



UNIVERSITY  
OF SKÖVDE

# YOU CREATE REALITY



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ENRIQUE RUIZ ZÚÑIGA – RESPONSIBLE FOR INTERNATIONALIZATION - SCHOOL OF ENGINEERING SCIENCE

UNIVERSITY OF MALAGA – 18TH NOVEMBER 2019



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OF SKÖVDE

SKÖVDE





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# SWEDEN – A SMALL COUNTRY THAT MAKES A DIFFERENCE



# SWEDEN, AN INNOVATIVE COUNTRY



# SKÖVDE – A SMALL TOWN THAT MAKES A DIFFERENCE



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# UNIVERSITY OF SKÖVDE



Established in 1977

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# UNIVERSITY OF SKÖVDE



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OF SKÖVDE



# MODERN UNIVERISTY WITH AN OPEN AND WELCOMING APPROACH

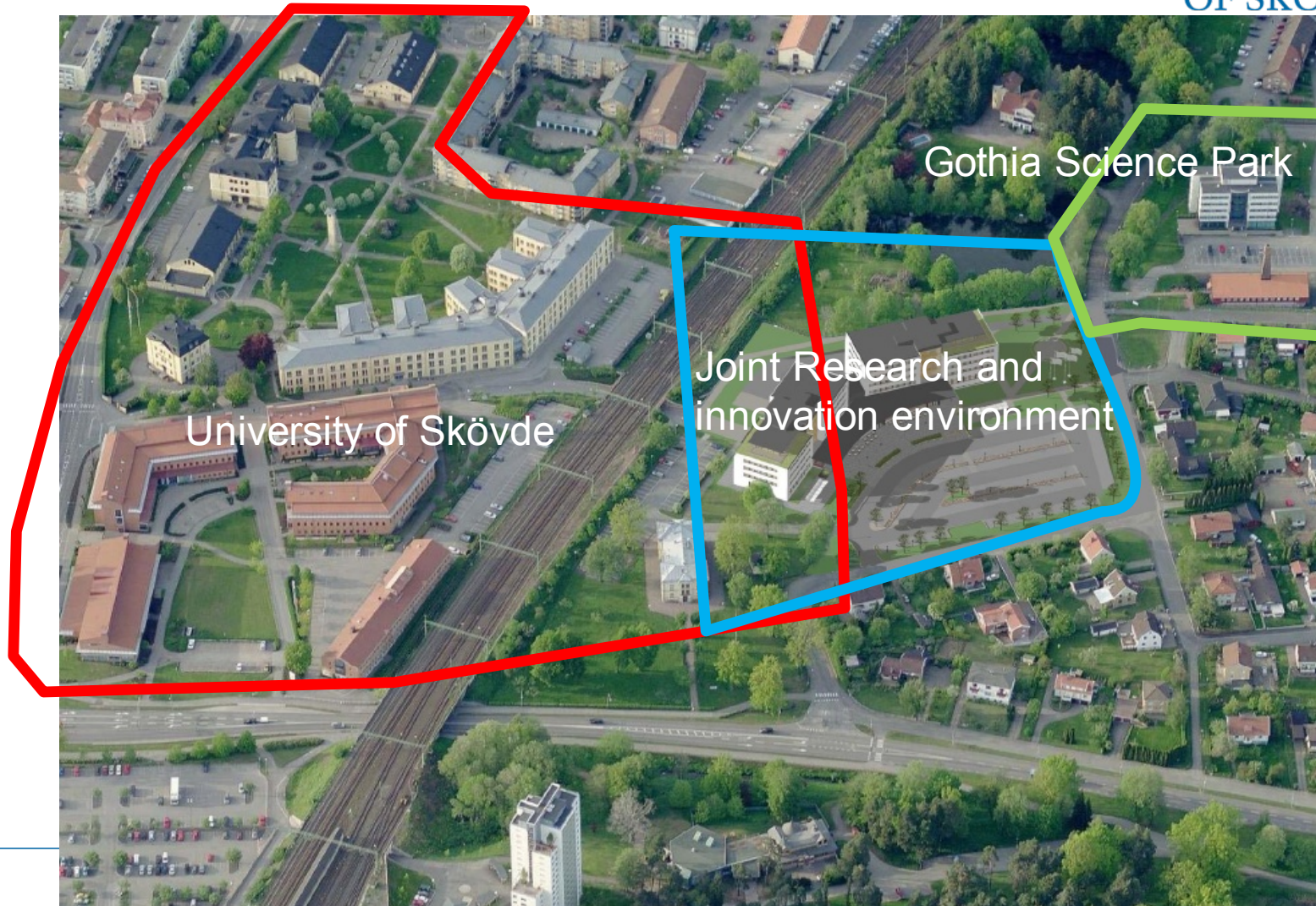




# The Campus



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# CAMPUS



- A** Högskolehopen  
 Technical Administrative Services  
 - University Shop (Print and Office Supplies)  
 - Access Card Distribution  
 The Student Union Office  
 Examination Halls  
 Computer /Lecture Rooms
- D** HR and Finance Office  
 Lecture Halls  
 Computer /Lecture Rooms

- E** Academic Affairs and Student Support  
 - Student Support, Student Counselling and Student Health Services  
 - Returns of Marked Exams  
 - Student Affairs Office and Reception  
 IT Services Office  
 - Head of Department  
 - System Development  
 - IT Services  
 - IT Helpdesk  
 The School of Business  
 Computer /Lecture Rooms  
 Lecture Halls

- G** Main Entrance/Reception/  
 Switchboard  
 The School of Bioscience  
 The School of Health and Education  
 Computer /Lecture Rooms  
 Lecture Halls
- H** Collaboration and Communications Office  
 Computer /Lecture Rooms  
 Lecture Hall
- 2** The Vice-Chancellor's Office  
**8** The School of Engineering Science  
 The School of Informatics

- Skövde Student Housing Accommodation
