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**Bachelor's degree programmes**

Construction Design and Economics  
Energy, Mobility and Environmental Management  
Social Work

**Master's degree programmes**

Architecture  
Construction Management and Engineering  
Energy and Transport Management  
Social Work

**Postgraduate Master's course**

Integrated Planning Design

EN



STUDY  
YOUR  
DREAM



Bachelor's degree programmes	Degree	Organisation	Campus
Construction Design and Economics	BSc	Full-time	Graz
Energy, Mobility and Environmental Management	BSc	Full-time	Kapfenberg
Social Work	BA	Full-time	Graz

Master's degree programmes	Degree	Organisation	Campus
Architecture	DI	Full-time	Graz
Construction Management and Engineering	DI	Full-time	Graz
Energy and Transport Management	MSc	Work-friendly	Kapfenberg
Social Work	MA	Part-time	Graz

Postgraduate Master's course	Degree	Organisation	Campus
Integrated Planning Design	MSc	Part-time	Graz

**W**hat are the ideas, concepts and measures needed for social co-existence in the 21st century in terms of architecture, building, environment and social affairs? These are the questions we seek to answer in the Department of Building, Energy & Society. We plan future-oriented living spaces, develop responsible transport solutions and work on building the city of the future. We design sustainable residential and commercial buildings, conduct research into renewable forms of energy and aim to support people in dealing with difficult situations in life. Networked thinking and an international perspective enable our students to combine their economic, technical, social and legal skills in the development of innovative and creative solutions.

Graduates from the Building, Energy & Society Department are open-minded experts who work in a wide range of career fields and contribute towards positive social development.

# Bachelor's degree programme CONSTRUCTION DESIGN AND ECONOMICS

Whether in the planning office or on the construction site, our students are part of the action as the cities of the future are created. Theoretical knowledge combined with plenty of practical project work provides the basis for a future career in architecture or construction engineering.

## What you will learn:

- Designing building structures
- Carrying out structural analysis and design
- Dimensioning structural elements
- Planning and managing building projects
- Working as part of a team
- Calculating construction work
- Calculations for energy certificates
- Designing energy-efficient buildings
- Revitalising buildings

In the first semester you can choose between two specialisations:

- Architecture
- Engineering

Interdisciplinary projects link the individual disciplines and prepare you for the complex tasks in the construction industry. You can also spend a semester studying abroad. In the sixth semester our students undertake an internship which is not only a stepping stone to your later career but also gives you an insight into the wide-ranging fields of construction engineering and architecture – from building construction to civil engineering, from planning to execution. The internship can be completed anywhere in the world so that you gain both professional and intercultural experience worldwide.

## Organisation

Construction Design and Economics is a full-time course. This means the classes are held at FH JOANNEUM over a 15 week period each semester, generally all day Monday to Friday.

## FACTS



Bachelor of Science in Engineering (BSc)



Full-time



6 semesters / 180 ECTS



FH JOANNEUM Graz



Language of instruction:  
German

- 60 places per year
- Head of degree programme:  
**FH-Prof. DI Dr. Michaela Kofler**
- Tuition fees: no tuition fees for students from the EU, EEA and Switzerland
- All information about deadlines, application and admission can be found online.
- [www.fh-joanneum.at/bbw](http://www.fh-joanneum.at/bbw)

## Did you know...

... that we organise many study trips? You'll be able to observe and analyse how specialist topics are put into practice at the construction site.



*"The wide variety of tasks I was given during my internship allowed me to apply the knowledge I've acquired and to gain many new experiences and impressions. I found it very interesting to experience the financial and technical aspects of how a construction project unfolds."*

DI Bianca Johanna Gollner, BSc, Graduate

## Career prospects

Our graduates can deepen their knowledge on the FH JOANNEUM Master's degree programmes in Architecture and in Construction Management and Engineering. Alternatively, they can immediately enter the world of work, finding employment on national and international construction projects where they are responsible for everything from project preparation and planning to construction.

CURRICULUM: 180 ECTS (30 ECTS per semester)

