

EXCHANGE STUDIES AT JÖNKÖPING UNIVERSITY

SCHOOL OF ENGINEERING



COURSES
IN ENGLISH
2015/2016





JÖNKÖPING UNIVERSITY

- 350 partner universities in 60 countries
- 1,500 international students in Jönköping
- A truly international environment

SWEDEN AND JÖNKÖPING

Sweden is known for being a clean, beautiful country, covered with lakes and forests and inhabited by 9,5 million people who are friendly, open-minded and welcoming. This is all true. What you have heard about high living standards and low crime rates is true too. There is also beautiful nature, great design and good music.

You will find Jönköping on the southern shore of lake Vättern. The city has a population of 130,000 and a beautiful city centre with cafés, restaurants, shopping, concert venues and gorgeous waterfront views. The university campus is located right in the heart of the city, with anything you might need at comfortable walking distance.

JÖNKÖPING UNIVERSITY

Jönköping University is characterised by internationalisation, an entrepreneurial spirit and collaboration with surrounding society. We have about 350 partner universities all over the globe and about 1,500 of our 10,000 students are international.

Jönköping University is one of three Swedish private, non-profit institutions of higher education with the right to award doctorates. The university operates on the basis of an agreement with the Swedish government and conforms to national degree regulations and quality requirements.

Research and education are carried out at four schools: School of Health Sciences, School of Education and Communication, Jönköping International Business School and School of Engineering.

SCHOOL OF ENGINEERING

The School of Engineering is one of Sweden's leading educators in the engineering field. Here, you will gain knowledge not just of engineering, but also of leadership, communication, economics and sustainability. Which is to say, all the things you need in a high-tech, global world.

The School of Engineering is a member of the CDIO initiative, a prestigious collaborative between leading engineering schools worldwide.

Welcome to the school that educates the next generation of engineers!

Programmes at School of Engineering

CONDUCTED IN SWEDISH

The following programmes are mainly conducted in Swedish. However, a number of courses within the programmes are offered in English for exchange students.

HIGHER EDUCATION DIPLOMA – 120 ECTS

- Lighting Design
- Computer Networking Technology
- Graphical Design and Web Development
- 3D Technology
- Product Development with Furniture Design

BACHELOR OF SCIENCE – 180 ECTS

- Civil Engineering: Architectural Engineering
- Civil Engineering: Building Projects/Civil Engineering
- Computer Engineering: Software Engineering and Mobile Platforms
- Computer Engineering: Embedded Systems
- Industrial Engineering and Management: Logistics and Management
- Mechanical Engineering: Industrial and Production Management
- Mechanical Engineering: Product Development and Industrial Design

CONDUCTED IN ENGLISH

The School of Engineering offers the following programmes conducted in English:

HIGHER EDUCATION DIPLOMA – 120 ECTS

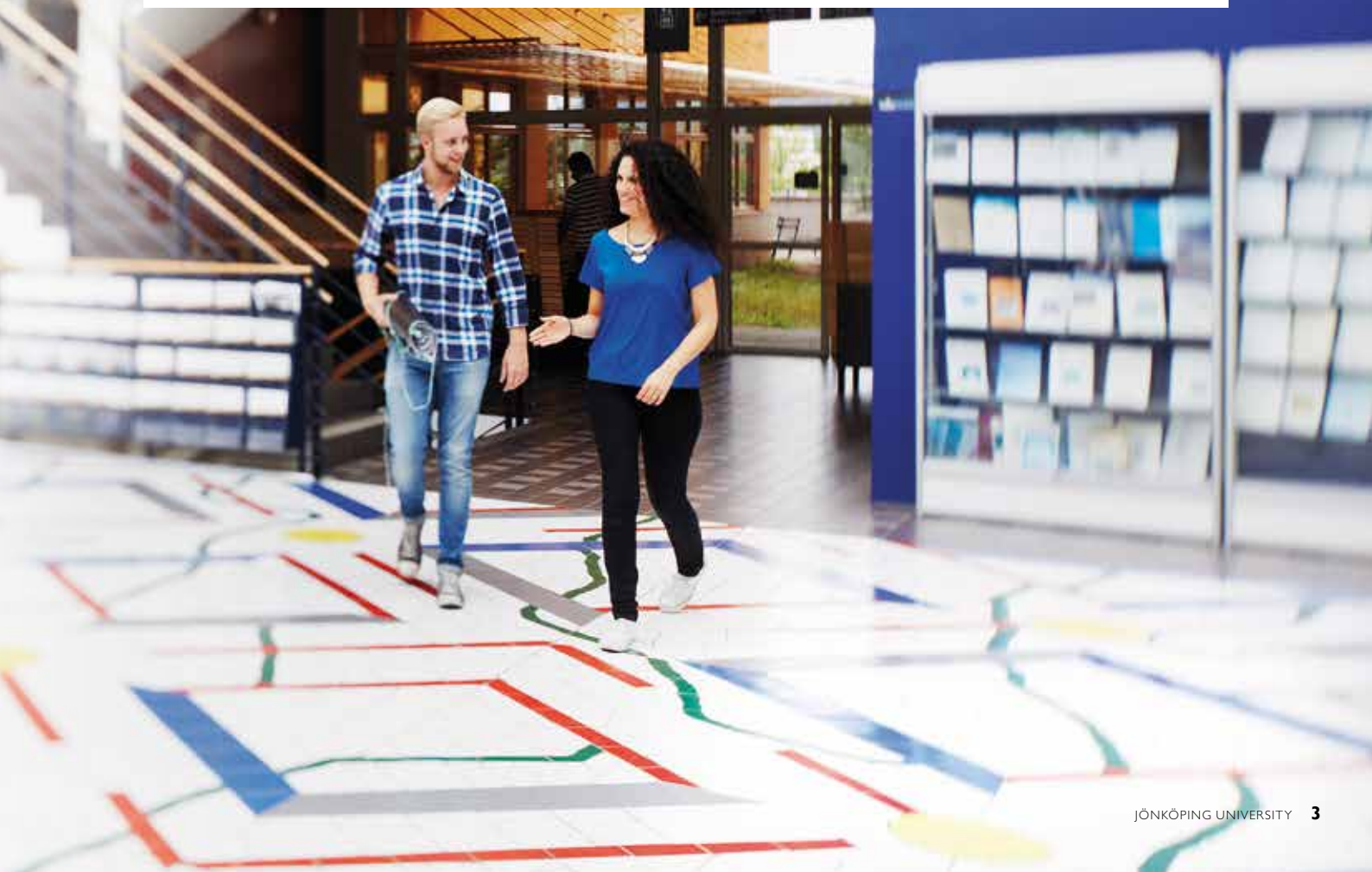
- Digital Visualization

MASTER OF SCIENCE – 60 ECTS

- Engineering Management (taught in collaboration with Jönköping International Business School)

MASTER OF SCIENCE – 120 ECTS

- Informatics: Information Engineering and Management
- Production Systems: Production Development and Management
- Product Development: Industrial Design
- Product Development: Product Development and Materials Engineering
- Product Development: Software Engineering



