INTERNATIONAL PROGRAMME

Summer Semester, 2019

FH JOANNEUM, Campus Kapfenberg

Study your dream

INTERNATIONAL PROGRAMME

Summer Semester, 25.02-2019 – 30.06.2019

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 and the International Relations Office have joined forces to create and offer you a programme in English.

ECM (Electronics and Computer Engineering, Master)

EMU (Energy Mobility and Environmental Management, Bachelor)

MET (Energy and Transport Management, Master)

ITM (Internet Technology, Bachelor)

IMS (IT & Mobile Security, Master)

IRM (IT Law & Management, Master)

IWI (Industrial Management, Bachelor)

IIM (International Industrial Management, Master)

INT (International Relations Office)

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

MET and ECM are taught entirely in English. Should applicants fulfil the course requirements, they may choose courses from the ECM and MET curricula which are not listed in the International Programme. Please bear in mind that there is a limited number of places in some courses so that only a limited number of incoming students can be accepted!

Hand in:

· A filled-in application form

· A transcript of records

· Your learning agreement

and spend a semester in Austria, Kapfenberg!

Application deadline

31st of October 2018 The number of participants for this programme is limited.

CONTACT INFORMATION

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List of all courses offered in the International Programme

Deg.prog.	Semester	Course no	Course	ECTS
ECM	2	K_AEE_090421_S2_07	Scientific working	2
ECM	2	K_AEE_090421_S2_03	Model based software development	5
ECM	2	K_AEE_090421_S2_04	Data structures and algorithms	4
ECM	4	K_AEE_090421_S4_02	International Technology Management	3,5
ECM	4	K_AEE_090421_S4_01	Innovation Management	1,5
				16
EMU	4	140591402	Thermal Engines	2
EVU	4		Business English	2
MET	2	130592204	Water supply & Drainage	2
MET	2	130592202	Traffic Telematics	4
MET	2	130592209	Economics Infrastructure Financing	4
MET	2	130592205	Environmental Chemistry	2
MET	2	130592211	Human Ressource Management	3
MET	2	130592208	Environmental Control for E&T	2
				21
ITM	4	110418408	IT-Project Work 1	4
ITM	4	110418411	Professional English Advanced	2
ITM	4	110418402	Distributed Computing	2,5
ITM	4		Internet economy	1
IMS	2	180419203	Ethical hacking	5
IMS	2	180419205	Mobile Cross-Platform Development	5
IMS	2	180419202	Secure software design	3
IMS	2	180419208	Native mobile apps	3
IMS	2	140472204	Data privacy law	4
IRM	2	140472205	Legal English	4
IRM	2	140472208	Entrepreneurship	2
IRM	2	140472202	e-business applications	2
				33,5
IWI	6	080589605	Scientific project work	6
IWI	6	080589603	Industrial Projects	4
IWI	2	170589212	Language of meetings (English II)	2
IWI	6	080589609	Cross-cultural Communication	4
IWI	4	170589411	Negotiation & Argumentation (English IV)	2
				18
INT	Flexible	0502101 or 0502112	German beginners (A1/1 or A1/2)	5
INT	Flexible	0502103 or 0502113	German intermediate (A2/1 or A2/2)	5
INT	Flexible	0502120 or 0502106	German advanced (B1/B2: Speaking or Writing)	3
INT	Flexible	0502133	Tandem+ Programme	2
INT	flexible		Cultural Diversity at FH JOANNEUM	2
				17
			Total ECTS	105,5

| K_AEE_090421_S2 | Scientific Working | 2 ECTS |

Course type: Seminar

Location of the course in the curriculum: S2

Learning outcome:

The students improve their understanding of scientific research and paper writing and get the tools for writing bigger scientific documents (i.e. master thesis) in a scientifically appropriate manner. They are able to apply Maxwell's theory in electronics, scientific work methods and are familiar with the criteria and rules of scientific publishing.

Prerequisites and requirements:

Course content:

This course deepens the knowledge about scientific working and includes the following topics:

- Scientific methods
- Literature research
- Technical and scientific description and documentation
- Scientific publishing

Required/necessary literature:

Hehl: Foundations of classical electrodynamics. Charge, Flux and Metric

Jackson: Classical Electrodynamics

Zobel: Writing for Computer Science

Journals:

Physics Today

The Industrial Physicist

Teaching activities and methods:

Assessment: Continuous assessment

| K_AEE_090421_S2 | Model based software development | 5 ECTS |

Course type: Integrated Couse

Location of the course in the curriculum: S2

Learning outcome:

Graduates

- are proficient in the fundamentals of modern digital signal processing
- are proficient in the fundamentals of digital control engineering
- are able to design digital controllers and implement them in microcontroller systems
- are familiar with the workflow for the development of software from MatLab/Simulink models
- are familiar with the workflow for the development of VHDL code from MatLab/Simulink models

Prerequisites and requirements:

Students need a good understanding of Control engineering (continuous and discrete time) and of electromechanical systems including their math.