1st semester	2nd semester	3rd semester	4th semester	5th semester	6th semester
Geometry - Mathematics - Structural Analysis 9 ECTS	Building Contracts and Procurement Procedure - Surveying 3 ECTS	Construction Economics 3 ECTS	Public Law and Authority Procedure - Project: Structural Engineering & Construction Economics 6 ECTS	Project Management - Planning Process and Scheduling - Occupational Health and Safety and Coordination of Construction Works 10 ECTS	Bachelor's Thesis 1 3 ECTS
Structural Engineering 1 - Architectural Style and Cultural History 6 ECTS	Building Ecology - Structural Engineering 2 - Building Physics 1 8 ECTS	Building Services Engineering - Structural Engineering 3 - Building Physics 2 7 ECTS			
General English 1 2 ECTS	General English 2 2 ECTS				
Introduction to Construction Engineering - Construction Methods and Operations Scheduling 4 ECTS	Strength of Materials - Structural Analysis 1 - Civil Engineering Informatics 7 ECTS	Structural Analysis 2 - Applied Statistics 5 ECTS	Barrier-Free Construction - Analysis of Buildings, Renovation and Masonry 5 ECTS	Urban Water Management 4 ECTS	Internship 25 ECTS
Informatics - Plan Development & CAD 5 ECTS	CAD - Applied Mathematics for Civil Engineers 6 ECTS	Concrete Construction 1 - Steel Construction 8 ECTS	Concrete Construction 2 - Timber Construction - Detailed Solutions in Construction Design 12 ECTS	Glass Construction - Interdisciplinary Project 9 ECTS	
Building Materials - Geology and Mineralogy 4 ECTS	Environmental Protection Technology and Law - Commercial and Labour Law 4 ECTS	Soil Mechanics and Engineering 5 ECTS	Cost Estimation 3 ECTS	Project Management in Practice 2 ECTS	
Architectural and Artistic Design - Introduction to Design - Materials in Architecture 10 ECTS	Digital Presentation Techniques - Architectural & Artistic Design 6 ECTS	Professional English 2 ECTS	Professional English - Academic Writing 4 ECTS	Professional English - Communication & Team 2 ECTS	
Basic Principles of Construction Law and Plan Preparation - CAD 3 ECTS	Design 1 - Structural Typology 11 ECTS	Building Surveying and Architectural Drawings - History of Architecture 4 ECTS	Urban and Regional Planning - Urban Development - Project: Urban Development 8 ECTS	Interdisciplinary Design 8 ECTS	
	Design 2 - Structural Design 2 15 ECTS	Interior Design - Residential Buildings - Design 2 - Structural 15 ECTS	Design 3 - Structural Design 3 - Cost Estimation 14 ECTS	Building Analysis and Renovation - As-Built Design and Revitalisation 8 ECTS	Bachelor's Thesis 2 5 ECTS
		Professional English 1 ECTS	Professional English - Academic Writing 2 ECTS	Professional English 1 ECTS	

Specialisation in Construction Engineering

Specialisation in Architecture

# Bachelor's degree programme ENERGY, MOBILITY AND ENVIRONMENTAL MANAGEMENT

Energy, mobility and the environment – three pioneering topics, one degree programme, many career opportunities. This programme is the right choice for anyone wishing to design tomorrow's living spaces and manage technological challenges. Whether in urban or rural contexts, working for a public authority or a corporate enterprise, you'll focus on sustainable energy systems, modern mobility concepts, and corporate environmental management.

### What you will learn:

- Planning efficient energy supply
- Advancing renewable energies
- Designing intelligent mobility systems
- Carrying out environmental, energy & mobility projects
- Designing infrastructure: in today's cities and in the smart cities of the future
- Acquiring soft skills
- Management and business administration for professional life
- Expanding your technical expertise

This degree programme, with its practical focus, offers you comprehensive interdisciplinary training, including subjects as diverse as modern energy concepts, sustainable environmental technologies, intelligent mobility systems and contemporary management. The ability to take a broader view and move internationally are essential to modern professional life. Cooperation with numerous international partners including the Glasgow Caledonian University and Tecnológico de Monterrey enable you to spend one semester and/or complete an internship abroad.

### Organisation

Energy, Mobility and Environmental Management is a full-time course. This means the classes are held at FH JOANNEUM over a 15 week period each semester, generally all day Monday to Friday. You receive a current timetable at the start of each semester.

### FACTS

 Bachelor of Science in Engineering (BSc)

 Full-time

 6 semesters / 180 ECTS

 FH JOANNEUM Kapfenberg

 Language of instruction: German

- 32 places per year
- Head of degree programme:  
**DI Dr. Uwe Trattnig**
- Tuition fees: no tuition fees for students from the EU, EEA and Switzerland
- All information about deadlines, application and admission can be found online.
- [www.fh-joanneum.at/emu](http://www.fh-joanneum.at/emu)

### Did you know ...

... that we have an extensive network of contacts in the energy, environmental and mobility sectors? Green Tech Cluster, ÖBB, Holding Graz and Linz AG are just some of our business partners. This provides you with many great opportunities for internships, projects and later employment.



*"My studies allowed me to gain experience abroad, as well as in practice. After an internship in Oslo, and being accepted by another well-respected university in Sweden, I can recommend this programme to everyone!"*

Andreas Lehner, BSc MSc, Graduate  
Founder and COO of TRINE, winner of Karin Markides Innovation Award for his commitment to fighting energy poverty

### Career prospects

Demand for experts who work at the interface between technology and industry is growing in the fields of energy transformation, electric mobility and smart cities. As a result, our graduates enjoy excellent job opportunities. Career openings extend from project management in energy and environmental plant engineering, to transport and urban planning, the development of smart mobility systems, waste management and energy efficiency planning. Graduates can also continue their studies on the FH JOANNEUM Master's degree programme in Energy and Transport Management.

