

Construction and Real Estate Management

Stellungnahme zur Erfüllung der Akkreditierungsauflagen
und gleichzeitige Beantragung der Akkreditierung als
internationales konsekutives Masterprogramm

(Beschluss der Akkreditierungskommission von ACQUIN vom 9.12.2005)

FHTW Berlin und Stadia Helsinki Polytechnic

Berlin, 19.12.2006

ANLAGE 2: ÜBERARBEITETE MODULBESCHREIBUNG



Helsinki Polytechnicum Stadia

and

Fachhochschule für Technik und Wirtschaft Berlin

(FHTW Berlin)

Detailed Module Description

of the International Master Programme

Construction and Real Estate Management

Module M1.1: Life cycle management (Facility Management)

Name	Life cycle management (Facility Management)
Period	1 Term
Credit Points	5
Type of examination	Written examination
Learning matter	Management
Level	2a
Status	Compulsory subject
Aims and competence	Real estate and facility management are part of an all over development: to "service society", these backgrounds and concepts (life-cycle and three columns concept) have to be understood under topics as client and service orientation. The respective management tools have to be known and applied accordingly.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	Life cycle management
Learning method	Lecture and self studying
Total workload	135 hours per 60 minutes
Workload at university	72 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<p>Development of society, economy and sectors</p> <ul style="list-style-type: none"> - From service and knowledge society - Market orientation: clients, users, goals - Coordinates of construction and real estate business - From product to process orientation <p>Theoretical models, systems theory and cybernetics</p> <ul style="list-style-type: none"> - Fundamentals and elements of the life cycle concept - Main phases, core and secondary processes <p>From project to object management</p> <ul style="list-style-type: none"> - Project development and programming - FM during the design and construction phase - Substantial completion and handover <p>The three columns of facility management</p> <p>Technical FM</p> <ul style="list-style-type: none"> - Inspection, maintenance, preservation - Maintenance strategies and management - Revitalisation, restoration, reconstruction - Redesign, reuse, demolition and recycling - Quality management <p>Business administration of FM</p> <ul style="list-style-type: none"> - Central tasks and fields of activity - Property administration - Ownership and owners association - Legislation, legal and contractual basis - Renting and leasing management - Tenants, marketing and services

<p>Special aspects and Fields of FM</p>	<ul style="list-style-type: none"> - Legislation, accounting and administration - Real estate and object management - Benchmarking and controlling <p>Infrastructural FM</p> <ul style="list-style-type: none"> - House and concierge services - Cleaning and maintenance services - Safety and guard services - Supply and discharge services - Relocation and furnishing services - Catering and special service - Insourcing and outsourcing - Corporate real estate management - Public Private Partnership - BOT (build, operate and transfer)
<p>Literature</p>	<p>Corsten, H.: Betriebswirtschaftslehre der Dienstleistungsunternehmen, München/Wien 1988</p> <p>Drucker, P.: Management in Turbulent Times, New York, 1980</p> <p>Heskett, J. L.: Service Breakthroughs, New York, 1990</p> <p>Lunn, S. D.; Stephenson, P.: The Impact of Tactical and Strategic FM Automation. Facilities 18(7/8), 2000, p. 312-322</p> <p>Master, D. H.: Managing the professional Service Firm, New York, 1997</p> <p>Pena, W.: Problem Seeking. Houston 1987</p> <p>Schulte, K. W.; Pierschke, B.(Hrsg.): Facility Management, Köln, 2000</p> <p>Sprenger, R. K.: Mythos Motivation, Frankfurt, 1992</p> <p>Vester, F.: Leitmotiv vernetztes Denken, München, 1988</p> <p>Waterman, R.: The Renewal Factor, New York, 1990</p> <p>Zeithamel, V. A.: Delivering Quality Service, New York, 1990</p>

Module M1.2: Project development and project management

Name	Project development and project management
Period	1 Term
Credit Points	5
Type of examination	Written examination
Learning matter	Project management
Level	2a
Status	Compulsory subject
Aims and competence	Understanding and application of the methods, instruments and tools of international settlement of projects and management over the whole life cycle of a building especially concerning adoption, modification and variation
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	Project development and project management
Learning method	Lecture and self studying
Total workload	135 hours per 60 minutes
Workload at university	72 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents International project development	<p>Regions, climate, societies and culture</p> <p>Types of international project development</p> <ul style="list-style-type: none"> - Europe, Middle East, Africa, Asia, South America - Healthcare and educational projects - Urban and infrastructural Projects - Traffic, Tourism, Sports <p>Methods of international project development</p> <ul style="list-style-type: none"> - Target, Goals and Standards - Programming and Organisation - Select strategy and mile stones - Collection and evaluation of data - Location, site and survey <p>Organisation</p> <ul style="list-style-type: none"> - Install project team - Define and select specialists - Time schedule and costs frame - Define required quality <p>Evaluation of selected projects</p> <ul style="list-style-type: none"> - Joint Banking Center, Kuwait - Schultheiss Quartier, Berlin/Spandau

<p>International project Management</p>	<ul style="list-style-type: none"> - Bank of Kuwait and the middle east-branches <p>Project control</p> <ul style="list-style-type: none"> - Propagation and initial phase - Design and planning phase - Construction and hand-over - Project accompanying activities <p>Project and project analysis</p> <ul style="list-style-type: none"> - Design, construction, material ,quality - Milestones and time scheduling - Procurement and procurement control - Main contract and contract administration - Main partners involved and their interests - Financial results and cost control <p>Project management and organisation</p> <ul style="list-style-type: none"> - Site office and management staff - Technical office and personal - Navigator and time scheduling - Contract administration and subletting - Commercial administration - Site installations and infrastructure <p>Elements and practices of project management</p> <ul style="list-style-type: none"> - Job descriptions, responsibilities, procedures, approvals - Flow of information, documents and documentation - Production, progress and quality control and risks man. - Work and change orders, change, claim management <p>Invoicing, costs and payment control</p>
<p>Literature</p>	<p>BS 6079: Guide to Project Management, British Standard Institute, London, 2000</p> <p>Diedrichs, C. J.: Grundlagen der Projektentwicklung. In: Handbuch der Immobilien-Projektentwicklung, Köln, 1996, S. 17-81</p> <p>Falk, B.: Zur Projektentwicklung von Gewerbe-Immobilien, München, 1991</p> <p>Kwakye, A. A.: Construction project Administration in Practice, Karlow, 1997</p> <p>Turner, R.: Handbook of Project-Based Management, 3rd ed., London 2000.Schulte, K.-W.: Handbuch Immobilien-Projektentwicklung, Köln, 1996</p> <p>Weber, A.: Managing Innovative Projects, London, 1994</p>

