



International Programme FH JOANNEUM, Campus Kapfenberg

Kapfenberg is the right place for you ...

The four degree programmes offered at the Kapfenberg Campus of the University of Applied Sciences JOANNEUM have joined forces to create and offer you a programme in English.

ITM (Internet Technology, Bachelor) – **ASE** (Advanced Security Engineering, Master) – **IRM** (IT Law & Management, Master)

EVU (Energy Transport and Environmental Management, Bachelor) – **MET** (Energy and Transport Management, Master)

ETM (Electronics and Technology Management, Bachelor) – **AEE** (Advanced Electronic Engineering, Master)

IWI (Industrial Management, Bachelor) – **IIM** (International Industrial Management, Master)

Please note: ASE, IRM, AEE, IIM are part time programmes. This means that the courses may also take place in the evenings and on Saturdays. Courses of the programmes ASE and IRM are conducted online via eLearning.

MET and AEE are taught almost entirely in English. Should applicants fulfil the course requirements, they may choose courses from the MET curriculum which are not listed in the “International Programme”.

Hand in

- a filled-in application form
- a transcript of records
- your learning agreement

and spend a semester in Austria, Kapfenberg!

Application deadline is **1st of November 2012**

The number of participants for this programme is limited.





Project Work 1 (ITM/4. Semester) 4 ECTS

By working independently on projects of average difficulty students learn to apply project management skills.

IT Project Management (IRM/2. Semester) 4 ECTS

The content of this course is based on project management standards, working with CPM and MPM methods in the context of standards in quality management.

VPNs and Firewalls (ASE/2. Semester) 3 ECTS

Theoretical fundamentals, practical setup and operation of current VPN architectures; principles of authentication and data encryption; different firewall architectures and their operation; perimeter security, clustering and system stability of firewalls.

List of topics covered in the course:

- theoretical introduction into VPN basics
- authentication
- implementation on OSI Layer 2/OSI Layer 3/OSI Layer 4+
- IPsec: AH and ESP
- key-management, VPN and PKI
- opportunistic encryption
- NAT, PAT, IP-Masquerading, IP packet filtering
- connection tracking/stateful inspection
- inclusion of MAC-Layers/Layer 5-7
- performance and stability of FW systems
- prevention of (D)DOS attacks

Communication Technology (ETM/2. Semester) 2 ECTS

In this course the following topics will be covered:

- ISO/OSI 7 Layer Reference Model
- Transmission media and wire technologies
- Communication protocols
- RS-232, RS-485
- Asynchronous start-stop transmission
- Access methods
- Examples of communication protocols (TCP-IP, USB, CAN, Time-Triggered Protocol)

Evaluation: Exam at the end of the semester



Control Engineering

(ETM/4. Semester)

4 ECTS

The scope of this course is an introduction into control systems. The following topics are covered:

- Control systems technology
- Modeling and simulation of systems
- On-Off controllers
- PID controllers
- Control design using bode diagrams

The lectures content is applied in practical exercises and case studies.

Evaluation: Written exam and laboratory assignment.



Supervised Group Projects 2

(MET/2. Semester)

4 ECTS

You will carry out a project in the field of Energy and Transport Management and write a scientific paper.

Please note: This class can only be chosen after having consulted the international coordinator of the department MET first.

Automotive Electronics 1

(AEE/2. Semester)

4 ECTS

The course gives an overview on electrical components in vehicles.

The content is structured as follows:

- On-board generation of electric energy
- Energy storage (batteries, super-caps, hydrogen with fuel cell)
- Board-net architectures and board-net control
- Auxiliaries (air-condition, fans, pumps, etc.)
- Automotive sensors

Evaluation: The chapter automotive sensors is elaborated on and presented by the students as a seminar paper. The other chapters are evaluated by a written exam.



Transport Logistics (EVU/4. Semester) 3 ECTS

The course will cover the following topics:

- To understand the system of logistics in a company.
- To understand the logistics network – Supply Chain Management.
- To use business vocabulary in a proper way.
- Special knowledge in focused themes such as logistics terminology, tasks of logistics, materials planning and information systems, SCM, strategic logistics management, logistics controlling, transportation.
- To see logistics as a cross divisional function and to act practice oriented.