Students have to have a basic understanding of embedded systems including FPGA and of the modeling and simulation tool MATLAB/Simulink or willingness to self-study

Students will have to prove that they will be able to follow the course in a short discussion with the professor at the beginning of the semester.

Course content:

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

Required/necessary literature: Name
Books:

- Dorf: Modern Control Systems
- Oppenheim: Discrete-Time Signal Processing
- Matlab Courseware: "Introduction to Model-Based System Design"
- Matlab Courseware: "Advanced Model-Based System Design"

Journals:

- IEEE Transactions on Control Systems Technology

Teaching activities and methods:
Assessment: 50% report of lab exercises, 50% final exam

K_AEE_090421_S2	Data structures and algorithms	4 ECTS

Course type: Integrated course
Location of the course in the curriculum: S4
Learning outcome:
Graduates are
- proficient in advanced programming techniques
- familiar with the structure of operating systems,
- proficient in the basic mechanisms for the implementation of real-time systems
- familiar with the major programming techniques in terms of data structures and algorithms.
Prerequisites and requirements:
Course content:

- Integer arithmetic
- Sorting and selection
- Hash tables
- Graph representation
- Shortest paths
- Practical examples

Required/necessary literature:
Books:

- Silberschatz, Galvin, Gagne: Operating System Concepts with C & C++
- Tanenbaum: Modern Operating Systems
- Tanenbaum: Structured Computer Organization
- Melhorn, Sanders: Algorithms and Data structures
- Sedgewick, Sanders: Algorithms

Journals:

- ACM Transactions in Embedded Computing Systems

Teaching activities and methods: Integrated course
Assessment: Continuous assessment

K_AEE_090421_S4	International Technology Management	3,5 ECTS

Course type: Integrated course
Location of the course in the curriculum: S4
Learning outcome:
Graduates

- are familiar with the development processes in electronics
- are familiar with the basic economic relationships in terms of globally active technology companies
- are familiar with the fundamentals of innovation management
- are able to present the results of their work in a comprehensible manner.

Prerequisites and requirements:
Course content:
- Global technology companies (structures, legal basis)
- Examples of globally active technology companies (Intel, Infineon, AT&S, AVL)
- Financing of international projects, financing of the internationalisation process
- Corporate management, corporate culture in international technology companies
Required/necessary literature:
Teaching activities and methods: Integrated Course
Assessment: Continuous assessment

K_AEE_090421_S4	Innovation Management	1,5 ECTS

Course type: Lecture
Location of the course in the curriculum: S4
Learning outcome:
Graduates are
- familiar with the development processes in electronics,
- familiar with the basic economic relationships in terms of globally active technology companies
- familiar with the fundamentals of innovation management
- able to present the results of their work in a comprehensible manner.
Prerequisites and requirements:
Course content:
- Evolution economics
- Theory of inventive problem solving (TRIZ)
- Systematic implementation of innovations
- Intellectual property management
Required/necessary literature:
- Burgelman, Christensen, Wheelwright: Strategic Management of
Technology and Innovation
- Dodgson, Gann,Phillips: The Oxford Handbook of Innovation Management
Teaching activities and methods: Integrated Course
Assessment: Continuous assessment

140591402	Thermal engines	2 ECTS

Course type: Integrated Course
Location of the course in the curriculum: S4
Learning outcome:
Overview and consolidation of all aspects of energy supply, including power plant engineering, renewable energies, district heating, building services engineering.
Prerequisites and requirements:
Technical fundamentals with a focus on thermodynamics
Course content:
Student will get a knowledge of basic thermodynamics of heat engines and their historical aspects, design aspects, operation characteristics etc.:
- piston engines, internal combustion engine (Otto, Diesel)
- steam turbine
- gas turbine
- combined cycle
Required/necessary literature: Baehr Thermodynamics
Teaching activities and methods: Integrated course
Assessment: Written exam

Business English	2 ECTS

Course type: Seminar

Location of the course in the curriculum: S4

Learning outcome:
- Develop the ability to write an abstract and use academic English in different contexts
- Acquire the necessary language proficiency to deal with different business situations e.g.: negotiations, job interviews, project meetings, etc.