Module M1.3: **International Tendering and construction and real estate contract administration**

Name	International Tendering and construction and real estate administration
Period	1 term
Credit Points	5
Type of examination	Written examination and assignment
Learning matter	Legislation and law in the construction and real estate industry
Level	2a
Status	Compulsory subject
Aims and competence	<p>Construction projects normally imply the involvement of many participants (from client to users, from architects and engineers, authorities to the involvement of different construction firms). Their development is time consuming and requires huge sums of financial means. Accordingly the relations between the parties involved have to be documented by sound contracts and appropriate regulations. Therefore the basic elements, interrelations and legal systems have to be understood and applied properly. This is of highest importance for international projects with changing systems of law and legislation.</p> <p>The general survey has to be studied in close relation with the FIDIC conditions of contract. To deepen and apply these, homework/assignments have to be performed by solving realistic cases of contract management.</p>
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	International Tendering and construction and real estate contract administration
Learning method	Lecture and self studying
Total workload	135 hours per 60 minutes
Workload at university	72 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<p>Principles of law and contracts</p> <ul style="list-style-type: none"> - Different historical developments - The cultural and social context - Constitutions, legislation and law <p>Different kinds of contracts</p> <ul style="list-style-type: none"> - Architects, engineers and surveyors - Special parties involved - Building contracts

	<ul style="list-style-type: none"> - Service and maintenance contracts <p>Methods and principles of tendering</p> <ul style="list-style-type: none"> - General procedure and phases - Different national procedures - International competitive bidding - The FIDIC tendering procedure <p>Building contracts and contractual relations</p> <ul style="list-style-type: none"> - National types and their elements - Parties involved and their relations - New forms of organisation <p>The FIDIC conditions of contract</p> <ul style="list-style-type: none"> - Red Book: Construction works only - Yellow Book: Design and construction - Silver Book: Turnkey projects - Green Book: Short form of contract <p>Special aspects of the Red, Yellow and Silver Book</p>
Literature	<p>Abrahamson, M. W.: Engineering Law and the ICE Contracts, London 1979</p> <p>Duncan Wallace, I. N.: The International Civil Engineering Contract, London 1978</p> <p>Duncan Wallace, I. N.: Building and Engineering Contracts, London 1980</p> <p>Kulicke, R.: Auslandsbau, Wiesbaden 2003</p> <p>Guide to the Use of FIDIC Conditions of Contract for Works of Civil Engineering Construction, Geneva 1989</p> <p>Neale, R.H., Neale, D.E.: Construction planning. Published by Thomas Telford Ltd, First published 1989.</p> <p>Pilcher, R.: Principles of construction management, New York, 1992.</p> <p>Project Management Institute: A Guide to the Project Management Body of Knowledge, Pennsylvania, 2000.</p>

Module M1.4: **Financial mathematics and management information system**

Name	Financial mathematics and informatics
Period	1 Term
Credit Points	5
Type of examination	Written examination
Learning matter	Financial management
Level	2a
Status	Compulsory subject
Aims and competence	<p>- Finance and investment planning An obligatory component of every economically oriented study programme is an advanced knowledge to financial mathematics and the presentation of calculations of profitability. The techniques of the financial mathematics are processed in a way, so that a solid basis is given for investment decisions and calculations of life cycle costs. The main emphasis is put on the comprehensibility of calculation processes of dynamic methods of the calculation of profitability under certainty and uncertainty. All mathematical models to be used are derived and explained in detail by extensive examples. Financial mathematical standard software shall not be used, but instead a table calculation programme. The acquired knowledge shall be converted in creation of own calculation sheets (according to a responsible and scientific working with computers). Students shall purchase the competence to recognise the efficiency, significance and limits of "classic" methods of investment appraisal. They independently test and review the learned information by individual homework.</p> <p>- Management information system The main challenge in supporting decision processes within construction and real estate management is to gain access to the sources of information available throughout the company and its various information systems. This includes ERP-Systems with the financial and logistics functions as well as solutions focussing on functions like project and contract management, collaboration or graphical software (e.g. CAD, CAFM, GIS). Students shall purchase the competence to understand well known information systems used for the technical and commercial issues of real estate management and techniques to establish new management information systems.</p>
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the units:

Name	Finance and investment planning
Learning method	Lecture and self studying
Total workload	67 hours per 60 minutes
Workload at university	36 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<p>The module contents can be described by the following key-words:</p> <ul style="list-style-type: none"> - Interest and compound interest calculation, - Calculation of present and final value (addition and deduction of accrued interest), - Calculation of bonds, - Calculation of annuities, - Calculation of the capitalised value, - Calculation of the dynamic payback period, - Calculation of the internal rate of return, - Calculation of equivalent annuities, - Sensitivity analysis, - Probable investment appraisal. <p>The teaching contents are direct basis for the module M3.1: Life cycle analysis.</p>
Literature	<p>Adelmeyer, M. Warmuth, E.: Finanzmathematik für Einsteiger, Braunschweig 2003</p> <p>Diederichs, C. J.: Wirtschaftlichkeitsberechnungen und Nutzen/Kosten Untersuchungen, Sindelfingen 1985</p> <p>Hensler, F.: Investitionsanalyse bei Hochbauten, Wiesbaden 1986</p> <p>Kruschwitz, L.: Investitionsrechnung, 8.Auflage, München 2000</p> <p>Möller, D. A.: Planungs- und Bauökonomie, München 1988</p> <p>Möller, D. A. / Kalusche, W.: Übungsbuch zur Planungs- und Bauökonomie, München 1990</p> <p>Oakshott, I.: Essential Quantitative Methods for Business Management and Finance, Houndmills 2001</p> <p>Pike, R. / Neale, B.: Corporate Finance and investment, Harlow 2003</p> <p>Tietze, J.: Einführung in die Finanzmathematik, 5. Auflage, Braunschweig 2002</p>
Name	Management information systems
Learning method	Lecture and self studying
Total workload	68 hours per 60 minutes
Workload at university	36 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.

