JÖNKÖPING UNIVERSITY, SCHOOL OF ENGINEERING

ECE PARIS STUDY GUIDE

SPRING 2017 AND AUTUMN 2017









THIS IS JÖNKÖPING UNIVERSITY.

Explore the advantages of becoming a JU student!

ONE CITY CENTRE CAMPUS

Jönköping University, JU, is located in the middle of southern Sweden, and has about 10.000 students. The campus consists of four schools: School of Engineering, School of Education and Communication, School of Health and Welfare, and Jönköping International Business School.

JU 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.

STUDY IN ENGLISH

All courses are taught in English, and ECE students will mix with other international and Swedish students. Nearly everyone in Sweden speaks English, and some can also understand French, Spanish or German. Many Swedish companies use English as their official business language.

GUARANTEED ACCOMMODATION

All new international students are guaranteed accommodation, provided that they apply for accommodation correctly and announce their arrival in time. Accommodation is organized by

our Accommodation Office. You apply online and choose the type of accommodation you are interested in (i.e. own apartment, shared apartment, dorm, etc.).

Accommodation is located in the city centre, as well as in some of the surrounding suburbs. It is seldom more than 20 minutes to go by bus, but usually closer. Many students commute by foot or by bicycle, depending on the location and the type of accommodation, Prices vary from EUR 200-450 per month.

More information: ju.se/en/study-at-ju/accommodation-and-arrival

INTERVIEW WITH AN ECE STUDENT.

We asked Leó Bretel from ECE Paris about student life in Sweden.

Why did you choose to go to Sweden?

It is a good balance between French and Swedish culture and Sweden is not so far from France. France and Sweden have some common points but there are also differences. I became interested in Sweden after I had seen the Millenium movie and I have also read a lot of Nordic thrillers so I wanted to see the Swedish landscape.

Why did you choose Jönköping University, School of Engineering?

I choosed between Malmö and Jönköping, Jönköping is a smaller town but not too small and it's better situated, it is only two hours from Gothenburg and Stockholm is not so far away. I like the landscape with many lakes. The school is very nice.

What are the main differences compared to ECE when it comes to learning?

In Sweden we have only two courses at the same time, in France the courses are more spread out over the semester. The principles of lectures, labs and projects are quite similar to what we have in France, so it's not so big difference. In France we have longer days at school, here we have only one or two lectures or labs in the same day and then you are expected to do more homework here.

What is the difference between Sweden and France?

The croissants are better in France ©

It is not so much difference as I thought, a lot of things are the same, but it's colder here.

Have you participated in any social activities?

I've been at moose safari in the nature, the mooses came to us and ate apples from our hands, it was really cool and impressing. I have tried different sports activities and I've been in Gothenburg, Stockholm and Copenhagen.

What is the highlight of your stay so far?

The moose safari.

Any other relevant tips to students or other things you'd like to say?

They need to go to icehockey, it's fun and they have to visit Gothenburg, Stockholm and Copenhagen.



"It's a very cool country to live in, people are very sympathetic."

" It's a great school, everything is made for us to work in the best environment. The best thing is that the university is open 24/7."

"Very great, people are nice, landscapes are awesome and very peaceful."



COST OF LIVING MONTHLY BUDGET Living costs in Sweden depend largely on your individual life-style. The price of food at stores varies, and as a student, it is recommended to shop at the bigger supermarkets to save money. Here is a general list of products, for comparison purposes: As a student in Jönköping, it is recommended that you have around EUR 850 per month, covering the following: **EUR 250 EUR 1,00** Milk 1 litre Accommodation **EUR 300** Yoghurt 1 litre **EUR 1,50** EUR 50 EUR 50 EUR 2,75 EUR 0,75 Local travel Juice, Tropicana 1 litre Potatoes, 1 kg Telephone/internet Bananas, 1 kg Water 1,5 litre bottle **EUR 1,50** Insurance, personal care **EUR 50 EUR 150** Hobby, leisure, etc. **EUR 1,00** Big Mac Meal **EUR 7,00** Beer 0,5 litre at student bar **EUR 3,00 EUR 850 EUR 6,50** Beer 0,5 litre at a normal bar Beer 0,5 litre, starting at EUR 1,50* Wine, 0,75 l bottle, starting at EUR 6,50* Lunch is served daily Monday-Friday at most restaurants. A warm meal (fish, meat, vegetables, pasta etc.) including a salad buffet, a soft drink/water and coffee costs approx. EUR 8,50. Dinner at a restaurant in the evening can be expensive. *Only sold at licence stores Compare your city's cost of living with the costs in Jönköping at: www.numbeo.com

