technology, wood technology, and fiber materials technology. Students can draw on basic knowledge from all areas of process engineering and think in an interdisciplinary and interdisciplinary manner, taking into account the concept of basic operations and a wide variety of modeling techniques.	
Contents	The module covers basic working concepts and strategies in the fields of chemical engineering, food technology, wood technology and fiber materials technology.	
Teaching and learning methods	Lecture: 3 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 150 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-E TEM	Elektrische und magnetische Felder	Dr. Jens Müller jens.mueller1@tu-dresden.de
Qualification objectives	<p>Upon completion of the module, students will have mastered basic concepts, quantities, and methods for calculating simple electric and magnetic fields. They will be able to calculate the energy stored in the field, the forces caused by the fields, and the induction effects in the magnetic field.</p> <p>The basic principles of electronic components The basic principles of electronic components such as resistors, capacitors, coils, and transformers, as well as their descriptive equations, are familiar.</p>	
Contents	The module covers the calculation of simple electric fields and magnetic fields.	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.</p>	
Prerequisites for participation	Knowledge of electrical engineering and mathematics is required, as taught in the modules Fundamentals of Electrical Engineering and Analysis in an Economic Context.	
Usability	<p>D WiIng: Field Engineering The selection must be made in accordance with the examination regulations. It creates the prerequisites for the "Dynamic Networks" module.</p>	
Examination	Written exam, 150 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-666-EBVM	Entwurf und Betrieb virtueller Mobilitätssysteme	Prof. Dr.-Ing. Oliver Michler oliver.michler@tu-dresden.de
Qualification objectives	<p>Students will acquire basic knowledge of the subject matter and objectives of virtual mobility systems, mobility aspects, and mobility areas.</p> <p>They will learn the fundamentals of technical planning, procedures, and solutions for mobility management in conventional and prospective systems, as well as procedures and processes in network and quality management for connection-oriented systems.</p> <p>They will learn the fundamentals of technical planning, procedures and processes in network and quality management for connection-oriented and connectionless communication with industry- and user-specific applications. They are able to plan, design, and operate virtual mobility systems.</p>	
Contents	<p>The module covers specific solutions for virtual mobility systems, their basic mode of operation, and their integration into holistic systems, in particular design, operating scenarios, and operating strategies based on defined operator and user profiles and the resulting system structures with interdisciplinary principles and methods.</p>	
Teaching and learning methods	<p>Lecture: 3 hours per week Practical: 1 hour per week Independent study</p> <p>The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills acquired in the modules Communications Engineering and Information Theory and Communication, Navigation, and Surveillance (CNS) are required.</p>	
Usability	<p>D WiIng: Field Engineering Sciences</p> <p>The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>More than five registered students: written exam, 90 minutes Up to five registered students: non-public oral examination, 30 minutes duration as an individual examination</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	

Frequency	Offered each summer semester
Duration	One semester

Module number	Module name	Responsible lecturer
WW-D-666-FZKO	Fahrzeugkommunikation und Ortung	Prof. Dr.-Ing. Oliver Michler oliver.michler@tu-dresden.de
Qualification objectives	<p>Students master the methodological fundamentals of information technology concepts and systems as well as the fundamentals and procedures of positioning and navigation and their transport-specific applications. They are able to classify, specify, and design information systems.</p> <p>They can apply systems for traffic data acquisition, transmission, and processing in intelligent transportation systems, integrate positioning and communication systems, and assess and evaluate selected transport-specific applications.</p>	
Contents	<p>The module covers the basics of traffic telematics information systems for networking and localizing road users, as well as the practical application of such systems, taking into account the specific requirements of each mode of transport.</p> <p>Other topics include basic location and navigation methods, Other content includes basic location and navigation procedures, especially satellite navigation systems and vehicle-mounted sensors, as well as the fundamentals of communication systems and their applications in intelligent transport systems.</p>	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills acquired in the modules Communications Engineering and Information Theory and Communication, Navigation, and Surveillance (CNS) are required.</p>	
Usability	<p>D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>More than 15 registered students: written exam, 90 minutes Up to 15 registered students: non-public oral examination, 30 minutes duration as an individual examination</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	

Frequency	Offered each winter semester
Duration	One semester

Module number	Module name	Responsible lecturer
WW-D-761-FTPD	Fertigungstechnik und Produktion	Prof. Dr.-Ing. Hans Christian Schmale hans_christian.schmale@tu-dresden.de
Qualification objectives	Students have essential basic knowledge of the manufacture and production of mechanical engineering products and understand the fundamental engineering approach. They are able to provide an overview of existing manufacturing processes and have basic knowledge of the operating principles, technical equipment, and technological parameters to be defined for these processes. Students are familiar with the basic principles of the processes and technologies involved in the production and distribution of goods, as well as the tasks of system planning for production and material flow systems. They have basic knowledge of production and distribution logistics.	
Contents	The module covers the areas of the company involved in the manufacture of products, the product requirements that determine manufacturing options, the derivation of manufacturing decisions, the most important manufacturing processes for primary forming, forming, machining, removal, joining, and surface technology and their operating principles, the basic concepts of production and distribution logistics, and selected technical and organizational solutions for internal logistics.	
Teaching and learning methods	Lecture: 3 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Analysis in an economic context, Mathematics in an engineering context, Statics and Strength of Materials, Fundamentals of Electrical Engineering, and Physics and Chemistry are required.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Complex assesment, 2,5 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-702-FTFM	Fügetechnik flexibler Materialien	Prof. Dr. Yordan Kyosev yordan.kyosev@tu-dresden.de
Qualification objectives	<p>Students are familiar with the joining mechanisms of flexible materials.</p> <p>They can select the continuous and discontinuous joining processes and machines applicable in specific cases and assess their use. In addition, they have knowledge of the possibilities for generating seam properties in line with stress requirements, their testing, and measures for quality assurance. Students can apply prevention strategies to avoid contamination of seams in packaging and medical technology. Based on the knowledge imparted, Students can apply prevention strategies to avoid contamination of seams in packaging and medical technology. Based on the knowledge they have acquired about interactions between materials and processes, students are able to tailor joining processes to innovative material development and creatively refine them.</p>	
Contents	<p>Based on the fundamentals of joining mechanisms for textile and polymer materials, the module covers process selection, such as bonding, welding, and sealing processes such as heat contact, ultrasound, laser, and high frequency, process specifics for laser and high frequency, the process specifics for different applications and seam designs, as well as the process parameters, monitoring of seam properties with the possibilities of non-destructive seam testing, and methods for specifically avoiding seam contamination.</p>	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 1 hour per week Tutorial: 1 hour per week Independent study The language of the module is German.</p>	
Prerequisites for participation		
Usability	<p>D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Written exam, 120 minutes</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each winter semester</p>	
Duration	<p>One semester</p>	

Module number	Module name	Responsible lecturer
WW-D-TVGE	Geräteentwicklung	Prof. Dr.-Ing. Jens Lienig jens.lienig@tu-dresden.de
Qualification objectives	<p>Upon completion of the module, students will have basic knowledge of the design and development of electronic assemblies and devices. They will gain an understanding of engineering tasks and the diverse requirements that must be taken into account.</p> <p>This will enable students to apply an engineering approach to the development and design of these products, taking all relevant aspects into consideration.</p>	
Contents	The module covers the fundamentals of design engineering, device structure and requirements, reliability of electronic devices, thermal dimensioning, and electromagnetic compatibility.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	Prerequisites include knowledge as taught in the modules Analysis in an economic context, Mathematics in an engineering context, Statics and Strength of Materials, Fundamentals of Electrical Engineering, and Physics and Chemistry.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 150 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-601-GLBA	Grundlagen der Bauausführung	Prof. Dr. Katharina Kleinschrot Katharina.Kleinschrot@tu-dresden.de
Qualification objectives	Students will be able to understand organizational and economic relationships in the construction industry. They will be able to demonstrate in-depth knowledge of construction price calculation. They will also be familiar with the functioning, procedural processes, and basic uses and applications of common civil engineering machinery and equipment and will be able to evaluate their performance capabilities.	
Contents	Contents include calculation of construction prices, introduction to construction process engineering (preparation technology, earthworks, lifting equipment, excavation pits, and construction site planning).	
Teaching and learning methods	Lecture: 4 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 180 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	Two semester	