BACHELOR OF SCIENCE COURSES	CODE	CREDITS	COURSE PERIOD	LEVEL
CIVIL ENGINEERING				
Architectural Engineering	TATN15	6	Nov 02 – Jan 17	G2F
BIM Modelling, Analysis and Simulation	TBMN16	7.5	Jan 18 – Jun 05	G2F
Energy and Building Services Engineering	TEIN15	6	Aug 17 – Nov 01	G2F
Housing Design	TBUK15	6	Aug 17 – Nov 01	G1F
Housing Design and Architectural Engineering	TBGK14	9	Aug 17 – Nov 01	G1F
Project Work Architecture and Technology	TATN11	7.5	Jan 18 – Jun 05	G2F
Project Work Design and Architecture	T1AN11	7.5	Aug 17 – Jan 17	G2F
Project Work Design and Architecture	T1AN11	7.5	Jan 18 – Jun 05	G2F
Project Work Structural Engineering	TP1N11	7.5	Aug 17 – Jan 17	G2F
Project Work Structural Engineering	TP1N11	7.5	Jan 18 – Jun 05	G2F
Urban Space	TSDK14	6	Aug 17 – Oct 04	G1F
COMPUTER ENGINEERING				
3D Graphics and Visualization	T3GK14	9	Aug 17 – Nov 01	G1F
Agile Project	TAGN16	9	Mar 07 – Jun 05	G2F
Android Development	TAUN15	9	Oct 05 – Jan 17	G2F
Applied Web Architecture	TTWK14	9	Aug 17 – Nov 01	G1F
Client Programming with Javascript	TKJK15	6	Jan 18 – Apr 03	G1F
Digital Electronics with VHDL	TDVK14	9	Oct 05 – Jan 17	G1F
Engineering of Socio-technical Systems	TUSG15	6	Nov 02 – Jan 17	G1N
Internet and Cloud Services	TMTN15	6	Aug 17 – Oct 04	G2F
iOS Development	TISN15	9	Oct 05 – Jan 17	G2F
Multimedia with HTML5	TM5K14	6	Aug 17 – Oct 04	G1F
Operating Systems for Embedded Systems	TOIK14	9	Oct 05 – Jan 17	G1F
Server-side Web Development	TPWK15	9	Jan 18 – Apr 03	G1F
INDUSTRIAL ENGINEERING AND MANAGEMENT				
Distribution Logistics	TDLN15	9	Oct 05 – Jan 17	G2F
Purchasing Logistics	TILN15	9	Jan 18 – Apr 03	G2F
Work-Human-Technology *	TAMK14	9	Aug 17 – Nov 01	G1F
MECHANICAL ENGINEERING				
Applied Finite Element Analysis	TFDK15	6	Aug 17 – Oct 18	G1F
CAD-Solid Modelling, Basic Level Modelling	TCSA17	7.5	Jan 18 – Jun 05	G1N
Component Casting	TKGK15	6	Oct 19 – Jan 17	G1F
Design and Process Planning in Parametric CAD	TKCN16	6	Jan 18 – Jun 05	G2F
Engineering Materials	TMAG14	6	Jan 18 – Mar 20	G1N
Mechanics 2	T2MK15	6	Jan 18 – Mar 20	G1F
Sustainability in Product Development	THPK15	6	Jan 18 – Mar 20	G1F
LIGHTING DESIGN				
Exterior Lighting Design	TPUK14	9	Aug 17 – Jan 17	G1F
Exterior Lighting Design Project	TPPK14	15	Aug 17 – Jan 17	G1F
Interior Lighting Design	TBIK15	9	Jan 18 – Jun 05	G1F
Interior Lighting Design Project	TBPK14	15	Jan 18 – Jun 05	G1F
GENERAL COURSES				
Computer Simulation in Physics and Engineering	TDSK16	6	Mar 21 – Jun 05	G1F
Intercultural and International Communication	TIKA17	7.5	Oct 19 – Jan 17	G1N
Intercultural and International Communication	LICA17	7.5	Jan 25 – Apr 03	G1N
Mathematical Statistics	TMSG14	6	Jan 18 – Mar 20	G1N
Mathematics for Software Engineers	TMMK16	6	Jan 18 – Mar 06	G1F
Multivariable Calculus	TFVK14	6	Aug 17 – Oct 04	G1F
Swedish Language, Culture and Society 1	TS1G15	7.5	Aug 24 – Oct 18	G1N
Swedish Language, Culture and Society 1	TS1G15	7.5	Jan 18 – Mar 20	G1N
Swedish Language, Culture and Society 2	TS2K15	7.5	Oct 19 – Jan 17	G1F
Swedish Language, Culture and Society 2	TS2K15	7.5	Mar 21 – Jun 05	G1F
Final Project Work **	TXMP14	15	Jan 18 – Jun 05	G2E

