Information sheet Turku University of Applied Sciences, Finland

Greetings
from the Faculty of Technology, Environment and Business, including Design
at Turku University of Applied Sciences, Finland

We are pleased to welcome your students to apply for exchange studies in:

- the spring semester 2018 (January – approx. end of April/mid May)

Our new and even better offer of International Semesters, courses and projects in English:

- see the guide in the enclosure or on our website
- Kindly note, TUAS has several faculties / campuses at different locations. Your students should choose courses from one faculty / campus, with which you cooperate.

Please e-mail your nominations to:

- the International Relations Office of the faculty TEBinternational@turkuamk.fi
- and CC to Anniina Jaranne, International Relations Officer, Anniina.jaranne@turkuamk.fi
- Please include the name, study field, semester and email address of each student in your nominations.

How to apply

- www.tuas.fi > study at TUAS > exchange students > how to apply

Application deadline:

- 15th of October 2018

General information for exchange students:

- Turku University of Applied Sciences: www.tuas.fi > study at TUAS > exchange students
- The city of Turku: http://www.visitturku.fi/en
- Finland: http://www.visitfinland.com/

We look forward to welcoming your students!
With best regards,

Mr. Jussi-Pekka Piiparinen
Administration Assistant, International Relations

TURKU AMK

Turku University of Applied Sciences
Faculty of Technology, Environment and Business, including Design
Campus address: Sepänkatu 1, 20700 Turku, Finland
Room C13L, appointment times by the door
E-mail: jussi-pekka.piiparinen@turkuamk.fi
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TURKU AMK
TURKU UNIVERSITY OF APPLIED SCIENCES

PARTNER INFORMATION SHEET FOR MOBILITY

FACULTY OF TECHNOLOGY, ENVIRONMENT AND BUSINESS

TURKU UNIVERSITY OF APPLIED SCIENCES

NAME OF INSTITUTION: TURKU UNIVERSITY OF APPLIED SCIENCES (TUAS)
TURUN AMMATTIKORKEAKOULU (in Finnish)
ERASMUS CODE: SF TURKU05
PIC CODE: 948193431
ECHE CODE: 29354-EPP-1-2014-1-FI-EPPKA3-ECHE

INSITUTIONAL ADDRESS: JOUKAHAISENKATU 3 A, 20520,
TURKU, FINLAND

WEBSITE: WWW.TUAS.FI
FACEBOOK: TUAS international students
#TurkuAMK #ExcellenceInAction

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FACULTY OF TECHNOLOGY, ENVIRONMENT AND BUSINESS (incl. Design)

ADDRESS Sepänkatu 1, 20700 Turku, Finland Map and instructions
FACULTY'S WEBSITE www.turkuamk.fi > about us > faculties and campuses

CONTACTS AT THE FACULTY'S INTERNATIONAL OFFICE

Ms Leena Saarinen, International Relations Coordinator
Faculty's international affairs, general mobility issues, partnerships, agreements
tel. +358 50 5985 849, e-mail leena.saarinen@turkuamk.fi, room C15

Ms Anniina Jaranne, International Relations Officer
Faculty's incoming and outgoing students, nominations and individual student issues
tel. +358 50 5985 922, e-mail: Anniina.jaranne@turkuamk.fi, room C13

Mr Jussi-Pekka Piiparinen, Administrative Assistant, International Relations
Student Exchange HelpDesk at the faculty
Faculty's contact for students
e-mail: TEBinternational@turkuamk.fi, room C13L

CONTACTS AT THE DEGREE PROGRAMMES
international contact persons and tutor teachers at every degree program

CONTACT AT TUAS INTERNATIONAL STUDENT SERVICES
student tutors, accommodation, residence permits/visa
e-mail: exchange.students@turkuamk.fi

ACADEMIC INFORMATION FOR EXCHANGE

Study guide:

- www.tuas.fi > study at TUAS > exchange students > courses > faculty of Technology, Environment and Business
- various degree programs of the faculty offer these modules, courses, projects etc.

Level of the exchange studies:

- (Finnish) Bachelor level, yet we welcome both Bachelor and Master level students to our courses and projects.
- The full Bachelor's degree requires either 3, 5 years (210 ECTS) or 4 years (240 ECTS) of studies in total, depending on the degree program.
- Master programs comprise 60-90 ECTS credits.

Language of Instruction

- English

Finnish language course

- An elementary course is available for all exchange students, Finnish for Exchange Students, 3 ECTS credits, free of charge.
- However, most Finns are able to communicate in English as a foreign language.

Tuition fees: There are no tuition fees for exchange students from our partner universities.

Faculty's semester dates:

- **Autumn semester:** from the last week of August till approximately the middle of December.
- **Spring semester:** from the beginning of January till the end of April/middle of May.
- Note:
  - ✓ the beginning and the finishing dates may vary depending on each course/ project
  - ✓ there is no separate exam period. Exams are included in the semester dates.
  - ✓ obligatory orientation days during the first week of the semester

Application instructions: www.tuas.fi > study at TUAS > exchange students how to apply

Application deadlines:

- **Autumn semester or the full academic year:** May 1st
- **Spring semester:** October 15th

Required documents:

- Application form, Transcript of records in English, Motivation letter, ECTS learning agreement
- For design students: also portfolio or related.

English language requirements:

- TUAS does not require an English Language Proficiency test from exchange students
- However, the students should meet at least the following requirements: English Language proficiency of minimum TOEFL 550, IELTS 6 or equivalent, CGPA of 2.5 and above

Transcript of records / Grading scale

- Grading scale: from 0 to 5 (5= excellent, 0=fail)
- One ECTS credit equals to 27 hours of student's work.

GENERAL INFORMATION

Faculty/ campus information – Come and study in an international and friendly atmosphere

- approx. 2500 students at the faculty's Sepänkatu campus (approx. 9000 students at TUAS)
- a great location in the city centre of Turku: easy to reach by foot, bike or public transportation
- a multiprofessional faculty with students from various fields
- more than 20 nationalities on campus studying together both in Finnish and/or in English
- annually more than 100 exchange students on campus who study with the local students (approx. 300 exchange students and 350 international degree students at TUAS in total)
- high academic standards and state-of-the-art facilities with innovative learning environments
- experienced and friendly teachers, tutor teachers, student buddies and campus services
- various student and leisure time activities available on and around campus and at TUAS

All the degree programs of the Faculty for full degree students

Bachelor's degrees

Professional Sales, Business Logistics, Mechanical and Production Engineering, Automotive and Transportation Engineering, Energy and Environmental Engineering, Industrial Management Engineering, Construction and Civil Engineering, Design

Master's degrees

Leadership and Service Design, Marine Technology, Construction, Environmental Technology

Research groups at the Faculty

You will find information about the research groups of the faculty here :
Sales and Purchases, Resource-efficient Business, Business Competence and Process Management, Design Thinking, Future Product Processes, Energy and the Environment, Energy Technology, Marine Engineering, Water Engineering, Constructed Environment, Security

Excellence Centres: You will find information about TUAS excellence centers here

Machine Technology Centre Ltd provides also learning environments for the faculty.