Module number	Module name	Responsible lecturer
WW-D-GLEL	Grundlagen der Elektrotechnik	Dr. Jens Müller jens.mueller1@tu-dresden.de
Qualification objectives	<p>Upon completion of the module, students will have acquired basic knowledge of electrical engineering and electronics and will have mastered methods for solving electrical engineering problems as a basis for advanced modules. The focus is on resistive circuits. They are able to describe linear and nonlinear two-pole circuits and take into account the temperature dependence of their parameters, systematically analyze electrical circuits with direct current, and apply special simplified analysis methods (two-pole theory, superposition theorem). You will be able to calculate the power conversion in circuits and analyze and dimension thermal arrangements.</p>	
Contents	The module covers electrical networks with direct current, current strengths, voltages, and resistances of circuits.	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.</p>	
Prerequisites for participation	Knowledge of mathematics and physics at high school graduation level is required.	
Usability	<p>D WiIng: Field Engineering The selection must be made in accordance with the examination regulations. It creates the prerequisites for the modules in the compulsory and elective areas, which are listed under "Prerequisites for participation."</p>	
Examination	Written exam, 150 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-728-GLKW	Grundlagen der Kältetechnik und Wärmepumpen / Principles of Refrigeration and Heat Pumps	Prof. Dr.-Ing. Christiane Thomas Christiane.Thomas@tu-dresden.de
Qualification objectives	<p>Students will master the fundamentals of refrigeration and heat pump technology with regard to system engineering and key components, as well as the natural and synthetic refrigerants used. They will learn about the special features and areas of application. They are familiar with the special features and areas of application of cold vapor compression, sorption, and cold gas machines, as well as alternative refrigeration and heat generation and the procedure for energy balancing of the systems.</p>	
Contents	<p>The module covers the calculation of cooling requirements, the calculation of stationary system behavior, the special features of significant system components, the characterization and special features of using different refrigerants, the energy balance of the overall system, sorption systems, cold gas machines, and alternative methods of cooling and heat generation.</p>	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills acquired in the Technical Thermodynamics module are required.</p>	
Usability	<p>D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Written exam, 120 minutes</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each semester</p>	
Duration	<p>One semester</p>	

Module number	Module name	Responsible lecturer
WW-D-651-GLSV	Grundlagen der Straßenverkehrstechnik	Prof. Dr.-Ing. Regine Gerike regine.gerike@tu-dresden.de
Qualification objectives	Students have knowledge of the functional structure of the road network, the necessary skills for safe road design, and the quantitative description of the laws governing traffic flow on roads. They can apply these laws in the procedures for measurement, design, and dimensioning. Students have knowledge of the representation of Students have knowledge of the representation of operational specifications in road traffic on site plans. They are familiar with methods of traffic safety work, in particular accident statistics	
Contents	The module covers procedures for planning urban road traffic systems, methods for describing and evaluating traffic flows, methods for evaluating police accident reports and corresponding statistics, and road safety management tools.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills acquired in the modules Analysis in an economic context and Mathematics in an engineering context are required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	Portfolio, 35 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-TVSM	Grundlagen der Strömungsmechanik	Prof. Dr.-Ing. Jochen Fröhlich jochen.froehlich@tu-dresden.de
Qualification objectives	Students will gain a basic understanding of the mechanics of liquids and gases in laminar and turbulent flow. They will be able to analyze and quantitatively describe simple technical flow configurations.	
Contents	The module covers the specific properties of fluids, static situations, fluid kinematics, and the derivation and application of conservation laws in differential and integral form, basic parameters, and streamline theory for compressible and incompressible fluids, with and without losses. Further contents include techniques for the exact calculation of laminar flows and the description of turbulent flows with examples of technical	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Analysis in an economic context, Mathematics in an engineering context, and Physics and Chemistry are required.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations. It creates the prerequisites for the modules in the compulsory and elective areas, which are listed under "Prerequisites for participation."	
Examination	Written exam, 150 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-711-GVMB	Grundlagen des Verarbeitungsmaschinenbaus	Prof. Dr.-Ing. Jens-Peter Majschak verarbeitungsmaschinen@tu- dresden.de
Qualification objectives	<p>Students are familiar with the general structure and function of processing machines and processing plants. They are able to develop creative solutions for tasks in processing machine construction by learning the methodology. They are also capable of dealing with current tasks in an integrative manner and of dealing with complex processes and design tasks and their interaction. Furthermore, students are familiar with the specific requirements for machines for mass commodity production in the food and pharmaceutical industries, but also in other industries where health and consumer protection are of paramount importance. They are familiar with the requirements of the European Machinery They are familiar with the requirements of the European Machinery Directive and the supporting requirements for ensuring the safety of work and products on these machines, and can apply these to specific examples of development and design and implement solutions methodically. They are familiar with the requirements of the European Machinery.</p>	
Contents	<p>he module covers the classification of processing machines in production processes for fabric processing, the presentation of the relationship between processing machines and systems with human and environmental resources, an explanation of how the subsystems work, interactions between the subsystems and higher-level control systems, as well as the systematic determination of solutions, fault analysis and optimization of processing machines, an overview of national and international legal and normative requirements for the design and operation of processing machines, aspects of occupational safety, and special considerations for protecting consumers from harmful effects caused by products from unsafe manufacturing processes. Other content includes design criteria that manufacturing processes. Other topics include design criteria that must be observed in the manufacture of hygienically and aseptically sound machines and apparatus for food and pharmaceutical production.</p>	
Teaching and learning methods	<p>Lecture: 3 hours per week Practical: 2 hours per week Independent study The language of the module is German.</p>	
Prerequisites for participation		

Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.
Examination	Written exam, 180 minutes
Workload and Credit points	150 hours, 5 credit points
Frequency	Offered each winter semester
Duration	One semester

Module number	Module name	Responsible lecturer
WW-D-691-GZLB	Grundzüge des Leichtbaus	Prof. Dr.-Ing. Maik Gude maik.gude@tu-dresden.de
Qualification objectives	Students will master the combination of lightweight construction principles for system-optimized component structures. They will be able to exploit the potential offered by lightweight construction by applying material-specific design principles.	
Contents	The module covers the fundamentals of developing modern lightweight products from isotropic and anisotropic materials with or without reinforcing materials, as well as the use of solutions combining lightweight design (stiffness), material lightweight construction (density, strength), and conditional lightweight construction (functionality, operational stability, connection technology) in the design of lightweight constructions.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Analysis in an economic context, Mathematics in an engineering context, Statics and Strength of Materials, and Physics and Chemistry are required.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Complex assesment, 31,5 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-TMKK	Kinematik und Kinetik – Grundlagen	Dr. Peter Hantschke peter.hantschke@tu-dresden.de
Qualification objectives	Students are familiar with the concepts of degrees of freedom and constraints, as well as momentum and angular momentum balance together with the work and energy theorem as a basis for describing the interaction between loads and motion. Furthermore, they can apply the principle of keses in kinetics to describe planar motions, linear oscillations of one degree of freedom, and impact processes. The practical relevance is established by examining basic tasks and examples from machine dynamics.	
Contents	The module covers the motion sequences of rigid bodies and body systems, interactions between loads and movements, single-degree-of-freedom vibrations, and impact processes.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	Knowledge of statics and strength of materials and mathematics as taught in the modules Statics and Strength of Materials and Analysis in an economic context is required.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations. It creates the prerequisites for the modules in the compulsory and elective areas, which are listed under "Prerequisites for participation."	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-611-KOSK	Konstruktion	Prof. Dr.-Ing. Jens Lienig jens.lienig@tu-dresden.de
Qualification objectives	Students can design components and assemblies, calculate design elements, lay them out, and apply them correctly. They are able to create standard-compliant design documentation using modern CAD systems.	
Contents	The module covers the fundamentals of design, with a focus on design engineering basics, standard numbers and dimensions, tolerances, fits, dimension and tolerance chains, strength calculations, material load-bearing capacity, mechanical fasteners such as material, form, and force connections, mechanical functional elements such as springs, bearings, guides, and shafts, mechanical functional groups and gearboxes, as well as CAD design with a focus on the methodology of creating CAD models, modeling assembly dependencies, parametric and adaptive design, and motion and tolerance simulation.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 4 hours per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Complex assesment, 52 hours	
Workload and Credit points	300 hours, 10 credit points	
Frequency	Offered each winter semester	
Duration	Two semester	

Module number	Module name	Responsible lecturer
WW-D-781-KOLE	Konstruktionslehre	Prof. Dr.-Ing. Kristin Paetzold-Byhain kristin.paetzold@tu-dresden.de
Qualification objectives	Students master basic knowledge and skills for creating constructive designs and documenting them. They have basic knowledge of construction technology and design skills. They are able to understand basic geometric and technical elements and, building on this, to produce and read technical documentation. In addition, they have the ability to think holistically in terms of design and to design mechanical engineering components in a way that is functional and suitable for production.	
Contents	The module covers fundamental relationships between geometric objects, the basics of producing and understanding technical documentation (such as drawings and parts lists), interchangeability, production-oriented design of machine parts, and function- and stress-oriented design of machine parts.	
Teaching and learning methods	Lecture: 4 hours per week Practical: 4 hours per week Independent study The language of the module is German.	
Prerequisites for participation	Knowledge of mathematics at high school level (basic course) is required.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 150 minutes	
Workload and Credit points	300 hours, 10 credit points	
Frequency	Offered each winter semester	
Duration	Two semester	