MASTER OF SCIENCE COURSES	CODE	CREDITS	COURSE PERIOD	LEVEL
INFORMATION ENGINEERING AND MANAGEMENT				
Database Systems and Trends	TDTS24	6	Nov 02 – Jan 17	A1F
Enterprise Modelling	TVMD28	7.5	Jan 18 – Mar 20	A1N
Entrepreneurial Performance Management and Information Technology	TEPR22	7.5	Mar 21 – Jun 05	A1N
Information Logistics	TILS24	9	Oct 05 – Jan 17	A1F
Information Retrieval	TIRR24	9	Jan 18 – Apr 03	A1N
Knowledge Modelling and Knowledge Management	TKKR23	6	Nov 02 – Jan 17	A1N
Software Quality and Project Management	TMKS24	6	Sep 28 – Nov 01	A1F
PRODUCT DEVELOPMENT AND MATERIALS ENGINEERING				
Advanced CAD	TACR24	6	Aug 17 – Oct 04	A1N
Advanced Materials Technology	TAMR24	6	Sep 21 – Nov 01	A1N
Computer Programming for Design Automation	TPAR24	6	Apr 04 – Jun 05	A1N
Computer Supported Engineering Design	TDKS24	9	Oct 19 – Jan 17	A1F
Functional Materials and Surfaces	TFYS24	6	Jan 18 – Apr 03	A1F
Integrated Product Development	TIPS25	12	Jan 18 – Apr 03	A1F
Modelling and Simulation of Casting	TMSS24	6	Oct 05 – Jan 17	A1F
Non-linear Finite Element Analysis	TOLR24	9	Oct 05 – Jan 17	A1N
Optimization Driven Design	TODS25	6	Apr 04 – Jun 05	A1F
Final Project Work in Product Development**	TEUV24	30	Jan 18 – Jun 05	A2E
PRODUCT DEVELOPMENT AND SOFTWARE PRODUCT ENGINEERING				
Integration with Software – People and Hardware	TMIS26	6	Apr 04 – Jun 05	A1F
Safe and Secure Software Products	TSMS25	6	Nov 02 – Jan 17	A1F
Software Engineering – a Product Perspective	TMUR25	9	Aug 17 – Nov 01	A1N
Software Product Architectures – From Chip to Enterprise	TMVS26	9	Jan 18 – Apr 03	A1F
Software Product Quality Assurance	TKSS26	9	Mar 07 – Jun 05	A1F
PRODUCTION DEVELOPMENT AND MANAGEMENT				
Human Factors Engineering *	TMTR23	6	Nov 02 – Jan 17	A1N
Production Development, Strategy – System – Technology	TUPN25	15	Aug 17 – Jan 17	A1N
Production Management	TPLS24	6	Apr 04 – Jun 05	A1F
Supply Chain Design	TUFS24	9	Mar 21 – Jun 05	A1F
INDUSTRIAL DESIGN				
INDUSTRIAL DESIGN, YEAR 1 – SEMESTER 1***				
Design Communication 1	TD1R23	9	Aug 17 – Jan 17	A1N
Design Philosophy and Practice (Human Factors 1)	TDPR23	6	Aug 17 – Nov 01	A1N
Industrial Product Realization, Process – Methods – Leadership	TIFR23	9	Aug 17 – Nov 01	A1N
Materials and Design	TMDR23	6	Nov 02 – Jan 17	A1N
INDUSTRIAL DESIGN, YEAR 1 – SEMESTER 2***				
Design Communication 2	TD2S24	9	Jan 18 – Jun 05	A1F
Ergonomics (Human Factors 2)	TERS24	15	Jan 18 – Jun 05	A1F
Business and Economy	TFEK14	6	Jan 18 – Mar 20	G1F
INDUSTRIAL DESIGN, YEAR 2 – SEMESTER 3***				
Design Communication 3	TD3S24	6	Sep 28 – Jan 17	A1F
Industrial Design Project	TIDS24	9	Sep 28 – Jan 17	A1F
INDUSTRIAL DESIGN, YEAR 2 – SEMESTER 4***				
Design and Emotion (Human Factors 3)	TDUS25	6	Jan 18 – Apr 03	A1F
Final Project Work in Product Development**	TEUV24	30	Jan 18 – Jun 05	A2E

* The courses Work-Human-Technology and Human Factors Engineering have overlapping content so therefore the student cannot register for both courses.

** Students interested in doing a Final Project Work must submit their application including level of project (Bachelor or Master) and area of project two weeks before the application deadline. School of Engineering cannot guarantee to find a supervisor and/or a project. For further important information and deadlines, please see page 7.

*** Students interested in taking courses within Industrial Design can only do this if a complete semester is chosen. The student must be admitted to a program in Industrial Design within Mechanical Engineering at the home university. Applicants must attach their portfolio to the exchange application and hand it in 2 weeks before application deadline. Limited number of places.

**** Classes and exams for courses with end date January 17 will finish before Christmas but there can be assignments with deadline January 17.

This is an overview of the courses we expect to be offering in the academic year 2015-2016. If there are additions or cancellations, these will be updated on our website, jth.ju.se

Application process for exchange students

HOW TO APPLY

The School of Engineering will receive nominations from the student's home university, after which the student will be provided with a username and password to be able to log in to our online application. All exchange students are required to apply online and to fill out all the information requested in the application such as personal information, choice of courses, and so forth.

REQUIRED DOCUMENTS

The student must print out the Choice of Courses confirmation, have it signed by the coordinator at their home university and then e-mail it to School of Engineering (International Relations Coordinator) together with their transcript of records

before the application deadline. We do not need the original documents, only the scanned version.

WHEN DO I RECEIVE THE LETTER OF ACCEPTANCE?

The application can take between 2 to 3 weeks to be processed. We kindly ask students to be patient.

European students will only receive their letters of acceptance by e-mail (if they do not request the original). Students from outside Europe will receive it by e-mail and to their home address (in order to be able to apply for a residence permit).

COURSES

Courses that do not attract a minimum number of participants may be cancelled.

In that case students must choose another course. In addition, it is possible that some courses may clash with each other. Thus, it is important that all exchange students select alternative courses in the online application form. School of Engineering also reserves the right to limit exchange student enrollment in classes that are at capacity.