  - ATM (cash withdrawal machine)
  - P – Public Parking Lot
  - S – Student Parking Lot  
 Parking permits can be picked up at the Student Union Office and at the reception desk in the G-building
  - PG – Staff and Guest parking  
 (Permits for guests may be picked at the reception desk in the G-building)
- Parking permits can be picked up at the reception desk in the G-building and at the Student Union Office  
 For detailed information, see [www.his.se/campuskarta](http://www.his.se/campuskarta)

- 1 Library
- 2 The Chancellery Administration
- 3 Götasalen Restaurant
- 4 Boulogner Student Union Building
- 5 Gothia Science Park
- 6 Travel Centre 300 m
- 7 Town Centre approx. 500 m
- 8 PORTALEN



UNIVERSITY  
OF SKÖVDE

# FACTS

- Students: around 7 400 (3 350 ft equivalents)
- Staff: around 540
- 60 study programmes –
  - Bachelor, Master, PhD
  - Innovative and cross disciplinary!
- 200 single subject courses
- About 100 courses given in English
- 120 exchange agreements  
with more than 40 countries
- 200 incoming international students
- 50 outgoing exchange students



Lars Niklasson  
Vice-Chancellor

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**BIOSCIENCE**  
Systems Biology

**INFORMATICS**  
Informatics

**ENGINEERING SCIENCE**  
Virtuell Systems



**BUSINESS**  
Enterprises for the Future

**HEALTH AND EDUCATION**  
Health and Learning

**YOU CREATE REALITY**

# School of Informatics



## **Degree subjects:**

- Informatics
- Media Arts, Aesthetics and Narration

**Other subjects:** Cognitive Science, Music



Our Game Incubator at Gothia Science Park is the world leading talent factory in the field of computer game development

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# School of Informatics

- Distributed Real-time Systems
- Information Systems
- Interaction Lab
- Skövde Artificial Intelligence Lab
- Media, Technology and Culture
- Software Systems Research Group





