

Dr. Michael Eichberg  
Software Technology Group  
Department of Computer Science  
Technische Universität Darmstadt

## Software Engineering

# Organization



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

# The Lecture's Goal

---



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

---

**The goal is to enable you to systematically carry out  
small(er) commercial or open-source software  
projects.**

---

# Basic Goals

Content / Structure of the Lecture | 4

---

- To get a brief overview of “all” areas of software engineering
- To understand agile software development processes
- To be able to perform object-oriented analysis and design
- To be able to read and create basic UML diagrams
- To perform basic Software Quality Assurance
- To get first hands-on experience and to learn to use basic software development tools
- To be able to use basic design patterns

# Basic programming skills are required.

Teaser | 5

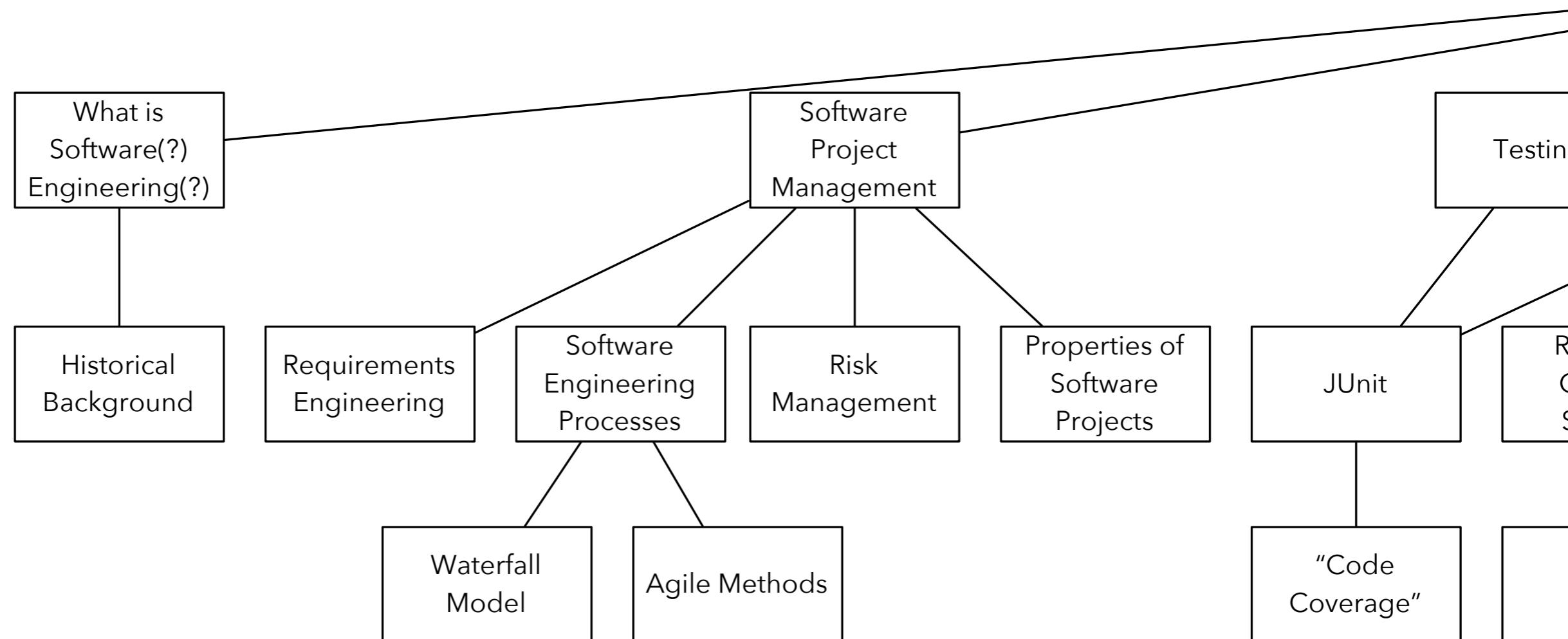
- Basic knowledge of object-oriented programming concepts is necessary  
I.e., you should readily understand the following terms:
  - **class, interface**
  - **object**
  - **inheritance**
  - **polymorphism**
- Working knowledge of the Java programming language
- We are going to use Java 8