Assessment	Depending on marks
Contents	<ul style="list-style-type: none"> • ERP-Systems within real estate management processes • Decision support systems (e.g. data warehousing) • Collaborative information systems • Business process engineering (focussing on requirements engineering and information modelling) • Approaches to introduce new information system infrastructures.
Literature	<p>Vetter, Max: Informationssysteme in der Unternehmung. Eine Einführung in die Datenmodellierung und Anwendungsentwicklung. 2., überarbeitete Auflage, Stuttgart: B.G. Teubner, 1994.</p> <p>May, Michael: IT im Facility Management erfolgreich einsetzen. Das CAFM-Handbuch. 2. Auflage, Berlin Heidelberg: Springer Verlag, 2004, 2006.</p> <p>Scheer, A.W.: Wirtschaftsinformatik – Referenzmodelle für industrielle Geschäftsprozesse, 6. Auflage. Berlin u.a.: Springer Verlag, 1995.</p> <p>Smit, K; Slaterus, W.H.: Information Model for Maintenance Management.; Gap Gemini Publishing; Rijswijk, 1992.</p> <p>Taylor, David A.: Business Engineering with Object Technology. New York, NY: Wiley, 1995.</p>

Module M1.5: Research and communication skills

Name	Research and communication skills
Period	1 Term
Credit Points	4
Type of examination	Written examination
Learning matter	Cultural science and science management
Level	2a
Status	Compulsory subject
Aims and competence	For this master programme, scientific research, methods and working are of outstanding importance. They are taught and practiced all over the programme. To prepare the students for these tasks and their final thesis and the colloquium, these are summarised and presented here by intensive discussions, exercises and presentations.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	Research and communication skills
Learning method	Lecture and self studying
Total workload	108 hours per 60 minutes
Workload at university	54 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<p>Subject, subject, subject</p> <ul style="list-style-type: none"> - How to find the right subject? - Research, collection and preparation of material - Structure and disposition of contents - Preliminary table of contents - Preliminary and final subject <p>Methods of scientific research</p> <ul style="list-style-type: none"> - Scientific correctness: guidelines and principles - Study and examination regulations - The topics of social research - Literature, citations and excerpts - Formal requirements, layout and typography <p>Techniques of mental working and writing</p> <ul style="list-style-type: none"> - B. Minto: The Pyramid Principle - Top-down thinking, - Bottom-up writing - Objectives, strategy and time scheduling - Self-programming and concentration - Strategies of success

	<p>How to prepare a presentation</p> <ul style="list-style-type: none"> - The written and spoke word - Intentions and contents - Basic rules of rhetoric - Tools, media and graphic support - Self-programming and mental preparation <p>The final examination: colloquium</p> <ul style="list-style-type: none"> - Preconditions, procedures and examiners - Preparations for the colloquium - Presentation of the Master Thesis - The colloquium – an academic conversation - Final grading for the colloquium <p>The time after graduation</p> <ul style="list-style-type: none"> - Professional take-off and career - Professional and personal goals - Beyond profession and career - Personal and private development
Literature	<p>Minto, Barbara: The Pyramid Principle, London, 1991.</p> <p>Zielke, Wolfgang: Methodik geistiger Arbeit, München, 1972.</p> <p>Höhn, Reinhard: Die Technik der geistigen Arbeit, Bad Harzburg, 1979.</p> <p>Popper, Karl Raimund.: Die Logik der Wissenschaft, Tübingen, 1982.</p> <p>Popper, Karl Raimund.: Die Logik der Sozialwissenschaften. In: Adorno, Theodor Wiesengrund: Der Positivismusstreit in der deutschen Soziologie, Darmstadt, 1980.</p> <p>Jang, Yen Tsi: An Outline of Scientific Writting, 1995.</p>

Module M1.6: **Business English**

Name	Business English
Period	1 Term
Credit Points	4
Type of examination	Written and/or oral examination
Learning matter	Language
Level	2a
Status	Compulsory subject
Aims and competence	Deepening knowledge of field-related terminology and improve English writing skills, improving oral communication skills during meetings and negotiations, gaining more confidence in expressing ideas clearly in a foreign language, representing company at trade fairs; discussing processes, effective cross-cultural communication, features of technical and academic writing; writing a thesis in English
Necessary prerequisite	Level B1 (European reference frame for languages)
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	Business English
Learning method	Lecture and self studying
Total workload	108 hours per 60 minutes
Workload at university	72 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	Revision of structures of English advanced grammar Revision of technical key terminology Conversation skills in work-related situations Informal versus formal use of language Effective communication Language of telephone and email Language of presentations Technical reading and writing - Features of technical English - Reports and documents Self studying and notes Written assignments
Literature	Material of different kind is handed over to the students according to the special character of the different lessons. Noble, Annie: Chambers Business English, 2007. Hirsch, G.S.: Talking your way to the top: Business English that works, 2006. Hollett, Vicky: Business Objectives, 2006

Module M1.7: German Culture

Name	German Culture
Period	1 Term
Credit Points	2
Type of examination	Written examination
Learning matter	Cultural science and science management
Level	2a
Status	Compulsory subject
Aims and competence	<p>The Humanities programme will introduce German language, culture and history to those students who are either unfamiliar with Germany or who wish to extend their basic knowledge of the country and its 2,000 year history. The student will gain a better understanding of German history and new insights into modern Germany that will provide him/her with valuable background information which people in all fields will find useful whether working in Germany professionally or dealing with Germans on a personal level.</p> <p>In addition to lectures and discussions visual material will include documentary films or excerpts from historically relevant films.</p>
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	German culture
Learning method	Lecture and self studying
Total workload	54 hours per 60 minutes
Workload at university	18 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<p>The programme is organised chronologically and the various art and music periods will be discussed concurrently: Baroque Art with Baroque music, etc.</p> <p>The language part provides an overview of the development of the German language, its origins, dialects, etc.; it is not a language course.</p> <p>The cultural part will include music, art and film. The historical section will deal with outstanding persons, important events and</p> <p>The political and economic part with developments with emphasis on the 19th and 20th centuries.</p>
Literature	Kolinsky, Eva, Will, Wilfried: The Cambridge Companion to Modern German Culture, 2005; Standfort, John: Encyclopaedia of contemporary German culture, 2001; Burns, Rob: German cultural studies, 1995.