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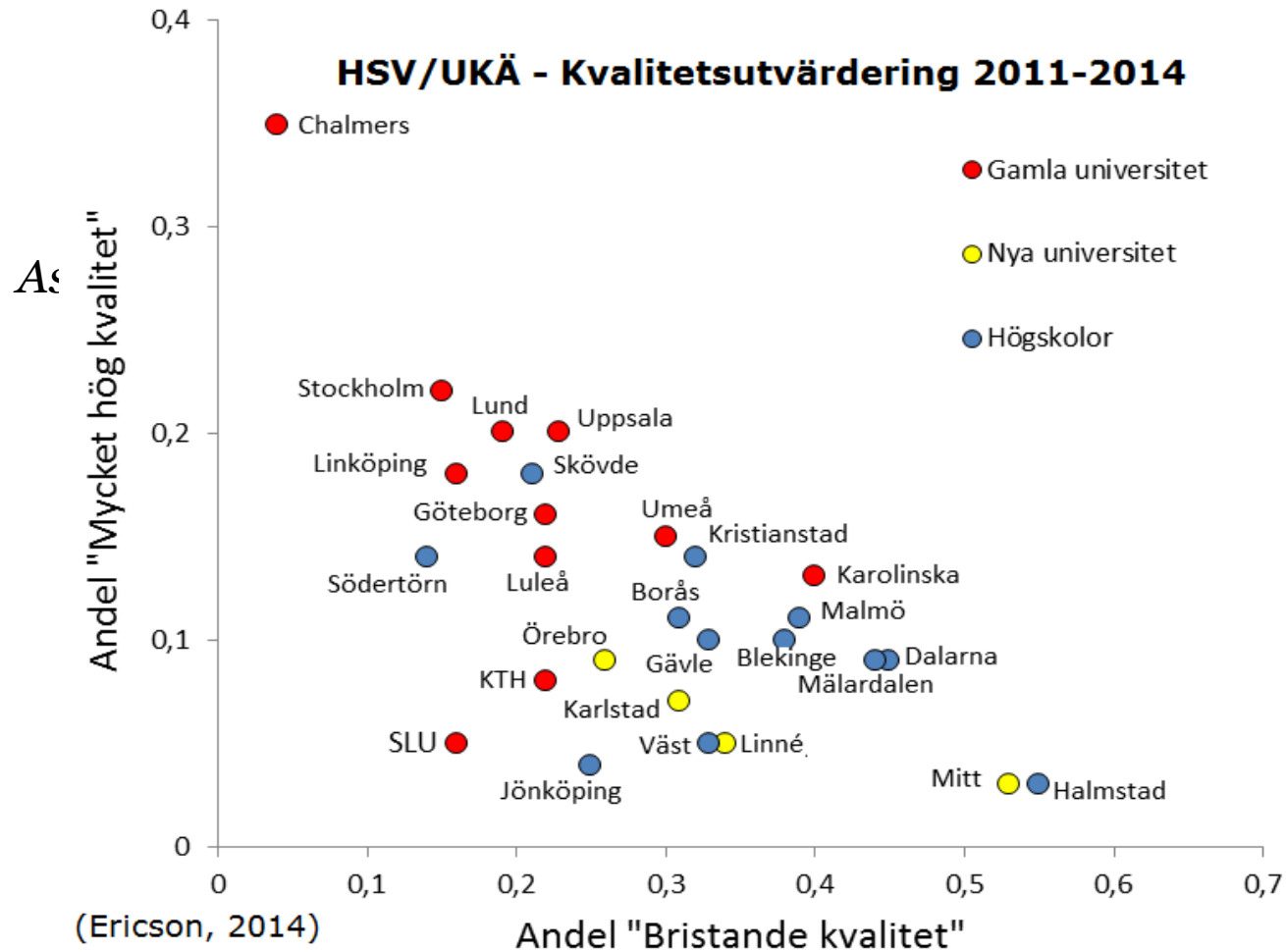
# PhD in Information Technology

The PhD programme in Informatics covers a broad spectrum of information technology-related disciplines ranging from the study of media and organizational computing to the technical disciplines

**IPSI** - Industrial PhD School Informatics

The vision is to be able to award PhD degrees in all of the five research specialisations.