Prerequisites and requirements: English B2 level

Course content:
This course aims at increasing students' written and oral competencies with special focus the application process (creation of CVs, cover letters, job interview) and academic writing. As far as written competencies are concerned, students will also learn how to express themselves in the academic world, how to write and read an abstract. All the strategies studied in the course will be applied in practical role plays, discussions and a final job interview

Required/necessary literature:
Downes, C.: Cambridge English for Job-Hunting,

Matthews, J., & Matthews, R.: Successful Scientific Writing,

McCarthy, M., & O'Dell, F.: Academic Vocabulary in use.

Teaching activities and methods:

Assessment: Continuous assessment and oral exam

130592204	Water supply and drainage	2 ECTS

Course type: Integrated course

Location of the course in the curriculum: S2

Learning outcome:
In-depth knowledge about the management of energy & transport networks including the underlying infrastructure and environmental influences/emissions; network design, including modelling and simulation; network operation including issues of stability, quality levels and controlled access to networks; network maintenance; network stability; restoration of power in the event of grid failures (e.g. power grid blackout; power interruption due to accidents or maintenance work); ability to understand and specify quality parameters (Quality of Service)

Prerequisites and requirements: None

Course content:
Urban irrigation and drainage; in-depth treatment of water supply/distribution in urban networks and wastewater engineering/drainage in urban networks, hydrology, hydraulics; road drainage and wastewater discharge in road networks.

Required/necessary literature:
William stallings: Computer networks with internet protocols

Kerner: The Physics of Traffic;

White: Elements of Train dispatching 1 and 2;

Teaching activities and methods: Integrated course

Assessment: written and/or oral exam

130592202	Traffic telematics	4 ECTS

Course type: Integrated course

Location of the course in the curriculum: S2

Learning outcome:
In-depth knowledge of transport planning, transport modes (road, rail, aviation), transport industry and traffic telematics for application by transport providers, authorities, consulting firms or the manufacturing industry; knowledge about the financing and legal status of companies, special knowledge about environmental impacts in the transport sector.

Prerequisites and requirements:

Course content:
1) Quality parameters of mobile phone systems in the transport sector
2) Mobile phone systems; positioning system and RFID, possible applications and their Assessment (no details about functional principles)
3) Operation and configuration of telematic networks
4) Intelligent transport systems ("ITS" intelligence in vehicles, intelligence in infrastructure).
5) Road-to-car communication, car-to-car communication
6) Application of current wireless communication systems and determination of quality parameters required for specific applications
7) Applied telecommunications; quality of service of telecommunication networks, service level agreement, availabilities, interfaces, time response.
Required/necessary literature:
European Comission-Joint Research Center: Well-to-wheels Report (2006);
Kavalov/Peteves: Status and perspectives of biomas to liquid fuels in the European Union (2005);
IEA: Biofuels for Transport (IEA, 2004);
Teaching activities and methods: Integrated course
Assessment: written and/or oral exam

130592209	Economics: Infrastructure financing	4 ECTS

Course type: Integrated course
Location of the course in the curriculum: S2
Learning outcome:
This module provides key knowledge of project financing, cooperation with public clients, international differences in business culture and public relations activities. It also covers the major aspects of national and international laws relevant to energy and transport and provides strategic management skills.
Prerequisites and requirements:
Course content:
Investment rating, financing methods (e.g. PPP, BOT), efficient economic and political risk management, financial institutions (local banks, development banks), current examples of infrastructure projects, project calculation; composition of tariffs and rates in the energy and transport sectors (examples from the energy sector: electricity, gas, heat tariffs; examples from the transport sector: tram, bus and railway rates), overhead costs, calculation methods, components etc.
Required/necessary literature:
Teaching activities and methods: Integrated course
Assessment: written and/or oral exam

130592205	Environmental Chemistry	2 ECTS

Course type: Tutorial
Location of the course in the curriculum: S2
Learning outcome:
Representative methods of environmental analysis and operation of typical equipment (e.g. flue gas analysis)
Prerequisites and requirements:
Course content:
In-depth knowledge about the management of energy & transport networks including the underlying infrastructure and environmental influences/emissions; network design, including modelling and simulation; network operation including issues of stability, quality levels and controlled access to networks; network maintenance; network stability; restoration of power in the event of grid failures (e.g. power grid blackout; power interruption due to accidents or maintenance work); ability to understand and specify quality parameters (Quality of Service).
Required/necessary literature:
Kerner: The Physics of Traffic; White: Elements of Train dispatching 1 and 2
Teaching activities and methods: Tutorial
Assessment: written and/or oral exam

| 130592211 | Human resource management | 3 ECTS |

Course type: Integrated course

Location of the course in the curriculum: S2

Learning outcome:

In this module students acquire the basic skills required for project development and management at national and international level. Special emphasis is placed on independent work.