Accommodation in Turku

Students studying in Turku are encouraged to book their accommodation in good time since TUAS is not able to guarantee accommodation for exchange students. Cost of accommodation varies between the housing providers (260€ - 550€). You will find more information here.

Estimated monthly living costs in Turku

approx. 700-800 eur/ month (including accommodation)

Arrival, see Before arrival,

Student tutoring

Every incoming exchange student will have a personal student tutor who will pick up the student when s/he arrives to Turku. The tutor student will pick up the apartment key, pick up the starting package (if the incoming student wants to rent one), help to settle down in the study town, familiarize the studying culture to the incoming student

Starting packages in Turku:

Exchange students are able to borrow a package with household items

Websites

- Turku University of Applied Sciences: www.tuas.fi
    - Www.tuas.fi/exchangestudents
    - Www.tuas.fi/courses
    - Www.tuas.fi/howtoapply
    - Www.tuas.fi/beforearrival
    - Sepänkatu campus (youtube)
    - Stories from exchange students in Turku
    - student life
    - Campus sports campussport.fi
    - Frienship programme at TUAS
- Turku Summer School https://turkusummerschool.turkuamk.fi/
- Turku Turku for visitors
- Finland www.visitfinland.com https://finland.fi/

Thank you for choosing us! Welcome!

TURKU AMK
TURKU UNIVERSITY OF
APPLIED SCIENCES

INTERNATIONAL SEMESTERS FOR EXCHANGE STUDENTS

2017-2018

ENGINEERING, BUSINESS, ENVIRONMENT AND DESIGN

TURKU UNIVERSITY OF APPLIED SCIENCES TUAS

FACULTY OF TECHNOLOGY, ENVIRONMENT AND BUSINESS
Sepänkatu Campus address:
Sepänkatu 1, 20700 Turku, Finland
www.tuas.fi

TURKU AMK
TURKU UNIVERSITY OF APPLIED SCIENCES

WELCOME TO THE INTERNATIONAL CAMPUS OF TECHNOLOGY, ENVIRONMENT, BUSINESS AND DESIGN

WE OFFER YOU:

- ✓ A dynamic campus with an international atmosphere at the center of the city
- ✓ Students with all backgrounds are welcome if interested in the topics
- ✓ Studies in English with local students and exchange students from more than 20 countries
- ✓ Experienced and friendly teachers
- ✓ Focus on innovation skills and real-life assignments and projects.
- ✓ Multiform and multidisciplinary learning environments
- ✓ On-campus services, student buddies and activities

GENERAL INFORMATION

Language: English for exchange students
Credits: European ECTS credits (1 ECTS equals 27 hours of student's work).

Semester dates: Autumn Semester: from the last week of August till approximately the middle of December. Spring semester: from the beginning of January until the end of April / middle of May. There is no separate exam period. At the beginning of the semester, there are obligatory orientation days. The actual finishing date depends on each course.

Applications: www.tuas.fi> study at TUAS > exchange students > how to apply. Deadlines for EU citizens 1st of May and 15th of October. For others (due to visa process) April 15th and October 1st. TUAS reserves the right to approve or to reject the application. In design, selection is based on the quality and level of the field related portfolio and application.

About courses and projects:.
You will find information about the modules, courses and the projects in this course list, and at www.tuas.fi> study at TUAS > exchange students > courses > faculty of Technology, Environment and Business.
You may choose courses from any program if there is no restriction mentioned. NOTE, this is not a contractual document. There might be changes to the courses or course schedules might overlap when the semester starts. The final study plan will be made after your arrival in Finland.

Level of the exchange programs:
(Finnish) Bachelor level. However, our courses and projects are suitable both for Bachelor and Master level students. In total, the Bachelor's degrees require 3, 5 years /210 ECTS of studies for business degrees, and 4 years / 240 ECTS for engineering and design degrees. Master degrees comprise 60-90 ECTS.

The way how we work is based on innovation pedagogy. We strongly advise you to include a considerable amount of project studies in your curriculum. The project work according to innovation pedagogy happens in groups which we call research and project hatcheries. There are many different types of hatcheries available. We believe that working in projects, which can be one research group - based or multidisciplinary, gives our students important skills for working in various organizations after their studies. We are pleased to give you this opportunity as well: you are welcome to join our Research, Development and Innovation projects which many times can be tailor-made according to your interests. When working in a project you will be based in one of our research groups where you will meet other people sharing the same interests.

THIS STUDY GUIDE IS NOT A CONTRACTUAL DOCUMENT.
It is possible that there might still be some changes to the courses by or at the beginning of the semester, or the course schedules might overlap. The final course plan will be made after your arrival in Finland.

You will find course descriptions after the course list.

AUTUMN SEMESTER 2017

INTERNATIONAL SEMESTERS IN BUSINESS, ENGINEERING AND DESIGN

- offered by the degree programs in industrial management engineering, professional sales, business logistics, automotive and transportation engineering, energy and environmental engineering, mechanical and marine engineering, civil engineering, design

BUSINESS, AUTUMN 2017

ENGINEERING, AUTUMN 2017

- **for all the students who are interested in these topics**

Course code	Course name	ECTS
	FROM THE PROGRAMS IN INDUSTRIAL MANAGEMENT ENGINEERING, PROFESSIONAL SALES, BUSINESS LOGISTICS, AUTOMOTIVE AND TRANSPORTATION ENGINEERING:	
code next to title	**International Business** (this module must be taken as a whole) • International Business and Cultures, 4 ECTS, Code 5091074 • International Operations, 3 ECTS, Code 5091075 • Responsible Business Management, 3 ECTS, Code 5091073 • Professional Communication, 5 ECTS, Code 7090029	**15**
code next to title	**Industrial Sales** (this module must be taken as a whole) • Industrial Sales Skills and Sales Processes, 5 ECTS, code 5091155 • Sales Workshop, 5 ECTS, code 5091167 • Sales Management, 3 ECTS, code 5091157 • Sales Methods and Tools, 2 ECTS, code 5091158	**15**
code next to title	**Industrial Purchasing** (this module must be taken as a whole) • Supplier Relations Management, 3 ECTS, code 5091151 • Global Sourcing, 5 ECTS, 5091132 • Materials and Inventory Management, 3 ECTS, 5091169 • Industrial Services Sourcing, 4 ECTS, code 5091168	**15**
code next to title	**Production Management and Lean** (this module must be taken as a whole) • Production Management and ERP, 5 ECTS, 5091171 • Process and Quality Management, 5 ECTS. 5091172 • Capacity Planning and Control, 5 ECTS, 3101244	**15**