# Top 7 in Sweden - Quality of education

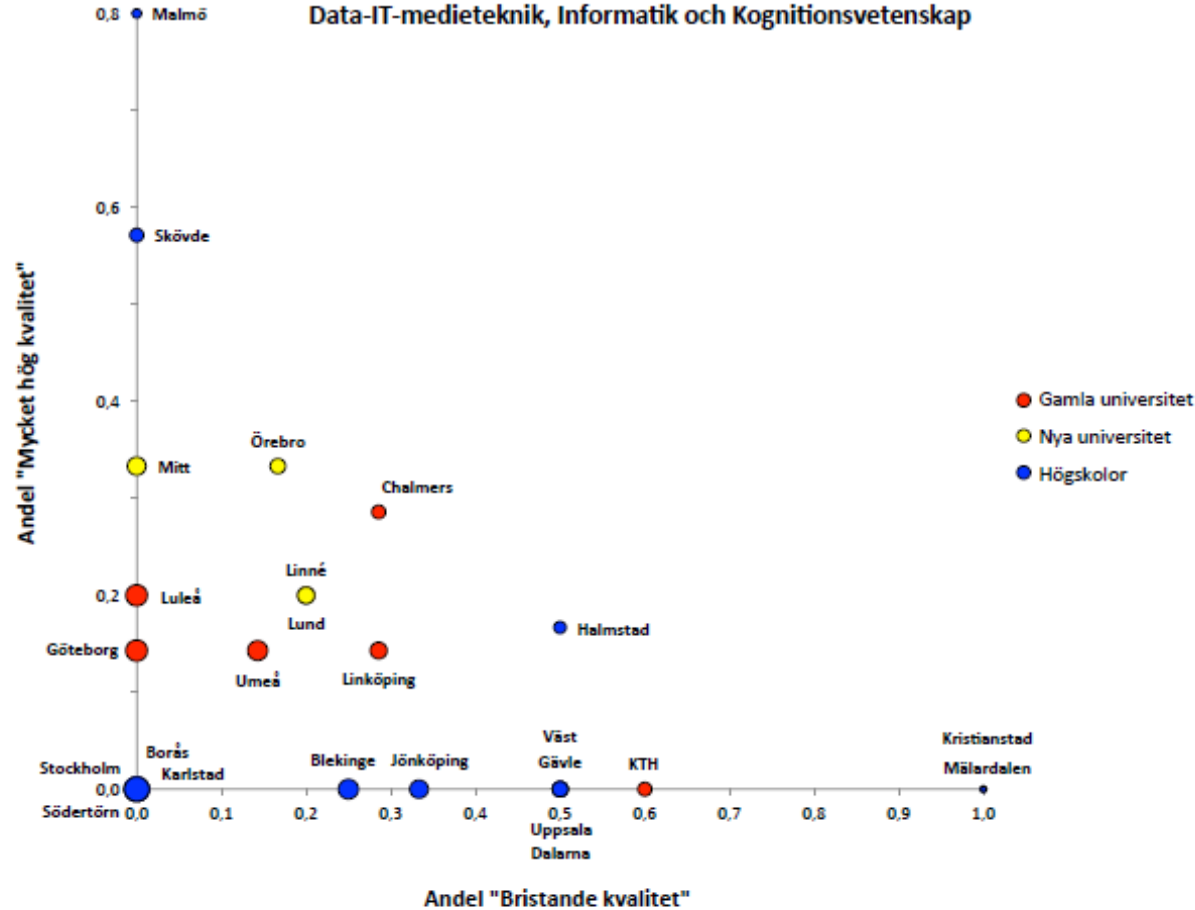






# Top 2 in Sweden – Computer Science

Andel "Mycket hög kvalitet" vs. andel "Bristande kvalitet":  
Data-IT-medieteknik, Informatik och Kognitionsvetenskap





- About 100 partner universities in 35 countries
- Scholarship programmes such as Erasmus+, Linnaeus-Palme, Erasmus-Mundus, MFS and Science without Borders