COURSE OPTIONS FOR ECE STUDENTS.

ECE and School of Engineering cooperate to develop a suitable course package for ECE students every semester. For detailed course contents, see ju.se/ece.

| SPRING SEMESTER 2017 | C. |
|---|-----|
| Swedish Language, Culture and Society This course will give a basic knowledge of Swedish grammar, vocabulary and everyday phrases. Furthermore, it will give sufficient language skills and a general "know-how" to understand and make yourself understood in situations occurring in daily life in Sweden. It will also give an overview over Swedish society and culture. | 7,5 |
| Mathematics for Software Engineers The course investigates mathematical concepts of direct relevance to programming and the construction of software systems. The course focuses on the use of mathematics as a tool for formalising and solving problems in programming and software engineering. Furthermore, the course makes use of scripting languages to implement proof-of-concept solutions to problems as well as other tools such as spreadsheets. | 6 |
| Computer Simulation in Physics and Engineering The course treats models of classical physics and engineering applica- tions, introducing simulation software as a tool for engineering problem solving and evaluation of physical system performance. The simulation tools shall demonstrate and help understanding various physical phe- nomena via learning a typical simulation work flow, and interpreting the simulation results. | 6 |
| Web Development with JavaScript and DOM The course aims to give students a solid introduction to web development on the client side. We will go through the concepts and techniques used to design static and dynamic Web pages, some common reusable frameworks/libraries for the Web, and provide an introduction to how AJAX can be used with a server-based interface to produce advanced web applications. | 6 |
| Programming in Python The course intends to give the student an introduction to programming and in deep understanding and knowledge of imperative programming. The programming language Python will be used to exemplify the concepts, and the student will be challenged to write a lot of code to improve his/her skills in solving problems. The student will primarily write console programs, but the more experienced students will be offered the opportunity to learn the basics of object oriented programming and to explore graphical programs or web servers. | 6 |

| ACADEMIC CALENDAR | SPRING | AUTUMN | |
|--|--------------|-----------------|--|
| 2017 | SEMESTER | SEMESTER | |
| Pick-up Service | Jan 7-8 | Aug 17-20 | |
| Introduction week (compulsory) | Jan 9-13 | Aug 21-27 | |
| Welcome meeting (compulsory) | Jan 9 | Aug 21 | |
| Course period incl. regular exams | Jan 16-Jun 4 | Aug 28-Dec 22 | |
| Re-examiniation periods | Jun 5-11, | Jan 6-14, | |
| Re-examination periods | Aug 12-20 | Feb 10-18, 2018 | |
| www.ju.se/student/en/studies/academic-calendar | | | |