Module number	Module name	Responsible lecturer
WW-D-747-LFAU	Luftfahrzeugauslegung	Prof. Dr. Johannes Markmiller studiendokumente.mw@tu-dresden.de
Qualification objectives	Students are familiar with the structure of aircraft and the regulations that are important for development. They understand the interdisciplinary interaction of various fields such as aerodynamics, flight mechanics, structural mechanics, and propulsion technology, and can use analytical calculation methods to perform preliminary designs for simple aircraft configurations.	
Contents	The module covers the fundamentals of aircraft design in the concept phase, in particular certification regulations, design methodology, configurations, methods for mass estimation, cabin design, aerodynamic design aspects, flight performance, tail design, propulsion concepts, and economic evaluation criteria.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hour per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills acquired in the modules Analysis in an economic context, Mathematics in an engineering context, Statics and Strength of Materials, Fundamentals of Electrical Engineering, and Physics and Chemistry are required. Furthermore, knowledge of English (basic course) is required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-681-FPAD	Luftfahrzeugeigenschaften (Flight Performance and Aerodynamics)	Prof. Dr.-Ing. Hartmut Fricke hartmut.fricke@tu-dresden.de
Qualification objectives	<p>Students are familiar with the methods and applications that describe the movement of aircraft with six degrees of freedom with the associated forces and moments, power and energy expenditure. They understand the origin and influence of air forces/moments on the aircraft.</p> <p>Students are able to mathematically model important factors influencing flight performance and flight characteristics. They can assess the operational behavior of the aircraft in terms of safety, economy, and environmental compatibility depending on the flight condition. Students understand the main engine assembly in terms of its structure, mode of operation, and operating behavior and are able to competently evaluate various aircraft propulsion systems.</p>	
Contents	<p>The module covers the operational behavior of an aircraft in various flight conditions, target functions and variants of cruise flight execution, ETOPS regulations and flight performance calculations, the basics of thrust diagrams and speed polars, the properties of air, lift and its formation, as well as associated air forces and aerodynamic moments, objects in the fields of aerodynamics, air force moments, topics in the field of aerodynamics, flight mechanics, and aerodynamic characteristics (polars), wing and profile geometry, the creation of moment equilibrium, loadability, trimability, and necessary aircraft control, basics of thermodynamics and gas dynamics, in particular p-v and T-s diagrams of OTTO and JOULE processes, flow through diffusers and nozzles, the design and operation as well as the operating behavior of gas turbine assemblies, and material and runtime problems in gas turbine engines.</p>	
Teaching and learning methods	<p>Lecture: 7 hours per week Practical: 1 hour per week Internship: 0,5 hours per week Independent study The language of the module is English.</p>	

Prerequisites for participation	The skills to be acquired in the modules Analysis in an economic context, Mathematics in an engineering context, Physics and Chemistry, and Operational and Logistical Structures of Air Traffic are required.
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.
Examination	Written exam, 240 minutes
Workload and Credit points	300 hours, 10 credit points
Frequency	Offered each winter semester
Duration	One semester

Module number	Module name	Responsible lecturer
WW-D-744-LFFE	Luftfahrzeugfertigung	Dr.-Ing. Falk Hähnel studiendokumente.mw@tu-dresden.de
Qualification objectives	<p>Students are familiar with the basic technologies that can be used specifically for the manufacture of aircraft components from lightweight metallic materials and fiber-reinforced plastics, as well as the corresponding material-specific joining and assembly processes. They can assess the influence of technologies on the quality and cost of components and understand the interaction between manufacturing and design. Students are able to select the appropriate manufacturing processes for aircraft components, taking into account specific constraints.</p>	
Contents	<p>The module covers a selection of basic and future-oriented processes and methods that are typical for the manufacture of aircraft. The module covers processes for component manufacturing and joining of individual parts as well as methods of structural assembly.</p>	
Teaching and learning methods	<p>Lecture: 4 hours per week Practical: 1 hour per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills acquired in the modules Analysis in an economic context, Mathematics in an engineering context, Statics and Strength of Materials, Fundamentals of Electrical Engineering, and Physics and Chemistry are required. Furthermore, English skills at the high school graduation level (basic course) are required.</p>	
Usability	<p>D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Written exam, 150 minutes</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each summer semester</p>	

Duration	One semester
-----------------	--------------

Module number	Module name	Responsible lecturer
WW-D-744-LFIH	Luftfahrzeuginstandhaltung	Dr.-Ing. Falk Hähnel studiendokumente.mw@tu-dresden.de
Qualification objectives	Students understand the basic methods and procedures of aircraft maintenance in the areas of maintenance, inspection, and repair. They master the technical terminology and relevant legal principles of aircraft maintenance, the usual maintenance methods of today's commercial aircraft, and the procedures for developing future maintenance programs. Based on component-specific types of damage and material-specific damage mechanisms, they can derive maintenance requirements and measures, including both inspection methods and measures for repairing aircraft structures. They master the mechanisms of action of basic repair solutions for aircraft structures.	
Contents	The module covers the structural, damage, and repair classifications relevant to aircraft maintenance , the types of structural damage typically occurring on aircraft with the associated damage mechanisms, the relevant legal basis for aircraft maintenance, the methodology for developing new maintenance programs, and procedures and methods for detecting and repairing structural damage.	
Teaching and learning methods	Lecture: 4 hours per week Practical: 1 hour per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills acquired in the modules Analysis in an economic context, Mathematics in an engineering context, Statics and Strength of Materials, Fundamentals of Electrical Engineering, and Physics and Chemistry are required. Furthermore, English skills at the high school graduation level (basic course) are required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	

