Technology
Arts Sciences
TH Köln

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 Gastechnologie (Stenzel)
- Capstone-Projekt (BaET)
- Colloquium (BaTIN)
- Communication Acoustics (Pörschmann)
- Computer Graphics (Fuhrmann)
- 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)
- 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)
- Electrial 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)
- Lighting Technology (Weigand)
- 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)
- Kolloquium zur Bachelorarbeit (BaMT)
- Kolloquium zur Bachelorarbeit (BaOPT)
- Laser Physics and Technology (Altmeyer)
- Light microscopy (Altmeyer)
- Light-Matter-Interaction (Oberheide)
- 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)

- Computer Science 3 (Lo Iacono)
- 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)
- Pathologie (BaOPT)
- Pharmakologie (BaOPT)
- Photo Technology 1 (Fischer)
- Phototechniology 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)

- Graphical User Interfaces (Rosenthal)
- High Voltage Technology (Humpert)
- Industrial Computer Vision (Thieling)
- Internship (BaTIN)
- Kinderoptometrie (BaOPT)
- Kolloquium zur Bachelorarbeit (BaET)
- Verteilte Datenverarbeitungssysteme (Behrend)
- 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 Renweable 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)
- 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)

- 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)
- 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)
- 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)
- 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)
- 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)