Automobile Electric Drives (AEE/2. Semester) 3 ECTS

The course gives an introduction to new automobile propulsion systems like Hybrid Drives, Electrical Cars, and combinations with fuel cells.

It covers the following topics:

- CO2 emission and climate change/limited fossil resources
- Individual Mobility today and in the future (comparing conventional cars with future concepts)
- Efficiency of vehicles in typical driving cycles
- Hybrid Drive Concepts
- Hydrogen as an energy transport medium
- Batteries and Supercaps
- Renewable energy production for Road Transport (closed overall cycle)

Evaluation: Exam at the end of the semester

Ethics and Technology Assessment (IRM/4. Semester) 4 ECTS

Technology assessment is a political as well as a social topic. In the course of this module you will discuss the different views of descriptive and normative ethics in the context of technology assessment.

eBusiness Applications (IRM/2. Semester) 2 ECTS

E-business models are the theoretical basis for e-business applications. In this lecture the focus is on the practical implementation of e-business concepts. This implementation occurs via the use of appropriate software engineering methods, such as specifications, requirements specification, project plan, schedule, resource plan. E-business Applications also includes the implementation and testing of the developed concept.



Entrepreneurship (IRM/2. Semester) 2 ECTS

Entrepreneurs generate substantial economic growth by pursuing innovations, introducing new products and services, opening new markets as well as adapting themselves to new knowledge. Therefore the present course focuses on starting and growing new businesses. We investigate concepts, tools, and practices of entrepreneurship by assessing the value of a new venture, writing a business plan, and selected guest speakers. Above that we identify and exercise entrepreneurial skills and behaviors that lead to firm performance and growth.

The course consists of two modules:

MODULE 1: Entrepreneurial concepts, tools, and practices

MODULE 2: Entrepreneurial skills and behaviors

Economics Infrastructure Financing (MET/2. Semester) 3 ECTS

Investment rating, financing methods (e.g. PPP, BOT), efficient economic and political risk management, financial institutions (local banks, development banks), current exemplary infrastructure projects, real option theory, project calculation; composition of tariffs in the energy and transport sector.



Production and Investment Planning (EVU/4. Semester) 3 ECTS

The course covers the following topics:

Introduction to Controlling: Classification and demarcations, function and tasks, controlling cost calculation aims: bases, complete cost accounting, planned cost calculation, characteristics of cost calculation in trade, cost management

Production and Investment Planning: strategic and operational management, strategic controlling, strategic success positions and factors, vision, goals, strategy, process of strategic controlling, instruments of strategic planning, development instruments, present value method, time value of money and other factors such as investment risk.



Risk Management (MET/2. Semester) 2 ECTS

Acquire and use the basic knowledge of technical and economic risk assessment. Be able to compare predictable risks with protective safety measures to be taken. Methods of risk assessment, efficient economic and political risk management.

Public Relations (MET/2. Semester) 2 ECTS

Principles of PR communication, functions of public relations and corporate communication in normal and in crisis situations, PR instruments (internal relations, communication with customers, investor relations, media relations).

Human Resource Management (MET/2. Semester) 3 ECTS

Human resources management (agreeing on targets, giving feedback, motivation, meaning-oriented leadership), conflict management, behavior and tactics in negotiations, people management, people development, time management, training and further education management, personnel recruiting and aptitude diagnostics.

Sustainability Analysis and Lifecycle Management (MET/2. Semester) 4 ECTS

System definition/systems thinking, ecological, technical (energy) operating figures, calculation of operating figures (e.g. cumulated energy demand, energy certificate for buildings, energy certificate for means of transport, etc.), economic and ecological life-cycle considerations.

Bachelor's Thesis 2 (Scientific Project Work) (IWI/6. Semester) 5 ECTS

Students, supervised by a lecturer, will write an academic paper, using scientific methods and techniques, as well as formalities. Within the scope of this project work, the participants should adapt industry-related tasks and autonomously work on solutions for their research problems.