Module M2.1: Advanced mathematical methods in economics and management

Name	Advanced mathematical methods in economics and management
Period	1 Term
Credit Points	5
Type of examination	Written examination and assignments
Learning matter	Mathematics
Level	2a
Status	Compulsory subject
Aims and competence	Understanding the key concepts and methods of advanced mathematics and data analysis in economics and management science. Ability to apply some of the methods in selected application projects.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every summer semester

Description of the unit or respectively units:

Name	Advanced mathematical methods in economics and management
Learning method	Project studying, video conferencing and virtual learning
Total workload	135 hours per 60 minutes
Workload at university	90 hours per semester (blended learning)
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<p>Advanced mathematics in Economics</p> <ul style="list-style-type: none"> - Market analysis using linear and nonlinear models, - Nonlinear optimization problems, - Dynamic analysis, - Market equilibrium and market models, - Leontieff input-output models, - Investment and capital flow, - Lifetime utility maximization. <p>Data Analysis in Management</p> <ul style="list-style-type: none"> - Data and business decisions, - Sampling and estimation, - Hypothesis testing, - Forecasting, - Decision modeling, - Risk analysis, - Queues and process simulation, - Optimization modeling, - Game theory, - Market research cases, - forecasting manufacturing capacity,

	<ul style="list-style-type: none"> - inventory and distribution management, - production planning.
Literature	<p>Chiang, A.C. & Wainwright, K. 2005. Fundamental Methods of Mathematical Economics. McGraw-Hill.</p> <p>Varian, H.R. 2003. Intermediate Microeconomics. Norton.</p> <p>Clark, C.W. 2005. Mathematical Bioeconomics: The Optimal Management of Renewable Resources. Wiley.</p> <p>Evans, J.R. 2007. Statistics, Data Analysis, & Decision Modeling. Prentice Hall.</p> <p>Taha, H.A. 2006. Operations Research. Prentice Hall.</p> <p>Metcalfe, A.V. 1997. Statistics in Civil Engineering. Arnold.</p> <p>Metcalfe, A.V. 2000. Statistics in Management Science. Arnold.</p>

Module M2.2: Sustainable development in the construction and real estate management

Name	Sustainable development in the construction and real estate management
Period	1 Term
Credit Points	5
Type of examination	Written examination and assignments
Learning matter	Sustainable development
Level	2a
Status	Compulsory subject
Aims and competence	The concept of a sustainable development as a discipline comprehensive behaviour and economy shall be introduced.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every summer semester

Description of the unit or respectively units:

Name	Sustainable development in the construction and real estate management
Learning method	Project studying, video conferencing and virtual learning
Total workload	135 hours per 60 minutes
Workload at university	90 hours per semester (blended learning)
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<p>Relationship between the built and natural environment, efficient use of energy and materials and the health standards of buildings:</p> <p>International agreements</p> <ul style="list-style-type: none"> - Rio de Janeiro - Johannesburg - Kyoto <p>Political background and strategies</p> <ul style="list-style-type: none"> - Environmental protection law - International legislation - National legislation <p>The built environment</p> <ul style="list-style-type: none"> - Construction and buildings - Traffic and transportation - Urban space and environment <p>Sustainable development of built environment</p> <ul style="list-style-type: none"> - Public transportation and traffic - Health service, housing, accessibility <p>Sustainable economic growth</p> <ul style="list-style-type: none"> - Life cycle costs

	<p>- Procurement and recycling</p> <p>Sustainable materials: repair, recycling, reuse</p> <p>Social sustainable development</p>
<p>Literature</p>	<p>European Local Agenda 21 Planning Guide, How to engage in long-term environmental Action planning towards Sustainability, (ICLEI), Freiburg 1995</p> <p>Bruntland Commission, <i>Our Common Future</i>, UN publication</p> <p>Johannesburg, World Summit on Sustainable development report, United Nations</p> <p>Towards sustainability. The European commissions progress report, 5th programme, 1997</p> <p>Rees, W. Wackernagel, M. and Testemale, P. 1996 Our ecological footprint: reducing Human impact on the Earth, New society publishers, 160p.</p> <p>Joachim Spangenberg, SERI, Draft of the OECD Environmental Strategy ENV/EPOC (2000)13/REV3</p> <p>The Baltic University Programme - Baltic 21 Education for sustainable development, http://www.balticuniv.uu.se/esd/index.ht, periodicals, internet sources, reports and book title</p>

Module M2.3: **Product modelling**

Name	Product modelling
Period	1 Term
Credit Points	5
Type of examination	Written examination and assignments
Learning matter	Management of product modelling
Level	2a
Status	Compulsory subject
Aims and competence	Learning strategies of the product model based construction process and effective utilization of information technology in construction projects. Improvement of the information management among the project parties. Ability to develop information management and knowledge management in construction project and to understand the building information modeling systems and their possibilities in customer and co-operation network.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every summer semester

Description of the unit or respectively units:

Name	Product modelling
Learning method	Project studying, video conferencing and virtual learning
Total workload	135 hours per 60 minutes
Workload at university	90 hours per semester (blended learning)
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	Theory and practice of product model based construction process. Modelling and coding systems. Information structures and standards. The information flow and the content, structure, format and presentation of the data. Information interchanges between parties in construction projects. Possibilities to utilize product models in design and construction process and in real estate management. Information as part of the product, and the as-built information at the end of the construction project forming the basis for the use and maintenance of the building.
Literature	Björk Bo-Christer, 1995, Requirements and information structures for building product data models. VTT Building Technology Charles M Eastman, 1999. Building Product Models: Computer Environments, Supporting Design and Construction (Hardcover) ProIT project's Building Product Model vocabulary, web site,

2005,
http://www.vtt.fi/rte/cmp/projects/proit/julkiset_tulokset/proit_sanasto_v10.pdf

Laitinen J,1999. Model based construction process management, Lacasse M A, Vanier D J (ed.); Information technology in construction, volume 4, ISBN 0-660-17743-9; Vancouver, May 30 - June 3, Canada <http://itc.scix.net/cgi-bin/works/Show?w78-1999-2844>