Prerequisites and requirements:

Course content:

Applied course and exercises: human resources management (agreeing on targets, giving feedback, motivation, meaning-based leadership), conflict management, behaviour and tactics in negotiations, personnel management, personnel development, time management, training and further education management, personnel recruiting and aptitude diagnostics, further training or retraining, strategic HRM, HRM in the context of change (change management)

Required/necessary literature:

Andreosso/Jacobson: Industrial Economics and Organisation, McGraw-Hill UK, 2005; Geert Hofstede and Gert Jan Hofstede: Cultures and Organizations, Software of the Mind. Intercultural Cooperation and Ist Importantce for Survival; McGraw-Hill UK 2005

Teaching activities and methods: Integrated course

Assessment: written and/or oral exam

| 130592208 | Environmental Control for E&T | 2 ECTS |

Course type: Integrated Course

Location of the course in the curriculum: S2

Learning outcome:

In-depth knowledge about the management of energy & transport networks including the underlying infrastructure and environmental influences/emissions; network design, including modelling and simulation; network operation including issues of stability, quality levels and controlled access to networks; network maintenance; network stability; restoration of power in the event of grid failures (e.g. power grid blackout; power interruption due to accidents or maintenance work); ability to understand and specify quality parameters (Quality of Service).

Prerequisites and requirements:

Course content:

Environmentally relevant topics in the field of energy and transport; emissions immissions; different kinds of emission (pollutants, exhaust gases, noise, air pollution control, dusts (e.g. particulate matter), CO, nitrogen oxide, sulphur dioxide, hydrocarbons, secondary reactions (aerosols, ozone formation); exhaust aftertreatment systems in vehicles (catalytic converters, filter systems), limit values for key pollutants (particulate matter measurement), noise, emission sources; emission reduction measures; environmental impact assessment

Required/necessary literature:

William stallings: Computer networks with internet protocols;

Teaching activities and methods: Integrated course

Assessment: written and/or oral exam

| 110418408 | IT-Project Work | 4 ECTS |

Course type: Seminar

Location of the course in the curriculum: S4

Learning outcome:

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

Prerequisites and requirements:

Course content:

The students will have to develop, execute and finalize an IT-project.

Required/necessary literature:

Teaching activities and methods: Supervision

Assessment: Project Assessment and final presentation

110418411	Professional English Advanced	2 ECTS

Course type: Seminar

Location of the course in the curriculum: S4

Learning outcome:

Prerequisites and requirements:

Course content:

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.

Required/necessary literature:

Teaching activities and methods:

Assessment: Continuous assessment and/or final exam

110418402	Distributed Computing	2,5 ECTS

Course type: Integrated course

Location of the course in the curriculum: S4

Learning outcome:

On completion of the course, students know about design and implementation of selected distributed software systems.

Prerequisites and requirements:

Sound knowledge in object-oriented programming, for instance in Java, considerable knowledge of web technologies such as HTML,

CSS, JavaScript and skills in Linux/Unix. Students will have to prove the ability to follow the course content at the beginning of the semester in a small discussion with the professor

Course content:

Designing software for distributed environments, managing remote objects (naming, discovery, serialization; Java RMI), aspects of parallel and distributed computing (concurrency, multithreading and synchronization, deadlocks, map reduce, producer consumer), messaging systems (message broker; RabbitMQ, worker queues, event-based, asynchronous communication, publish-subscribe model, mobile code), caching emcached/redis) for ReST web services and/or real time clients (web sockets).

Teaching activities and methods: Lecture and Tutorial

Required/necessary literature:

Distributed Systems: Principles and Paradigms by Andrew S. Tanenbaum and Maarten Van Steen. Prentice Hall.

Assessment: Team project and written exam

	Internet Economy	1 ECTS

Course type: Lecture

Location of the course in the curriculum: S4

Learning outcome:

Introduction to and consolidation of digital management skills; students know the various functional areas of digital economy and are able to draw connections between the respective fields and apply them in practice.

