Welcome!
Students of Software Engineering and Management (N2SOF)

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Regina Hebig

- Associate Professor at CSE
- Software Evolution, Modelling and Processes

- Mother of one
- French horn player, Swedish learner, To-work cycler

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- Jupiter, 4th floor, room 423A
The role of the program manager

• **Quality** assurance
• Check that the **rules** are followed
• **Vision** for the program’s future

• FYI, I do **not** discuss grades 😊
Software projects are complex operations.
Program Overview

Year 1

Term 1
- DIT246 Empirical SE 7.5 credits
- DIT285 Advanced Requirements engineering 7.5 credits

SP1
- SP2
- SP3
- SP4

Term 2
- Semi-elective 7.5 credits
- Elective 7.5 credits

Year 2

Term 3
- Elective 7.5 credits
- DIT588 Software Evolution Project 15 credits

DIT551 MSc thesis 30 credits

Term 4

SP = study period (7 weeks)
Term = semester (2 SPs)
First Term

• Introduction to pillars of the SE field

• **Advanced Requirements Engineering**
  – How to identify, prioritize, and validate req. specs.

• **Empirical Software Engineering**
  – How to conduct empirical studies and evaluate results

• **Quality Assurance and Testing**
  – Skills and how to measure them

• **Project Management**
  – Cost estimation, scheduling activities

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**Richard Torkar**
Sept. 1 08:15-12:00, Beta, Saga

**Eric Knauss**
Tue, Aug-30, 13:15-17:00, Delta, Svea
You HAVE TO ATTEND to get a project group!
Second Term

• Selected topics in SE

• At least **15 credits** from a list of courses

• Organized into **recommended profiles**
  – Software Engineering for Data Intensive Systems
  – Human factors in Software Engineering
  – User experience
  – Data science
  – Strategy and leadership
  – Communication
Strongly recommended

Second Term

• Pick 2 profiles, select those 4 courses
• For instance...

Software Engineering for Data Intensive Systems

- DIT291 Architectures for scale-out systems 7.5 credits
- DIT978 Advanced Software Engineering for AI/ML-Enabled Systems 7.5 credits

Human factors in Software Engineering

- DIT192 Agile development processes 7.5 credits
- DIT849 Behavioral software engineering 7.5 credits
Areas of specialization

Software Engineering for Data Intensive System

– DIT291 Architectures for scale-out systems (SP3)*
– DIT978 Advanced Software Engineering for AI/ML-Enabled Systems (SP4)*

Human factors in Software Engineering

– DIT192 Agile development processes (SP3)*
– DIT849 Behavioral software engineering (SP4)*

*You have "platsgaranti" in these four courses
Areas of specialization

Software and user experience

– DIT095 Human-computer interaction (SP3)
– DIT157 Designing User Experiences (SP4)
– TIA100 Human-centered design and Human factors (SP4)

Software and data science

– DIT866 Applied machine learning (SP3)
– DIT873 Computational techniques for large-scale data (SP4)
Areas of specialization

Software, strategy and leadership

– TIA013 Organising for Digital Transformation (SP3)
– TIA014 Governance and Control for Digital Capabilities (SP4)

Software and communication

– TIA150 Communication among professionals
Third Term

• **Software Evolution Project**
  – Real software
  – Fix, improve and innovate
  – Application of knowledge from previous courses
  – Requirements elicitation, project planning, SW architecture, development and testing

• Elective course 2 x 7.5 or 15
Other options

• DIT279 Industrial practice project in software engineering (15 credits)
  – Ideally, Y2 in SP1 + SP2 (before thesis)
  – Strong commitment from company
  – Need an academic supervisor
  – All Y1 credits
  – Need to write a proposal
  – Need my approval
  – **NO**: Just coding on a project
Fourth Term

- Thesis
- 2 students
- Academic supervisor
- Collaboration with industry is incentivized

Dedicated info event

https://masterthesis.cms.chalmers.se
Other options

• 60 credits thesis (all of Y2)
  – Strong collaboration with SE researcher
  – Very, very rare
Program Overview

Year 1

Term 1
- DIT246 Empirical SE (Richard Torkar)
- DIT285 Advanced Requirements Engineering (Eric Knauss)