Frequency	Offered each winter semester
Duration	One semester

Module number	Module name	Responsible lecturer
WW-D-747-LFKO	Luftfahrzeugkonstruktion	Prof. Dr. Johannes Markmiller studiendokumente.mw@tu-dresden.de
Qualification objectives	<p>Students are familiar with the structural design of aircraft, various construction methods, and the design philosophies commonly used in aircraft engineering.</p> <p>They understand the basic calculation methods used in the structural design of aircraft structures and can use them to design simple components.</p> <p>Students are familiar with the basic principles of aerodynamics and can use them to design simple components.</p>	
Contents	<p>The module covers basic knowledge of aircraft design and airframe construction methods, applicable materials, and key design philosophies, as well as load determination and basic analytical calculation methods for aircraft design.</p>	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 1 hour per week Independent study</p> <p>The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills acquired in the modules Analysis in an economic context, Mathematics in an engineering context, Statics and Strength of Materials, Fundamentals of Electrical Engineering, and Physics and Chemistry are required. Furthermore, English language skills (basic course) are required.</p>	
Usability	<p>D WiIng: Field Engineering Sciences</p> <p>The selection must be made in accordance with the examination regulations.</p>	
Examination	Portfolio	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-747-LFSY	Luftfahrzeugsysteme	Prof. Dr. Johannes Markmiller studiendokumente.mw@tu-dresden.de
Qualification objectives	Students are familiar with the most important systems in an aircraft, understand how they work, and can assess the impact of new technologies on future aircraft development.	
Contents	The module covers the structure, function, and mode of operation of onboard systems required for the operation of modern aircraft, e.g., electrical, pneumatic, and hydraulic systems, electronic flight control, and safety systems, as well as their components and design methods.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills acquired in the modules Analysis in an economic context, Mathematics in an engineering context, Statics and Strength of Materials, Fundamentals of Electrical Engineering, and Physics and Chemistry are required. Furthermore, knowledge of English (basic course) is required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-MING	Mathematik im ingenieurwissenschaftlichen Kontext	Prof. A. Thom andreas.thom@tu-dresden.de
Qualification objectives	Students have knowledge of mathematical methods in engineering sciences. They can identify and evaluate mathematical prerequisites and skills for engineering issues and solve specific problems.	
Contents	The module covers complex numbers, linear systems of equations, matrices and linear algebra in \mathbb{R}^n , multidimensional integration, vector analysis, differential equations, Taylor and Fourier series, and Laplace and Fourier transforms.	
Teaching and learning methods	Lecture: 4 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	Basic skills in mathematics, as taught in the Analysis module in the economic context.	
Usability	D WiIng: Field Methods and Procedures It creates the prerequisites for the modules in the compulsory and elective areas, which are listed under "Prerequisites for participation."	
Examination	Written exam, 90 minutes	
Workload and Credit points	300 hours, 10 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-TVVS	Modellierung von Verkehrssystemen	Prof. Dr. Karl Nachtigall karl.nachtigall@tu-dresden.de
Qualification objectives	Students have a basic understanding of the interrelationships between the various modes of transport. They can perform a basic performance evaluation of transport systems by analyzing performance, performance behavior, and service theory models. Students understand cross-transport system models for describing traffic flows and their stochastic behavior and can apply them. They have basic knowledge in the areas of statistical modeling of traffic problems, traffic measurement, measurement methods, and evaluation models of transport systems.	
Contents	The module covers traffic flow models, models for service theory, stochastics, and statistics.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the Mathematics module in an engineering context are required.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	More than six registered students: written exam, 150 minutes Up to six registered students: non-public oral examination, 30 minutes duration as an individual examination	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-PHCH	Physik und Chemie	Prof. Dr. Rainer Lasch rainer.lasch@tu-dresden.de
Qualification objectives	After completing the module, students will understand chemical and physical relationships, be able to quantify them using case studies, and, based on this, derive initial cross-references to technical requirements in line with their subject selection for electrical engineering or mechanical engineering approaches. The module is designed to provide students with a basic understanding of the chemical and physical relationships that are relevant to their chosen field of study. It also aims to enable students to apply this knowledge to solve problems in their respective fields.	
Contents	The module covers chemical bonds, reactions, equilibria, corrosion, mechanics, thermodynamics, oscillations, waves, and optics.	
Teaching and learning methods	Lecture: 4 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	D WiIng: Field Engineering It creates the prerequisites for the modules in the compulsory and elective areas, which are listed under "Prerequisites for participation."	
Examination	Complex assesment, 3 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-762-PDAT	Produktionsautomatisierung	Prof. Dr. Alexander Brosius alexander.brosius@tu-dresden.de
Qualification objectives	Students acquire basic knowledge of production automation and develop skills in automating processes and systems in the process chain, from product development and production preparation to production implementation. Production automation is a key area of industry, and the field of automation technology is constantly evolving. The course aims to provide students with a solid foundation in automation technology and to prepare them for a career in automation engineering.	
Contents	The module covers the areas of influence of production automation, focusing on information provision and application systems in production (rapid product development, NC technology, NC programming, CAx systems and data interfaces, workshop control and control systems) as well as basic automation concepts (actuator and sensor technology, control and communication technology).	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	Basic scientific and technical skills at undergraduate level are required.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-651-RUVP	Raum- und Verkehrsplanung	PD Dr. Rico Wittwer rico.wittwer@tu-dresden.de
Qualification objectives	<p>Students will master the tools of integrated transport development planning, the planning principles for urban transport networks and facilities, which are based on spatial planning and urban development planning and serve as the basis for urban land-use planning. They will be able to apply the transport planning process to solve practical tasks. They can apply the transport planning process to solve practical tasks.</p> <p>They are able to spatially delimit and structure study areas, conduct analyses of spatial, transport, and transport network structures in order to design integrated transport planning measures across all modes of transport and for the sub-networks. They are familiar with the principles of integrated transport planning.</p>	
Contents	<p>The module covers the fundamentals of mobility and transportation, determining the quality of road networks, designing and planning urban roads, designing public transportation networks and facilities, methods of parking space management, applying traffic surveys, and calculating future traffic volumes.</p>	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.</p>	
Prerequisites for participation		
Usability	<p>D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.</p>	
Examination	Complex assesment, 11,5 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-741-RAFT	Raumfahrttechnik	Dr. Tino Schmiel tino.schmiel@tu-dresden.de
Qualification objectives	<p>Students are familiar with the basic tasks of the key elements of a mission and the functional groups/subsystems of spacecraft. They are able to plan the communication architecture between the ground station and satellites and to design the communication link, taking into account the interactions with the other functional groups of the spacecraft and the mission . Students understand the fundamentals of space propulsion, master the relevant calculation methods, and can apply them. They are familiar with current concepts for further and new developments as well as ideas for future technologies.</p>	
Contents	<p>Key elements of a satellite mission, subsystems and functions of a satellite, radio link geometry, link budget and analysis, antenna technology. Fundamentals of space propulsion, basic thermodynamic equations, thermal rockets, solid and hybrid engines, alternative concepts, nuclear propulsion, electric propulsion, future technologies).</p>	
Teaching and learning methods	<p>Lecture: 4 hours per week Practical: 2 hours per week Independent study The language of the module is German.</p>	
Prerequisites for participation	<p>Prerequisites include knowledge as taught in the modules Mathematics for Economists: Linear Algebra, Mathematics for Economists: Analysis, Advanced Mathematics, Statics and Strength of Materials, Fundamentals of Electrical Engineering, Physics, and Chemistry</p>	
Usability	<p>D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Written exam, 180 minutes</p>	
Workload and Credit points	<p>300 hours, 10 credit points</p>	
Frequency	<p>Offered each summer semester</p>	
Duration	<p>One semester</p>	

Module number	Module name	Responsible lecturer
WW-D-TVRE	Regenerative Energiequellen	Prof. Dr.-Ing. Clemens Felsmann clemens.felsmann@tu-dresden.de
Qualification objectives	Students are familiar with the technologies used to tap renewable energy sources and convert them into electricity and heat, and are able to apply this knowledge to the use of renewable energy sources.	
Contents	The module covers the physical and technological fundamentals of renewable energy sources such as solar radiation, geothermal energy, hydroelectric and wind power, and biomass as a prerequisite for their integration into energy systems.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	Basic knowledge that can be acquired in the modules Technical Thermodynamics and Technical Fluid Mechanics.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 150 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-681-SAMG	Safety und Airline Management (Safety and Airline Management)	Prof. Dr.-Ing. Hartmut Fricke hartmut.fricke@tu-dresden.de
Qualification objectives	<p>Students are familiar with the structures and measures for ensuring air traffic safety. They are aware of factors within and outside the system that influence air traffic safety and know the common methods for evaluating and quantifying air traffic safety.</p> <p>They understand the objectives, structure, and implementation of safety management systems at airports, They understand the objectives, structure, and implementation of safety management systems at airports, ground handling companies, and, in particular, airlines, as well as their concerns and objectives for flight and airport operations and their specific management functions.</p>	
Contents	<p>The module covers general traffic safety-related aspects of air transport and factors influencing air traffic safety, general quantitative assessment options for air traffic safety, requirements and framework conditions for the management and flight operations of an airline, business strategies and corporate forms of airlines, the role of air traffic safety in airline management, and safety management at airports and airlines.</p>	
Teaching and learning methods	<p>Lecture: 3 hours per week Practical: 1 hour per week Independent study The language of the module is English.</p>	
Prerequisites for participation		
Usability	<p>D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.</p>	
Examination	Written exam, 180 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-666-SKKS	Satellitenkommunikation und positionsbezogene Kommunikationssysteme	Prof. Dr.-Ing. Oliver Michler oliver.michler@tu-dresden.de
Qualification objectives	<p>Students are familiar with the basic structure of satellite systems and radio sensor networks, the specific transmission-related implications for technology, and special satellite communication and positioning services, both satellite-based and terrestrial. They are able to assess and evaluate the use and diverse applications in land, air, and sea transport. Students can use positioning, navigation, and communication technology in a realistic manner and understand the mode of operation and properties of components, systems, and processes of vehicle and mobile communication.</p>	
Contents	<p>The module covers the theoretical and technical fundamentals and procedures of satellite-based and terrestrial communication and positioning systems, their transport-specific applications in rail, road, air, and water transport, and essential parts of the associated vehicle and mobile communication in their application.</p>	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 1 hour per week Internship: 1 hour per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills acquired in the modules Communications Engineering and Information Theory and Communication, Navigation and Surveillance (CNS) are required.</p>	
Usability	<p>D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Portfolio, 40 hours</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each summer semester</p>	
Duration	<p>One semester</p>	

Module number	Module name	Responsible lecturer
WW-D-631-SODE	Sound Design	Prof. Dr.-Ing. Ercan Altinsoy ercan.altinsoy@tu-dresden.de
Qualification objectives	Students know and understand the technological fundamentals, basic principles, and technical terminology of sound design. They can design acoustic signals, make environmental phenomena and events audible, convey messages, and provoke or reinforce affective, cognitive, and/or psychomotor responses through acoustic signals. They are capable of product development, e.g., in the automotive, hearing aid, or machine industry, telecommunications and medical technology. They are able to comprehend problems in acoustics and sound design and know how to develop solutions. They are also particularly qualified for working and providing guidance in interdisciplinary projects and teams.	
Contents	The module covers methods of sound design, particularly the relationship between acoustic signals as carriers of information and the associated auditory perceptions, and in this context, the consideration of perceptual aspects of sounds.	
Teaching and learning methods	Lecture: 2 hours per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills acquired in the modules Analysis in an economic context and Mathematics in an engineering context are required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	Complex assesment, 1,5 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-TMSF	Statik und Festigkeitslehre	Dr. Peter Hantschke peter.hantschke@tu-dresden.de
Qualification objectives	<p>The module enables students to perform static design and assessment of the functional safety of simple components and structures. Students master the basic knowledge required to formulate and solve problems in statics and strength of materials. Based on the concept of rigid bodies and independently applied loads, forces, and moments, students learn about the conditions of force and moment equilibrium together with the principle of section as the basic laws of statics. These basic laws are used to calculate the bearings and section reactions of simple and composite flat structures. First- and second-order area moments supplement these fundamentals. Simple stresses of tension, compression, and shear prepare students to understand general stress and strain conditions. Furthermore, students can calculate stress and strain fields for elastic material behavior in rods, beam bending, and pure torsion of prismatic rods and evaluate the results on the basis of various strength hypotheses.</p>	
Contents	<p>The module covers force and moment balances, the principle of section, friction, centers of area and line, bar structures, stress states, area moments, bending, and torsion.</p>	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.</p>	
Prerequisites for participation		
Usability	<p>D WiIng: Field Engineering It creates the prerequisites for the modules in the compulsory and elective areas, which are listed under "Prerequisites for participation."</p>	
Examination	<p>Written exam, 120 minutes</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	