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3101219	**International Enterprise**	5
3101114	**Business to Business Selling and Productization**	5
5011139	**Leadership Skills and Customer Service**	3
7010317	**New Fuels and Drive Systems for Vehicles**	5
3101067	**Innovative Work Organizations**	3
	FROM ENERGY AND ENVIRONMENTAL ENGINEERING:	
5131079	**Introduction to the Baltic Sea**	4
5131107	**Water Conservation and Technical Solutions**	11
5131080	**Waste Management**	15
5001062	**Corporate Social Responsibility**	5
	Specialization Studies in Water Engineering	5, 10 or 15
	RESEARCH PROJECTS AND HATCHERIES:	
7000180	**Project Hatchery** (depending on availability)	3
No Code	**Reseach Hatcheries** (depending on the study field and availability)	2-5

	GENERAL TUAS COURSES:	
1000474	**Finnish for Exchange Students**	3
1000393	**Get FINternational**	3

MECHANICAL AND MARINE ENGINEERING
AUTUMN 2017

Course code	Course name	ECTS
5031090	**Production Engineering Project Work** (Engineering Project)	5
5031090	**Product Development Project Work** (Engineering Project, basic knowledge and experience of Solid Works programme required)	5
5031090	**Projects and Engineering, Energy** (Engineering Project, previous basic Diesel technology and power plant studies required)	5
5031067	**Marine Technology Project Work** (Engineering Project, previous marine and shipbuilding studies required)	5
5031280	**Engineering Physics 2**	5

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5031281	**3D Modelling**	5
1001005	**English Professional Skills**	5
5031336	**Ship Structures** (offered in English if a minimum of 5 exchange students attend)	3

CIVIL ENGINEERING
AUTUMN 2017

Course Code	Course name	ECTS
No code	**Research Hatchery in Civil Engineering**	1-8 each
5041073	**Masonry** (from structural engineering)	3
5041071	**Cast-in-situ Structures** (from structural engineering)	3
5041072	**Prefabricated Concrete Structures** (from structural engineering)	3
5041171	**Condition Investigation** (from real estate management)	2
5041144	**Quality Management in Construction** (from production management)	3
5041142	**Water Management in Sparsely Populated Areas** (from infrastructure engineering)	2
5041207	**Planning at Urban Areas** (from infrastructure engineering)	4

DESIGN

AUTUMN 2017

Only for design students.

Approval / rejection is based on the application documents including portfolio.

Course Code	Course name	ECTS
2051156	**History of Design**	3
2051154	**Free elective studies, which can be different working life oriented projects**	2-5
2051161	**Optional Design Module 1**	15
	Project / Research Hatchery	2-5
S2017	**YE Start Up Programme**	5
5021181	**Sustainable Packaging**	15

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SPRING SEMESTER 2018

INTERNATIONAL SEMESTERS IN BUSINESS, ENGINEERING AND DESIGN

- offered by the degree programs in business logistics, professional sales, industrial management engineering, energy and environmental engineering, mechanical and marine engineering, civil engineering, design

- **for all the students who are interested in these topics**

Course code	Course name	ECTS
	OFFERED BY THE DEGREE PROGRAMS IN INDUSTRIAL MANAGEMENT ENGINEERING, PROFESSIONAL SALES, BUSINESS LOGISTICS	
3101205	**Risk Management and Economics**	**5**
code next to title	**Product Development Management** (this module must be taken as a whole) Implementation: Wed-Fri • Industrial Service Business and Productization, 5 ECTS, code 5091160 • Business Financing. 5 ECTS, code 5091162 • Product Development, 5 ECTS, code 3101227	**15**
code next to title	**Industrial Purchasing** (this module must be taken as a whole) Implementation: Mon-Wed • Supplier Relations Management, 3 ECTS, code 5091151 • Global Sourcing, 5 ECTS, code 5091132 • Materials and Inventory management, 3 ECTS, code 5091169 • Industrial Services Sourcing, 4 ECTS, code 5091168	**15**
code next to title	**Production Management and Lean** (this module must be taken as a whole) Implementation Mon-Wed • Production Management and ERP, code 5091171 • Process and Quality Management, code 5091172 • Capacity Planning and Control, code 3101244	**15**

code next to title	**Supply Chain Management** (this module must be taken as a whole) Implementation: Mon-Wed • Management Accounting, 4 ECTS, 5091163 • ERP-Systems, 3 ECTS, 5091149 • Supply Chain Management, 4 ECTS, 5091143 • Product Data Management, 4 ECTS,5091164	**15**
code next to title	**Industrial Sales** (this module must be taken as a whole) Implementation: Wed-Fri • Industrial Sales Skills and Sales Processes, 5 ECTS, code 5091155 • Sales Workshop, 5 ECTS, code 5091167 • Sales Management, 3 ECTS, code 5091157 • Sales Methods and Tools, 2 ECTS, code 5091158	**15**
	ENERGY AND ENVIRONMENTAL ENGINEERING	
5131123	**Power Electronics**	**5**
5131124	**Integration of Distributed Generation into the grid**	**5**
6021069	**PES applications and Energy storage**	**5**
no code	**Specialization in Water Engineering**	**5, 10 or 15**
no code	**Research Hatchery** (suitable for students from different study fields)	**2-5**
	MECHANICAL AND MARINE ENGINEERING	
5031280	**Engineering Physics 2**	**5**
5031281	**3D Modelling**	**5**
1001005	**English Professional Skills**	**5**
	CIVIL ENGINEERING (for civil engineering students only)	
No code	**R&D Research Hatcheries in civil engineering**	**3-8**
	DESIGN (For design students only)	
2051154	**Service Design and Service Aspect in Design**	**6**
	Research Hatchery	**2-5**
	Free elective studies, which can be different working life oriented projects	**2-5**

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COURSE DESCRIPTIONS
AUTUMN 2017:

INTERNATIONAL BUSINESS (this module must be taken as a whole)

International Business and Cultures, 5091074, 4 ECTS

The aim of the study unit is to increase the student's awareness of the content and significance of selling and marketing communications in general in international business, and preparing them for an understanding of the concept of the international marketing mix. A further aim is to make the students understand cultural differences and customer behaviour in international business life, especially in the selling context.

International Operations, 5091075, 3 ECTS

The overall aim of the study unit is to increase the students' awareness of the content and significance of international business. The students learn to understand the concept of planning, implementation and evaluation of international operations. The significance of internationalization; The international environment; Gathering international market information; The strategic planning of international operations; Alternatives for internationalization; Export planning; Implementation and evaluation of international business.