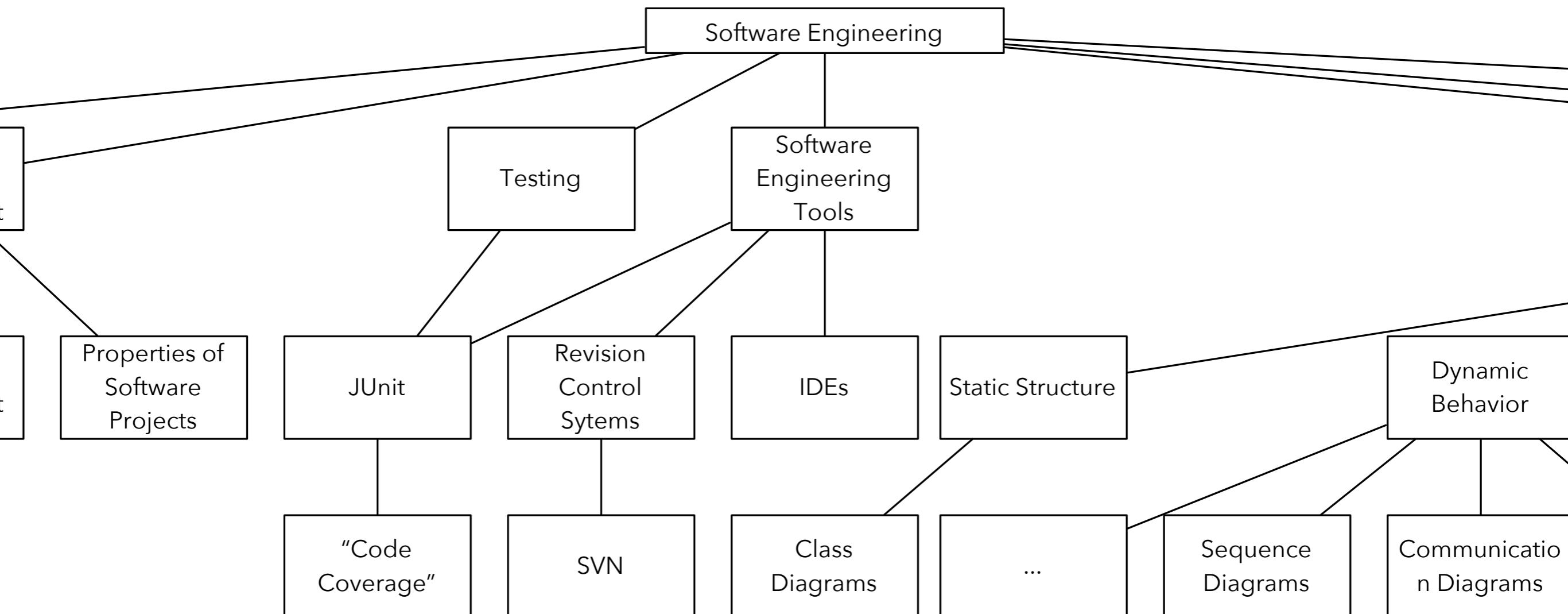
# The Lecture's Structure

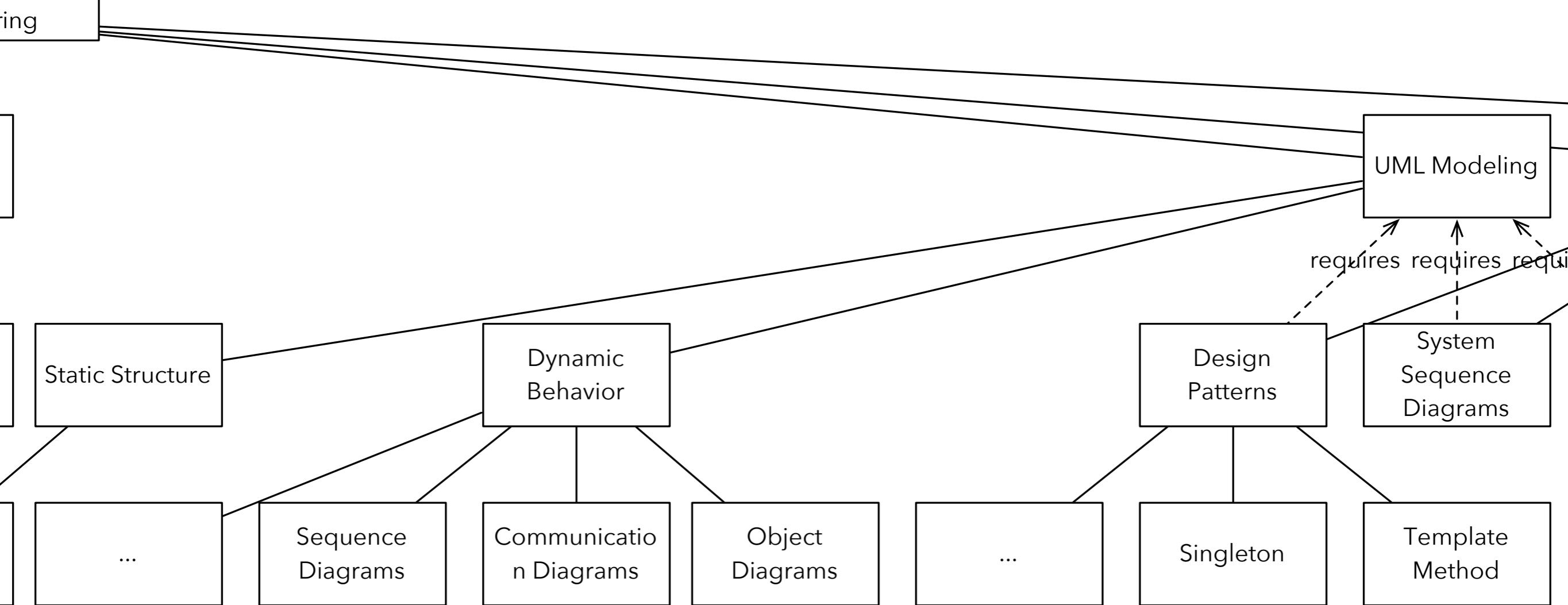
---

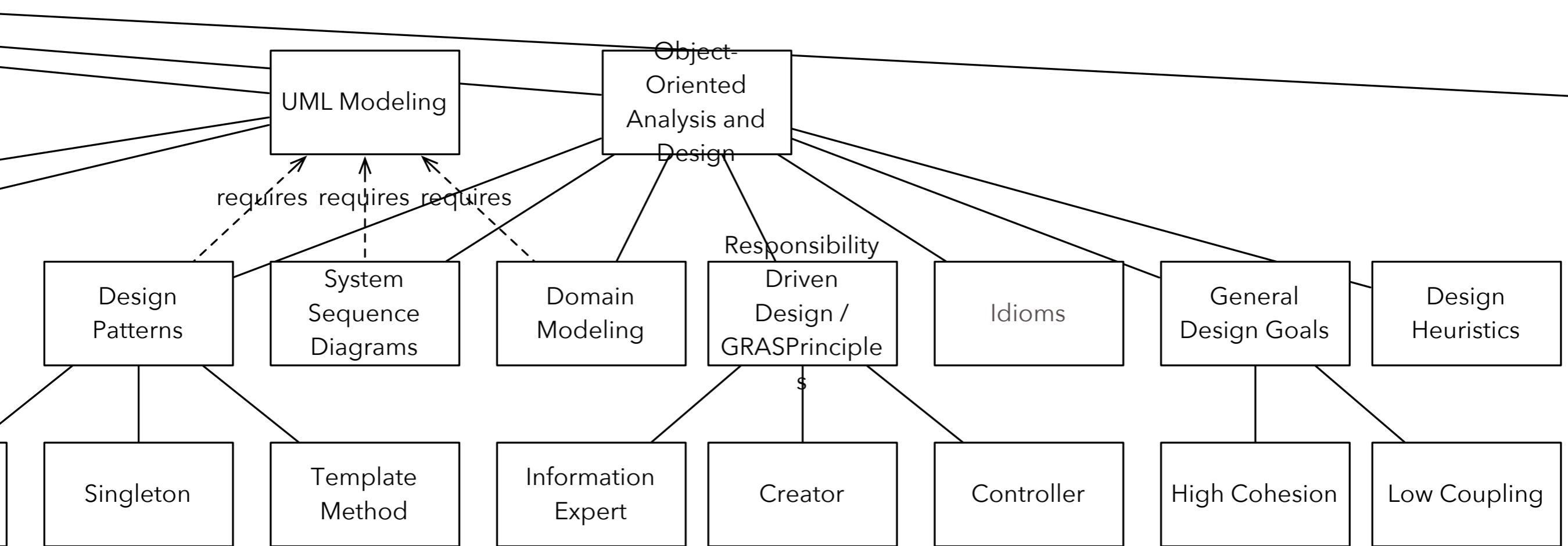


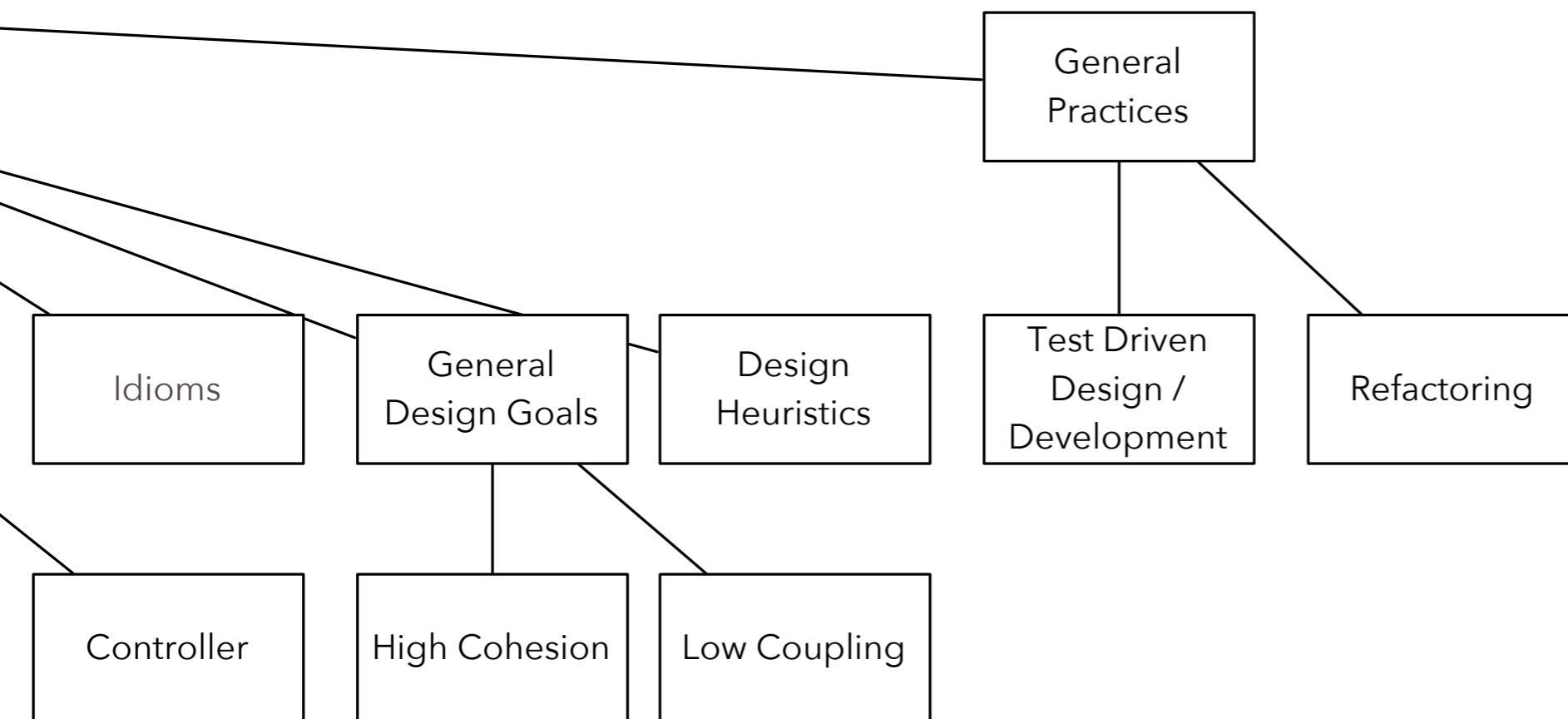
TECHNISCHE  
UNIVERSITÄT  
DARMSTADT