CURRICULUM: 180 ECTS (30 ECTS per semester)

1st semester	2nd semester	3rd semester	4th semester	5th semester	6th semester
Introduction to Energy Engineering 4 ECTS	Environmental Chemistry 2 ECTS	Resource Management 3 ECTS	Waste & Recycling Management 2 ECTS	Measurement & Automation Technology 3 ECTS	Applied Computer Science III 3 ECTS
	Energy Sources 2 ECTS				
Introduction to General Chemistry 3 ECTS	Electrical Engineering 4 ECTS	Thermal Energy Technology 4 ECTS	Environmental Process Engineering 3 ECTS	Storage Technologies 3 ECTS	Industrial Energy Efficiency & Low Carbon Technologies 3 ECTS
		Environmental Impacts in the Energy & Transport Sectors 3 ECTS			
Applied Computer Science 3 ECTS	Thermodynamics 3 ECTS	Renewable Energy Technologies 3 ECTS	Sensors in Environmental Engineering 3 ECTS	Energy Distribution Networks 4 ECTS	Practical Infrastructure Management 1 ECTS
Introduction to Applied Mathematics & Statistics 4 ECTS	Applied Mathematics & Statistics II 4 ECTS		Project, Process and Quality Management 3 ECTS		
		Applied Sciences 3 ECTS	Design & Engineering 2 ECTS	Infrastructure Management 3 ECTS	Numerical Simulation & Modelling 4 ECTS
Environmental & Mobility Systems 3 ECTS	Physical Materials Science 2 ECTS	Building Technology & Management 3 ECTS	Applied Computer Science II 4 ECTS	Smart City & Sustainable Future Concepts 2 ECTS	Bachelor's Thesis 2 6 ECTS
				Business Management I 3 ECTS	
Environmental & Business Law 3 ECTS	Business Management II 5 ECTS	Business Management III 3 ECTS	Presentation Techniques II 1 ECTS	Environmental Law & Standards 2 ECTS	Internship Semester 16 ECTS
Presentation Techniques I 2 ECTS	English II Focus on the environment 2 ECTS	Technical Documentation 2 ECTS	Innovation Management 2 ECTS	Marketing 2 ECTS	
English for Communication 2 ECTS		Mobility Systems II 4 ECTS			Occupational Safety 2 ECTS
	English III Focus on mobility 2 ECTS		English IV Focus on energy 2 ECTS	Academic Writing & Bachelor's Thesis Seminar Bachelor's Thesis 1 4 ECTS	

Business, Law, Languages | Energy, Mobility, Environment | Internship | Bachelor's Theses

# Bachelor's degree programme SOCIAL WORK

We prepare our students to provide professional support for people in critical life situations. They are trained to develop solutions in the areas of care for children, young adults and families, in the provision of subsistence needs, supporting elderly, disabled or sick people, in the field of migration and asylum, and for problems with criminality, addiction or violence.

### What you will learn:

- Gaining an insight into the professional field of social work
- Supporting people in psychosocial hardships and existential crises
- Training reflection and applying yourself as a 'tool'
- Organising support within the social environment
- Developing solutions together with the client
- Exploring complicated issues and specifying objectives
- Organising yourself and others

The course combines theoretical knowledge and practical application from the first to the sixth semester, covering various fields of action such as social work with families and youth welfare, health and illness, social work with the elderly, or international and intercultural social work. You have the opportunity to deepen your knowledge in specific fields as part of career explorations, internships and a Bachelor's thesis. Interdisciplinary classes are designed to familiarise you with individual fields of social activity on a case-oriented basis. You can also spend a semester studying abroad.

### Organisation

Social Work is a full-time course. This means the classes are held at FH JOANNEUM over a 15 week period each semester, generally all day Monday to Friday. You receive a current timetable at the start of each semester.

### FACTS



Bachelor of Arts in Social Sciences (BA)



Full-time



6 semesters / 180 ECTS



FH JOANNEUM Graz



Language of instruction: German

- 53 places per year

- Head of degree programme:

**FH-Prof. DSA Mag. Dr. Gertraud Pantucek**

- Tuition fees: no tuition fees for students from the EU, EEA and Switzerland
- All information about deadlines, application and admission can be found online.
- [www.fh-joanneum.at/sam](http://www.fh-joanneum.at/sam)

### Did you know ...

... that our students present their projects? Every year, at the end of a semester, students' innovative and practical social work projects are presented to the public.



*"Social work is a diverse and challenging activity. The solid grounding I received in the subject at FH JOANNEUM, paired with my social skills, provide me with the basis for working professionally with people in difficult circumstances and problem situations."*

Mag. (FH) Ulrike Hütter-Jahnel, Graduate

### Career prospects

New lifestyles, a changing world of work, and economic crises all combine to create a growing need for social services. Our graduates have a wide and responsible range of employment choices before them. They work with children, young people and families, with the old, with those who have mental or addiction problems, with criminals, with the disabled, with asylum seekers, refugees and those in precarious situations. Other professional occupations include social work in the workplace, social marketing, and lobbying for the psycho-socially disadvantaged. Graduates also have the option of extending their subject knowledge on the Master's degree programme in Social Work at FH JOANNEUM.