Responsible Business Management, 5091073, 3 ECTS

This course aims at providing the participants with the current tools and instruments for managing world-class business. For far too long business has concentrated on the profit mandate without regard to issues such as the environment and the sustainable future of the consumers. In this course, we are going to demonstrate that good business ethics makes good business sense. The world has witnessed thousands of liquidations, bankruptcies, mergers, alliances, and partnerships. Corporate scandals highlighted the need for improved business ethics and corporate disclosures of financial transactions. Thus the challenges and opportunities facing organizations of all sizes today are greater than ever.

Professional Communication, 7090029, 5 ECTS

The student has an extensive knowledge of English especially in the field of business and international marketing.

The student knows how to obtain and convey knowledge and follow the development of international business activities.

Emphasis is also laid on oral and written skills and cross-cultural communication.

INDUSTRIAL SALES (this module must be taken as a whole)

Industrial Sales Skills and Sales Processes, 5091155, 5 ECTS

This course should be combined with the courses Sales Management and Sales Workshops. Selling is about influencing and the critical assets are interaction skills and the correct selling style for each customer and for each circumstance. The salesperson has to know not only the solutions that his or her company can offer, but also the market situation, in order to benefit from the prevailing conditions. The focus is on business to business selling.

Sales Workshop, 5091167, 5 ECTS

This course should be combined with the courses Industrial Sales Skills and Sales Process as well as Sales Management. The students will participate in sales workshops. The students can practice their sales skills, partnering skills and sales management skills in role play exercises. The culmination of the course is the European Sales Competition, where the students' sales skills are evaluated on the basis of seller-buyer role plays.

Sales Management, 5091157, 3 ECTS

This course should be combined with the courses Industrial Sales Skills and Sales Process as well as Sales Workshop. Effective sales management is a key issue related to sales performance. Consistent competence development of sales personnel is essential for profitable operation under changing market conditions. Sales management includes activities required to lead, direct or supervise the personal selling efforts of an organization.

Sales Methods and Tools, 5091158, 2 ECTS

Students sales planning, prospecting, contacting, consultive selling and presentation skills will develop .

After the study unit the student can utilize needed methods and tools in all steps of sales process

INDUSTRIAL PURCHASING **(this module must be taken as a whole)**

Supplier Relations Management, 5091151, 3 ECTS

After completing the course the student will be able to:

- Communicate the importance of good supplier relationships
- Successfully manage supplier relationships
- Conduct new supplier evaluation and set selecting criteria for a new supplier
- Plan and carry out new supplier induction
- Manage and develop the performance of an existing supplier by using relevant metrics, scorecards
  and feedback
- Explain the competitive advantage related to cross-organizational co-operation and partnerships
- Conduct supplier assessments/audits

Global Sourcing, 5091132, 5 ECTS

After completing this study unit the student will be able to:

- Apply a suitable purchasing strategy in different situations
- Decide what documents and payment transactions will be needed when importing goods and services and knows where to find them
- Explain the risks and costs of international purchasing
- Realize the meaning of different cultures
- Learn some practical know-how of how to operate in foreign countries

Materials and Inventory Management, 5091169, 3 ECTS

After completing the course, the student will be able to:

- Organize materials management in a company
- Manage inventories cost effectively
- Calculate inventory related costs and control them
- Apply a suitable replenishment method in different environments-
- Calculate replenishment parameters and metrics (eg. EOQ, order point, inventory turnover rate, DOS and safety stock)
- Explain what kind of costs are related to physical warehousing and material handling and what kind of technologies, automation and methods can be used in order to reduce these costs

Industrial Services Sourcing, 5091168, 4 ECTS

After completing this study unit, the student will be able to:

- explain the stages of the purchasing process especially from the industrial company point of view
- manage the basics ofservices sourcing

- discuss the total lifecycle costs related to a purchase
- carry out cost analysis
- compare quotations and makedecisions based on them
- explain the importance and effect of differentterms in purchasing (eg Incoterms 2010)
- utilize the sources of information necessary for purchasing
- describe various indicators measuring the performance of purchasing operations
- prepare for purchasing negotiations

PRODUCTION MANAGEMENT AND LEAN

(this module must be taken as a whole)

Production Management and ERP, 5091171, 5 ECTS

Aim:

- ERP systems
- Production management theory bases
- ERP in production planning
- Practical exercises with ERP systems

Contents:

- ERP systems
- Production management theory bases
- ERP in production planning
- Practical exercises with ERP systems

Process and Quality Management, 5091172, 5 ECTS

Aim:

- LEAN thinking and philosophy
- Process thinking and describing
- Problem solving and continuous development eg DMAIC, use of Kaizen
- Six sigma, Statistical process control SPC
- Process improvement, eg. BPR

Contents:

- LEAN thinking and philosophy
- Process thinking and describing
- Problem solving and continuous development eg DMAIC, use of Kaizen
- Six sigma, Statistical process control SPC
- Process improvement, eg. BPR

Capacity Planning and Control, 3101244, 5 ECTS

Aim:

- Production planning in different levels
- Capacity management
- Production process types

Contents:

- Production planning in different levels
- Capacity management
- Production process types

OFFERED BY BUSINESS AND ENGINEERING PROGRAMS

International Enterprise, 3101219, 5 ECTS

After completing the course, the student can:

- analyze and interpret the basic phenomena within the economy and the factors affecting them
- evaluate the impact of economic fluctuations on business and sales
- recognize the connections between a nation economy and the global economy
- describe the basic principles of international business from the point of view of an internationalizing enterprise
- describe an enterprise's internationalization opportunities, Incoterms, payment methods and risks work together with others in multiprofessional teams

Business to Business Selling and Productization, 3101114, 5 ECTS

The student learns to assess the special characteristics related to the selling between organizations and its impact on various situations. He/she can interpret the organizational

buying behavior and integrate his/her actions accordingly. Further, while making tactical plans, the student can take into account the acquisition practices of the public sector.

The student learns to carry out a customization process consisting of a product/service combination required. He/she can analyze the special characteristics related to professional services and take them into account in the realization of a productization or marketing activities in practice.

Leadership Skills and Customer Service, 5011139, 3 ECTS

The student can:

- contrast leadership and management
- assess leadership effectiveness
- define the qualities of a good leader
- identify his/her own leadership skills and how to develop them
- manage him-/herself and own work
- take responsibility for a team
- act in a constructive manner within a work community
- act in customer service

New Fuels and Drive Systems for Vehicles, 7010317, 5 ECTS

The course introduces facts related to greenhouse emissions and climate change. The course will cover current and oncoming fuel options which will possibly be added to the fuel spectrum, or maybe gradually replace conventional fuels such as gasoline and diesel. These fuels are alcohols (methanol, ethanol), gaseous fuels (LPG, CNG, LNG, biogas) and biodiesel (different generations). Hydrogen will be covered as a fuel for combustion engines and for the fuel cell.