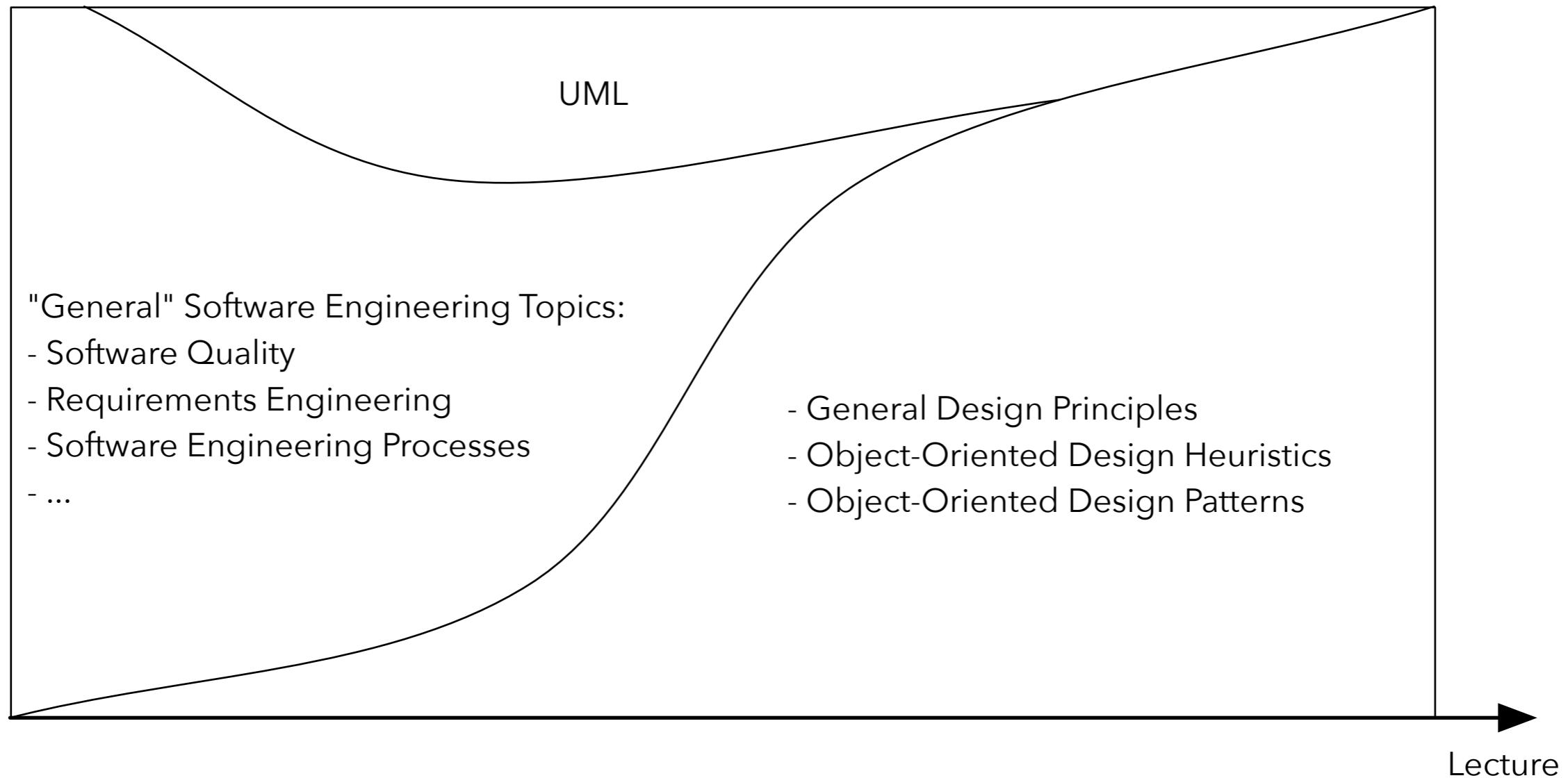








# Content Distribution



# The Team

---



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

# The Team

Organization | 14



**Dr. Michael Eichberg**



**Leonid Glanz**



**Sven Amann**

## Contact

WWW

[http://www.stg.tu-darmstadt.de/teaching/teaching\\_overview.en.jsp](http://www.stg.tu-darmstadt.de/teaching/teaching_overview.en.jsp)

## Forum

<http://www.d120.de/forum/>

→kanonische Einführungsveranstaltungen

→Einführung in Software Engineering

# Organization

---



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

# Lecture

- Thursdays 13:30-15:00 in S2 02 | C205 and C110
- The slides are in English  
(Key terms will be translated into German.)
- The slides will generally be available after the lecture  
(I will try hard to make a preliminary version available the day before the lecture.)
- The slides can be found at  
<http://stg-tud.github.io/eise/>