WELCOME TO JÖNKÖPING

Every semester we have a compulsory introduction week. Students arriving during the arrival dates are guaranteed pick-up service.

We look forward to seeing you in Jönköping!



Academic calendar

The academic year consists of 40 weeks, divided into two semesters. Full-time study is 30 ECTS credits per semester or 60 ECTS credits per year. There is a teaching

break during Christmas. There is no break during the semester, so international students wishing to travel for more than a weekend in Sweden or Europe should do so

either before or after their study period at School of Engineering. Attendance is compulsory during the introduction week for all new students.

ACADEMIC CALENDER	AUTUMN SEMESTER 2015	SPRING SEMESTER 2016
Re-examination period	August 8 – 16	February 13 – 21
Pick-up service	August 13 – 16	January 9 – 10
Introduction week (compulsory)	August 17 – 23	January 11 – 15
Welcome meeting (compulsory)	August 17	January 11
Course period including regular examinations	August 24 – December 20	January 18 – June 5
Re-examination period	January 9 – 17, 2016	June 6 – 12



Requirements

The general prerequisite for bachelor exchange students is at least one year of completed university studies at the home institution before the exchange semester. For applicants interested in master level courses, we recommend prerequisites with the equivalence of a bachelor degree of at least three or four years.

All students must fulfil the prerequisites of each chosen course. When signing the Choice of Courses confirmation the home institution certifies that the student fulfils the prerequisites for each chosen course.

FINAL PROJECT WORK (BACHELOR/MASTER THESIS)

Only the department of Product Development and the department of Materials and Manufacturing and their research areas can offer Final Project Work. Students applying must submit their application two weeks before the regular deadline (April 15 or October 1). The student should describe which research area he/she wants to do the project in, plus on which level. The decision about the project will be made depending on the resources at the department at the time. We cannot guarantee exchange students to do Final Project Work.

DEADLINES

Applications for incoming exchange:

May 1 – Autumn semester
October 15 – Spring semester

Applications for Final Project Work and Industrial Design (courses where portfolio is required):

April 15 – Autumn semester
October 1 – Spring semester

LANGUAGE REQUIREMENTS

Language of instruction	Swedish (mainly BSc courses) and English (all MSc courses and a number of BSc courses)
Language of instruction level based on the Common European Framework of Reference for Languages (CEFR)	N/A
Although language test scores are not formally required, all students are expected to meet the minimum English requirements at School of Engineering. The home institution is responsible for insuring the fluency in English of the students. Students without the adequate level of English run the risk of failing the courses.	Exchange students must have the equivalence of: <ul style="list-style-type: none"> • TOEFL Paper based: a minimum score of 575 TOEFL with at least 4.5 in "Written test (TWE)". • TOEFL Internet based: a minimum score of 90 with at least 20 in "Written test (TWE)". • IELTS Academic: An overall score of 6.5 and no section below 5.5.

Introduction Week

In the beginning of each semester a compulsory introduction week is organized for all new exchange students. See the academic calendar for exact dates.

The students will be introduced to Jönköping University, receive important information about studies and have the opportunity to take part in social activities organized by the Student Union.



Accommodation

All new international students are guaranteed accommodation and pick-up service, provided that they apply for accommodation correctly and announce their arrival in time.

ju.se/accommodation
accommodation@hj.se



EXAMINATIONS

There are different forms of examinations in the courses. Students are required to register at least 10 days in advance for both examinations and re-examinations. Students must bring a valid identification to the examination (i.e. passport, not Jönköping University access card).

RE-EXAMINATIONS

Swedish universities allow students to take a re-examination in failed courses. This also applies to exchange students taking courses at School of Engineering. However, re-examinations can only be taken at School of Engineering! It is not possible for exchange students to take any re-exams at their home university.

COURSE EVALUATIONS

Student representatives are elected among and by programme students, are assigned each year and act as course representatives/

course developers to be involved at course evaluations. They are responsible for giving and receiving feedback to/from teachers.

HEALTH INSURANCE

Exchange students admitted at Jönköping University receive a supplementary health insurance, which covers students' medical treatment costs in Sweden. More information can be found in the Insurance terms and conditions.

PLEASE NOTE: Regarding medical care and dental care cover, this insurance does not apply for: Citizens of a Nordic country, EU/EEA country, Switzerland, or other country with which a convention regarding medical benefits exists. In these instances the insured person must have an EU card or similar from their home country.

Students will be expected to pay the same health care fees as Swedish residents. Since the insurance only applies in Sweden, students are recommended to have another insurance that covers their trip to and from Sweden as well as occasional trips outside Sweden.