The new drive system part of the course covers hybrid and electric drives, fuel cell vehicles, as well as new combustion strategies such as the so called HCCI engine. Also, the latest innovations in conventional internal combustion engine technology will be discussed.

Innovative Work Organizations, 3101067, 3 ECTS

The students increase their innovation competencies. They understand why innovations are needed in society and in different occupations and organizations. They are active and innovative team members and understand how to lead innovative teams. They are able to:

- explain the importance of innovations in society and organizations
- name recent innovations in their own field
- identify individual and organizational factors which enhance or limit innovativeness
- act innovatively and creatively in teams
- brainstorm new product and service design innovations in diversified teams
- describe how to lead and motivate innovative teams

ENERGY AND ENVIRONMENTAL TECHNOLOGY

Introduction to the Baltic Sea, 5131079, 4 ECTS

The student knows the basic characteristics of the Baltic sea and has a basic understanding of the environmental problems and their solutions.

Contents:

Baltic Sea demographics and livelihoods, Baltic Sea oceanography, Baltic Sea catchment area, Baltic Sea flora and fauna, Baltic Sea environmental problems, Baltic Sea solutions – cases

Water Conservation and Technical Solutions, 5131107, 11 ECTS

Note: This course includes the "Water management in Sparsely Populated Areas, 2 ECTS" course.

The student knows what kind of policies and regulations direct water resources management in the Baltic Sea region. The student can identify pollution sources in a drainage basin, he/she knows the basics of integrated water resources management and can use GIS tools for planning of water protection measures.

The student knows the basics of water and habitat restoration methods and can make draft designs of different types of solutions for reducing diffuse loading. The student knows how official water quality monitoring works and how continuous monitoring methods can be used for assessing the efficiency of water protection measures.

Contents:

- Ecological and chemical state of water bodies
- Different types, sources and impacts of loading into water bodies
- Integrated water resources management and the basics of River Basin Management planning
- The use of GIS (geographical information system) tools in water resources management
- River, stream and lake restoration methods
- Solutions for reducing nutrient and chemical loading from diffuse sources
- Storm water management and flood control methods
- Wastewater management in sparsely populated regions
- Planning and dimensioning of water protection measures
- Water quality monitoring.

Waste Management, 15 ECTS

The Waste Management Module consists of studying in a virtual learning environment as well as working in multidisciplinary and multinational groups on real-life challenges offered by companies.

Virtual learning enables flexible studying in accordance with your own timetable. In addition it allows students to take other courses at the same time.

In this course we will have excursions in Finland and a trip to Estonia to learn about waste management.

Corporate Social Responsibility, 5001062, 5 ECTS

The aim of the course is to learn the basics of corporate social responsibility (CSR) and the business use of it. Nowadays, economic, social and environmental issues related to social responsibility and sustainability are increasingly gaining significance, especially in the business sector. The field of responsible business practice becomes one of the most challenging and dynamic subjects corporate leaders face today.

Specialization Studies in Water Engineering, 5, 10 or 15 ECTS

The course allows the student to develop special professional expertise in a selected field of water engineering

Contents:

Specialization project (topic form a company or a research project by the water engineering research group), an optional book exam from material linked with the project topic.

The number of ECTs will depend on the extent of the project and the book exam.

RESEARCH PROJECTS AND HATCHERIES

Project Hatchery, 7000180, 3 ECTS

Outcomes:

The goal of the course is that the new student trains to exploratory working and learning methods. The student learns basics from the project working and project skills. Student learns how to work in a multidisciplinary team, and gets to know students from other disciplines. Student starts to build networks needed in work life. The aim of the course is also to increase communality of the faculty.

Contents:

- introduction to project hatchery
- introduction to project work
- working in multidisciplinary project groups

- making a poster and participating in poster show
- presenting a project, presentation competition
- finishing the project

Research Hatcheries, (No Code), 2-5 ECTS

Combination of group work and project work. Students work in small groups with existing projects: assignments are given by companies and other organizations and students are divided into small teams of three-five persons. Learning takes place under counselling, giving a chance to support the students' learning process based on personal aspects of interest. The students' own activity and team work skills are emphasized. Each research hatchery will be started with one or several meetings, where the topic and the research methods will be carefully studied.The teacher has mainly a counselling role.

In addition, the teacher provides expert lectures or guidance when needed.

GENERAL COURSES

Finnish for Exchange Students, 1000474, 3 ECTS

The student understands the basic structures of the Finnish language and is able to cope in everyday situations. Basic grammar; Everyday situations; Finnish culture.

Get Finternational, 1000393, 3 ECTS

For both Finnish and international students. The aim for the international students: gaining a wider perspective into the Finnish society, taking part in it more actively, learning how to analyse the adaptation to a foreign culture, learning how to interact with the representatives of different cultures. http://getfinternational.tuas.fi

MECHANICAL AND MARINE ENGINEERING

ENGINEERING PROJECT: Project Work in Production Engineering, 5031090, 5 ECTS

After completing the course, a student can:

- make lay-out design
- design piping systems
- model and simulate powerplant or engine cycles and processes
- manage and realize a R&D project
- apply some computer program for project management.

Content:

- Lay-out and piping system design
- Development project in energy and engine technology
- Modeling and simulation of powerplants and engines.

ENGINEERING PROJECT: Product Development Project Work, 5031090, 5 ECTS

After completing the course, a student can:

- make lay-out design
- design piping systems
- model and simulate powerplant or engine cycles and processes
- manage and realize a R&D project
- apply some computer program for project management.

Content:

- Lay-out and piping system design
- Development project in energy and engine technology
- Modeling and simulation of powerplants and engines.

ENGINEERING PROJECT: Projects and Engineering, Energy, 5031090, 5 ECTS

After completing the course, a student can:

- make lay-out design
- design piping systems
- model and simulate powerplant or engine cycles and processes
- manage and realize a R&D project
- apply some computer program for project management.

Contents:

- Lay-out and piping system design
- Development project in energy and engine technology
- Modeling and simulation of powerplants and engines.

ENGINEERING PROJECT: Marine Technology Project Works, 5031067, 5 ECTS

The students apply their knowledge of marine technology in a design exercise, which should be obtained from the industry.