International Management (AEE/4. Semester) 5 ECTS

This **BLOCKED** course examines the dimensions of international business. It is structured beginning with the macro-environment, transitions to the firm level, and concludes with the individual manager in the international setting. Students will be introduced to theories of international management in the context of current and emerging realities in the global marketplace. This course will take a practical approach to International Management with a special emphasis on cases & examples that are relevant to the actual practices of international business today.

Evaluation: Immanent evaluation and final exam





Industrial Projects (IWI/6. Semester) 4 ECTS

Description:

Small project groups, supervised by a lecturer, will work on subjects, case studies or real situations given by an industry partner or the degree program Industrial Management. Participants will learn the basic principles of project management improve their teamwork skills and gain an insight into the daily business of an industrial environment.

Attention: There are only a few places for an English Industrial Project. If you want to participate in a German Industrial Project good German skills are required. To check your skills you will have a talk to the international coordinator before starting the project.

Prerequisites:

Knowledge in topics related to the project
Good language skills in English or German

Innovation Management (AEE/4. Semester) 1.5 ECTS

The blocked course gives an introduction to the following topics:

- Importance of innovation
- Evolutionary economics
- The theory of inventor's problem solving (TRIZ)
- Managing technology and knowledge
- Managing intellectual property
- Innovation as an operations process
- Development of new products

Evaluation: Accompanying (immanent) evaluation based on case studies.

Presentations and Meetings (AEE/4. Semester) 1.5 ECTS

The blocked course will be held as a workshop focussing on the following topics:

- Developing effective oral presentations
- Designing effective visual aids for presentations
- Preparing and leading efficient meetings
- Practical cases

Evaluation: Accompanying (immanent) evaluation based on practical exercises





Legal English 2

(IRM/2. Semester)

4 ECTS

The course covers the following topics:

- Sale of goods, warranties, terms and conditions of sale, retention of title; writing a memorandum
- Company Law : capitalization, shares, rights issue; contrasting, expressing opinions
- Changes in the company: mergers, acquisitions etc.; explaining procedure;
- Intellectual Property; the case of Joel Tennenbaum; discourse markers; phrases for discussions;
- IT law and cybercrime; the case of the Palin hacker
- Secured Transactions; formal letter writing; financial crisis
- ILEC test examples and tips on preparing for and passing the ILEC exam; Competition law ; Employment Law Contracts: repetition of express and implied terms; case studies on contract law and intellectual property law ; Licensing agreement theory and sample contract

Professional English Advanced

(ITM/4. Semester)

2 ECTS

Consolidation of relevant skills for the students' professional careers: Improvement of negotiation and meeting skills, critical reflection of relevant topics from the fields of business, law and engineering; English for specific purposes: specific language used in meetings and negotiations; simulated meetings in class.

Effective Scientific Writing

(ASE/2. Semester)

2 ECTS

This is an introductory course designed to help students develop scientific writing skills by looking at some of the basic principles underlying clear and effective writing (including the consideration of the following aspects: audience, purpose, organization, style, presentation). Aspects of language and grammar that are significant for academic writing will be dealt with. The topic of ethics and scientific writing with regard to plagiarism and the need to apply correct and precise referencing formats will be discussed. The critical review of example papers taken from current research will help students improve their own writing. As reading and listening skills are integral parts of the writing process a strong focus will also be laid on speed-reading as well as note-taking techniques. Collaboration and team work, important components of academic research, will be facilitated throughout the semester by peer reviews, group and pair work activities.

English 2 (Language of Meetings)

(IWI/2. Semester)

2 ECTS

In the course Language of Meetings the following topics will be covered:

- Meetings and moderation with multi-cultural participants.
- Language functions in English as a participant, moderator or chairperson.
- Telephone conferences
- Plan of action
- High level questions to clarify information





German Courses and Intercultural Subjects:

There might be slight changes in the course offerings due to student numbers and required levels! Please note that several German courses of different levels cannot be taken at once.

German Beginners 1 (A1/1) or German Beginners 2 (A1/2)	3 ECTS
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Whether both or just one of the above mentioned courses will be offered depends on the student numbers.

The beginner courses (first and second level) integrate the skills of listening, speaking, reading and writing and emphasize oral communication and listening comprehension in a culturally authentic context.

More information about the contents: www.fh-joanneum.at/daf

Prerequisites: No command of the German language for German Beginners 1 (A1/1). The course German Beginners 1 is a prerequisite for German Beginners 2.