| AUTUMN SEMESTER 2017 (PRELIMINARY) | C. |
|--|-----|
| User Research The course introduces the students to user research concepts, methods and techniques as they are used throughout the design process to identify needs, behavioral patterns, and functionalities. It provides students with a basic understanding of the differences between interviews and surveys, cultural probes and ethnography, behavioral or attitudinal approaches, qualitative and quantitative methodologies, and practically illustrates how to turn user research results into communicable synthetic deliverables such as personas or user journeys. | 6 |
| Web and User interface Design The course comprises contemporary and basic techniques to create modern web applications for desktop as well as mobile devices. The course includes the following parts: - HTML5 - CSS (Cascading Style Sheets) including animation and transitions - Precompiled CSS (SASS/LESS) - Dynamic clients for improved web site functions - Project methods for web projects and version control - Responsive design theory and implementation methods - Standards and templates for construction of forms and input | 9 |
| Swedish Language, Culture and Society This course will give a basic knowledge of Swedish grammar, vocabulary and everyday phrases. Furthermore, it will give sufficient language skills and a general "know-how" to understand and make yourself understood in situations occurring in daily life in Sweden. It will also give an overview over Swedish society and culture. | 7,5 |
| Digital Elctronics with VHDL The course covers digital design and a basic use of the hardware description language VHDL. The course covers the following topics: - The hardware description language VHDL (Very High Speed Integrated Circuit) - Circuit technologies (e.g. CPLD, FPGA, ASIC) - Data path building blocks (e.g. adders, multipliers) - Sequential logic (e.g. registers, counters) - Time critical aspects - Finite State Machines, FSM - Design verification (testbenches) - Project work in accordance with the V-model. | 9 |
| Introduction to Script Programming - Basic imperative programming - Basic programming - Integrated development environment - Program syntax in a high level language - Algorithms - XML, JSON, CSV | 7,5 |
| Leadership and Project Management Basic knowledge of project work including management and coordination process. Content: -Group dynamics and leadership -Project management -Communication process -Risk analysis and cost planning | 6 |

SWEDEN AND ÖNKÖPIN

Sweden is known for being a clean, beautiful country, covered with lakes and forests and inhabited by 9.5 million people. The warm Gulf Stream in the Atlantic Ocean gives Sweden a milder climate than other areas equally far north. Sweden is well-known for its high standard of living, sustainability, and high degree of safety in society.

Jönköping is a fast-growing student city with a population of 135,000 and is the centre of a region with some 380,000 inhabitants. it is located in a county characterized by its innovative and entrepreneurial spirit.

The city is easily accessible and there are excellent links between Jönköping and the major cities in Sweden as well as a good connection to the continent.

In Jönköping you will find most things around the corner. Just a short walk from campus you will find the long sandy beaches of Lake Vättern. There is a wide range of leisure and sports facilities and the great outdoors is within easy reach, offering forests, mountains and lakes. Jönköping also has a wide variety of cultural venues: theatres, museums, cinemas and concert halls.

> School of Education and Communication

School of Engineering School of Health and Welfare Jönköping International **Business School**



Jönköping University is one of Sweden's most international universities. We attract students from all over the world with committed teachers and study programmes that connect research to industry. We provide many opportuntities to practice what you learn and offer an international study environment that is fun and inspiring, and an entrepreneurial way of looking at the world.

Jönköping University is a private, non-profit institution of higher education with the right to award doctorates. The university conducts education and research at its four schools.



STUDENT UNION ACTIVITIES

Open to all students. Some examples:

- Moose safari
- Weekend trips (Oslo, Copenhagen, Helsinki, Berlin...)
- Movie nights
- Sport activities
- Language cafes
- **Quiz nights**
- Party nights **Culture days**
- **Contact family and Buddy programme**

www.jonkopingsstudentkar.se/english

NO VISA REQUIRED

Citizens of EU/EEA/Switzerland/Nordic counties may live and study in Sweden without a residence permit or visa. For registration at the university, you must bring a passport or a national ID card that shows your citizenship.

NO EXTRA TUITION FEES

You pay your normal tuition fee to ECE, and there are no extra tuition fees for your studies or for registration. However, all students must become members of Jönköping Student Union, at a cost of 30 Euro per semester.

HOW TO APPLY

The School of Engineering will receive nominations from the International Office of ECE, after which the students will be provided with a username and password to be able to log in to our online application.

DEADLINE TO APPLY

Mav 1 for autumn semester October 15 for spring semester







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ju.se/ece

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