The students carry out a general design project for a ship, a boat or an offshore structure, typically in pairs. The outcomes are:

- Solution for the transport problem (ships and boats)
- Main dimensions of the vessel
- General arrangement, lines drawing and outline specification for the vessel
- Price and weight of the vessel
- Necessary stability-, scantling and powering calculations
- Selection of main outfitting components.

Engineering Physics 2, 5031280, 5 ECTS

After completing the course the student:

- Understands the fundamentals of natural science as a base of technological applications.
- Understands the basic theories related to the course contents.

3D Modelling, 5031281, 5 ECTS

This course includes the basics of solid modeling techniques used in mechanical design. After completing the course the student will be able to create the relations and measurements for a 2D profile and use this profile to create a 3D body with feature tree. He/she will know how to manipulate and shape finished bodies and assemble structures and designs out of them. He/she also will know how to make mechanical drawings of assemblies and parts.

English Professional Skills, 1001005, 5 ECTS

The aim of the course is to activate and develop the students' field-relevant English language and communication skills. The students will gain professional skills in various spoken and written communicative situations encountered in working life and society. In addition, they will learn to utilize tools and techniques to further develop their skills in authentic, field-specific contexts. More specifically, students will focus on developing their language and communication skills in.

Upon completing the course, the students should have acquired skills to communicate at level B2 according to European Framework of Reference for Languages, which states that at B2-level students should be able to produce clear, coherent and well-structured texts, present detailed descriptions related to one's field of interest, express and exchange opinions using fluent language, follow complex arguments, and read longer articles and reports.

- writing professional, field-specific texts
- presenting and discussing field-specific topics in a professional manner
- reading field-specific texts and utilizing the information in professional contexts
- learning and using key terminology of their field
- becoming professional, autonomous language users in working life

Ship Structures, 5031336, 3 ECTS

The student understands the loads on structures at sea, and can design the midship section, bulkheads, frames, and shell thicknesses with design rules.

The focus is in calculation and design exercises of loads on ship structures at sea, and scantling design of hull parts, such as frames, bulkheads and hull shell plating.

CIVIL ENGINEERING

- **For civil engineering students only**

Research Hatchery, (No Code), 1-8 ECTS

For civil engineering students only. Combination of group work and project work. Students work in small groups with existing projects: assignments are given by companies and other organizations and students are divided into small teams of three-five persons. Learning takes place under counselling, giving a chance to support the students' learning process based on personal aspects of interest. The students' own activity and team work skills are emphasized. Each research hatchery will be started with one or several meetings, where the topic and the research methods will be carefully studied.The teacher has mainly a counselling role.

In addition, the teacher provides expert lectures or guidance when needed.

Masonry, 5041073, 3 ECTS (within structural engineering)

For civil engineering students only. The student becomes aware of applications and uses for masonry and learns to design brick and block structures. There will be an individualized project for exchange students.
Typical uses, materials, design and dimensioning of brick and block structures, beams, columns, walls. Structural details. Work methods. Lifespan and renovation of masonry. Historical background.

Cast-in-situ Structures, 5041071, 3 ECTS (within structural engineering)

For civil engineering students only. The student becomes familiar with the phases and practices related to the design of cast-in-situ structures and is able to produce the design documents. Material and manufacturing techniques; understanding of statically indeterminate slab structure; changes in stiffness. Design practices and structural solutions per structural member. Beams, slabs, calculation methods, foundations. Designing reinforcement for in-situ cast structures. Design documents. CAD design. Work practice at an engineering company.

Prefabricated Concrete Structures, 5041072, 3 ECTS (within structural engineering)

For civil engineering students only. The student becomes familiar with the design tasks related to prefabricated concrete construction and the design practices of the most important prefabricated slabs. S/he understands the need for stiffening in different types of structures, masters load calculation and the design of stiffening members and joints. Operation of a concrete prefabrication factory: manufacturing, transportation, installation. Prefabricated products: frame structures, elevations. Design and dimensioning of prefabricated products, materials, reinforcement, fixtures. Structural members: columns, beams, slabs, separating walls, external wall elements.

Condition Investigation, 5041171, 2 ECTS (within Real Estate Renovation)

For civil engineering students only. After the course, the student is familiar with the building methods and structures typical of different periods, is able to carry out a basic condition assessment of a building, knows how different structures are surveyed as well as masters the observation and measurement methods applied in condition assessment. There will be an individualized project for exchange students.

Quality Management in Construction, 5041144, 3 ECTS, (within Production Management)

For civil engineering students only. Organizing a project, reporting, inspection and control, ending a project. Quality control systems and their maintenance; securing quality in planning and during construction. Based on the lectures, the student draws up e.g. a quality assurance plan for a small building project, as well as a plan for organizing, supervising and controlling a project. There will be an individualized project for exchange students.

Water Management in Sparsely Populated Areas 5041142, 2 ECTS (within infrastructure engineering)

After the course, the student masters the requirements for water management in sparsely populated areas. The student can estimate the environmental effects in water management in sparsely populated areas. There will be an individualized project for exchange students.

Planning at Urban Areas, 5041207, 4 ECTS (within infrastructure engineering)

For civil engineering students only. After the course, the student is familiar with the basics of urban structure and the concept of space, the effect of the surroundings on the pleasantness and habitability of an area, landscape structures and the role of green area development in landscaping, as well as with the environmental impact assessment procedures. The student is able to estimate the effects of construction on the environment. The student is also familiar with the town planning system. The student can estimate the effects of construction on the environment, is aware of the recent chances in the building legislation relating to town planning, and is able to use CAD to create a town plan.

Big focus at the course is in traffic and how to control it in densely populated areas. All the means to order different parts of streets is included. The course is involved with surrounding and environment, esthetical aspect, how to organize slow speed streets, public transportation and also pedestrian streets

DESIGN STUDIES

Only for design students. Approval / rejection is based on the application documents including portfolio.

History of Design, 2051156, 3 ECTS

- Design from L'art Nouveau to modern time in Finland and Europe, examples of Japanese and American design
- Product design, Industrial design, Textile design, Fashion design
- Materials, techniques, colours, forms
- Companies
- Examples of designers and their works

Free elective studies, which can be different working life oriented projects, 2-5 ECTS / project

- own projects / Stockholm Fair
- own perspective and interest
- a possibility to participate Stockholm Furniture Fair (second week in February): product and textile design, different techniques and products -team work

Optional design module 1, 2051161, 15 ECTS

Basics of designing 3 credits,
Designer's drawing skills 2 credits,
Thinking with hands studio 10 credits

Basics of the forming 3 cr
• The shape and form from the general design point of view
• Shape of rhythm, harmony and tension.
Composition with the importance of everyday life and the formation of this

• forming, intuition – importance of the designer's design work
• Architecture design platform.
• Exercise shop and massing
• Aesthetic design training, drafting

Designer's drawing skills, 2 cr
Drawing, sketching – designer's planning and thinking tools

Shape forming and Tangible Thinking Studios 10 ects

The target of the course is material based design. The focus of the course is testing different materials and techniques and make experiments. During experiments the student design a proto or a concept. Available studios are: Textile printing, Weaving, Sewing, Wood and Metal studios.