For more information about the insurance please visit: ju.se/student

VISA/RESIDENCE PERMIT

Students from countries whose citizens are required to have a visa/residence permit are advised to contact the Swedish embassy or consulate in their home country to start their application for a student visa, which is a procedure that can take two months or more.

Students are recommended to apply online. For more information visit: migrationsverket.se

COST OF LIVING

Living costs, which include food, accommodation, transport, books and any other expenses are approximately 7,500 SEK per month.

All students, including exchange students, are required to pay the obligatory Student Union membership fee, which is approximately 290 SEK per semester.

AT YOUR SERVICE!

The staff at Jönköping University are dedicated to providing the best possible service – before and during your studies.

STUDENT SERVICES OFFICES

Provide information about: examinations, results, re-exams, access cards, print-outs and more.

ACCOMMODATION OFFICE

The Accommodation Office will help you find a place to live. You will receive information about this once you have been accepted to Jönköping University.

PICK-UP SERVICE

The university arranges pick-up services for arriving international students. To make use of this service it is important that you have applied for accommodation through the university and confirmed your arrival date.

INTERNATIONAL RELATIONS OFFICE

The IRO develops cooperation with universities all over the world to offer students the possi-

bility to study abroad. Service prior, during and after studies abroad is provided to outgoing and incoming exchange students. In addition, IRO administers scholarships that students can obtain when studying abroad.

CAREER CENTRE

The Career Centre helps build bridges between university life and professional life and offers career guidance, information, lectures and seminars.

UNIVERSITY LIBRARY

The University Library is an old foundry from the beginning of the 20th century that has been transformed into a modern research library. Group rooms and reading rooms are available 24 hours a day.

COMPUTER LABS

Each school within the university has its own computer facilities for students, accessible 24 hours a day. Wireless internet access is also available on campus.

STUDENT HEALTH CARE

Visits are free of charge and completely confidential. The staff at the Health Centre can help you navigate the Swedish healthcare system.

SPORTS CENTRE – CAMPUS ARENA

The brand new sports centre on campus is waiting to accommodate your exercise needs. The centre includes a well equipped gym as well as a gymnasium for indoor team sports and offers special discounts to students at Jönköping University.

SPIRITUAL ROOM

A room for prayer and meditation, open for all regardless of religion, is located on the third floor of the library building.

RESTAURANTS AND CAFÉS

Food is available at various cafés and restaurants on campus at student prices. Microwave ovens and refrigerators are available in the student kitchen on the ground floor, next to HI TECH's office.