Frequency	Offered each winter semester
Duration	One semester

Module number	Module name	Responsible lecturer
WW-D-603-SUOG	Structural Use of Glass	Prof. Dr.-Ing. Michael Engelmann bauko@mailbox.tu-dresden.de
Qualification objectives	Students will master the application of glass as a building material in glass and facade constructions, as well as safety concepts and dimensioning within the given building regulations.	
Contents	The module covers aspects of glass and façade engineering, including the mechanical and physical fundamentals of coated and uncoated glass, safety concepts in glass construction, designing and constructing with glass, analytical description of glass as a building material, analytical description of mechanically joined and bonded constructions as well as all-glass constructions, calculation methods, and modeling based on current standards.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is English.	
Prerequisites for participation	The skills acquired in the modules Statics and Strength of Materials as well as Advanced Technical Mechanics are required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-TMVT	Technische Mechanik Vertiefung	Dr. Sven Werdin Sven.Werdin@tu-dresden.de
Qualification objectives	In addition to calculating stresses and deformations of statically determinate and indeterminate structures, students are familiar with the concept of stability and its application to the simple case of buckling of bars. Furthermore, they have advanced knowledge of additions to the general bending of straight beams and the calculation of simple rotationally symmetric stress states based on membrane theory. Students master the application of Lagrange's equations of the second kind to describe plane motions. The module enables students to evaluate the strength of structures and provides the prerequisites for the application of modern computer programs.	
Contents	The module covers second-order Lagrange equations, energy methods, skew bending of prismatic beams, simple rotationally symmetric stress states, and buckling of bars.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	Knowledge of technical mechanics and mathematics is required, as taught in the modules Statics and Strength of Materials, Kinematics and Kinetics – Fundamentals, Analysis in an Economic Context, and Mathematics in an Engineering Context.	
Usability	D WiIng: Field Engineering The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-681-TEOP	Terminal Operations	Prof. Dr.-Ing. Hartmut Fricke hartmut.fricke@tu-dresden.de
Qualification objectives	Students are familiar with structures and measures for ensuring aviation security. They can evaluate different security strategies specifically for terminal operations. They are able to describe the individual passenger handling processes in the terminal using specific parameters and to model these operating processes. Students can develop and apply stochastic-based models.	
Contents	The module covers the characterization of operating and movement processes in terminals, including general factors influencing aviation security, procedures and guidelines for emergency management, methods for assessing potential hazards, modeling of operating and movement processes in airport terminals, and requirements and design criteria for guidance systems in terminals.	
Teaching and learning methods	Lecture: 3 hours per week Practical: 1 hour per week Independent study The language of the module is English.	
Prerequisites for participation	The skills acquired in the modules Planning and Design of Road and Air Traffic Facilities and Operational and Logistical Structures of Air Traffic are required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-666-TTIS	Theorie und Technik der Informationssysteme	Prof. Dr.-Ing. Oliver Michler oliver.michler@tu-dresden.de
Qualification objectives	<p>Students are familiar with the sequence of events in an information transmission chain, its specific structure, and the influence of interference.</p> <p>They are able to independently evaluate and compare electrical engineering, information technology, and communication technology structures in traffic telematics, both in relation to specific modes of transport and across modes of transport, analyze their function, and develop individual components.</p> <p>Students are familiar with the basic principles of the transmission of information components.</p>	
Contents	<p>The module covers the theoretical and technical fundamentals of information technology systems and their characteristics in practical application and implementation. Transport-specific requirements are given special consideration.</p>	
Teaching and learning methods	<p>Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills acquired in the modules Communications Engineering and Information Theory and Communication, Navigation, and Surveillance (CNS) are required.</p>	
Usability	<p>D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Written exam, 90 minutes</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each winter semester</p>	
Duration	<p>One semester</p>	

Module number	Module name	Responsible lecturer
WW-D-651-VIPL	Verkehrs- und Infrastrukturplanung	Prof. Dr.-Ing. Regine Gerike regine.gerike@tu-dresden.de
Qualification objectives	Students are familiar with the complex interrelationships of spatial and transport planning, its procedures and processes with integrated cooperative and consensus-oriented approaches. They are familiar with the interactions between regional planning, urban development planning, and integrated transport development planning. They are able to analyze and forecast transport trends and assess the effects of planned transport infrastructure measures. They are familiar with approaches to solving practical transport planning tasks at the municipal level.	
Contents	The module covers transport development planning measures, the objectives and methodology of federal transport infrastructure planning, urban land-use planning and planning approval procedures, impact analyses and transport planning evaluation procedures, and the collection of data on transport behavior.	
Teaching and learning methods	Lecture: 3 hours per week Practical: 1 hour per week Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.	
Prerequisites for participation	The skills to be acquired in the Spatial and Transport Planning module are required.	
Usability	D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-651-VESI	Verkehrssicherheit	Prof. Dr.-Ing. Regine Gerike regine.gerike@tu-dresden.de
Qualification objectives	<p>Students have comprehensive and practical knowledge of the safe functioning of road traffic, including the necessary skills for safe road space design and road design. Furthermore, they have knowledge of aspects of behavioral psychology, human sensory perception, and the fulfillment of driving tasks. They have up-to-date knowledge from research and development in the field of traffic safety.</p> <p>Students are also able to design measures to improve road traffic safety and evaluate them independently.</p>	
Contents	<p>The module covers safety-related design features for different groups of road users, procedures for auditing urban and rural road designs, and methods for analyzing the traffic safety of road networks. Other topics include procedures and methods for evaluating safety measures and current issues in traffic safety research.</p>	
Teaching and learning methods	<p>Lecture: 3 hours per week Practical: 1 hour per week Independent study</p> <p>The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills to be acquired in the module Fundamentals of Road Traffic Engineering are required.</p>	
Usability	<p>D WiIng: Field Engineering Sciences</p> <p>The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Written exam, 90 minutes</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each summer semester</p>	
Duration	<p>One semester</p>	

Module number	Module name	Responsible lecturer
WW-D-666-VETN	Verkehrstelematiknetze	Prof. Dr.-Ing. Oliver Michler oliver.michler@tu-dresden.de
Qualification objectives	<p>Students will master the theoretical fundamentals of the structure, classification, design, and mode of operation of traffic telematics networks.</p> <p>They are familiar with the principles of layer-based modeling of the functionality of telematics networks and know traffic-specific applications of these networks. Students are able to design, dimension, evaluate, and operate telematics networks.</p>	
Contents	<p>The module covers the theoretical and methodological fundamentals of network design, the fundamentals of mediated communication networks and open communication systems, including reference models for network platforms and market participants, monomedia and multimedia service platforms, and the specifics of transport telematics applications, as well as standards and regulatory frameworks.</p>	
Teaching and learning methods	<p>Lecture: 3 hours per week Practical: 1 hour per week Independent study</p> <p>The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills to be acquired in the modules Communications Engineering and Information Theory and Communication, Navigation, and Surveillance (CNS) are required. The course is designed to provide students with the necessary skills to work in the fields of communications engineering, information theory, and CNS.</p>	
Usability	<p>D WiIng: Field Engineering Sciences</p> <p>The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>More than five registered students: written exam, 90 minutes Up to five registered students: non-public oral examination, 30 minutes duration as an individual examination</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each winter semester</p>	

Duration	One semester
-----------------	--------------

Module number	Module name	Responsible lecturer
WW-D-631-VIRE	Virtuelle Realität	Prof. Dr.-Ing. Ercan Altinsoy ercan.altinsoy@tu-dresden.de
Qualification objectives	<p>Students can apply AI, recording, and playback technologies of virtual reality and scientific work to address a scientific question in the field of human-computer interaction. They can design acoustic/haptic/visual sensors, actuators, and systems for the development and application of VR systems for education, the automotive industry, the telecommunications industry, medicine, or the entertainment industry. Students are able to comprehend problems in the field of application and understand how to develop solutions.</p>	
Contents	<p>The module covers selected techniques, methods, and current technologies used in virtual realities, the role of AI, audio recording and playback technologies, in particular binaural technology, stereophony, ambisonics, wave field synthesis, and the implementation of room acoustic models, as well as sound synthesis methods, haptic devices, haptic perception, visual output devices, in particular VR glasses/head-mounted displays, and cave environments.</p>	
Teaching and learning methods	<p>Lecture: 2 hours per week Project: 20 hours Independent study The language of the module can be German or English and is determined at the beginning of each semester and announced in the usual manner.</p>	
Prerequisites for participation	<p>The skills acquired in the modules Analysis in an economic context and Mathematics in an engineering context are required.</p>	
Usability	<p>D WiIng: Field Engineering Sciences The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Complex assesment, 20 hours</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each summer semester</p>	
Duration	<p>One semester</p>	