HÖGSKOLAN  
I SKÖVDE



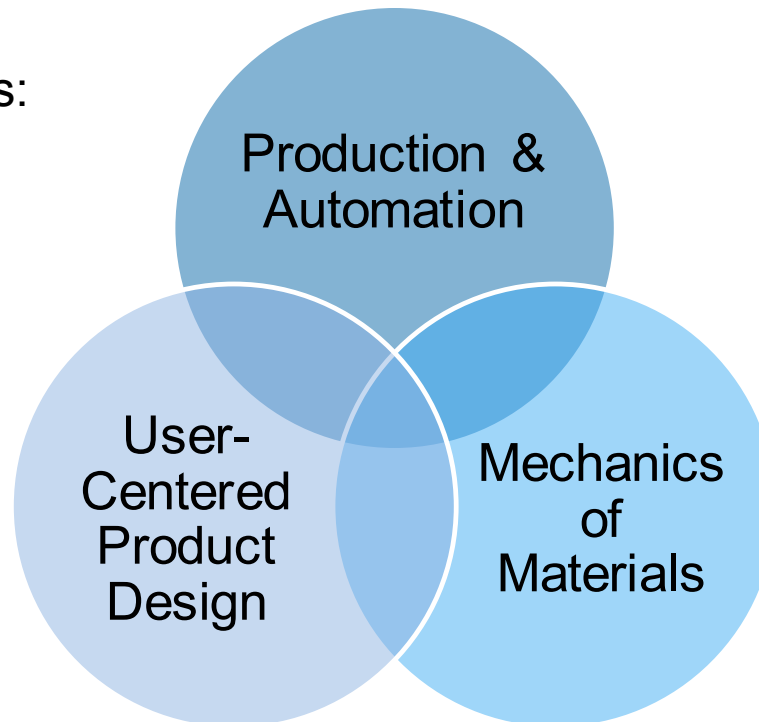
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SCHOOL OF ENGINEERING  
SCIENCE

# FOCUS

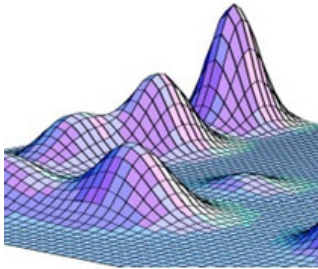
**Virtual Engineering** – industrial problem solving based on the usage and development of virtual solutions.

Three research groups:



# PRODUCTION & AUTOMATION

## Simulation-based optimization



## IT-tools for the operators of the future



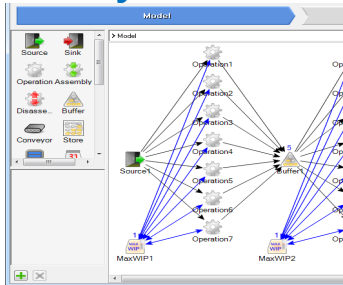
## Maintenance optimization



## Human-robot collaboration



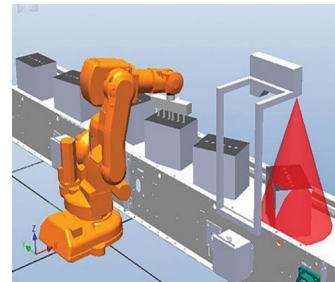
## Decision-support system



## Product life-cycle management



## Virtual commissioning



## Continuous improvements



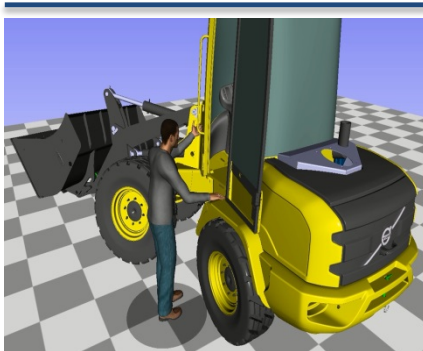
# USER-CENTERED PRODUCT DESIGN

## VIRTUAL ERGONOMICS DESIGN

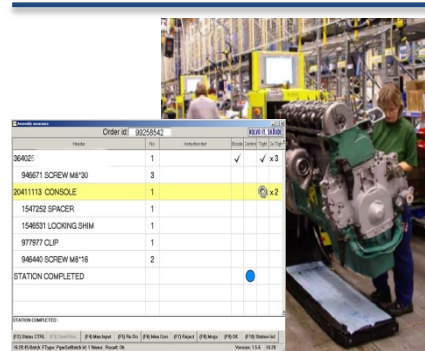
## INDUSTRIAL INFORMATION DESIGN

## HUMAN-ROBOT COLLABORATION

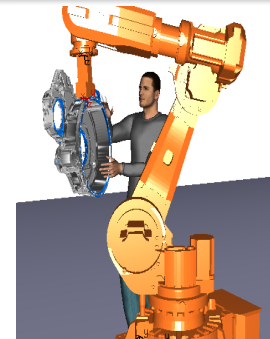
## SMART TEXTILES – INDUSTRIAL APPLICATIONS



Research about methods and tools for simulation of human-product interaction, to evaluate ergonomics and design ergonomic products and workplaces.