CURRICULUM: 180 ECTS (30 ECTS per semester)

1st semester	2nd semester	3rd semester	4th semester	5th semester	6th semester
Theories and History of Social Work 5 ECTS	Psychological and Medical Basics 5 ECTS	Foundations of Sociopolitics and Humanities 5 ECTS	Bachelor's Thesis 1: Life-World Oriented Case Study 5 ECTS	Social Philosophy and Social Theory 5 ECTS	Bachelor's Thesis 2: Interdisciplinary Case Studies in a Sociopolitical Context 10 ECTS
Societal Conditions 5 ECTS	Social (Work) Research 5 ECTS	Fields of Social Work 2 25 ECTS	Case Studies 5 ECTS	Internship / Seminar 20 ECTS	
Methodology 1 5 ECTS	Methodology 2 5 ECTS	Methodology 3 5 ECTS	Methodology 4 5 ECTS		Career Entry 5 ECTS
Fields of Social Work 1 5 ECTS	Professional Field Exploration 10 ECTS	Social Management 2: Projects / Social Marketing 10 ECTS	Fields of Social Work 3 5 ECTS	Professional Identity 5 ECTS	
Law 1: Civil Law / Social Law 5 ECTS			Law 2: Legal Bases of Social Organisations / Criminal Law 5 ECTS		Fields of Social Work 4 5 ECTS
Social Work Issues 1 5 ECTS	Social Management 1: Organisation of Social Services 5 ECTS	Social Work Issues 2 5 ECTS	International Social Work Systems / Excursion 5 ECTS	Social Management 3: Human Resources Management 5 ECTS	Social Management 4: Case Management 5 ECTS
Scientific Basics	Practice and Fields of Social Work	International Social Work	Law	Social Management	

# Master's degree programme ARCHITECTURE

This course offers you interactive and comprehensive hands-on training opening up a variety of career options. Alongside creative design and practical project management you'll also study contemporary topics in architecture in depth.

## What you will study:

### An integrated architectural education.

The Master's degree programme in Architecture focuses on realistic, application-oriented projects: from creative architectural designs to their technical requirements, through to project execution and management. You will study the international architectural and cultural landscape, as well as becoming acquainted with different work techniques and complex communication processes.

### Contemporary architectural issues.

By examining contemporary issues in architecture you add to your professional profile: you will be able to take a forward-looking approach to resolving challenging tasks in urban planning and architecture.

### Integral teaching.

Each semester a key topic is studied in a series of coordinated courses. The students work through individual aspects of this topic in a hands-on manner in their architecture projects, simulating the actual conditions in architectural and planning offices.

### Specialisations.

In the specialist modules and the Diploma thesis you can explore your own particular area of interest in more depth.

## FACTS



Diplomingenieurin /  
Diplomingenieur (DI)



Full-time



4 semesters / 120 ECTS



FH JOANNEUM Graz



Language of instruction:  
German

- 23 places per year

- Head of degree programme:

**Arch. DI Wolfgang Schmied**

- Tuition fees: no tuition fees for students from the EU, EEA and Switzerland

- All information about deadlines, requirements, application and admission can be found online.

- [www.fh-joanneum.at/arc](http://www.fh-joanneum.at/arc)

## Did you know ...

...that you can choose to specialise in sustainability & energy, construction & existing structures, or space & design? Any one of these modules prepares you thoroughly for the demands of your professional career.



## Organisation

Architecture is a full-time course. This means the classes are held at FH JOANNEUM over a 15 week period each semester, generally all day Monday to Friday. You receive a current timetable at the start of each semester.

*"The Architecture programme offers an individual two-year training with the choice of attractive specialisations. The focus lies in formulating interesting designs."*

DI Oliver Steinbauer, BSc, Graduate

## Career prospects

The students are engaged in building design and construction and also take part in national and international competitions. Our graduates enjoy a broad, interdisciplinary education that opens up opportunities for diverse careers in the development, design and implementation of architectural projects. They go on to work in architectural offices, with general planners, developers, for government authorities, in interior design, or in project development and marketing.