Supplementary Qualifications

Module number	Module name	Responsible lecturer
WW-BA-MWAN WW-D-MWAN	Analysis im wirtschaftswissenschaftlichen Kontext	Direktorin bzw. Direktor des Instituts für Mathematische Stochastik i.stochastik@tu-dresden.de
Qualification objectives	Students will know and master the fundamentals of analysis, for example, differentiation and integration, as well as linear differential equations, and their application to optimization problems. They will be able to use these methods for mathematical modeling and solving economic problems.	
Contents	The module covers the fundamentals of analysis, particularly differentiation and integration as well as linear differential equations.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the Linear Algebra in an Economics Context module are required.	
Usability	BA Verkehrswirtschaft	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-DAMF	Data Management Foundations	Prof. Dr. Wolfgang Lehner wolfgang.lehner@tu-dresden.de
Qualification objectives	Students can correctly structure a section of the real world using entity-relationship data modeling, relational data modeling, and design theory. They thus possess personal and social skills as well as methodological competence. Furthermore, with the help of appropriate tools, they are able to create a relational database, taking semantic integrity constraints into account, and query and edit it using SQL statements. Furthermore, students are able to correctly classify and understand selected system-oriented aspects in the implementation of database systems. Students also have an understanding of how database development is embedded as a fundamental component in a higher-level software development process.	
Contents	The content covers the fundamentals of the scientific field of databases and database systems. This includes, on the one hand, theoretical knowledge of database design theory, such as the Entity-Relationship Model, the Relational Data Model, and physical data structures for data organization. Further content covers central aspects of the implementation of database systems. This includes, on the one hand, functional transformations of textual SQL queries to storage-level primitives, including specific optimization approaches. On the other hand, the implementation of non-functional features includes synchronization, restart, and error handling.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	BA WiPäd (I): Field Computer Science D WiInf: Field Computer Science	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-DEST WW-D-DEST	Deskriptive Statistik	Prof. Ostap Okhrin ostap.okhrin@tu-dresden.de
Qualification objectives	Students will be able to statistically analyze empirical relationships and data, particularly from the economic and transportation fields. They will be familiar with basic methods and approaches of descriptive statistics and probability theory.	
Contents	The module covers descriptive statistics, particularly the empirical distribution function, the histogram, distribution parameters, combinatorics, and the fundamentals of probability theory.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Linear Algebra in an Economic Context and Fundamentals of Economics and Transport Economics are assumed. The following literature is suitable for preparation: Jeske: Fun with Statistics, Problems, Solutions, and Formulas, Oldenbourg Verlag; Neubauer; Bellgardt; Behr: Statistical Methods, Vahlen Verlag; Bohley: Statistics, Introductory Book for Economists and Social Scientists, Oldenbourg Verlag.	
Usability	BA Verkehrswirtschaft	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-ETIF	Einführung in die theoretische Informatik	Professur für Automatentheorie, secretary_lat@mailbox.tu- dresden.de
Qualification objectives	Students will master the fundamentals of algorithms and data structures, which are important for computer science, including the correctness and complexity analysis of algorithms, Boolean formulas, formal languages, and automata, using regular languages and finite automata as examples. They will have knowledge of efficient algorithms for fundamental problems and design strategies for constructing algorithms.	
Contents	The module covers algorithms, graph theory, formal languages, automata theory, and logic.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	BA WiPäd (II): Field Computer Science D WiInf: Field Computer Science	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-401-GLVP WW-D-401-GLVP	Grundlagen Verkehrspolitik	Dr. Stefan Tscharaktschiew stefan.tscharaktschiew@tu-dresden.de
Qualification objectives	Students are able to structure and analyze fundamental issues in transport policy from the perspective of microeconomics and industrial economics. Students can identify causes of market failure in the transport sector and discuss possible solutions. Building on this, students can evaluate competition and regulatory problems and develop concepts that do justice to the division of tasks between the state and the market in the transport sector.	
Contents	The module covers the central foundations of transport policy and economics, in particular the economic and structural features of transport and approaches to the division of tasks between the market and the state.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Linear Algebra in an Economic Context, Analysis in an Economic Context, Programming in Transportation, Fundamentals of Economics and Transportation Economics, Introduction to Microeconomics, Strategy and Competition, and Introduction to Macroeconomics are required.	
Usability	BA Verkehrswirtschaft: both in the Qualified and General Focus Fields of Transport Policy	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-INST WW-D-INST	Induktive Statistik	Prof. Ostap Okhrin ostap.okhrin@tu-dresden.de
Qualification objectives	Students are able to use probabilistic considerations to make statements about the population based on samples. They are able to formulate, test, and appropriately present mathematical models.	
Contents	The module covers inductive statistics, particularly two-dimensional distribution functions, limit theorems, parameter estimations, confidence intervals, significance tests, measures of association, and linear regression.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Linear Algebra in an Economic Context, Fundamentals of Economics and Transport Economics, and Descriptive Statistics are assumed. The following literature is suitable for preparation: Jeske: Fun with Statistics, Exercises, Solutions, and Formulas, Oldenbourg Verlag; Neubauer; Bellgardt; Behr: Statistical Methods, Vahlen Verlag; Bohley: Statistics, Introductory Book for Economists and Social Scientists, Oldenbourg Verlag.	
Usability	BA Verkehrswirtschaft	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-401-IPRG WW-D-401-IPRG	Infrastrukturpolitik und Regulierung	Prof. Georg Hirte georg.hirte@tu-dresden.de
Qualification objectives	Students are able to analyze key issues regarding the impact of transport infrastructure using appropriate economic methods. They can develop concepts to assess economic instruments such as road pricing and regulatory measures for financing and using infrastructure based on appropriate economic approaches and develop options for further developing transport infrastructure.	
Contents	The module covers the economic importance of transport infrastructure, economic approaches to its evaluation, key approaches to assessing the relationship between government and market in the provision of transport infrastructure, and issues of regulation and financing of transport infrastructure.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The skills to be acquired in the modules Linear Algebra in an Economic Context, Analysis in an Economic Context, Programming in Transportation, Fundamentals of Economics and Transportation, Introduction to Microeconomics, Strategy and Competition, Introduction to Macroeconomics, and Fundamentals of Transportation Policy are assumed.	
Usability	BA Verkehrswirtschaft: both in the Qualified and General Focus Fields of Transport Policy	
Examination	Portfolio, 30 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-MWLA WW-D-MWLA	Lineare Algebra im wirtschaftswissenschaftlichen Kontext	Direktorin bzw. Direktor des Instituts für Mathematische Stochastik i.stochastik@tu-dresden.de
Qualification objectives	Students will know and master the fundamentals of linear algebra, for example, in the areas of vectors and matrices as well as linear systems of equations, and their application to optimization problems. They will be able to use these methods for mathematical modeling and solving economic problems.	
Contents	The module covers the fundamentals of linear algebra, particularly vectors and matrices as well as systems of linear equations.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	Mathematics skills at the basic Abitur level are required.	
Usability	BA Verkehrswirtschaft	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-403-PSVL WW-D-403-PSVL	Planung und Steuerung von Verkehrs- und Logistikprozessen	Prof. Jörn Schönberger joern.schoenberger@tu-dresden.de
Qualification objectives	Students are familiar with key business management problems, particularly cost optimization for transport and logistics companies. They are able to identify and structure such situations. Furthermore, they have knowledge of applying methods for analyzing, presenting, and solving planning problems in transport and logistics companies. Finally, students possess fundamental skills related to the selection and use of relevant software systems for addressing problems.	
Contents	The module covers the formal representation and modeling of complex decision-making situations in transport, traffic, and logistics, mathematical graphs for the representation and analysis of networks and processes within networks, algorithmic solution of decision models, particularly linear optimization, and the exemplary presentation and application of relevant software for solving algebraic models.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 1 hour per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Linear Algebra in an Economic Context, Analysis in an Economic Context, and Programming in Transportation are assumed. The following literature is suitable for preparation: Nollau, Mathematics for Economists, Teubner-Verlag, Stuttgart-Leipzig, current edition.	
Usability	BA Verkehrswirtschaft: both in the Qualified and General Focus Fields of Transport management and transport logistics	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-PRWI WW-D-PRWI	Privatrecht im wirtschaftswissenschaftlichen Kontext	Prof. Dr. Anne Lauber-Rönsberg office.lauber-roensberg@tu- dresden.de
Qualification objectives	Students will have a fundamental understanding of general civil law, particularly with regard to the legal requirements and consequences of commercial activity, and will be able to legally classify various situations and problems and evaluate simple legal issues.	
Contents	The module covers the fundamentals of the general part of the German Civil Code, particularly the theory of legal transactions; the fundamentals of the law of obligations, including contract law, consumer protection law, unjust enrichment law, and tort law; the fundamentals of property law, commercial law, and corporate law, as well as excursions into civil procedure law and other areas of private commercial law.	
Teaching and learning methods	Lecture: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	BA Verkehrswirtschaft	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
D-WW-RNTZ	Rechnernetze	Prof. Dr. Alexander Schill alexander.schill@tu-dresden.de
Qualification objectives	After completing the module, students will be familiar with the layered architecture of computer networks and understand the basic functionalities of data transmission, local area networks, data switching and transport, and computer network applications. They will be able to evaluate, systematically select, and appropriately combine alternative technologies, protocols, and mechanisms for computer networks.	
Contents	The module covers the fundamentals of computer networks based on the layered model for open communication systems. These include the fundamentals of transmission technology, the principles of local area networks, efficient and secure data transmission, and the computer network applications based on them.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	BA WiPäd (): Field Computer Science D WiInf: Field Computer Science	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
VWW-BA-401-RSTÖ WW-D-401-RSTÖ	Regional- und Stadtökonomie	Prof. Georg Hirte georg.hirte@tu-dresden.de
Qualification objectives	After completing the module, students will be able to incorporate the factor of space into economic theory. They will have mastered the fundamentals of classical location theory, agglomeration theories, and urban economics. They can apply these approaches to current and relevant spatial economic issues, particularly in connection with mobility. They understand fundamental empirical aspects of economic literature.	
Contents	The module covers theories of price and location competition in space, regional and location policy, the distribution of economic activities in space, agglomeration effects, spatial structures in a city, and the role of mobility within the framework of these approaches.	
Teaching and learning methods	Lecture: 1 hour per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the modules Linear Algebra in an Economic Context, Analysis in an Economic Context, Fundamentals of Economics and Transport Economics, Descriptive Statistics, Inductive Statistics, Programming in Transportation, Introduction to Macroeconomics, Strategy and Competition, and Environmental Economics are required.	
Usability	BA Verkehrswirtschaft: both in the specialized and general focus Fields of environmental and regional economics	
Examination	Portfolioio, 50 hours	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each winter semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-D-SOFT	Softwaretechnologie	Prof. Dr. Uwe Aßmann uwe.assmann@tu-dresden.de
Qualification objectives	Students will master the methods for developing software systems. They will be able to apply a systematic engineering approach using the concepts of object orientation, as well as employing object-oriented modeling and programming languages in analysis, design, and implementation.	
Contents	The module includes an introduction to an object-oriented modeling language, such as the Unified Modeling Language (UML), as well as reuse aspects in an object-oriented programming language such as Java, with a particular emphasis on the use of class libraries and design patterns. Furthermore, the module provides an introduction to object-oriented analysis, design, and architecture. Basic information on project management, agile software development, and software quality assurance rounds out the content.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation	The skills acquired in the Object-Oriented Programming module are assumed.	
Usability	BA WiPäd (I): Field Computer Science D WiInf: Field Computer Science	
Examination	Written exam, 120 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-404-UMVE WW-D-404-UMVE	Umwelt und Verkehr	Prof. Jens Borken-Kleefeld verkehrsoekologie@tu-dresden.de
Qualification objectives	Students understand the systems concept and the interactions between transport and the environment and can assess fundamental environmental impacts, their relevance and dynamics.	
Contents	The module covers basic definitions of terms such as mobility and transport, the environmental impacts of transport such as noise, exhaust gases, and energy consumption, as well as measures to reduce these environmental impacts.	
Teaching and learning methods	Lecture: 2 hours per week Practical: 2 hours per week Independent study The language of the module is German.	
Prerequisites for participation		
Usability	BA Verkehrswirtschaft	
Examination	Written exam, 90 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each summer semester	
Duration	One semester	