Project / Research Hatchery 2-5 ECTS

- Team work with other students – different backgrounds (study fields, cultures)
- Together agreed program, goals and perspectives, work practicalities

YE Start Up Programme, S2017, 5 ECTS

This program provides an experience-based educational community where students can start acting on their business ideas in practice. The target of the course is to offer real life experiences of entrepreneurship in multidisciplinary teams with students from three local universities. Groups of students enter a cohort during the Fall semester and start from an idea for a company into testing their business model. During this program studying is more working in teams than traditional lectures: it has freedom, but it requires entrepreneurial mindset. All participants are involved in start-ups of their own creation, ranging from mobile cafes to software development. After attending the course the student will have improved her/his skills in forming, assessing and seizing new business opportunities. The course advances also students' team working, project management and communication skills.

Sustainable Packaging, 5021181, 15 ECTS

The Sustainable Packaging course focus on designing ecologically and economically sustainable packaging. The participants familiarize to the different functions of a packaging as a protecting necessity, as an information and brand building media and as a logistical unit. The participants learn about different packaging materials, their ecological footprint and recyclability. They also learn about packaging design from marketing and functionality point of views. In the course, a packaging will be conceived and designed for a chosen product.

COURSE DESCRIPTIONS
SPRING 2018:

BUSINESS AND ENGINEERING

Risk Management and Economics, 3101205, 5 ECTS

The aim of the study unit is to introduce the concept of risk management to the students. The students learn to recognize various risks involved in business operations and to know the methods used to avoid them. The course emphasizes the systematic approach required in risk management and the fact that risk management must be an integral part of business management.

PRODUCT DEVELOPMENT MANAGEMENT, 15 ECTS
(This module must be taken as a whole)

Industrial Service Business and Productizations 5091160, 3 ECTS

After completing the course, a student can:

- Understand the context of service business and productizations
- Define productizations needs in different cases
- Describe the life cycle of products

- Develop services to cover different needs in products´ life cycle
- Analyze costs and profits of services
- Define deliverables of services
- Describe performance and productivity differences between different service options
- Make reasoned selections between different offerings
- Make reasoned offers for clients in order to improve their performance and productivity

Business Financing, 5091162, 5 ECTS

The student is able to:

- estimate financial needs of a product and productization processes
- can present financing alternatives depending on the different financing needs
- Perform a product, project and investment profitability evaluation
- Understand cost structure, cost behavior and decision making and interconnections between them

Product Development, 3101227, 5 ECTS

After completing the course, a student can:

- Recognize how product development and R&D processes and activities are related to company´s business
- Explain product development processes´ phases and content
- Utilize different tools to enhance and facilitate creativity and development
- Lead and manage basic R&D projects
- Apply knowledge sourcing as supporting R&D activities
- Build up appropriate development team and utilize team work in development projects
- Document and report development activities and results

INDUSTRIAL PURCHASING, 15 ECTS (This module must be taken as a whole)

Supplier Relations Management, 5091151, 3 ECTS

After completing the course the student will be able to:

- Communicate the importance of good supplier relationships
- Successfully manage supplier relationships
- Conduct new supplier evaluation and set selecting criteria for a new supplier
- Plan and carry out new supplier induction
- Manage and develop the performance of an existing supplier by using relevant metrics, scorecards
  and feedback
- Explain the competitive advantage related to cross-organizational co-operation and partnerships
- Conduct supplier assessments/audits

Global Sourcing, 5091132, 5 ECTS

After completing this study unit the student will be able to:

- Apply a suitable purchasing strategy in different situations
- Decide what documents and payment transactions will be needed when importing goods and services and knows where to find them
- Explain the risks and costs of international purchasing
- Realize the meaning of different cultures
- Learn some practical know-how of how to operate in foreign countries

Materials and Inventory Management, 5091169, 3 ECTS

After completing the course, the student will be able to:

- Organize materials management in a company
- Manage inventories cost effectively
- Calculate inventory related costs and control them

- Apply a suitable replenishment method in different environments-
- Calculate replenishment parameters and metrics (eg. EOQ, order point, inventory turnover rate, DOS and safety stock)
- Explain what kind of costs are related to physical warehousing and material handling and what kind of technologies, automation and methods can be used in order to reduce these costs

Industrial Services Sourcing, 5091168, 4 ECTS

After completing this study unit, the student will be able to:

- explain the stages of the purchasing process especially from the industrial company point of view
- manage the basics ofservices sourcing
- discuss the total lifecycle costs related to a purchase
- carry out cost analysis
- compare quotations and makedecisions based on them
- explain the importance and effect of differentterms in purchasing (eg Incoterms 2010)
- utilize the sources of information necessary for purchasing
- describe various indicators measuring the performance of purchasing operations prepare for purchasing negotiations

PRODUCTION MANAGEMENT AND LEAN, 15 ECTS
(This module must be taken as a whole)

Production Management and ERP, 5091171, 5 ECTS

Aim:

- ERP systems
- Production management theory bases
- ERP in production planning
- Practical exercises with ERP systems

Contents:

- ERP systems
- Production management theory bases
- ERP in production planning
- Practical exercises with ERP systems

Process and Quality Management, 5091172, 5 ECTS

After completing the course the student will be able to:

- explain the overall system framework of MPC-systems.
- describe in details how ERP system operations are done in production planning
- understands how production planning process is linked to other functions of the company.
- design production planning process to ERP -system.
- plan and operate production planning activities in ERP -system.
- execute production activities via ERP-system.
- control and manage and improve supply chain performance.

Capacity Planning and Control, 3101244, 5 ECTS

Aim:

- Production planning in different levels
- Capacity management
- Production process types

Contents:

- Production planning in different levels
- Capacity management
- Production process types

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SUPPLY CHAIN MANAGEMENT, 15 ECTS (this module must be taken as a whole)

Management Accounting, 5091163, 4 ECTS

After completing the course, a student can:

- describe the differeces between management accounting and financial accounting
- describe the basic problems of accounting
- describe the basic terms of costing
- calculate material, labour and capital costs
- allocate costs to cost centres
- calculate product costs
- utilize contribution margin analysis in various short-term calculations
- set the price to a product
- utilize linear programming
- make investment calculations
- prepare the separate budgets which lead to the main budgets

Content:

- classification, assessment and assigment of costs
- contribution margin analysis
- pricing
- short-term alternative calculations
- linear programming
- investment calculations
- budgeting

ERP-Systems, 5091149, 3 ECTS

After completing the course the student will be able to:

- explain the overall system framework of MPC-systems.
- describe in details how ERP system operations are done in production planning
- understands how production planning process is linked to other functions of the company.
- design production planning process to ERP -system.
- plan and operate production planning activities in ERP -system.
- execute production activities via ERP-system.
- control and manage and improve supply chain performance.