CURRICULUM: 120 ECTS (30 ECTS per semester)

1st semester	2nd semester	3rd semester	4th semester
Special Fields of Building Theory - Urban Residential Housing - Design 1 - Visualisation 1 13 ECTS	Design 2 - Visualisation 2 10 ECTS	Town/Country Planning - Design 3 - Strategies in Urban Space - Land Use 13 ECTS	Project Supervision & Local Site Supervision 2 ECTS
Building Services Engineering: Planning - Project 1 5 ECTS	Structural Planning and Design - Building Analysis - Project 2 5 ECTS	Project 3 3 ECTS	Professional Meetings & Communication 2 ECTS
Project Development 3 ECTS	Requests for Bids & Awarding of Contracts - Life Cycles of Buildings 5 ECTS	Project Management 3 ECTS	Lecture Series - Diploma Thesis - Seminar 26 ECTS
Cultural History & Architecture - Project Work & Presentation 1 3 ECTS	Architectural Theory & History of Construction 2 ECTS	Project Work & Presentation 2 1 ECTS	
Sustainable Planning - Energetics in Design 3 ECTS	Alternative Energy Concepts - Design with Ecological Materials 4 ECTS	Sustainability in Urban Planning - Ecology and Spatial Development 5 ECTS	
Façade Construction & Building Physics - Design Strategies 3 ECTS	Detailed Design - Preservation of Historical Monuments 4 ECTS	New Materials in Architecture - Revitalisation 5 ECTS	
Applied Building Theory - Indoor Climate and Acoustics 3 ECTS	Industrial Design - Perception of Light, Space and Colour 4 ECTS	Digital Design - Design of Objects 5 ECTS	
Architecture and Urbanistics - Modules I, II, III 36 ECTS	Engineering - Modules I, II, III 13 ECTS	Architectural History & Communication - Modules I, II, III, IV 8 ECTS	Project Management - Modules I, II, III, IV 13 ECTS
Sustainability & Energy - Modules* I, II, III 12 ECTS	Design and Construction & Existing Structures* - Modules I, II, III 12 ECTS	Space & Design - Modules* I, II, III 12 ECTS	Diploma Thesis Module 26 ECTS

\* students must choose 2 from 3 specialisations

## Master's degree programme CONSTRUCTION MANAGEMENT AND ENGINEERING

This degree programme reflects the growth in demand for greater functionality and building quality, and an increased awareness of costs and the environment. Combining expertise in interdisciplinary, problem-focused projects in particular serves to enhance students' understanding of procedures and processes in the construction industry.

### What you will study:

#### Energy-efficient planning and construction.

The programme focuses on energy-efficient construction in both new and existing buildings. You examine the use of new, ecological materials, as well as applying principles of building physics to improve detailed solutions. Furthermore, you learn how to factor lifecycle analysis and costs into the planning process.

#### Bridge construction.

You study the many aspects of bridge construction, and the fundamental principles of planning and structural implementation. In addition, you will also develop a bridge project taking into account structural, constructive and economic aspects.

#### Tunnel construction.

You will study the New Austrian Tunnelling Method (NATM), learn more about geotechnical engineering, and discover details about tunnel equipment and operational safety.

#### Construction management.

You study project management and construction contracts in greater depth, while retaining a focus on the economic and business aspects. An overview of the international environment allows you to draw comparisons between the planning and realisation of construction projects.

### FACTS



Diplomingenieurin /  
Diplomingenieur (DI)



Full-time



3 semesters / 90 ECTS



FH JOANNEUM Graz



Language of instruction:  
German

- 31 places per year
- Head of degree programme:  
**FH-Prof. DI Dr. Michaela Kofler**
- Tuition fees: no tuition fees for students from the EU, EEA and Switzerland
- All information about deadlines, requirements, application and admission can be found online.
- [www.fh-joanneum.at/bmi](http://www.fh-joanneum.at/bmi)

### Did you know ...

... that we have personal contacts in the construction industry? Various renowned companies in the construction sector visit our institute and inform students about job prospects and career opportunities.



### Organisation

Construction Management and Engineering is a full-time course. This means the classes are held at FH JOANNEUM over a 15 week period each semester, generally all day Monday to Friday. You receive a current timetable at the start of each semester.

*"The internship in South Africa certainly enriched my studies. It not only allowed me to use my newly acquired knowledge, it also gave me the chance to learn about a completely foreign culture."*

DI Thomas Pychner, BSc, Graduate

### Career prospects

Our graduates find employment and career opportunities across the entire spectrum of building construction and civil engineering, in design and engineering offices, construction departments, and in the construction industry. You will be able to demonstrate your competence both at home and abroad, and play a part in shaping future, sustainable building industry development, including project development and management, approval and implementation planning through to costing and building construction.

CURRICULUM: 90 ECTS (30 ECTS per semester)

1st semester	2nd semester	3rd semester
Support Structures – Renovation of Existing Structures 7 ECTS	Bridge Construction – Project: Civil Engineering & Construction Management 7 ECTS	Alternative Energy Generation – Power Plant Construction 4 ECTS
Energy-Efficient Building Design – Project: Structural Engineering & Building Trade – Construction of Industrial Buildings – Structural Fire Protection 13 ECTS	Rock Mechanics and Tunnelling – Soil Mechanics and Foundation Engineering 5 ECTS	International Construction & PPP – Business Administration & Management – Calculation of Costs of Planning and Construction Work 5 ECTS
	Traffic Route Engineering – Rail and Road 3 ECTS	Diploma Thesis + Seminar 21 ECTS
Life Cycle Costs 2 ECTS	Building Contracts – Public Procurement – Project Management 7 ECTS	
Professional Meetings & Communication 2 ECTS	Project Work and Presentation 2 ECTS	
Finite Element Method – New Materials in Construction – Structural Fire Design – Timber Construction – Sustainability in Civil Engineering – Building Physics Simulations 12 ECTS*	Prestressed Concrete – Structural Dynamics – Measurement Technique – Revitalisation – Building Contracts – Investment Calculations & Financial Mathematics – Tunnelling – Facility Management 12 ECTS*	