Foreign Languages

Module number	Module name	Responsible lecturer
WW-BA-901-ABWC WW-D-901-ABWC	Aufbau Berufs- und Wissenschaftssprache C1	Ute Meyer ute.meyer@tu-dresden.de
Qualification objectives	Students have the ability to communicate independently in a foreign language of their choice in writing and orally for study and work purposes at level C1 of the Common European Framework of Reference for Languages. Students can understand complex scientific and work-related written or oral texts, express themselves in detail and using complex linguistic structures and an extensive general and specialized vocabulary on topics in their field of study. They can follow and participate in complex discussions, even on abstract and complex topics, use language flexibly and effectively to express irony, allusion, and metaphor, and deal effectively with communication and cultural problems.	
Contents	The contents of the module in a foreign language chosen by the student are the basics of scientific language, reading and listening strategies, reception and production of subject- and science-related texts, basics of business correspondence, profession-specific communication constellations such as team meetings, presentations, lectures and discussions, application documents, and independent work on and with texts and audio texts. The languages German as a foreign language, English, French, Russian and Spanish are available. The German language course is offered as a compulsory subject.	
Teaching and learning methods	Language course: 4 hours per week Independent study	
Prerequisites for participation	Language skills in the chosen language at level B2 of the Common European Framework of Reference for Languages are required.	
Usability	BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations.	
Examination	Language test, 105 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-901-A002 WW-D-901-A002	Fremdsprache A2	Ute Meyer ute.meyer@tu-dresden.de
Qualification objectives	<p>Students have basic communication skills in a foreign language of their choice at level A2 of the Common European Framework of Reference for Languages.</p> <p>Students can understand slow and clearly articulated concrete information on topics from everyday life, and can read and understand simple and short texts with reference to everyday and professional experiences that are simple in terms of syntax, semantics, vocabulary, and morphology. If the vocabulary is limited to frequently used and internationally understandable words, students can largely follow short, simple conversations and very simple presentations and respond appropriately. If they are familiar with the topic, they can describe their environment orally and in writing using simple phrases and sentences. Students have a basic communicative competence in a foreign language of their choice at level A2 of the Common European Framework of Reference for Languages. Students can understand slowly and clearly articulated concrete information on topics from everyday life and read and understand simple and short texts related to everyday and professional experiences.</p>	
Contents	<p>The module content in a foreign language chosen by the student includes simple texts on everyday situations and specific topics, particularly in a university environment, simple presentations and original documents such as announcements, interviews, short audio and video sequences, reading and listening strategies, simple grammatical structures and an appropriate vocabulary, as well as various forms of work with different media. The languages available are Arabic, Chinese, French, Italian, Japanese, Polish, Portuguese, Russian, Swedish, Spanish and Czech.</p>	
Teaching and learning methods	<p>Language course: 4 hours per week Independent study</p>	
Prerequisites for participation	<p>Language skills in the chosen language at level A1 of the Common European Framework of Reference for Languages are required.</p>	
Usability	<p>BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations.</p>	

Examination	Language test, 105 minutes
Workload and Credit points	150 hours, 5 credit points
Frequency	Offered each semester
Duration	One semester

Module number	Module name	Responsible lecturer
WW-BA-901-EA2+ WW-D-901-EA2+	Fremdsprache A2+ – Europa und Mittelmeerraum	Ute Meyer ute.meyer@tu-dresden.de
Qualification objectives	Students have advanced communicative language skills in a foreign language of their choice at level A2 of the Common European Framework of Reference for Languages. Students can understand clearly articulated concrete information on topics related to everyday life, understand simple texts in terms of syntax, semantics, lexicon, and morphology with reference to everyday and professional experiences, recognize different text types, and read and understand relatively easily in simple, routine texts. Reading comprehension, if the vocabulary is limited to frequently used and internationally understandable words, recognize different types of texts, communicate relatively easily in simple, routine situations and use connectors appropriately, describe their environment orally and in writing using simple phrases and sentences, and respond to a limited number of simple questions.	
Contents	The module content in a foreign language chosen by the student includes simple texts and audio texts on everyday situations, particularly in a university environment, basic oral and written text production and interaction on this topic, relevant reading and listening strategies, grammatical structures and an expanded vocabulary, as well as various forms of work with different media. The languages available are Arabic, French, Italian, Polish, Portuguese, Swedish, Spanish, and Czech.	
Teaching and learning methods	Language course: 4 hours per week Independent study	
Prerequisites for participation	Language skills in the chosen language at level A2 of the Common European Framework of Reference for Languages are required, as can be acquired in the Foreign Language A2 module.	
Usability	BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations.	
Examination	Language test, 105 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each semester	
Duration	One semester	