Kam C, Fischer M, Hänninen R, Karjalainen A and Laitinen J (2003) The product model and Fourth Dimension project, ITcon Vol. 8, Special Issue IFC - Product models for the AEC arena , pg. 137-166, <http://www.itcon.org/2003/12>

Module M2.4: **International Business**

Name	International business
Period	1 Term
Credit Points	5
Type of examination	Written examination and assignments
Learning matter	Business administration
Level	2a
Status	Compulsory subject
Aims and competence	Social and economical sciences are the basis of construction and real estate management. Therefore micro and macro economy offer a coherent system of principles: starting with the smallest units (consumers and producers), explaining the principles of markets within the context of national and global economy. This framework is then specified and detailed by the fundamentals of “business administration”. The knowledge of these fields is essential for its modified application to “construction and real estate economy” and afterwards to management.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every summer semester

Description of the unit or respectively units:

Name	Economics and business administration
Learning method	Project studying, video conferencing and virtual learning
Total workload	135 hours per 60 minutes
Workload at university	90 hours per semester (blended learning)
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<p>1.0 Why do we have to economise?</p> <p>PART I: MICRO ECONOMICS</p> <p>2.0 Basics and Theory of Demand and Consumption</p> <p>2.1 The Value of Goods and Services</p> <p>2.2 Law of Decreasing Marginal Benefit</p> <p>2.3 Law of the Equal Margin</p> <p>2.4 The Consumers Plan</p> <p>3.0 A short History of Economic Development</p> <p>4.0 The Economic Circle</p> <p>5.0 The Theory of Production and Supply</p> <p>5.1 The Law of Varying Returns</p> <p>5.2 Productivity and Economical Efficiency</p> <p>5.3 Function of Costs and Differentiation of Costs</p> <p>5.4 The Law of Mass Production</p> <p>5.5 Sales Revenues - Marginal Revenues and Prices</p> <p>5.6 The Theory of Profit</p>

	<p>5.7 The Variation of Prices</p> <p>Part II: Macro-Economics</p> <p>6.0 The Supply and Demand Side Make a Market</p> <p>6.1 Markets and Their Mechanisms</p> <p>6.2 Changes on the Demand and Supply Side</p> <p>6.3 Different Kinds and Forms of Markets</p> <p>7.0 Distribution of Income and National Wealth</p> <p>7.1 Different Forms of Income</p> <p>7.2 The Gross National Product</p> <p>7.3 National Wealth - The Hyper-Aggregate</p> <p>8.0 Economic Change - Business Cycles and Growth</p> <p>9.0 The Political Macro Systems</p> <p>Part III: Business Administration</p> <p>10.0 Aspects and Elements of Enterprises</p> <p>11.0 Purchasing and Production</p> <p>12.0 Marketing and Distribution</p> <p>13.0 Investment and Financing</p> <p>14.0 From Business Administration to Management</p>
Literature	<ul style="list-style-type: none"> - Samuelson, Paul A./ Nordhaus, William D - Economics, New York 1985 - Woll, A.: Allgemeine Volkswirtschaftslehre, 11. Auflage, München, 1993. - Wöhe, Günter: Einführung in die Allgemeine Betriebswirtschaftslehre, 14. Auflage, München, 1981. - Corsten, Hans: Betriebswirtschaftslehre der Dienstleistungsunternehmen, München, 1988.

Module M2.5: Real estate technology

Name	Real estate technology
Period	1 Term
Credit Points	5
Type of examination	Written examination and assignments
Learning matter	Real estate management
Level	2a
Status	Compulsory subject
Aims and competence	By different subjects (see below) is exemplified, how to get an appropriate overview of special fields, to find the key problems, to define goals and develop solutions
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every summer semester

Description of the unit or respectively units:

Name	Real estate technology
Learning method	Project studying, video conferencing and virtual learning
Total workload	135 hours per 60 minutes
Workload at university	90 hours per semester (blended learning)
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<p>High velocity air conditioning</p> <p>Fundamentals and Goals of air-conditioning Thermal loads – heating and cooling Indoor air quality issues - Norms and standards- ASHRAE 62 - VDI 6022, DIN 1946 Thermodynamics of humid air Psychrometric charts – Carrier, Mollier - Construction of psychometric charts - Representation of thermodynamic charts - Thermal comfort zone Air-conditioning systems - All-air systems - Air-and-water systems - Water systems Components of air-conditioners Sizing of air-conditioning equipment</p> <p>Due diligence procedure</p> <p>Central aspect of due diligence - What means due diligence - Who needs due diligence - Parts of due diligence</p> <p>Technical due diligence investigation - Scope of investigations</p>

<p>Revitalisation of buildings</p>	<ul style="list-style-type: none"> - Necessary external information <p>Phases of the due diligence procedure</p> <ul style="list-style-type: none"> - Initiation and preparations - Physical building inspection - Analysing the conditions - Conditions of external areas - Conditions of the structure - Conditions of technical systems <p>Functional investigations</p> <ul style="list-style-type: none"> - Plot, location and functional items - Review of existing documents - Review of rental agreements - Building and law status <p>Projection of values and costs</p> <ul style="list-style-type: none"> - Rough costs calculation - Maintenance and running costs <p>The due diligence report</p> <p>General aspects and conditions</p> <ul style="list-style-type: none"> - Maintenance and modernisation - Restoration and revitalisation <p>Types of revitalisation projects</p> <p>Main phases of revitalisation</p> <p>Examples of revitalisation projects</p> <ul style="list-style-type: none"> - Residential buildings up to 1960 - Residential Buildings after 1960 - Office buildings - Commercial buildings <p>Features of project management</p> <ul style="list-style-type: none"> - Tenant management - Contract management - Costs management <p>Risks management</p>
<p>Literature</p>	<p>ASHRAE – American Society of H/R/A Engineers: Handbook of Fundamentals, Atlanta 2001</p> <p>Allen, E.: How Buildings Work, Oxford 1995</p> <p>Stein, B. and Reynolds, J.S.: Mechanical and Electrical Equipment for Buildings, 8th edition, New York 1992</p> <p>Banal, N.K., Hauser, G.M.: Passive Building Design, Amsterdam, London</p>