Research about work related information and development of methods for design of successful information system solutions in industry.



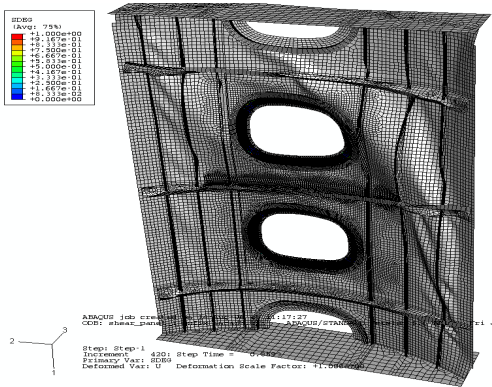
Research about human-robot collaboration, to create human friendly and productive workplaces.



Research about how smart textiles can be applied in industry to improve health, quality and productivity.

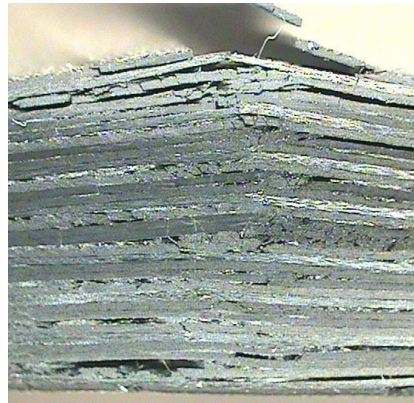
# MECHANICS OF MATERIALS

## Adhesive joints



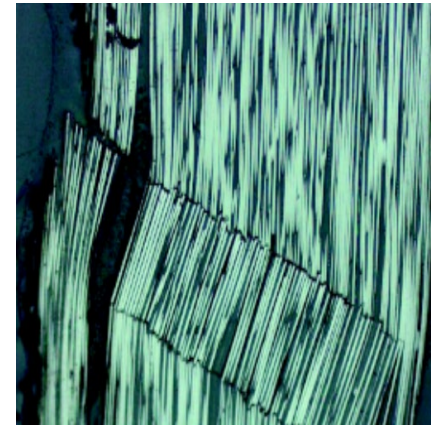
Fracture of adhesive joints of strengthening components in airplane fuselage.

## Composite material



Delamination of carbon fiber composite material.

## Kink-band



Kink-band formation during compressive loading of carbon fiber reinforced epoxy.

# ENGINEERING PROGRAMS

## Undergraduate Engineering Programs

- Automation Engineering
- Production Engineering
- Mechanical Engineering
- Design Engineering
- Building Engineering
- General Engineering
- Production Technician
- Automation Technician

## Graduate Engineering Programs

- Intelligent Automation 60 ECTS
- Intelligent Automation 120 ECTS
- Virtual Ergonomics and Design 60 ECTS
- Virtual Ergonomics and Design 120 ECTS







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- Interaction between business and research
- Business incubator





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## INDUSTRIAL INNOVATION ARENA





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The Volvo AB Preferred Research Partner  
within Virtual Manufacturing

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# Mechanical Engineers 2019 International students



		2nd year - AS20/SS21		3th year -AS21/SS22		
<b>Autumm semester</b>	Vecka					
	1	Fluid Dynamics	Statistics for Engineers II	Swedish for Foreign Students / English/Preparatory Course/Engineering Introduction for Exchange Students		
	2					
	3					
	4					
	5	Mechanics II	Linear Algebra: Vector Algebra	Machine Design Component	Mechanics IV	
	6					
	7					
	8					
	9	Strength of Materials I: Introduction	Linear Algebra: Matrices and Eigenvector Problems	Applied FEM II	Material Processing Technology	
	10					
	11					
	12					
	13	Manufacturing Technology and Science of Materials	Mechanics III	Final project in Mechanical Engineering		
	14					
	15					
	16					
	17					
	18					
19						
<b>Spring Semester</b>	1	Strength of Materials II	Swedish for Foreign Students / English/Preparatory Course	Final project in Mechanical Engineering		
	2	Applied FEM I	Strength of Materials III			
	3					
	4					
	5					
	6	Engineering Project II: Machine	Sustainable Development for Engineers II			
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19						
20						




















Varje cell motsvarar en vecka

IP Auto Maskin Matte Fysik Andra inst.

