

Course Catalog

Fakultät für Informations-, Medien- und Elektrotechnik

Courses are colour-coded according to the course language

German

English

German, English if
necessary

German and English

– Level: Bachelor, Summer Semester

→ [Advanced methods and theories of Media Design \(Russi\)](#)

→ [algorithms and data structures \(Rosenthal\)](#)

→ [Anerkennung "Staatlich geprüfter Augenoptiker" \(BaOPT\)](#)

→ [Audio Engineering \(Reiter\)](#)

→ [Autonomous Systems \(Yuan\)](#)

→ [Autonomous Systems \(Yuan\)](#)

→ [Bachelor Thesis \(BaTIN\)](#)

→ [Bachelorarbeit \(BaET\)](#)

→ [Bachelorarbeit \(BaMT\)](#)

→ [Bachelorarbeit \(BaOPT\)](#)

→ [Basics of Media Design 1 \(Russi\)](#)

→ [Bioenergie und regenerative Gastechologie \(Stenzel\)](#)

→ [Capstone-Projekt \(BaET\)](#)

→ [Colloquium \(BaTIN\)](#)

→ [Communication Acoustics \(Pörschmann\)](#)

→ [Computer Graphics \(Fuhrmann\)](#)

→ [Management of Projects in Information Technology \(Yuan\)](#)

→ [Mathematics 2 \(Bold\)](#)

→ [Mathematics 2 \(Knospé\)](#)

→ [Mathematics 2 \(Kunz\)](#)

→ [Mathematics 2 \(Weigand\)](#)

→ [Measurement Technology \(Silverberg\)](#)

→ [Media Design Project \(Russi\)](#)

→ [Media ethics and society \(Russi\)](#)

→ [Medical Imaging \(Oberheide\)](#)

→ [Microcomputer systems \(Stockmann\)](#)

→ [Network Security and Automation \(Grebe\)](#)

→ [Operating Systems and Distributed Systems 2 \(Vogt\)](#)

→ [Operational energy management \(Stockmann\)](#)

→ [Optical Design \(Weigand\)](#)

→ [Parallel Programming and Computerarchitektur \(Thieling\)](#)

→ [Persönliche Studienverlaufsplanung \(Kreiser\)](#)

→ Computer Science 2 (Fuhrmann)

→ Control Systems of Electrical Drives (Lohner)

→ Data Base Systems 2 (Behrend)

→ Digital Communications (Dettmar)

→ Digital Signal Processing with FPGA (Krah)

→ Discrete Signals and Systems (Elders-Boll)

→ Display technology (Ruelberg)

→ Electrical Engineering Materials (Poggemann)

→ Electric power generation (Evers)

→ Electrical Engineering 2 (Basics) (Kronberger)

→ Electrical Machines (Evers)

→ Electrical safety and EMC (Humpert)

→ Electronic Media 1 (Pörschmann)

→ Embedded system project (Krawutschke)

→ Energy Economics (Stadler)

→ Entwurf, Simulation und Layout von Schaltungen (Brunner)

→ Formal Languages and Automata Theory (Nissen)

→ Fundamentals in System Programming (Thieling)

→ Fundamentals of Electrical Engineering 1 (Waffenschmidt)

→ Fundamentals of Electrical Engineering 2 (May)

→ Fundamentals of Electrical Engineering 2 (Waffenschmidt)

→ Graphentheorie (Randerath)

→ High Frequency Technologies (Kronberger)

→ Holography (Altmeyer)

→ Image Processing (Kunz)

→ Image Sensor Technology (Poggemann)

→ Industrial Image Processing (Thieling)

→ Information technology for automation technology (Große)

→ Photo Technology 2 (Fischer)

→ Physics 1 (Humpert)

→ Physics 1 (Kohlhof)

→ Physics 1 (Oberheide)

→ Postproduction (Gärtner)

→ Power Electronics (Dick)

→ Practical Informatics 2 (Rosenthal)

→ Practical Informatics 2 (Yuan)

→ Practically based Summer School (Schneider)

→ Praxis- und Mobilitätsphase (BaMT)