USEFUL LINKS

ju.se

jth.ju.se

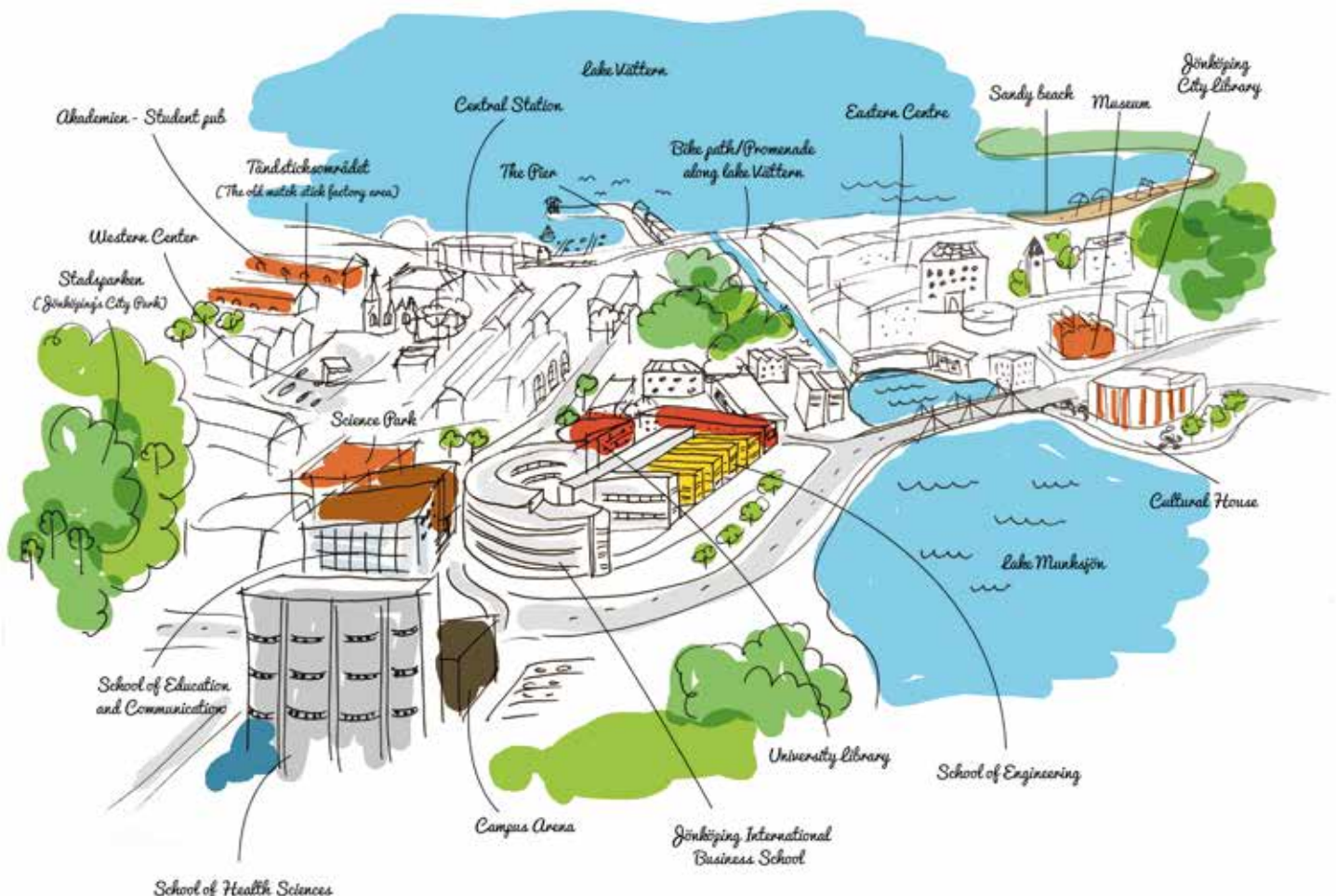
jonkopingsstudentkar.se

jonkoping.se

sweden.se

studyinsweden.se

migrationsverket.se





Grading system and study levels

ECTS CREDITS

ECTS credits are a value allocated to course units which describes the student workload required to complete the course. The credits reflect the quantity of work that each course requires. This includes lectures, practical work, seminars, self-studies (in the library or at home) and examinations or other assessment activities. ECTS credits provide a way of measuring and comparing learning achievements, to transfer them from one institution to another. ECTS credits are based on the mutual trust between participating higher education institutions.

WORKLOAD

In ECTS, 60 credits represent the workload of one year of study; normally 30 credits are given for a semester. Credits are awarded only when the course has been completed and all required examinations have been successfully taken. In Swedish higher education, the workload of a course is based

on the amount of credits that the course is worth. 1.5 ECTS credits is equivalent to approximately 40 hours (1 week) of total work. This includes lecture hours, group work, seminars, homework etc.

On the School of Engineering's webpage courses are given in 'credits' (hp). These have the same value as the ECTS credits. In other words 5 hp = 5 ECTS credits.