Module M2.6: Project work: International management

Name	Project work: International management
Period	1 Term
Credit Points	5
Type of examination	Written examination and assignments
Learning matter	Project management
Level	2a
Status	Compulsory subject
Aims and competence	Engineers are very project, fact and result oriented. Nevertheless already for small projects, there are many people involved, beside the technical aspects and organisation. Soft skills like management, self-organisation and behaviour are of high importance But this is not done by some tricks and hints. A sound background, a serious philosophy of management is required, as this was developed by Peter Drucker 60 years ago. This interaction of project development and management has to be understood and trained in this module.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every summer semester

Description of the unit or respectively units:

Name	Project work: International management
Learning method	Project studying, video conferencing and virtual learning
Total workload	135 hours per 60 minutes
Workload at university	90 hours per semester (blended learning)
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<p>The management philosophy of P. Drucker</p> <ul style="list-style-type: none"> - Industrial society and the origin of management - Central tasks, principles and goals - Management by objectives and delegation - Planning, relations, decisions and activities - Leadership or who is a manager - Organisation only as means to an end <p>Leadership or administration of personal during the project work</p> <ul style="list-style-type: none"> - Concepts of staff management - Myths and legends of motivation - Personal agreement on objectives - Goals, delegation and responsibilities - Principles of leadership and coaching <p>Personal status, analysis, goals and strategy</p> <ul style="list-style-type: none"> - Personal situation, family, cooperation - Who I am, what do I want?

	<ul style="list-style-type: none"> - Abilities – strengthen your strengths! - My body and how your brain works - Principles, strategies and tools <p>What are my values, goals and objectives?</p>
Literature	<p>Berth, R.: Visionäres Management, Düsseldorf 1992</p> <p>Böseberg, D., Metzen, H.: Lean Management, Landsberg 1993</p> <p>Covey, S. R.: The Seven Habits of Highly Effective People, New York 1989</p> <p>Crainer, Stuart: Key Management Ideas, London 1998</p> <p>Dennison, P. E. and G. E.: Brain-Gym, Glendale 1986</p> <p>Drucker, Peter: The Practice of Management, New York 1954</p> <p>Drucker, Peter: The Ideal</p> <p>Fromm, E.: Haben oder Sein, Stuttgart 1979</p> <p>Großmann, A.: Erfolg hat Methode, Offenbach 1995</p> <p>Lay, R.: Dialektik für Manager, München 1994</p> <p>Sprenger, R. K.: Die Entscheidung liegt bei Dir</p>

Module M3.1: Life cycle analysis

Name	Life cycle analysis
Period	1 Term
Credit Points	5
Type of examination	Written examination
Learning matter	Cost management
Level	2a
Status	Compulsory subject
Aims and competence	The student will understand the theory and practice of life cycle costing methods including programmes and adaptations. Therefore the fundamentals of lifetime economy and the respective terms and standards are presented the contents of lifetime engineering i.e. processes and systems have to be understood to apply appropriate methods.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	Life cycle analysis
Learning method	Lecture and self studying
Total workload	135 hours per 60 minutes
Workload at university	72 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<p>Life cycle economy</p> <p>Lifetime engineering</p> <ul style="list-style-type: none"> - Sustainable development - Terms and definitions - International standards <p>Contents of lifetime engineering</p> <ul style="list-style-type: none"> - Lifetime investment planning - Integrated lifetime design - Integrated lifetime construction <p>Maintenance management</p> <ul style="list-style-type: none"> - Inspection and organisation - Maintenance and repair - Restoration and modernisation - Recovery and reuse - Recycling and disposal <p>Methods of life cycle costing</p> <ul style="list-style-type: none"> - Analysis of risks - Reliability principles <p>Service life planning</p>

	<ul style="list-style-type: none"> - Modelling of performance - Ecological analysis and calculation - Multiple Criteria Decision Aid (MADA) <p>Processes and systems of lifetime design</p> <ul style="list-style-type: none"> - Specific methodologies and procedures - Total life cycle costing <p>Principles of ecological building</p> <p>Life cycle economy in practice</p>
Literature	<p>Flanagan, R., Norman, G., Meadows, J. and Robinson, G. (1989): <i>Life Cycle Costing: theory and practice</i>, Basil Blackwell Scientific Publishing, Oxford</p> <p>Flanagan, R., Kendell, A., Norman, G. and Robinson, G. D. (1987): 'Life cycle costing and risk management', <i>Construction Management and Economics</i>, Vol. 5, pp. 553-571.</p> <p>The literature will be confirmed at the beginning of the course.</p>

Module M3.2: **International site management**

Name	International site management
Period	1 Term
Credit Points	6
Type of examination	Written examination
Learning matter	Side and time management
Level	2a
Status	Compulsory subject
Aims and competence	Knowledge transfer in understanding the theory of time management and practicing by the use of new scheduling and controlling tools.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	International site management
Learning method	Lecture and self studying
Total workload	162 hours per 60 minutes
Workload at university	72 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents Context and strategy Techniques and method	Construction planning in context Early decisions Planning techniques - Bar charts - Line of balance - Linear programme - Network analysis Resources Monitoring and control Putting planning into practice
Planning in practices	Case studies
Literature	Neal, D.: Construction Planning, Loughborough 1994 The literature will be confirmed at the beginning of the course.