→ Praxismodul 1 (BaOPT)

→ Praxisprojekt (BaET)

→ Praxisprojekt (BaOPT)

→ Process Control Technology Systems (Große)

→ Product Development for Smart City (Stadler)

→ Programming distributed and mobile applications (Vogt)

→ Project Camera Technology Applications (Fischer)

→ Project Image Processing / Pattern Recognition (Kunz)

→ Project Interactive Systems (Grünvogel)

→ Project Media Distribution / Display Technology (Ruelberg)

→ Project Media Production Technologies (Reiter)

→ Project-based optics (Gartz)

→ Radiation, radiometry, photometry (Gartz)

→ Sensors and evaluation of measurements (May)

→ Software Engineering (Kreiser)

→ Software Lab (Nissen)

→ Stereoscopy (Fischer)

→ Switch-Mode Power Supplies (Dick)

→ Systems on Programmable Chips (Krawutschke)

→ Internship (BaTIN).

→ Introduction to Fieldbus Systems (Bartz).

→ IoT Protocols and Applications (Elders-Boll).

→ IT Security (Knospe).

→ Kolloquium zur Bachelorarbeit (BaET).

→ Kolloquium zur Bachelorarbeit (BaMT).

→ Kolloquium zur Bachelorarbeit (BaOPT).

→ Technical optics (Altmeyer).

→ Technologien der augenoptischen Industrie (NN).

→ wave optics, interference, diffraction (Gartz).

→ Web Architectures (Wörzberger).

→ Web Engineering 1 (Backend) (NN).

→ Web project (NN).

→ Writing scientific papers (Weigand).

– Level: Bachelor, Winter Semester

→ Acoustics for Engineers (Pörschmann).

→ Analogue signals and systems (Elders-Boll).

→ Analogue signals and systems (Lohner).

→ Anerkennung "Staatlich geprüfter Augenoptiker" (BaOPT).

→ Antenna Technology (Kronberger).

→ Applied Mathematics (Rhein).

→ Applied Statistics and Numerical Analysis (Rhein).

→ Bachelor Thesis (BaTIN).

→ Bachelorarbeit (BaET).

→ Bachelorarbeit (BaMT).

→ Bachelorarbeit (BaOPT).

→ Basic Electrical Engineering for Computer Science and Engineering (Thieling).

→ Basics of Media Design 2 (Russi).

→ Business and Law (Kim).

→ Camera Technology (Fischer).

→ Colloquium (BaTIN).

→ Computer Animation (Grünvogel).

→ Computer Generated Imagery (Fuhrmann).

→ Computer Science 1 (Fuhrmann).

→ Computer Science 3 (Lo Iacono).

→ Kolloquium zur Bachelorarbeit (BaOPT).

→ Laser Physics and Technology (Altmeyer).

→ Light microscopy (Altmeyer).

→ Light-Matter-Interaction (Oberheide).

→ Lighting Technology (Weigand).

→ Machine Learning (Thieling).

→ Mathematics 1 (Bold).

→ Mathematics 1 (Grünvogel).

→ Mathematics 1 (Knospe).

→ Mathematics 1 (Weigand).

→ Media Design Conception and Storytelling (Russi).

→ Media Distribution and Storage (Ruelberg).

→ Media Law (BaMT).

→ Medizinische Statistik und Studienplanung (BaOPT).

→ Networking in automation technology (Stockmann).

→ Neuroophthalmologie (BaOPT).

→ Operating Systems and Distributed Systems 1 (Vogt).

→ Optical metrology (Gartz).

→ Pathologie (BaOPT).

→ Control Engineering_(Krah).

→ Control System Technology_(Kreiser).

→ Data Base Systems 1_(Behrend).

→ Data Mining_(Rhein).

→ Data Mining_(Rhein).

→ Datenbanken_(Behrend).

→ design and 3D-CAD_(Gartz).

→ Development of Complex Software Systems_(Nissen).

→ Digital Computer_(Thieling).

→ Electrical Drives_(Dick).

→ Electrical Engineering_(Basics)_(Kronberger).

→ Electrical Engineering 3_(Kronberger).

