

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 \(Rosenthal\)](#)

→ [Audio Engineering \(Reiter\)](#)

→ [Autonomous Systems \(Yuan\)](#)

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

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

→ [Business and Law \(Kim\)](#)

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

→ [Computer Graphics \(Fuhrmann\)](#)

→ [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 \(Große\)](#)

➔ [Internship \(BaTIN\)](#)

➔ [Introduction to Fieldbus Systems \(Bartz\)](#)

➔ [IoT Protocols and Applications \(Elders-Boll\)](#)

➔ [IT Security \(Knospe\)](#)

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

➔ [Mathematics 2 \(Bold\)](#)

➔ [Mathematics 2 \(Knospe\)](#)

➔ [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 \(Thieling\)](#)

➔ [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 \(Schneider\)](#)

➔ [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 for automation technology \(Kreiser\)](#)

→ [Software Lab \(Nissen\)](#)

→ [Stereoscopy \(Fischer\)](#)

→ [Switch-Mode Power Supplies \(Dick\)](#)

→ [Systems on Programmable Chips \(Krawutschke\)](#)

→ [Technical optics \(Altmeyer\)](#)

→ [Technologien der augenoptischen Industrie \(NN\)](#)

→ [wave optics, interference, diffraction \(Gartz\)](#)

→ [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 \(Lohner\)](#)

→ [Antenna Technology \(Kronberger\)](#)

→ [Applied Mathematics \(Rhein\)](#)

→ [Applied Statistics and Numerical Analysis \(Rhein\)](#)

→ [Basic Electrical Engineering for Computer Science and Engineering \(Thieling\)](#)

→ [Basics of Media Design 2 \(Russi\)](#)

→ Business and Law (Kim)

→ Camera Technology (Fischer)

→ Computer Animation (Grünvogel)

→ Computer Generated Imagery (Fuhrmann)

→ Computer Science 1 (Fuhrmann)

→ Computer Science 3 (Lo Iacono)

→ Control Engineering (Krah)

→ Control System Technology (Kreiser)

→ Data Base Systems 1 (Behrend)

→ Data Mining (Rhein)

→ Data Mining (Rhein)

→ 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 \(Rosenthal\)](#).

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

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

→ [Internship \(BaTIN\)](#).

→ [Kinderoptometrie \(BaOPT\)](#).

→ [Laser Physics and Technology \(Altmeyer\)](#).

→ [Light microscopy \(Altmeyer\)](#).

→ [Light-Matter-Interaction \(Oberheide\)](#).

→ [Lighting Technology \(Weigand\)](#).

→ [Machine Learnig \(Thieling\)](#).

→ [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)

→ 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)

→ Presentation and Communication (BaTIN)

→ Principles of Networked IT Systems (Elders-Boll)

→ Process Control Engineering (GroBe)

→ Programming Practice (Yuan)

→ Programming Project (Kreiser)

→ Recipe Control (GroBe)

→ 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 (Detmar)

→ Spezielle Kontaktlinsen (BaOPT)

→ System Design Lab (Wörzberger)

→ [Theory of imaging](#) (Altmeyer).

→ [Verteilte Datenverarbeitungssysteme](#) (Behrend).

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

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

→ [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 \(Ladrière\)](#)

➔ [InnoBioDiv - Innovative research on plant-environment interaction in a changing climate combining biology and modern Internet-of-Things technologies \(Dettmar\)](#)

➔ [Intelligent Information Systems \(Behrend\)](#)

➔ [Large and Cloud-based Software-Systems \(Wörzberger\)](#)

➔ [Machine Learning and Scientific Computing \(Rhein\)](#)

➔ [Next Generation Networks \(Grebe\)](#)

➔ [Nonlinear optics \(Oberheide\)](#)

➔ [Optical and wireless communication systems \(Uhde\)](#)

➔ [Optical Spectroscopy and Applications \(Gartz\)](#)

➔ [Qpotoelektronik \(NN\)](#)

➔ [Parallel Programming \(Fuhrmann\)](#)

➔ [Project Management \(Dettmar\)](#)

➔ [Research Project in Virtual Acoustics and Object Based Audio \(Reiter\)](#)

➔ [Research Project Virtual and Augmented Reality \(Grünvogel\)](#)

➔ [Research Seminar \(Krah\)](#)

➔ [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 \(Grebe\)](#)

➔ [Algorithms for video signal processing \(Ruelberg\)](#)

➔ [Alternative Computer Architectures and Programming Languages \(Wörzberger\)](#)

➔ [Audio and Video Technologies \(Ruelberg\)](#)

➔ [Combinatorial Optimization and Graph Algorithms \(Banderath\)](#)

➔ [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 \(MaTIN\)](#)

➔ [InnoBioDiv - Innovative research on plant-environment interaction in a changing climate combining biology and modern Internet-of-Things technologies \(Dettmar\)](#)

➔ [IT Security \(Knospe\)](#)

➔ [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 \(Dettmar\)](#)

➔ [Project Management for System Design Lab \(Wörzberger\)](#)

➔ [Quantum mechanics \(Oberheide\)](#)

➔ [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 \(May\)](#)

➔ [Virtual and Augmented Reality \(Fuhrmann\)](#)

➔ [Virtuelle Private Netze \(Österreich\)](#)

➔ [Zuverlässigkeit von Systemen \(Jung\)](#)