Module M3.3: Renovation and reconstruction

Name	Renovation and reconstruction
Period	1 Term
Credit Points	6
Type of examination	Written examination
Learning matter	Maintenance management
Level	2a
Status	Compulsory subject
Aims and competence	<p>Construction and real estate markets in most western societies are saturated markets. Therefore an important part of future construction business will occur in existing buildings, i.e. rehabilitation and revitalisation. This requires quite a different approach concerning surveying, design, project management, techniques and site management. These have to be understood and trained by theoretical models and practical examples.</p> <p>The course will deepen the students understanding of renovation, preservation and building maintenance. The student will be able to understand:</p> <ul style="list-style-type: none"> - the possibilities of preservation, - the needs and methods for renovation, - the importance of building maintenance, - building regulations for renovation projects. <p>The focus is needs and methods for renovation and modernisation.</p>
Necessary prerequisite	None
Recommended prerequisite	It is assumed that the students are familiar with the basic aspects of construction business. By examples from practice these experiences are modified and adjusted to building in existing structures and environment.
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	Renovation and reconstruction
Learning method	Lecture and self studying
Total workload	162 hours per 60 minutes
Workload at university	72 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents Building technology and renovation	<ul style="list-style-type: none"> - Building system definition and description, elements, systems, materials etc. - Principles of building design and their relation to failure - Building condition assessment, structures, fabric, component materials - Maintenance plans for different building types and different client types

<p>Understanding renovation</p> <p>Renovation process</p> <p>The management of renovation and reconstruction</p>	<ul style="list-style-type: none"> - Defect diagnostic techniques and repair, renovation approaches - Building information management, FM and Qs as information source for renovation - Definition and types of renovation - Differences between renovation and new constructions - Renovation goals - Reasons leading to renovation decisions - Issues to consider in renovation - Industries and renovation - Providing solutions to facilities problem and renovation - Concept and feasibility of renovation projects - Preliminary engineering and design - Detailed engineering and design - Procurement and procurement control - Construction and site management - Start-up and implementation Operation or utilisation Contracts between client - Client, architect and engineer - Client and project management Site inspection, surveying - Research of historical documents - Statutory requirements, special case: heritage Design, special reconstruction techniques - Reinforced concrete - Cast-iron and steel - Brickwork and masonry, timber - Construction and production drawings Call for tenders, tendering procedure, subletting - Contractors, contracts, contract drawings - Cost records, cost control, final billing Practice of execution, site management - Time schedules, site reports - Negotiations and meetings - Modifications and amendments Site inspection: certificate procedure - Site progress reports and photographs - Substantial completion - Inspection, defects liability Final certificate, documentation, records
<p>Literature</p>	<p>Melville, Gordon: The Repair and Maintenance of houses, London 1997; Irvine, W.: Surveying for Construction, London 1995 Fielden, B.: Conservation of Historic Buildings, w.l. 2003; Oxley, R.: Survey and Repair of Traditional Buildings, Donhead 2003</p>

Module M3.4: **Applied product modelling**

Name	Applied product modelling
Period	1 Term
Credit Points	5
Type of examination	Written examination
Learning matter	Management of product modelling
Level	2a
Status	Compulsory subject
Aims and competence	Theory and practice of product model-based construction process and its applications. Knows the technologies of data transfer, building information model databases and IFC standard.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	Applied product modelling
Learning method	Lecture and self studying
Total workload	135 hours per 60 minutes
Workload at university	72 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	The practical principles and rules of product modeling in construction projects. Use and effective utilization of product modeling tools and applications in design phase, construction phase and in real estate management. Case studies, computer exercises and practical assignments.
Literature	Confederation of Finnish Construction Industries RT, ProIT project web site, 2005: http://www.vtt.fi/rte/cmp/projects/proit_eng/indexe.htm ArchiCAD by Graphisoft, an object-based design software, web site. 2005: http://www.graphisoft.com/ Revit by Autodesk, an object-based design software, web site. 2005: http://www.autodesk.com/ Solibri Model Checker, web site. 2005: http://www.solibri.com/ Owolabi A, Anumba C J and El-Hamalawi A (2003) Architecture for implementing IFC-based online construction product libraries , ITcon Vol. 8, Special Issue IFC - Product models for the AEC arena , pg. 201-218, http://www.itcon.org/2003/15

Module M3.5: Additional courses

Name	Additional courses
Period	1 Term
Credit Points	5
Type of examination	Written examination
Learning matter	According to selected subject
Level	2a
Status	Compulsory optional subject
Aims and competence	By the subjects <ul style="list-style-type: none"> - Business English II, - Corporate real estate management, - Finnish language or - Information technology is exemplified, how to get an appropriate overview of special fields, to find the key problems, to define goals and develop solutions
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	Additional courses
Learning method	Lecture and self studying
Total workload	135 hours per 60 minutes
Workload at university	72 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents Business English II	<ul style="list-style-type: none"> - Field-related terminology - Informal versus formal use of language - Communication in work-related situations - Effective meetings and negotiations - Representing your company at a trade fair - Discussion processes - Effective cross-cultural communication
Corporate real estate management	<ul style="list-style-type: none"> - Overview and definitions - Objectives and goals - Structure and main principles - Buildings and their users - Processes and process analysis - User oriented services - Quality and price management - A model of integrated analysis - Decision support systems and software

<p>Finnish language</p> <p>Information technology</p>	<p>Basics of the Finnish language</p> <p>The contents are shaped individually in relation to the deficits and requirements of the participants in the following fields:</p> <ul style="list-style-type: none"> - Models of information interchange - Product models and project data banks - Application Server Providers, ASP - Information technology in construction - Networking in construction projects - Application of IT and networking - Relevant IT methods and techniques - Communication with electronic data
<p>Literature</p>	<p>Material of different kind is handed over to the students according to the special character of the different lessons.</p> <p>Noble, Annie: Chambers Business English, 2007.</p> <p>Hirsch, G.S.: Talking your way to the top: Business English that works, 2006.</p> <p>Hollett, Vicky: Business Objectives, 2006</p> <p>Hines, M.A.: Global corporate real estate management, 1990</p> <p>O'Mara, Martha, A.: Strategy and place: corporate real estate management, 1999.</p> <p>Edwards, Victoria, Ellision, Louise: Property management: aligning real estate with business strategy, 2003.</p>

Module M3.6: Leadership and social competence

Name	Leadership and social competence
Period	1 Term
Credit Points	2
Type of examination	Written examination
Learning matter	Social competence
Level	2a
Status	Compulsory subject
Aims and competence	The main aim is to form the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organizations of which they are members.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	Leadership and social competence
Learning method	Lecture and self studying
Total workload	54 hours per 60 minutes
Workload at university	18 hours per semester
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<ul style="list-style-type: none"> • 1_Terminology, usage and conceptual scope • 2_Categories and types of leadership • 3_The psychology of leadership • 4_Leadership associated with positions of authority <ul style="list-style-type: none"> ○ 4.1_Leadership cycles ○ 4.2_Leadership as a phase in human life-cycles ○ 4.3_Titles emphasizing authority ○ 4.4_Symbolism of leadership • 5_Leadership amongst primates • 6_Leadership as a vanguard • 7_Scope of leadership • 8_Orthogonality and leadership • 9_Support-structures for leadership • 10_Determining what makes "effective leadership" <ul style="list-style-type: none"> ○ 10.1_Suggested qualities of leadership ○ 10.2_Leadership "styles" (per House and Podsakoff) • 11_Leadership and vision • 12_Leadership's relation with management • 13_Leadership by a group <ul style="list-style-type: none"> ○ 13.1_Co-leadership ○ 13.2_Divided leadership • 14_Leader relationships with followers • 15_Historical views on leadership