→ Electrical Power Distribution_(Waffenschmidt).

→ Electronic Circuits_(Schneider).

→ Electronic Media 2_(Ruelberg).

→ Electronics_(Poggemann).

→ Embedded Systems_(Krawutschke).

→ Energy Storage_(Stadler).

→ F07 Networks and Protocols_(Grebe).

→ Fahrmechanik_(Frantzen).

→ Film- and Postproduction_(Gärtner).

→ First term project_(Gartz).

→ Functional Safety_(Krah).

→ Fundamentals of Electrical Engineering 1_(May).

→ Fundamentals of Electrical Engineering 3_(Evers).

→ Fundamentals of Electrical Engineering 3_(May).

→ Geo- und Solarthermie_(Lambers).

→ Geometrical Optics_(Gartz).

→ Graphentheorie_(Randerath).

→ Graphical User Interfaces_(Rosenthal).

→ Pharmakologie_(BaOPT).

→ Photo Technology 1_(Fischer).

→ Phototechnology 3_(Poggemann).

→ Physics 2_(Humpert).

→ Physics 2_(Kohlhof).

→ Physics 2_(Oberheide).

→ Practical Informatics 1_(Rosenthal).

→ Practical Informatics 1_(Vogt).

→ Praxis- und Mobilitätsphase_(BaMT).

→ Praxismodul 2_(BaOPT).

→ Praxisprojekt_(BaET).

→ Presentation and Communication_(BaTIN).

→ Principles of Networked IT Systems_(Elders-Boll).

→ Process Control Engineering_(Große).

→ Programming Practice_(Yuan).

→ Programming Project_(Kreiser).

→ Recipe Control_(Große).

→ Self-management in studies_(Grünvogel).

→ Signal Processing_(Bartz).

→ Signal Theory and Applied Mathematics_(Kunz).

→ Signalprocessing using Matlab/Python and Microprocessors_(Elders-Boll).

→ Simulation von Energiesystemen_(Nebel).

→ Software Engineering_(Nissen).

→ Software Management_(Wörzberger).

→ Solarenergie_(Blieske).

→ Source and Channel Coding_(Dettmar).

→ Spezielle Kontaktlinsen_(BaOPT).

→ System Design Lab_(Wörzberger).

→ Theory of imaging_(Altmeyer).

→ Verteilte Datenverarbeitungssysteme_(Behrend).

→ [High Voltage Technology](#) (Humpert).

→ [Industrial Computer Vision](#) (Thieling).

→ [Internship](#) (BaTIN).

→ [Kinderoptometrie](#) (BaOPT).

→ [Kolloquium zur Bachelorarbeit](#) (BaET).

→ [Kolloquium zur Bachelorarbeit](#) (BaMT).

→ [Video Studio Technology](#) (Reiter).

→ [Visual and Auditive Perception](#) (Kunz).

→ [Web Architectures](#) (Wörzberger).

→ [Web Engineering 2 \(Frontend\)](#) (NN).

→ [Wind Energy](#) (Stadler).

→ [Wireless Communications in the IoT](#) (Dettmar).

→ [Writing scientific papers](#) (Weigand).

– Level: Master, Summer Semester

→ [Advanced Channel Coding](#) (Dettmar).

→ [Advanced Mathematics](#) (Knospe).

→ [Applied Matheamtics](#) (Grünvogel).

→ [Basics on Systems and Networks](#) (Kronberger).

→ [Communication in Distributed Systems and Networks](#) (Jonas).

→ [Computational Intelligence](#) (Bartz).

→ [Cryptography](#) (Knospe).

→ [Digital Motion Control](#) (Krah).

→ [Electric vehicle drivetrain](#) (Lohner).

→ [Electrical Power Grids for Renewable Energy](#) (Waffenschmidt).

→ [Embedded Security](#) (Lemke-Rust).

→ [Ethics](#) (MaTIN).

→ [Finite element method in electrical engineering](#) (Evers).

→ [High Voltage Transmission Technology](#) (Humpert).

→ [Human Computer Interaction](#) (Fuhrmann).