# Product Design Engineers 2019 International students



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		2nd year - AS20/SS21		3th year -AS21/SS22					
<b>Autumm Semester</b>	<b>Vecka</b>								
	1	Product Development and Design II 		Swedish for Foreign Students / English/Preparatory Course/Product Development and Design II 					
	2								
	3								
	4								
	5	Mechanics II: Static	Linear Algebra: Vector Algebra 	Design Methodology II: 	Ergonomics II: Digital Human Modeling and Evaluation 				
	6								
	7								
	8	Strength of Materials I: Introduction	Linear Algebra: Matrices and Eigenvector Problems	CAD III 	User Centered Design 				
	9								
	10								
	11	Manufacturing Technology and Science of Materials	Industrial Design I	Final project in Industrial Product Development 					
	12								
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	18								
19									
<b>Spring semester</b>	1	Swedish for Foreign Students / English/Preparatory Course	Digital Visualization 	Final project in Industrial Product Development 					
	2								
	3	Ergonomics I: Introduction 	Design Methodology I 			Final project in Industrial Product Development 			
	4								
	5								
	6	Engineering Project II: Design 	Industrial Design II 					Final project in Industrial Product Development 	
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	11								
12	Sustainable Development for Engineers II 	Final project in Industrial Product Development 							
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16	Final project in Industrial Product Development 								
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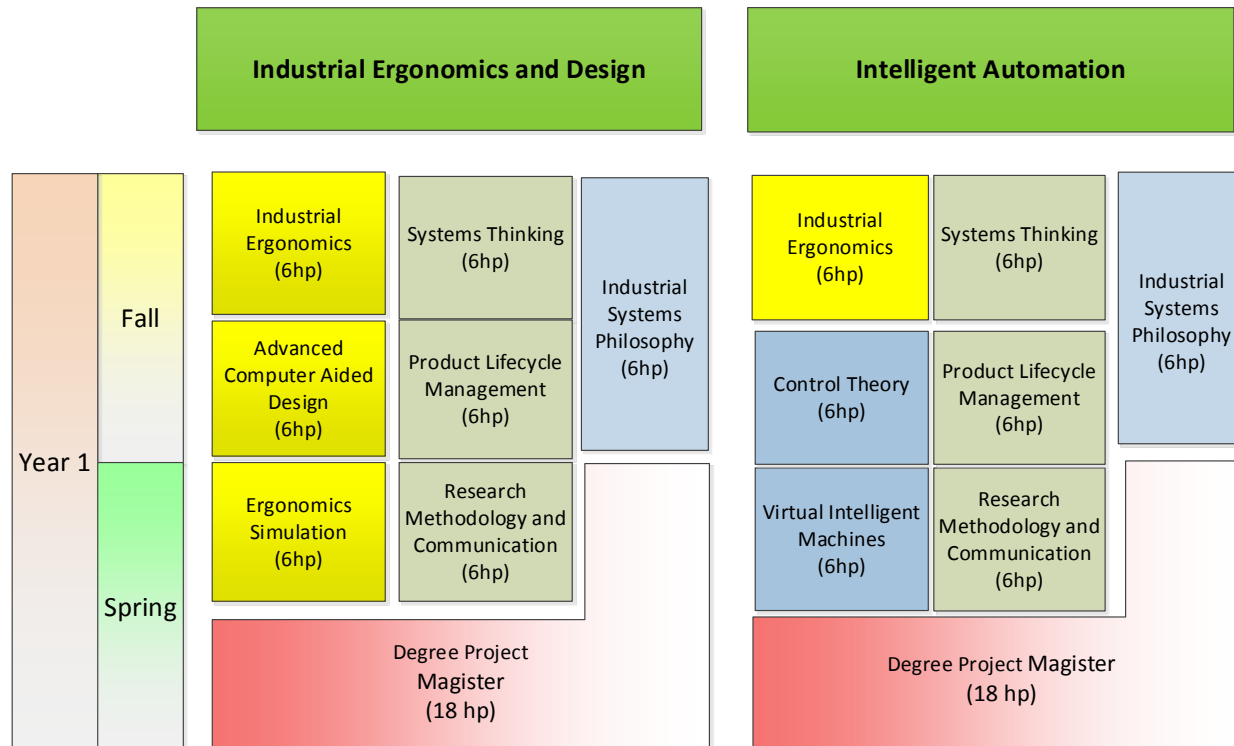
# Production Engineer 2019 International students