Module number	Module name	Responsible lecturer
WW-BA-901-OA2+ WW-D-901-OA2+	Fremdsprache A2+ – Ostasiatische Sprache	Ute Meyer ute.meyer@tu-dresden.de
Qualification objectives	<p>Students have advanced communicative language skills in Chinese or Japanese, depending on their choice, at level A2 of the Common European Framework of Reference for Languages. Students can understand clearly articulated concrete information on topics from everyday life, read and understand simple texts with reference to everyday and professional experiences, provided that the vocabulary is limited to frequently used and internationally understandable words, and, if the vocabulary is limited to frequently used and internationally understandable words, recognize different types of texts, communicate relatively easily in simple, routine situations and use connectors appropriately, describe their environment orally and in writing using simple phrases and sentences, and respond to a limited number of simple questions. They can a</p>	
Contents	<p>The content of the module in the foreign language Chinese or Japanese, depending on the student's choice, includes simple texts and audio texts on everyday situations, especially in a university environment, basic oral and written text production and interaction on this topic, relevant reading and listening strategies, grammatical structures and an expanded vocabulary, as well as various forms of work with different media.</p>	
Teaching and learning methods	<p>Language course: 4 hours per week Independent study</p>	
Prerequisites for participation	<p>Language skills in the chosen language at level A2 of the Common European Framework of Reference for Languages are required.</p>	
Usability	<p>BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Language test, 105 minutes</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each semester</p>	
Duration	<p>One semester</p>	

Module number	Module name	Responsible lecturer
WW-BA-901-EB01 WW-D-901-EB01	Fremdsprache B1 – Europa und Mittelmeerraum	Ute Meyer ute.meyer@tu-dresden.de
Qualification objectives	<p>Students have advanced basic communication skills in a foreign language of their choice at level B1 of the Common European Framework of Reference for Languages. Students can understand the main points of audio texts on topics from everyday life and the university environment when spoken in clearly articulated standard language or a familiar variety. They can understand factual texts on topics related to their own interests and areas of expertise to a large extent, express themselves in detail and coherently on topics related to their own areas of interest. They can largely understand factual texts on topics related to their own interests and fields of study, express themselves in detail and coherently on topics of their own interest both orally and in writing, and compose simple official documents. They have mastered communication techniques such as summarizing, arguing, and evaluating, and can take the initiative in conversations. They can express their opinions and feelings in a clear and coherent manner. They can describe their own and others' thoughts and feelings in a clear and coherent manner.</p>	
Contents	<p>The module content in a foreign language chosen by the student includes texts and audio recordings relating to everyday situations, particularly in a university environment, oral and written text production and interaction on this topic, relevant reading and listening strategies, grammatical structures, and expanded vocabulary. The languages available are Arabic, French, Italian, Russian, Swedish, and Spanish.</p>	
Teaching and learning methods	<p>Language course: 4 hours per week Independent study</p>	
Prerequisites for participation	<p>Language skills in the chosen language at level A2 of the Common European Framework of Reference for Languages are required.</p>	
Usability	<p>BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Language test, 105 minutes</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each semester</p>	
Duration	<p>One semester</p>	

Module number	Module name	Responsible lecturer
WW-BA-901-OB01 WW-D-901-OB01	Fremdsprache B1 – Ostasiatische Sprache	Ute Meyer ute.meyer@tu-dresden.de
Qualification objectives	<p>Students have advanced basic communication skills in Chinese or Japanese at level B1 of the Common European Framework of Reference for Languages.</p> <p>Students can understand the main points of audio texts on topics from everyday life and the university environment when spoken in clearly articulated standard language or a familiar variety. They can understand factual texts on topics related to their own interests and fields of study, express themselves in detail and coherently on topics of their own interest both orally and in writing, and compose simple official documents. They have mastered communication techniques such as summarizing, arguing, and evaluating, and can take the initiative in conversations. They can express their opinions and feelings on topics of their own interest.</p>	
Contents	<p>The content of the module in the foreign language Chinese or Japanese, depending on the student's choice, includes texts and audio recordings on everyday situations, particularly in a university environment, oral and written text production and interaction on this topic, relevant reading and listening strategies, grammatical structures, and an expanded vocabulary. The module is taught in Chinese or Japanese, depending on the student's choice.</p>	
Teaching and learning methods	<p>Language course: 4 hours per week Independent study</p>	
Prerequisites for participation	<p>Language skills in the chosen language at level A2 of the Common European Framework of Reference for Languages are required.</p>	
Usability	<p>BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Language test, 105 minutes</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each semester</p>	
Duration	<p>One semester</p>	

Module number	Module name	Responsible lecturer
WW-BA-901-EB1+ WW-D-901-EB1+	Fremdsprache B1+ – Europa und Mittelmeerraum	Ute Meyer ute.meyer@tu-dresden.de
Qualification objectives	<p>Students have productive and receptive skills in a foreign language of their choice at level B1 of the Common European Framework of Reference for Languages.</p> <p>Students have sufficient language skills to complete an internship abroad or attend courses at a foreign university in the local language.</p> <p>Students have sufficient language skills to complete an internship abroad or attend courses at a foreign university in the local language.</p> <p>They can understand the main points of audio texts on topics from everyday life and the university environment when spoken in standard language or a familiar variety, understand factual texts on abstract and concrete topics familiar variety, understand factual texts on abstract and concrete content related to their own interests and fields of study, express themselves in detail and coherently on past, present, and future topics of their own interest, both orally and in writing, and compose official documents. The course also covers the use of specialized terminology in the field of communication and information technology.</p>	
Contents	<p>The module content in a foreign language chosen by the student includes texts and audio recordings relating to everyday situations, particularly in a university environment, oral text production and interaction on this topic, writing longer texts on topics related to the student's own university environment, grammatical structures, and expanded vocabulary. The languages available are Arabic, French, Italian, Swedish, and Spanish.</p>	
Teaching and learning methods	<p>Language course: 4 hours per week Independent study</p>	
Prerequisites for participation		
Usability	<p>BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Language test, 105 minutes</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each semester</p>	
Duration	<p>One semester</p>	

Module number	Module name	Responsible lecturer
WW-BA-901-OB1+ WW-D-901-OB1+	Fremdsprache B1+ – Ostasiatische Sprache	Ute Meyer ute.meyer@tu-dresden.de
Qualification objectives	<p>Students have productive and receptive skills in Chinese or Japanese at level B1 of the Common European Framework of Reference for Languages. Students have sufficient language skills Students have sufficient language skills to complete an internship abroad or attend courses at a foreign university in the local language. They can understand the main points of audio texts on topics from everyday life and the university environment when spoken in standard language</p> <p>or a familiar variety, understand factual texts on abstract and concrete content related to their own interests and fields of study, express themselves in detail and coherently on past, present, and future topics of their own interest areas, both orally and in writing, and compose official documents.</p>	
Contents	<p>The content of the module in the foreign language Chinese or Japanese, depending on the student's choice, includes texts and audio texts on everyday situations, especially in a university environment, oral text production and interaction on this topic, writing longer texts on topics related to the student's own university environment, as well as grammatical structures and an expanded vocabulary.</p>	
Teaching and learning methods	<p>Language course: 4 hours per week Independent study</p>	
Prerequisites for participation		
Usability	<p>BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations.</p>	
Examination	<p>Language test, 105 minutes</p>	
Workload and Credit points	<p>150 hours, 5 credit points</p>	
Frequency	<p>Offered each semester</p>	
Duration	<p>One semester</p>	

Module number	Module name	Responsible lecturer
WW-BA-901-GBWB WW-D-901-GBWB	Grundlagen Berufs- und Wissenschaftssprache B2+	Ute Meyer ute.meyer@tu-dresden.de
Qualification objectives	Students have the ability to communicate independently in a foreign language of their choice in writing and orally for study and work purposes at level B2 of the Common European Framework of Reference for Languages. Students can understand complex scientific and work-related written or orally presented texts to a large extent. They can express themselves clearly and fluently on selected topics in their field of study in detail and using complex linguistic structures, and can use a variety of strategies to ensure understanding. Students have intercultural competence.	
Contents	The contents of the module in a foreign language chosen by the student are the basics of scientific language, listening and listening strategies, reception and production of subject- and science-related texts, basics of business correspondence, profession-specific communication constellations such as team meetings, presentations, lectures and discussions, application documents, and independent work on and with texts and audio texts. The languages German as a foreign language, English, French, Russian and Spanish are available.	
Teaching and learning methods	Language course: 4 hours per week Independent study	
Prerequisites for participation	Language skills in the chosen language at level B2 of the Common European Framework of Reference for Languages are required.	
Usability	BA Wiwi, BA WiPäd, D WiInf, D WiIng: Field Supplementary Qualifications The selection must be made in accordance with the examination regulations.	
Examination	Language test, 105 minutes	
Workload and Credit points	150 hours, 5 credit points	
Frequency	Offered each semester	
Duration	One semester	