Prerequisites and requirements: business project management

Course content:

Students learn about the difference between old and new economy (with regard to new technologies) on the macro- and micro-economic level as well as on the business administration level; traditional, digital and hybrid business models will be analysed with respect to client focus and quality awareness. Online Marketing emphasizes the diversity of this current business philosophy and links the various existing marketing tools with each other by assessing them from different viewpoints. The course aims to give students a general understanding of the behaviour of buyers and sellers and to teach them how to best use online marketing.

Required/necessary literature: -

Teaching activities and methods: lecture

Assessment: Final project work, Continuous Assessment

| 180419203 | Ethical Hacking | 5 ECTS |

Course type: Lecture
Location of the course in the curriculum: S2
Learning outcome:
The graduate obtains detailed knowledge about common attack methods against IT systems, and derives from them detailed competencies to secures these systems with regard to hacker attacks.
Prerequisites and requirements:
Course content:
The course covers the topic of Penetration Testing (also known as white hat hacking oder ethical hacking). In the first part typical attack verctors are analyzed and simulated in a laboratory environment. The main focus is placed on the exploitation of programming errors and other typical weaknesses of software products (Buffer overflows, race conditions, logical errors). Students are aware of exploit development methods and exploit mitigation mechanisms of modern operating systems (ASLR, Stack cookies, SafeSEH, DEP,..).
Another focus is to understand typical weaknesses and attack patterns of WEB applications and the mitigation steps to avoid them.
The third part of the course covers the structured analysis of security problems and steps used in a Penetration test. (Analysis, preparation, exploitation, documentation, giving recommendations)
This course will be held in German but there is the opportunity for incoming students to do a project work.
Required/necessary literature:
Hacking The Art of Exploitation, Erickson
Hacking mit Metasploit, Messner
Hacking Exposed Malware & Rootkits, Elisan
Hacking Exposed Industrial Control Systems, Bodungen, Singer
Hacking Exposed WEB Applications, Scambray, Liu
Teaching activities and methods: self study + project work
Assessment: Continuous assessment and final exam

| 180419205 | Mobile Cross-platform development | 5 ECTS |

Course type: Integrated course
Location of the course in the curriculum: S2
Learning outcome:
Students gather knowledge of design, development and evaluation of secure mobile applications on different platforms.
Prerequisites and requirements:
Course content:
Selected aspects of mobile development like cross-plattform code generation are presented in this lecture.
Required/necessary literature:
A book apart (http://books.alistapart.com/),
HTML5 and JavaScript Web Apps (ISBN-13: 978-1449320515)
Effective JavaScript (ISBN-13: 978-0-321-81218-6)
Journals: ACM
Teaching activities and methods: Lecture and tutorial
Assessment: Continuous assessment and final exam

| 180419202 | Secure software design | 3 ECTS |

Course type: Integrated course
Location of the course in the curriculum: S2
Learning outcome:
Prerequisites and requirements:
Students have to have a very good knowledge of Java programming

Course content:
Architectural Risk Analysis
– Security Design Principles
– Threat Modeling
Secure Web Application Design
– Web Application Risk Analysis
– HTTP Protocol
– Client-Side Controls
– Access Controls
(Authentication, Session Management, Authorization)
– Data Stores
– XSS Protection
– CSRF Protection
Examples for this lecture can be found on https://github.com/teiniker/teiniker-lectures-securedesign
Required/necessary literature:
Teaching activities and methods: Integrated course
Assessment: exam

180419208	Native mobile apps	3 ECTS

Course type: Tutorial
Location of the course in the curriculum: S2
Learning outcome:
The graduate has detailed knowledge about the architecture and development of secure software in general and secure mobile applications on different platforms in particular
Prerequisites and requirements:
Course content:
System near apps using the competences acquired in "Mobile Operating Systems" (C-Programming). Mobile Platform Native app development for several mobile operating systems (iOS, WP8, ...) including their special approaches and differences are covered.
Required/necessary literature:
Gary McGraw, Software Security – Building Security In, Addison-Wesley, 2006
HTML5 and JavaScript Web Apps (ISBN-13: 978-1449320515)
N. Elenkov: Android-Security-Internals, 2014
J. Drake et. al.: Android Hacker's Handbook, 2014
Teaching activities and methods: Lecture and tutorial
Assessment: continuous assessment and final exam

170472204	Data privacy law	4 ECTS

Course type: lecture
Location of the course in the curriculum: S2
Learning outcome:
understanding of data protection in the EU in theory and practice
Prerequisites and requirements: none
Course content:
The General Data Protection Regulation of the EU (GDPR) - in theory and practical examples to certain aspects of the GDPR
Required/necessary literature:
The GDPR (available online)
Teaching activities and methods:
lecture and group activities (group activities in class and at home)
Assessment: attendance (prerequisite), activities during the course (50%), test (50%); grades: 1 (90%-100%), 2 (80% to 89%), 3 (70% to 79%), 4 (60% to 69%), 5 (less than 60%)

| 140472205 | Legal English | 4 ECTS |

Course type: Seminar

Location of the course in the curriculum: S2

Learning outcome:

The students learn to understand legal texts and hold informed discussions about legal aspects in business and IT. They will develop skills, such as negotiating in English and writing formal reports, that will help them to assert themselves in their fields.