Evaluation: Continuous assessment, written exams

Bibliography: Schritte international 1, A1/1 or 2, A1/2 (Hueber 2006) with Audio-CD and interactive exercises, about € 13,-

German Intermediate 2 (B1/2)	3 ECTS
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The course "German Intermediate 2" focuses on your grammar competences and the structure of the German language. It will also enlarge the students' range of vocabulary and expressions. Students will be exposed to more complex issues of grammar at level B1/2 such as: Temporal and local connectors and prepositions, passive voice in past tense and perfect tense ("Präteritum" and "Perfekt"), future tense I, ("Futur I"), unreal comparison, conditional II, word order, conditional II ("Konjunktiv II") etc.

Prerequisites: Level B1/1

Bibliography: You will get up-to-date and didactic teaching materials in the course, which are designed specifically to meet the needs of your language level: € 13,-

Evaluation: Continuous assessment, written exams

ÖSD Preparation Course (A1-C1)	no ECTS
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Do you want to test your German skills? And set this down for posterity in your curriculum vitae or résumé? Or perhaps include an internationally recognised language diploma in your application? Then the German Language Diploma (Österreichisches Sprachdiplom – ÖSD) is just the right thing for you! In this course you will get to know the types of questions that will come up in the examination and prepare yourself for the examination using sample tests.

Prerequisites: Level A2-C2, depending on the exam

Bibliography: Material will be provided by the course instructor

Assessment: No grade, no ECTS for this preparation course.



Intercultural Competence

2 ECTS

In order to be intercultural competent one has to be able to communicate effectively across cultures. Therefore central aspects of cross cultural communication will be addressed at the beginning of the course. The students will become familiar with different definitions of 'culture' and some models which have been used to describe and differentiate cultures. Special emphasis will be given to aspects of Austrian culture – in comparison to other cultures represented in the classroom.

Prerequisites: None

Bibliography: Teaching material is provided by the lecturer.

Evaluation: Exam at the end of the semester, paper



Austria – People and Culture

2 ECTS

In this course, the intercultural experiences of the participants will be discussed and the cultural differences between Austria and the participants' home countries analysed. It will not only provide useful information about Austria, but also focus on the basics of the German language and on how to handle difficult situations caused by the cultural differences discussed.

Prerequisites: None

Bibliography: Teaching materials are provided by the lecturer: € 13,--

Evaluation: Class participation and presentation

Minimum number of participants: 8



*Have you always wanted to get to know Austria and learn some German?
Do you enjoy being part of a small and very intimate community of students?
Do you relax best when doing sports?*

Kapfenberg is just the place to go!

Why Kapfenberg?

It not only offers the best out and indoor sports facilities but also a first class educational environment. With about 23.000 inhabitants Kapfenberg is the third biggest town of the province of Styria. It is one of the most modern and innovative high-tech industrial cities in Austria.

In Kapfenberg students can enjoy a unique campus atmosphere: after lectures, students are encouraged to meet and talk with professors and lecturers, who spend much of their time attending to their students' needs. Due to the small campus our students form a real community and it will be easy for you to get fully involved in student life. State-of-the-art laboratories, a canteen, a comfortable students' lounge and a residence hall, which is also a starting point for great running and mountain bike trails, provide you with the perfect study environment.

How to get to Kapfenberg?

The campus is easy to reach as railway station and bus stops are located directly in front of the building. And Graz, the capital of Styria, is less than an hour away.

Where to stay?

Kapfenberg provides a range of accommodation facilities for students. The nearest housing possibility is the student home WIST. For more information please contact us directly via mail.

We are already looking forward to welcoming you at FH JOANNEUM in Kapfenberg!

We would like to advise you that even if you can choose from a variety of courses held in English to also take the chance and enrol in a German course.

As the courses described in this programme leaflet are offered by four different degree programmes, we cannot assure you that you will be able to take any possible combination of them. Due to administrative and organisational issues related to the planning of course schedules an **overlapping of courses** cannot entirely be avoided. The courses described in this leaflet take place every fall term. Please note that the courses listed are subject to change and availability.

Contact

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