Term 2
- DIT278 Project Management (Ksenia Onufrey)
- DIT843 Quality Assurance and Testing (Francisco Gomes)

Term 3
- DIT291 Architectures for scale-out systems (Philipp Leitner)

Term 4
- DIT978 Advanced Software Engineering for AI/ML-Enabled Systems (Regina Hebig)
- DAT265 Software Evolution Project 15 credits (Nayla Nasir)

Year 2

Term 1
- Elective 7.5 credits

Term 2
- Elective 7.5 credits

Term 3
- DATX05 MSc thesis 30 credits
  - Examiners: Gregory Gay, Daniel Strüber, Lucas Gren, Jennifer Horkoff, Robert Feldt, Regina Hebig

Term 4
- DIT978 Advanced Software Engineering for AI/ML-Enabled Systems (Regina Hebig)
- DIT291 Architectures for scale-out systems (Philipp Leitner)
- DIT285 Advanced Requirements Engineering (Eric Knauss)
- DIT843 Quality Assurance and Testing (Francisco Gomes)
- DIT192 Agile development processes
- DIT849 Behavioral software engineering (Lucas Gren, Robert Feldt)
- DAT265 Software Evolution Project 15 credits (Nayla Nasir)
Your sister program

• Software Engineering and Technology (Chalmers)

• You will be often sitting with students of this program
  – E.g., Software Quality and Requirements Engineering
Teamwork
A qualifying aspect of this program

• **Key skill** to succeed in this program

• Company policy: mix of courses with and without **randomization** of teams!

• We evaluate individuals
  – And assess **individual contribution** in project work

• Central message: **professionalism** in teams
Some guiding principles

• We are **not the enemy 😊**
  – The faculty and administration are a group of young, motivated, reasonable, and friendly people

• Open **communication** channel
  – Talk to me if something doesn’t seem right to you
  – Suggest a solution, it shows your commitment
Some guiding principles

• **Professionalism** is the most appreciated currency here (next to hard work)
  – Respect your fellow students (and teachers)
  – Deadlines are deadlines
  – Don’t ask for exceptions (e.g., extra re-exams)
Some guiding principles

• Plagiarism and cheating will not be tolerated
  – Everything you submit is checked for plagiarism
  – Covering up for a slacking team member is cheating
  – 2 Modules on Academic Integrity in the Canvas Program Room
Student Portal
– Information for new students

- https://studentportal.gu.se/english/my-studies/cse/new-student
Online Teaching Platform

- Canvas [https://canvas.gu.se/](https://canvas.gu.se/)
- Zoom (links via Canvas)
- TimeEdit (Room Scheduling, linked via Canvas)
Canvas Program Page

• Summary of important links
• Collection of course pages (including old course instances)
• Important dates, e.g. concerning master’s thesis
• Important contacts
• Discussion forum that you can use

Enroll in the page using the following link:
https://chalmers.instructure.com/enroll/693PBW
Lindholmen

- Industrial hub of Gothenburg
  - 21000 people work, study or live

- Lindholmen Science Park
  - Proximity to where software is made
Working Environment – (normally)

- Lindholmen, Jupiter, Kuggen
  - Student areas floor 2, 3, and basement
  - SE group rooms, floor 3, room 317, 321, 322
  - Saga, Patricia, Svea
- Johanneberg Campus
Contribute to Quality Assurance

• The program is not perfect (yet)

• Student representatives in each course

• Mid-course meeting with the teacher

• **Online course evaluations**

• Final meeting (incl. me)
Contribute to Quality Assurance

- Online program evaluation (at the end of the academic year)

![Overall Program Satisfaction]

Avg. 3.7 / 5

- Very Unhappy
- Unhappy
- Neutral
- Happy
- Very Happy
Contribute to Quality Assurance

• Some lessons learned:
  
  – (Some) presence elements in teaching are important
    • Less for ”content”, more for social elements and study experience
  
  – However, distance teaching can (sometimes) work better than in-class equivalents
    • Will try to ”keep the good parts” going forward
  
  – Important for students to connect
    • Attend student union events, after-hours, etc.
    • Never leaving your apartment during your studies just isn’t the same
Questions?
Welcome!

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