	<ul style="list-style-type: none">• 16_Specific theories of leadership• 17_Alternatives to leadership
Literature	<p>Crawford, Chris, Brungardt, Curtis, Maughan, Micol: Understanding Leadership: Theory and Concepts, 2004.</p> <p>Collingwood, Harris, Goleman, Daniel, Boyatzis, Richard: Harvard Business Review on Breakthrough Leadership, 2002.</p> <p>Boyatzis, Richard, Goleman, Daniel, McKee, Annie: Primal leadership: learning to lead with emotional intelligence, 2004.</p>

Module M3.7: Intercultural working and cooperation

Name	Intercultural working and cooperation
Period	1 Term
Credit Points	2
Type of examination	Written examination
Learning matter	Intercultural cooperation
Level	2a
Status	Compulsory subject
Aims and competence	<p>Intercultural working, cooperation and communication tried to bring together such relatively unrelated areas as cultural anthropology and established areas of communication. Its core is to establish and understand how people from different cultures communicate with each other. Its charge is to also produce some guidelines with which people from different cultures can better communicate with each other.</p> <p>Cross-cultural communication, as many scholarly fields, is a combination of many other fields. These fields include anthropology, cultural studies, psychology and communication. The field has also moved both toward the treatment of interethnic relations, and toward the study of communication strategies used by co-cultural populations, i.e., cooperation and communication strategies used to deal with majority or mainstream populations.</p>
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	Intercultural working and cooperation
Learning method	Lecture and self studying
Total workload	50 hours per 60 minutes
Workload at university	36 semester week hours
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	<ul style="list-style-type: none"> - Basics, - Typical examples of cultural differences, - Reflection and development of cultural competence, - Analyzing different cultural patterns in the world, - Finding strategies for adapting different cultures in working and cooperation - Solving problems in intercultural communication and cooperation, - Strategies for reducing cultural misunderstandings.
Literature	Lewis, Richard: When cultures collide: leading across cul-

tures, 2005.

Beamer, Linda, Varner, Iris: Intercultural communication in the global workplace, 2006.

Martin, Judith, Nakayama, Thomas: Intercultural communication in context, 2006.

Module M3.8: Finnish culture

Name	Finnish culture
Period	1 Term
Credit Points	2
Type of examination	Written examination
Learning matter	Cultural science, intercultural cooperation and soft skills
Level	2a
Status	Compulsory subject
Aims and competence	For successful working in foreign countries, a sufficient understanding of the historical, political, social and cultural context is required. For different situations of professional life, these practices have to be developed accordingly. The fields of construction and real estate business, urban development and architecture are weighted appropriately.
Necessary prerequisite	None
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every winter semester

Description of the unit or respectively units:

Name	Finnish culture
Learning method	Lecture and self studying
Total workload	33 hours per 60 minutes
Workload at university	18 semester week hours
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	
Finnish cultural and political history	<ul style="list-style-type: none"> - Geography, geology and geopolitics - Ancient history, backgrounds and roots - Swedish period: 1750 – 1809 - Russian period: 1809 – 1917 - The nationalistic movement - History of the 20th century - Finnish neutrality, cold war, post cold war - Minorities, immigrant empowerment - German influence on Finnish culture
Social and urban development, architecture	<ul style="list-style-type: none"> - From agrarian to urban society - Economic growth of the 60s and 70s - Vernacular architecture and peasant buildings - History and urban development of Helsinki - Modern Finnish architecture - Engineering, construction methods and materials - Cultural heritage and redevelopment projects
Arts and other fields of cultural and social life	<ul style="list-style-type: none"> - Classicism, Art Nouveau, National Romanticism - Functionalism, humanism, modernism

	<ul style="list-style-type: none">- Mod. Architects: Engel, Saarinen, Aalto, Gullichsen- Literature, music and other fields of culture- Sports, social, private and public life
Literature	Jutikkala, Eino; Pirinen, Kauko: A History of Finland.

Module M4.1: **Master thesis**

Name	Master thesis
Period	1 Term
Credit Points	25
Type of examination	Written elaboration
Learning matter	Scientific working
Level	2a
Status	Compulsory subject
Aims and competence	The master thesis shows in which way the students are able to elaborate a clearly defined subject by scientific methods. The students have to prove the specialised knowledge and methods they acquired during their studies as well as their social competences.
Necessary prerequisite	See conditions of study
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every summer semester

Description of the unit or respectively units:

Name	Master thesis
Learning method	Self studying
Total workload	675 hours per 60 minutes
Workload at university	None
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	Depending on the matter of the master thesis
Literature	Depending on the matter of the master thesis

Module M4.2: **Master colloquium**

Name	Master colloquium
Period	1 Term
Credit Points	5
Type of examination	Oral examination
Learning matter	Presentation and critical discussion of working results
Level	2b
Status	Compulsory subject
Aims and competence	By the master-thesis and the final examination (colloquium), the candidate has to show that he/she is able to elaborate a clearly defined subject by scientific methods in a certain time. This requires systematic methods and an adequate mental approach. These are presented theoretically and practically during the whole study programme.
Necessary prerequisite	See conditions of study
Recommended prerequisite	None
Units	See below
Usability of the modules	-
Acknowledged modules	-
Frequency of the offer	Every summer semester

Description of the unit or respectively units:

Name	Master colloquium
Learning method	Self studying
Total workload	135 hours per 60 minutes
Workload at university	None
Exam relevant workload	No study performances presupposing the examination attendance are scheduled.
Assessment	Depending on marks
Contents	Depending on the matter of the master thesis
Literature	Depending on the matter of the master thesis