Structural Engineering	Geotechnical Engineering	Energy-Efficient Design and Construction & Construction of Industrial Buildings	Transport and Energy
Construction Economics, Construction Management & International Construction	Communication & Presentation	Electives*	Diploma Thesis + Seminar

\* students must choose 6 ECTS per semester

## Master's degree programme ENERGY AND TRANSPORT MANAGEMENT

Tomorrow's regions and cities need solutions for sustainable energy supply, innovative mobility and environmentally-friendly urbanisation. Join us and become part of these solutions. We offer you the relevant expertise and teach you to take an interdisciplinary approach to local and global factors affecting energy and mobility.

### Energy. Sustainable energy systems.

We offer you a broad portfolio of subjects relating to energy systems: from network infrastructure through to the international energy industry. You will learn the fundamentals of energy trading and the mechanisms underpinning the liberalised energy markets. You will also examine the integration of renewable energy systems such as photovoltaics and wind power plants into existing power grids, as well as conventional technologies and the corresponding emissions controls.

### Mobility. Innovative transport planning.

Play your part in shaping tomorrow's mobility by addressing innovative mobility and transport solutions in urban spaces. You will examine mobility systems, transport logistics, urban planning and traffic simulations. In addition to the technological possibilities, the programme also considers the financing and business models of the various transport service providers.

### Intelligent infrastructure planning.

Implementing modern energy and mobility solutions relies on intelligent infrastructure planning. Choose compulsory elective subjects which will provide you with the knowledge you need to implement infrastructure projects.

### International focus. Go global.

Urbanisation faces city planners around the world with new challenges. Consequently, the focus of this programme is relevant worldwide: working on interdisciplinary projects, you will develop novel energy and transport solutions in an international context.

### FACTS



Master of Science in Engineering (MSc)



Work-friendly



4 semesters / 120 ECTS



FH JOANNEUM Kapfenberg



Language of instruction: English

- 25 places per year
- Head of Degree Programme:  
**DI Dr. Uwe Trattmig**
- Tuition fees: no fees for students from the EU, EEA and Switzerland
- All information about dates, requirements, application and admission is available online.
- [www.fh-joanneum.at/met](http://www.fh-joanneum.at/met)

### Did you know ...

... that we offer graduates with a bachelor degree in environmental systems science the chance to start the master programme without losing any time?



### Organisation

The course is organised in a work-friendly format, which means that lectures are held from Monday to Wednesday, between 8.45 and 18.30. This enables you to work part-time whilst studying. Due to its international focus, international students who meet the entry requirements for the English language admission process, are encouraged to apply.

### Job prospects

The future belongs to experts in the fields of energy, mobility or environmental management. Graduates of this Master's is degree programme are highly skilled individuals with a strong focus

on project management, who are able to work in a variety of industries and fields of expertise. Classical jobs include energy trading, mobility project management, traffic planning or energy efficiency management.

*"I currently work as an energy efficiency manager for voestalpine Stahl Donawitz GmbH. The Master's degree programme provided me with excellent training in all the core technical and business skills I need in my job."*

DI (FH) Andreas Reinhart Kiedl, MSc, Graduate Energy and Transport Manage

CURRICULUM: 120 ECTS (30 ECTS per semester)

1st semester	2nd Semester	3rd Semester	4th semester	
Fuel and Biofuel 2 ECTS	Water Supply & Drainage 2 ECTS	Hydro Power 2 ECTS	Master's Thesis 26 ECTS	
Integration of Renewable Energy 2 ECTS	Traffic Telematics 4 ECTS	Traffic Simulations 4 ECTS		
Solarthermics & Geothermics 2 ECTS	Power & Emissions Trade 4 ECTS	Petroleum Engineering 2 ECTS		
Photovoltaics & Wind Power 2 ECTS		Energy Storage 2 ECTS		Emission Control 2 ECTS
Local Transportation & Logistics 2 ECTS	Supervised Group Projects 2 6 ECTS	Traffic Safety 2 ECTS		
Road Traffic Infrastructure 4 ECTS		Transport Economics 2 ECTS		
Supervised Group Projects 1 5 ECTS		Social Aspects of Infrastructure 2 ECTS		
Automation & Control 4 ECTS	Modelling & Simulation 4 ECTS	Energy & Traffic Legislation 4 ECTS		
Grid Operation 4 ECTS	Environmental Control 2 ECTS	Management & Organisation 4 ECTS		Train Operation 2 ECTS
Urban & Regional Planning 4 ECTS	Grid Maintenance 4 ECTS			Traffic Management & Control 2 ECTS
Advanced Traffic Systems 4 ECTS	Financing 4 ECTS	International Project Development 4 ECTS	Energy Management- & Demand-Side Management 4 ECTS	
Advanced Energy Systems 4 ECTS	Public Relations 2 ECTS			
	Human Resources Management 3 ECTS	Strategic Management 3 ECTS		
Technology (obligatory)		Technology (optional, partly biennial, choose >=30 ECTS of 52 ECTS)	Economy & Law (obligatory)	