Prerequisites and requirements: Legal English 1 or similar courses

Course content:
- Negotiatons
- Report writing
- Data protection
- Intellectual property rights
- The language of licence agreement
- Sale of goods, esp. warrenties
- Cybercrime

Required/necessary literature:

http://www.thefreedictionary.com

http://www.just-the-word.com

Teaching activities and methods:

Assessment: Immanent evaluation and/or final exam

| 140472208 | Entrepreneurship | 2 ECTS |

Course type: Seminar

Location of the course in the curriculum: S2

Learning outcome:

Prerequisites and requirements:

Course content:

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.

Required/necessary literature:

Teaching activities and methods:

The course consists of two modules:

MODULE 1: Entrepreneurial concepts, tools, and practices

MODULE 2: Entrepreneurial skills and behaviors

Assessment: paper

| 140472202 | E-business applications | 4 ECTS |

Course type: Integrated course

Location of the course in the curriculum: S2

Learning outcome:

Prerequisites and requirements:

Course content:

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.

You will have to do a project on your own.
Required/necessary literature:
Marcia Robinson; Strategies for e-business success, Bryn Jolfsson, Glen Urban; Electronic Commerce 2002, Efraim Turban; .Net e-Business Architecture
Teaching activities and methods:
Assessment: Name: Continuous assessment

080589605	Scientific project work	6 ECTS

Course type: Seminar
Location of the course in the curriculum: S6
Learning outcome:
Students are able to
· evaluate a professionally relevant complex problem independently in accordance with scientific criteria
· display new findings and research questions in writing
· independently apply the basic principles of scientific writing (referencing, formal structure etc.)
Prerequisites and requirements:
Course content: -
Required/necessary literature:
The lecturer agrees to pass on an updated list of recommended literature to the students in accordance with the syllabus.
Journals
Teaching activities and methods: BA/SC
Assessment: Evaluation of the Scientific's Thesis Paper

080589603	Industrial Projects	4 ECTS

Course type: Seminar /
Location of the course in the curriculum: S6
Learning outcome: The students are able to analyse professionally relevant problems posed within projects, derive suggestions for solutions and assess processed results.
Prerequisites and requirements: -
Course content: Working in a project in industry or working on a topic in research relevant to the study programme.
Required/necessary literature: The lecturer agrees to pass on an updated list of recommended literature to the students in accordance with the syllabus.
Teaching activities and methods: PR
Assessment: continuous assessment

080589612	Language of meetings (English II)	2 ECTS

Course type: Integrated lecture
Location of the course in the curriculum: S2
Learning outcome:
Students are able to
· express themselves adequately in technical and business terms.
· describe basic material properties and industrial processes.
· use English for general business communication (i.e. in meetings).
· write a letter of application & to adequately communicate one's goals, strengths, and experiences.
· spontaneously discuss and describe professions and processes in industrial companies.
· use conditionals in all tenses.
· apply the grammatical rules and structures acquired in English 1.
Prerequisites and requirements:

Course content:
· Meetings and moderation with multi-cultural participants.
· Language functions in English as a participant, moderator or chairperson.
· Telephone conferences
· Plan of action
· Describing basic material properties and industrial processes
Required/necessary literature:
· Tullis/Trappe: Intelligent Business, Longman
· Vince: English Grammar in Context, Macmillan
· Various up-to-date materials from media resources
· Literature adapted in accordance with the guidelines of CEFR for second language acquisition.
The lecturer agrees to pass on an updated list of recommended literature to the students in accordance with the syllabus.
Teaching activities and methods: Integrated lecture
Assessment: continuous assessment