Supply Chain Management, 5091143, 4 ECTS

After completing the course the student will be able to:

- explain the overall picture of the whole logistics chain in business
- describe the importance of efficient purchasing and material control, transportation, distribution and logistics services for the competitiveness of modern companies in global supply chain
- design a supply chain network
- plan and calculate location decisions
- prepare and optimize distribution models
- manage and improve supply chain performance

Product Data Management, 5091164, 4 ECTS

After completing the course the student will be able to:

- Recognize different parts in industrial product data management (PDM)
- Analyse needs in product data management regarding products´ life cycle
- Form product data specifications to products from different process point-of-views
- Apply product data knowledge in different cases

INDUSTRIAL SALES, 15 ECTS (this module must be taken as a whole)

Industrial Sales Skills and Sales Processes, 5091155, 5 ECTS

This course should be combined with the courses Sales Management and Sales Workshops. Selling is about influencing and the critical assets are

interaction skills and the correct selling style for each customer and for each circumstance. The salesperson has to know not only the solutions that his or her company can offer, but also the market situation, in order to benefit from the prevailing conditions. The focus is on business to business selling.

Sales Workshop, 5091167, 5 ECTS

This course should be combined with the courses Industrial Sales Skills and Sales Process as well as Sales Management. The students will participate in sales workshops. The students can practice their sales skills, partnering skills and sales management skills in role play exercises. The culmination of the course is the European Sales Competition, where the students' sales skills are evaluated on the basis of seller-buyer role plays.

Sales Management, 5091157, 3 ECTS

This course should be combined with the courses Industrial Sales Skills and Sales Process as well as Sales Workshop. Effective sales management is a key issue related to sales performance. Consistent competence development of sales personnel is essential for profitable operation under changing market conditions. Sales management includes activities required to lead, direct or supervise the personal selling efforts of an organization.

Sales Methods and Tools, 5091158, 2 ECTS

Students sales planning, prospecting, contacting, consultive selling and presentation skills will develop .

After the study unit the student can utilize needed methods and tools in all steps of sales process.

ENERGY AND ENVIRONMENTAL TECHNOLOGY

Power Electronics, 5131123, 5 ECTS

- Power electronic basics
- Converter topologies
- Components
- Control and protection
- Electric machines

Integration of Distributed Generation into the grid, 5131124, 5 ECTS

- Power Quality Standards
- Residential loads : Lighting / HVAC /Appliances..
- Converters for Renewable Energy production
- Voltage stability control
- Microgrids, LVDC and LVAC (data-centers, marine, drives)
- Islanding and safety standards

PES applications and Energy storage, 6021069, 5 ECTS

- Electric Drives for transport application
- Electric Drives for Energy conversion and production
- Battery technologies for vehicles and grid
- Electrical Vehicle chargers

Specialization Studies in Water Engineering, 5, 10 or 15 ECTS

The course allows the student to develop special professional expertise in a selected field of water engineering

Contents:

Specialization project (topic form a company or a research project by the water engineering research group), An optional book exam from material linked with the project topic.

The number of ECTs will depend on the extent of the project and the book exam.

Research Hatcheries, (No Code), 2-5 ECTS

Combination of group work and project work. Students work in small groups with existing projects: assignments are given by companies and other organizations and students are divided into small teams of three-five persons. Learning takes place under counselling, giving a chance to support

the students' learning process based on personal aspects of interest. The students' own activity and team work skills are emphasized. Each research hatchery will be started with one or several meetings, where the topic and the research methods will be carefully studied.The teacher has mainly a counselling role.

In addition, the teacher provides expert lectures or guidance when needed.

FROM MECHANICAL AND MARINE ENGINEERING

Engineering Physics 2, 5031280, 5 ECTS

After completing the course the student:

- Understands the fundamentals of natural science as a base of technological applications.
- Understands the basic theories related to the course contents.

3D Modelling, 5031281, 5 ECTS

This course includes the basics of solid modeling techniques used in mechanical design. After completing the course the student will be able to create the relations and measurements for a 2D profile and use this profile to create a 3D body with feature tree. He/she will know how to manipulate and shape finished bodies and assemble structures and designs out of them. He/she also will know how to make mechanical drawings of assemblies and parts.

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Upon completing the course, the students should have acquired skills to communicate at level B2 according to European Framework of Reference for Languages, which states that at B2-level students should be able to produce clear, coherent and well-structured texts, present detailed descriptions related to one's field of interest, express and exchange opinions using fluent language, follow complex arguments, and read longer articles and reports.

- writing professional, field-specific texts
- presenting and discussing field-specific topics in a professional manner
- reading field-specific texts and utilizing the information in professional contexts
- learning and using key terminology of their field
- becoming professional, autonomous language users in working life

CIVIL ENGINEERING

Research Hatcheries, (No Code), 3-8 ECTS

For civil engineering students only. Combination of group work and project work. Students work in small groups with existing projects: assignments are given by companies and other organizations and students are divided into small teams of three-five persons. Learning takes place under counselling, giving a chance to support the students' learning process based on personal aspects of interest. The students' own activity and team work skills are emphasized. Each research hatchery will be started with one or several meetings, where the topic and the research methods will be carefully studied.The teacher has mainly a counselling role.

In addition, the teacher provides expert lectures or guidance when needed.

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DESIGN STUDIES

Service design and service aspect in design, 2051154, 6 ECTS
The students learn Service design thinking, service design, service design processes and service design methods. Service design project is realized in a real life project with teamwork

Research Hatchery 2-5 ECTS

- Team work with other students – different backgrounds (study fields, cultures)
- Together agreed program, goals and perspectives, work practicalities

Free elective studies, which can be different working life oriented projects, 2-5 ECTS / project

- own projects / Stockholm Fair
- own perspective and interest
- a possibility to participate Stockholm Furniture Fair (second week in February): product and textile design, different techniques and products -team work

GENERAL COURSES

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The student understands the basic structures of the Finnish language and is able to cope in everyday situations. Basic grammar; Everyday situations; Finnish culture

Get Finternational, 1000393, 3 ECTS

For both Finnish and international students. The aim for the international students: gaining a wider perspective into the Finnish society, taking part in it more actively, learning how to analyse the adaptation to a foreign culture, learning how to interact with the representatives of different cultures. http://getfinternational.tuas.fi

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