## Master's degree programme SOCIAL WORK

The programme begins with a 'customised' introductory phase, before you extend your theoretical knowledge and practical skills in elective modules on intercultural and international social work; social policy, social economics and social management; or social work with people in precarious circumstances.

### What you will study:

#### Intercultural and international social work.

In lectures on subjects including social work in foreign cultures, ethno-psychoanalytic social work, asylum and migration, and psycho-social aspects of torture and war, you deepen your knowledge of work in a globalised society. In this module you will reflect on your professional thoughts and actions against a background of maintaining international values in social work.

#### Social policy. Social economics. Social management.

In this module you concentrate on social policies and business topics. Key subjects including organisational management, organisational dynamics and cultures, law, quality development and knowledge management qualify you for challenging positions with social institutions.

#### Social work with people in precarious circumstances.

In this module you examine in detail all areas of traditional social work. You also work on innovative projects designed to counter current social problems such as increasing social inequality, the threat of poverty, and increased migration.

#### Research project. Master's thesis.

A core element of the degree programme is your research project. Lectures on social research methods prepare you for the Master's thesis.

### FACTS



Master of Arts in Social Sciences (MA)



Part-time



4 semesters / 120 ECTS



FH JOANNEUM Graz



Language of instruction:  
German / selected classes in English

- 28 places per year
- Head of degree programme:  
**FH-Prof. DSA Mag. Dr. Gertraud Pantucek**
- Tuition fees: no tuition fees for students from the EU, EEA and Switzerland
- All information about deadlines, requirements, application and admission can be found online.
- [www.fh-joanneum.at/soa](http://www.fh-joanneum.at/soa)

### Did you know ...

...that we undertake research at our Institute? For example, into migration and ethnic differentiation, on violence and security management, and on the role of social work in the development of society.



### Organisation

The part-time degree programme is compatible with employment and family commitments. Many subjects can be completed via e-learning; all other lectures during the semester are delivered on Thursday and Friday afternoons and Saturdays or in blocks.

*"Undertaking autonomous research on social work issues is important for the profession as a whole, helping us to confront the heteronomy of other scientific disciplines."*

Tanja Fellner, BA MA, Graduate

### Career prospects

Graduates who have specialised in social work with people in precarious circumstances work in a growing professional field. They are able to advise and care for people in need of urgent psychosocial help. Those who have completed the elective module in social policy, social economics and social management can assume executive positions at public institutions. Graduates who have specialised in intercultural and international social work go on to work with refugees and migrants, among others. All graduates also have the chance to enrol on a doctoral programme at a university.

CURRICULUM: 120 ECTS (30 ECTS per semester)

1st semester	2nd semester	3rd semester	4th semester
Introductory Phase: Critical-Reflective Social Work 7 ECTS	Intercultural and International Social Work or Social Policy, Social Economics and Social Management or Social Work with People in Precarious Circumstances 22 ECTS	Intercultural and International Social Work or Social Policy, Social Economics and Social Management or Social Work with People in Precarious Circumstances 18 ECTS	Intercultural and International Social Work or Social Policy, Social Economics and Social Management or Social Work with People in Precarious Circumstances 10 ECTS
Introductory Phase: Practical Social Work or Theory and Practice of Social Work or General Studies 15 ECTS	Social Work Research 8 ECTS	Social Work Research 6 ECTS	Master's Thesis 14 ECTS
Social Work Research 8 ECTS	Social Work Research 8 ECTS	Social Work Research 6 ECTS	Social Work Research 6 ECTS

## Postgraduate Master's course INTEGRATED PLANNING DESIGN

On this Master's course you will study the integrated planning and digital simulation of buildings. Over three semesters you become familiar with all the important processes, starting from the initial project sketches right through to building demolition.

### What you will study:

#### Building information modelling.

International experts teach you the basics of building information modelling (BIM). The key elements of BIM are the coordination of project participants and the distribution of information. The challenges lie in the planning and design processes at different levels of detail, and how they interface with the construction process. The course examines aspects of building technology and related legal issues.

#### Digital simulation

The exchange and structuring of data are an essential part of integrated planning design, and therefore a focus of the course content. The material covered on the course ranges from integrated planning design through to digital fabrication of buildings and building components. The management of completed building structures is studied in detail in facility management and lifecycle planning.