080589609	Cross-cultural Communication	4 ECTS

Course type: Seminar
Location of the course in the curriculum: S6
Learning outcome:
Students are able to:
· use English for business and socializing in a multicultural world
· enable students to express themselves adequately in technical and
financial terms in an industrial business environment with English as
the target language.
· use English as the business language for meetings and moderation while understand the differences of communication with multi-cultural participants.
· use English to negotiate while maintaining proper business etiquette with multicultural participants.
· analyse and evaluate information for scientific work when using references.
· apply learned skills to prepare and deliver a professional presentation as a culmination of project or theoretical work.
Prerequisites and requirements: Name
Course content:
· Communicative strategies and business etiquette in an international
environment.
· Case studies to extract and analyze valuable information, identify
problems, plus make creative/realistic solutions during meetings.
· Professional presentation of Industrial Research Project
· Writing an abstract for the Bachelor Thesis
· Writing a term paper
Required/necessary literature:
Books:
· Tullis/Trappe: Insights into Business, Longman
· Various up-to-date materials from media resources
The lecturer agrees to pass on an updated list of recommended literature to the students in accordance with the syllabus.
Teaching activities and methods: Seminar
Assessment: Continuous assessment

170589411	Negotiation & Argumentation (English IV)	2 ECTS

Course type: Seminar
Location of the course in the curriculum: S4
Learning outcome:
In English the students are able to
· express themselves professionally in technical and
financial terms in an industrial business environment with English as the target language.
· Use English as the business language for meetings and moderation while understanding the differences of communication with multi-cultural participants.
· understand legal terms and definitions pertaining to contracts and business.
· use English to negotiate while maintaining appropriate business etiquette with international participants.
· analyse and evaluate information for scientific work whilst using references.
Prerequisites and requirements: Name
Course content:
· Professional English
· Negotiations and appropriate business etiquette
·Case Studies
· Argumentation methods
· Quoting and paraphrasing information from different sources
Required/necessary literature:
Books:
· Ibbotson: Cambridge English for Engineering, Cambridge
· Tullis/Trappe: Intelligent Business, Longman
· Pilbeam/O'Driscoll: Market Leader - Logistics Management, Longman
· Vince: English Grammar in Context, Macmillan
· Various up-to-date materials from media resources
· Literature in accordance with CEFR framework.
Teaching activities and methods: Integrated Lecture
Assessment: Final Exam and continuous assessment

0502101 or 0502112	German beginners (A1.1 or A1.2)	5 ECTS

Depending on the number of interested students for each course, we are offering or the course level A1.1 or A1.2.

Course type: Integrated course
Location of the course in the curriculum: flexible
Location of the course: room 203 or 209
Learning outcome:
A1.1:
You will learn to greet people, name jobs, talk about your origin (where from? where to?), to count, to tell people your address and phone numbers, how to invite guests, to express your general opinion, to order in a bar or restaurant, to find your way around in a department store, to inform yourself, to name groceries, to give advice and ask favours, to apologise, and much more.
Grammar: Verbs in the present tense, wh-questions and yes/no questions, articles, accusative, dative, personal pronouns in the accusative and dative.
A1.2:
You learn to talk about your work, your and the other's state of health, to give directions, to ask the way, to express date and time, to express preferences and repugnances and much more.
Grammar: recapitulation of Perfekt (perfect tense); Präteritum (past tense) of the auxiliary verbs; possessive articles; modal verbs; imperative; local und temporal prepositions; polite form with subjunctive II; personal pronouns with Akkusativ and Dativ; demonstrative pronouns; verbs with Dativ
Prerequisites and requirements:

Course content:

- speaking
- listening
- reading
- writing

Required/necessary literature:
Books: Schritte plus (available at your International Relations Office, 15 EUR)
Teaching activities and methods: Integrated course
Assessment: Continuous assessment

0502103 or 0502113	German intermediate (A2/1 or A2/2)	5 ECTS

Depending on the number of interested students for each course, we are offering or the course level A2.1 or A2.2.

Course type: Integrated course
Location of the course in the curriculum: flexible
Learning outcome:
A2.1:
This course will focus on enlarging the student's range of vocabulary and expressions and students will be exposed to more complex issues of grammar at level A2/1 such as: past tense ("Präteritum") from „haben", „sein" and modal verbs, perfect tense ("Perfekt"), making requests using „sollte" and imperatives, comparison
and graduation of adjectives, verbs with Dativ, pronouns with Dativ, position of pronouns, verbs with prepositions, „Wechselpräpositionen", temporal and local prepositions, subordinate clauses with „wenn" and „dass", relative and idefinite pronouns etc.
A2.2:
This course will focus on enlarging the student's range of vocabulary and expressions and students will be exposed to more complex issues of grammar at level A2/2 such as: Past tense ("Präteritum"), perfect tense ("Perfekt") (recap); adjective declination; passive voice (present tense); subjunctive II (of haben, sein, modal verbs); temporal and local prepositions; subordinate clauses with "wenn", "weil", "dass"; reported questions; word formation etc.
Course content:
- speaking
- listening
- reading
- writing