		2nd year - AS20/SS21		3th year - AS21/SS22	
<b>Autumm Semester</b>	Vecka				
	1	Linear Algebra -geometric transformation	Statistics for Engineers II	Swedish for Foreign Students / English/Preparatory Course/Engineering Introduction for Exchange Students	
	2				
	3				
	4				
	5				
	6				
	7	Industrial robotics and och offline programming	Production and Logistics Simulation I	Production System Design	Efficient workplaces
	8				
	9				
	10				
	11				
	12				
	13	Manufacturing Technology and Science of Materials	Industrial Control	Applied Operations Research	Production and Logistics Simulation II
	14				
	15				
	16				
	17				
	18				
19					
<b>Spring semester</b>	1	Efficient workflows	Swedish for Foreign Students / English/Preparatory Course	Final Year Project in Automation Engineering	
	2				
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	6	Engineering Project II: Production	Maintenance and realitability engineering		
	7				
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12	Sustainable Development for Engineers II				
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# NEW 1-YEAR MASTER'S PROGRAMS



# NEW 2-YEAR MASTER'S PROGRAM



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		Intelligent Automation			Industrial Ergonomics and Design		
Year 1	Fall	Industrial Ergonomics (6hp)	Systems Thinking (6hp)	Industrial Systems Philosophy (6hp)	Industrial Ergonomics (6hp)	Systems Thinking (6hp)	Industrial Systems Philosophy (6hp)
		Control Theory (6hp)	Product Lifecycle Management (6hp)		Advanced Computer Aided Design (6hp)	Product Lifecycle Management (6hp)	
	Spring	Virtual Intelligent Machines (6hp)	Computational Intelligence (6hp)	Engineering Project (6hp)	Ergonomics Simulation (6hp)	Computational Intelligence (6hp)	Engineering Project (6hp)
		Virtual commissioning (6hp)	Modelling and Optimization (6hp)		Cognitive Ergonomics I (6hp)	Modelling and Optimization (6hp)	
Year 2	Fall Inter.	Alternative Manufacturing Methods (6hp)	Technical Management (6hp)	Sustainability and Innovation (6hp)	Cognitive Ergonomics II (6hp)	Technical Management (6hp)	Sustainability and Innovation (6hp)
		Intelligent Automation (6hp)	Research Methodology and Communication (6hp)		Inclusive Design (6hp)	Research Methodology and Communication (6hp)	
	Spring	Degree Project 30 hp					





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# Student Support

- Student Accommodation Service
- Pick-up service
- Introduction programme
- Student Union
- International Committee
- A buddy system





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# Student Support

- Student Affairs Office
- Student and Career Counselling
- Student Health (Social counselling)
- Support for students with disabilities
- IT-Helpdesk
- Library
- Study Support Centre





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# CONTACT

- International Office:  
[international@his.se](mailto:international@his.se)
- Student counsellors:  
[studycounselling@his.se](mailto:studycounselling@his.se)
- Admission:  
[admission@his.se](mailto:admission@his.se)
- Accommodation:  
[bostadsformedling@his.se](mailto:bostadsformedling@his.se)



# BENEFITS OF THE ERASMUS PROGRAM



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Professional and personal enrichment  
Meet people and learn new cultures  
Improve languages

# AN OPORTUNITY



Possibility of enriching your engineering studies and even more:

- Possibility of getting a double engineering title if the requisites are accomplished.
- Possibility of studying a 1 year master degree after getting the bachelor degree.
- Personalized attention to the student.
- Direct relation with industry.
- Meet one of the most innovative countries in the world.
- Improve languages.

*Take your chance!*





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# TACK SÅ MYCKET

[www.his.se](http://www.his.se)

[www.studyinsweden.se](http://www.studyinsweden.se)

[www.facebook.com/hogskolaniskovde](https://www.facebook.com/hogskolaniskovde)

Enrique Ruiz Zúñiga – School of Engineering Science - Responsible for internationalization

University of Malaga – 18th November 2019