CREDIT TRANSFER

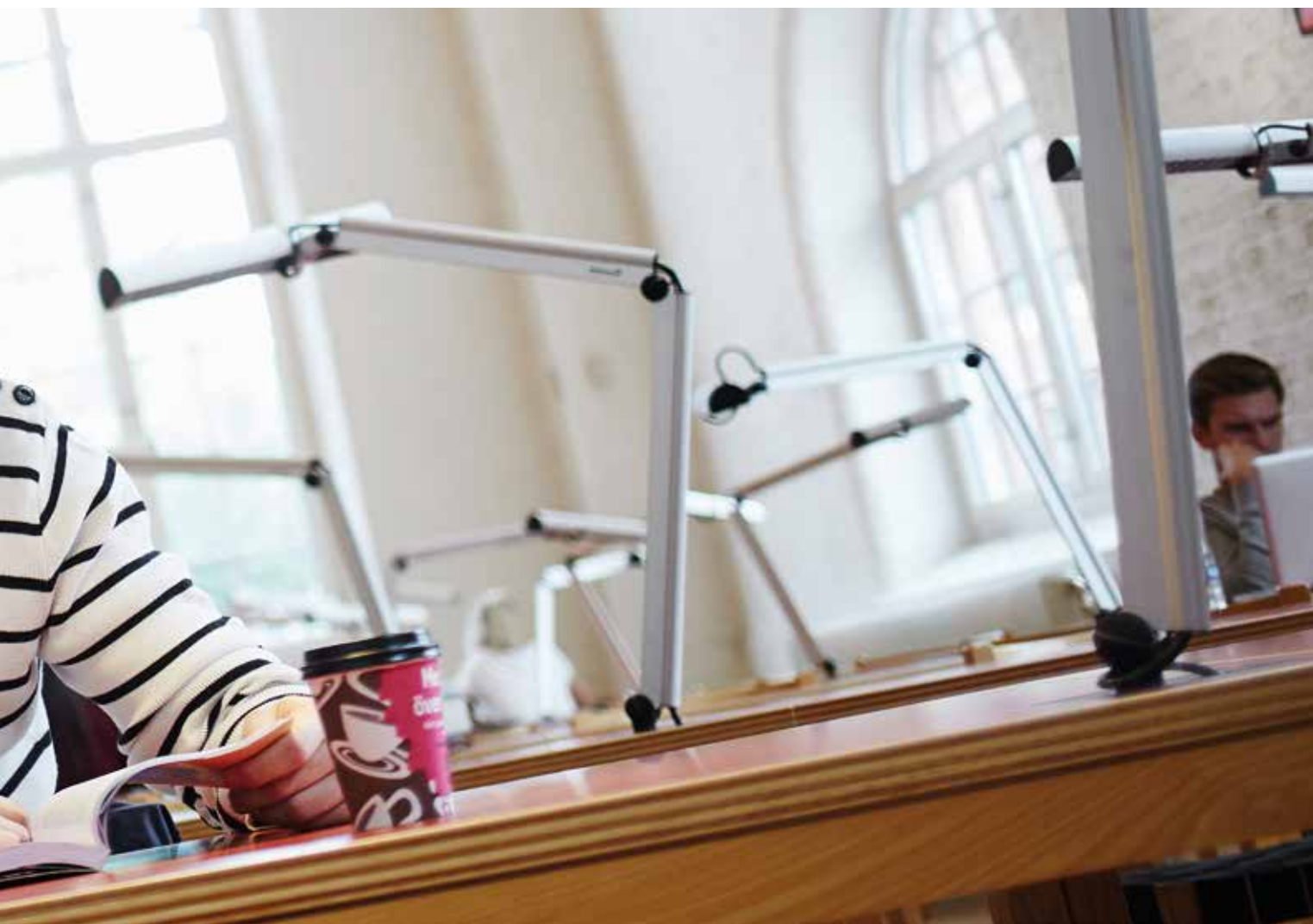
Students participating in exchange will receive full credit for all academic work successfully carried out during their exchange semester. On completion of the courses agreed upon by the home and host institutions, these academic credits will be transferred to their home institution, based on a learning agreement between the institutions. The transcript of records will be sent to the student's home institution after the end of the semester.

GRADING TABLE (EGT)

School of Engineering uses a National Grading Table which applies to all students. In order to pursue the objective of making European grades more transparent, the ECTS grading scale based on a predetermined percentage structure with grades A-F has been replaced by a grading Table (EGT). EGT will provide, in a standard table form, the statistical distribution of grades. In other words, instead of trying to fit existing grading practices in a standard distribution scale, universities need only to determine the actual percentage of students that receive each 'local' grade. School of Engineering has replaced the ECTS grading scale with EGT from the autumn semester 2014. The EGT table for each course will be included in the transcript of records for international students.

NATIONAL GRADING TABLE

- Fail or pass
- Fail or 3 (pass), 4 (good), 5 (very good)



First Cycle/Bachelor level

LEVELS	DESCRIPTION
G1N	First cycle, has only upper-secondary level entry requirements
G1F	First cycle, has less than 60 credits in first cycle courses as entry requirements
G1E	First cycle, contains specially designed degree project of Higher Education Diploma
G2F	First cycle, has at least 60 credits in first cycle courses as entry requirements
G2e	First cycle, has at least 60 credits in first cycle courses as entry requirements, contains degree project for Bachelor of Arts/Bachelor of Science

Second Cycle/Master level

LEVELS	DESCRIPTION
A1N	Second cycle, has only first cycle course(s) as entry requirements
A1F	Second cycle, has second cycle course(s) as entry requirements
A1E	Second cycle, contains degree project for Master of Arts/Master of Science (60 credits)
A2E	Second cycle, contains degree project for Master of Arts/Master of Science (120 credits)



ADDRESS: Jönköping University, International Relations Office, P.O. Box 1026,
SE-551 11 Jönköping, Sweden **VISITING ADDRESS:** Students' House, Gjuterigatan 3,
University Campus **WEBSITE:** jth.ju.se **E-MAIL:** Incomingstudent@hj.se



SCHOOL OF ENGINEERING
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