#### Organisation. Coordination.

You gain the fundamental skills needed to work across the different trades in architecture and construction. You will be made familiar with the key aspects of the planning and construction process in accordance with the stages of the interdisciplinary digital design simulation.

### FACTS



Master of Science in Engineering (MSc)



Part-time



3 semesters / 90 ECTS



FH JOANNEUM Graz



Language of instruction:  
German

- 16 places per year

- Tuition fee: EUR 3,800 per semester

- All information about deadlines, requirements, application and admission can be found online.

- [www.fh-joanneum.at/ipl](http://www.fh-joanneum.at/ipl)

### Did you know ...

... that the curriculum covers all specialist topic areas of building information modelling? The postgraduate course provides students with state-of-the-art knowledge.



### Organisation

The course is organised on a part-time basis. In the first and second semester you will be required to spend one week at FH JOANNEUM, plus study blocks on selected weekends. There is no one-week mandatory attendance period in the third semester. Up to 65% of the course is taught through e-learning, making it easy to combine studies with your job.

### Career prospects

Graduates are able to work on complex assignments of varying levels of difficulty, involving the integrated planning of construction projects – from development, planning and execution through to operation – either on their own or as part of a team. Working on behalf of the contractor or client, they have the skills needed to undertake integrated planning design simulations as a coordinator or manager. Potential fields of employment range from architecture, construction and building services to transport and environmental planning.

CURRICULUM: 90 ECTS (30 ECTS per semester)

1st semester		2nd semester		3rd semester	
Project Initiative	Design	Awarding Procedure	Execution	Operation	Abbruch
<b>Fundamentals:</b> Modelling Strategies – Fundamentals of Integrated Planning Design 6 ECTS		<b>Law</b> Legal Framework Conditions 2 ECTS		<b>Master's Thesis</b> Master's Thesis Master's Thesis Seminar 25 ECTS	
<b>Data Structures</b> Data Structures & Data Management 4 ECTS		<b>Data Exchange</b> Definition of Interfaces 2 ECTS			
<b>Building Models – Planning</b> Integrated Planning Design 1 10 ECTS		<b>Building Models – Execution</b> Integrated Planning Design 2 10 ECTS			
<b>Process Models</b> Coordination of Technical Plans 1 Business Process Models 4 ECTS		<b>Coordination</b> Coordination of Technical Plans 2 Project Management Costing & Scheduling 10 ECTS		<b>Data Storage</b> Data Spaces 1 ECTS	
<b>Programming</b> Visual Programming 2 ECTS		<b>Advanced Skills – Digitisation</b> Building Automation Digital Fabrication Life Cycle Assessment in Digital Building Models 6 ECTS		<b>Operation</b> Model-based Facility Management 2 ECTS	
<b>Advanced Skills – Design</b> Modell-based Structural Design – Technical Equipment and Digital Building Models 4 ECTS				<b>Advanced Skills – Communication</b> Communication 2 ECTS	



*“Tomorrow’s living spaces will need to meet increasing demands from society in terms of functionality, quality, cost efficiency and rising environmental awareness. This includes, among other things, building quality, energy supply, transport and urban planning in line with the needs of a changing society. The Department of Building, Energy & Society sets out to tackle these challenges in teaching and research.”*

FH-Prof. DI Dr. Michaela Kofler  
Head of the Department of Building, Energy & Society

## **FH JOANNEUM**

FH JOANNEUM offers students sound academic training – our programmes are practice-oriented, project-based and interdisciplinary. Our university’s large network enables students to complete internships with leading companies and institutions in Austria and abroad and spend a semester studying at one of over 200 partner universities around the world.

### **GRAZ – Science and Culture**

... in a nutshell: population over 270,000, student population around 50,000 at a total of eight universities. A historic centre, which is listed as a UNESCO world heritage site. Contemporary art and music, modern architecture, which has gained international renown as the Graz School. Eco-city, City of Design, business and innovation centre. Mediterranean flair, bustling urban atmosphere and exciting night life, plus many great places to dine out are part and parcel of the Graz experience.

[www.graz.at](http://www.graz.at)

### **KAPFENBERG – High Tech and Sports**

Kapfenberg is home to a large number of innovative high-tech companies which act as global players in a worldwide business network. FH JOANNEUM Kapfenberg is therefore surrounded by the region’s major industrial and manufacturing companies. State-of-the-art laboratories and excellent business contacts throughout the world give graduates a head start in their careers. FH JOANNEUM Kapfenberg offers not only first rate education, but also a wide range of leisure opportunities, such as running and mountain bike trails, as well as cultural highlights.

[www.kapfenberg.at](http://www.kapfenberg.at)

For more detailed information about our degree programmes, application and admission please contact:  
T: +43 (0)316 5453-8800  
E: [info@fh-joanneum.at](mailto:info@fh-joanneum.at), [www.fh-joanneum.at](http://www.fh-joanneum.at)  
[www.facebook.com/fhjoanneum](https://www.facebook.com/fhjoanneum)