Required/necessary literature:
Books: Scripts of FH JOANNEUM (available at your International Relations Office, 15 EUR)
Teaching activities and methods: Integrated course
Assessment: Continuous assessment

0502120 or 0502106	German advanced (Listening and Speaking B1/B2 or Reading and Writing B1/B2)	3 ECTS

Depending on the number of interested students for each course, we are offering or the course Listening and Speaking B1/B2 or the course Reading and Writing B1/B2

Course type: Integrated course
Location of the course in the curriculum: flexible

Learning outcome:

Listening and Speaking B1/B2
You will learn …
·… to understand and to obtain information about a person
·… to understand announcements in buses, department stores etc.
·… to understand and to obtain information about prices, departure times etc.
·… to understand and participate in conversation while shopping
·… to order in a coffee house
·… to understand directions and to describe a route
·… to understand a simple story about a tourist landmark
·… to talk about the city you live in
·… to understand and gather information about the family during conversation
·… to speak about your own living arrangements and to question others on the topic
·… to understand, make, accept and reject suggestions
·… to understand weather and traffic reports

·… to talk about your daily routine and to question others on the topic
·… to understand information provided over the telephone
·… to book a hotel room
·… to talk about your holiday and to question others on the topic
·… to make an appointment over the telephone

Course content:
· speaking
· listening

Required/necessary literature:
Books: Scripts of FH JOANNEUM (available at your International Relations Office, 15 EUR)
Teaching activities and methods:
Communicative Teaching focusing on listening and speaking
Assessment: Continuous assessment

Reading and Writing B1/B2
Learning outcome:
You will learn …
·… to recognise different types of text and write a curriculum vitae
·… to extract important information from a text
·… to compose a summary and to understand a popular science text
·… to apply different styles of reading and to find specific information in a text
·… to understand a scientific text
·… to write an informal letter and to compose a complaint email
·… to understand a fairytale
·… to compile a report and to make notes and write a summary
·… to interpret statistics and summarise them
·… to write a personal statement
·… to identify and correct errors in spelling, grammar and syntax
·… to compose a letter to the editor and to write a story ending

Course content:
- reading
- writing

Required/necessary literature:
Books: Scripts of FH JOANNEUM (available at your International Relations Office, 15 EUR)
Teaching activities and methods:
Communicative Teaching focusing on reading and writing
Assessment: Continuous assessment

0502133	Tandem+ Programme	2 ECTS

Course type: Integrated course
Location of the course in the curriculum: flexible
Learning outcome:
Insights into Austrian Culture and Language and a lot of fun with your Austrian Tandem Partner by joining provided activities.
Course content:
Language, experience and cultural exchange among Austrian and International students.
Required/necessary literature:
No literature, but mandatory Tandem+ Start-up.
Teaching activities and methods:

Start-up at the beginning of the semester and poster presentation/Tandem Learning Objectives Form at the end of the semester.
The Tandem+ Certificate can also be credited towards the ISC (Intercultural Skills Certificate): https://www.fh-joanneum.at/international/services/intercultural-skills-certificate/
Assessment: Continuous assessment

Please be award that for this course you will not get a grade, on the Transcript of Records you will get the notation "attended" with the according number of ECTS. Please clarify with your home university the course will be accredited.

Cultural Diversity at FH JOANNEUM	2 ECTS

Course type: Integrated course
Location of the course in the curriculum: flexible
Learning outcome:
Learning about other cultures, developing new perspectives of the home culture, meeting International and Austrian Students, desire to travel, tasting food of other cultures
Course content:
 International degree seeking students and exchange students at FH JOANNEUM Kapfenberg are presenting their own first experiences in Austria - followed by an entertaining country presentation to point out the intercultural diversity at Campus Kapfenberg.
Teaching activities and methods:
Presentations of international students and report at the end of the semester (activities on Moodle platform)
The Certificate for Cultural Diversity at FH JOANNEUM can also be credited towards the ISC (Intercultural Skills Certificate): https://www.fh-joanneum.at/international/services/intercultural-skills-certificate/

Please be award that for this course you will not get a grade, on the Transcript of Records you will get the notation "attended" with the according number of ECTS. Please clarify with your home university the course will be accredited.