→ [Identification and Privacy Enhanced Technologies](#) (Ullmann).

→ [image processing master](#) (Salmen).

→ [Industrial property protection](#) (Ladrière).

→ [Master Thesis](#) (MaMT).

→ [Master Thesis](#) (MaTIN).

→ [Master Thesis Colloquium](#) (MaMT).

→ [Master Thesis Defense](#) (MaTIN).

→ [Master's project](#) (MaMT).

→ [Masterarbeit](#) (MaCSN).

→ [Masterarbeit](#) (MaET).

→ [Next Generation Networks](#) (Grebe).

→ [Nonlinear optics](#) (Oberheide).

→ [Optical and wireless communication systems](#) (Uhde).

→ [Optical Spectroscopy and Applications](#) (Gartz).

→ [Optoelektronik](#) (NN).

→ [Parallel Programming](#) (Fuhrmann).

→ [Project Management](#) (Dettmar).

→ [Reseach Project](#) (MaTIN).

→ [Research Project](#) (MaCSN).

→ [Research Project in Virtual Acoustics and Object Based Audio](#) (Reiter).

→ [Research Project Virtual and Augmented Reality](#) (Grünvogel).

→ [Research Seminar](#) (Krah).

→ Intelligent Information Systems (Behrend).

→ Kolloquium zur Masterarbeit (MaCSN).

→ Kolloquium zur Masterarbeit (MaET).

→ Large and Cloud-based Software-Systems (Wörzberger).

→ Machine Learning and Scientific Computing (Rhein).

→ Technologies and Systems of Video Production (Reiter).

→ Theoretical Computer Science (Randerath).

→ Theoretical Electro Dynamics (Kohlhof).

→ Virtual Acoustic Environments (VAE) (Pörschmann).

– Level: Master, Winter Semester

→ Advanced Multimedia Communications (Grebe).

→ Advanced Seminar on Media Technology (MaMT).

→ Algorithms for video signal processing (Ruelberg).

→ Alternative Computer Architectures and Programming Languages (Wörzberger).

→ Audio and Video Technologies (Ruelberg).

→ Combinatorial Optimization and Graph Algorithms (Randerath).

→ Communication in Distributed Systems and Networks (Jonas).

→ Digital Imaging (Fischer).

→ Digital Signal Processing (Elders-Boll).

→ Electric Railways (Evers).

→ Embedded Systems in Media Technology (Poggemann).

→ Energy Management in Interconnected Systems (Stadler).

→ Ethics (MaTIN).

→ IT Security (Knospe).

→ Kolloquium zur Masterarbeit (MaCSN).

→ Kolloquium zur Masterarbeit (MaET).

→ Master Thesis (MaMT).

→ Master Thesis (MaTIN).

→ Micro and nano systems (Kohlhof).

→ Optical Software Development (Weigand).

→ Power Electronics for PV and Wind (Dick).

→ Power Electronics for PV and Wind (Lohner).

→ Project management (Gartz).

→ Project Management (Dettmar).

→ Quantum mechanics (Oberheide).

→ Research Project (MaTIN).

→ Research Project (MaCSN).

→ Research Project in Virtual Acoustics and Object Based Audio (Reiter).

→ Research Project Virtual and Augmented Reality (Grünvogel).

→ Research Seminar (Krah).

→ RF System Design (Kronberger).

→ Scanning Microscopy (Altmeyer).

→ Servicemanagement in Netzen (Leischner).

→ Simulation of Illumination Systems (Weigand).

→ Software Engineering by Components and Pattern (Kreiser).

→ Special Aspects of Mobile Autonomous Systems (Yuan).

→ State Space Control (Große).

→ Systems Engineering for Energy Efficiency (May).

→ Master Thesis Colloquium (MaMT).

→ Master Thesis Defense (MaTIN).

→ Master's project (MaMT).

→ Masterarbeit (MaCSN).

→ Masterarbeit (MaET).

→ Virtual and Augmented Reality (Fuhrmann).

→ Virtuelle Private Netze (Östreich).

→ Zuverlässigkeit von Systemen (Jung).