# Exercises

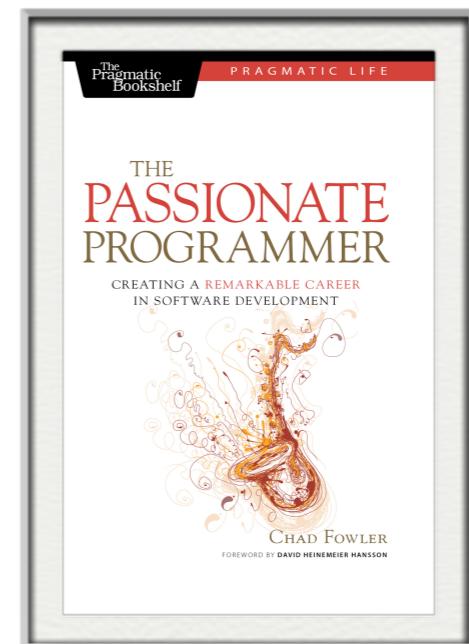
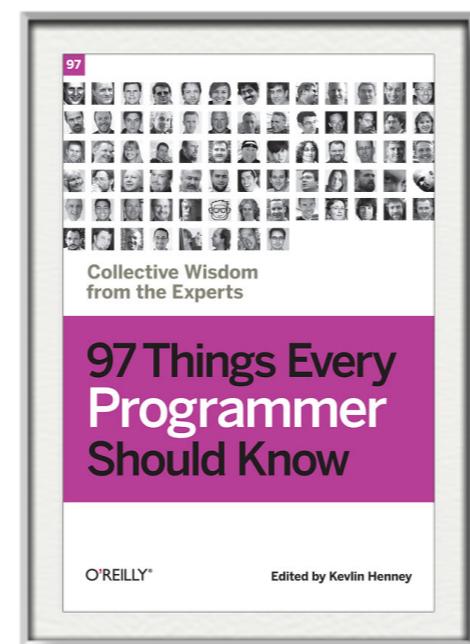
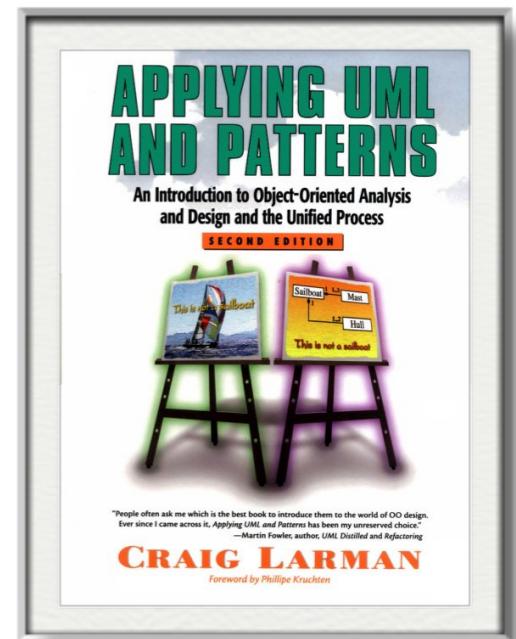
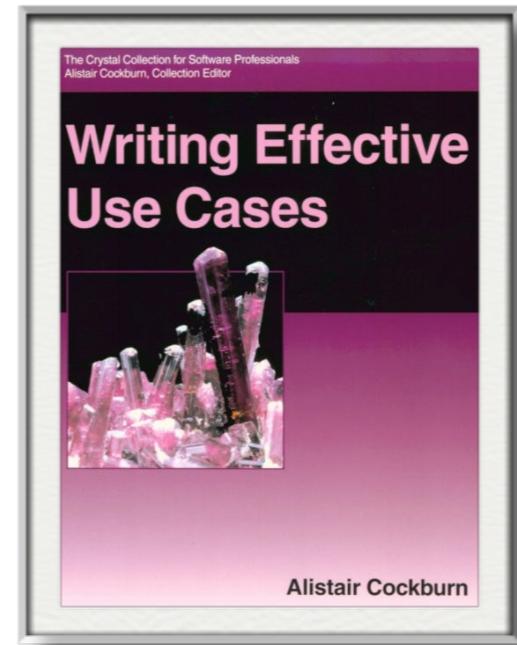
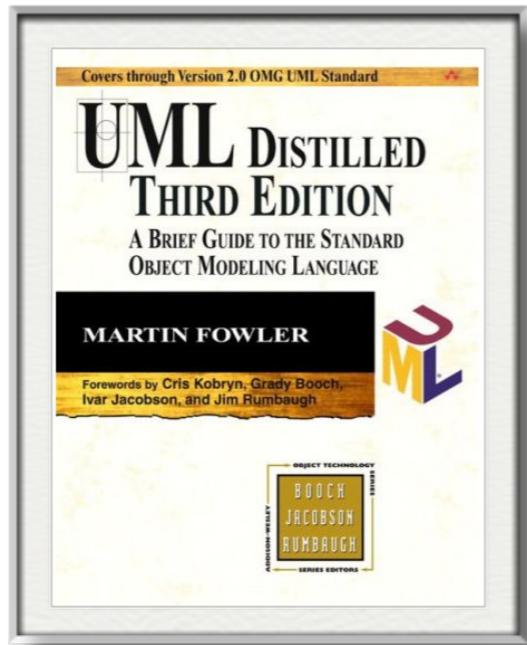
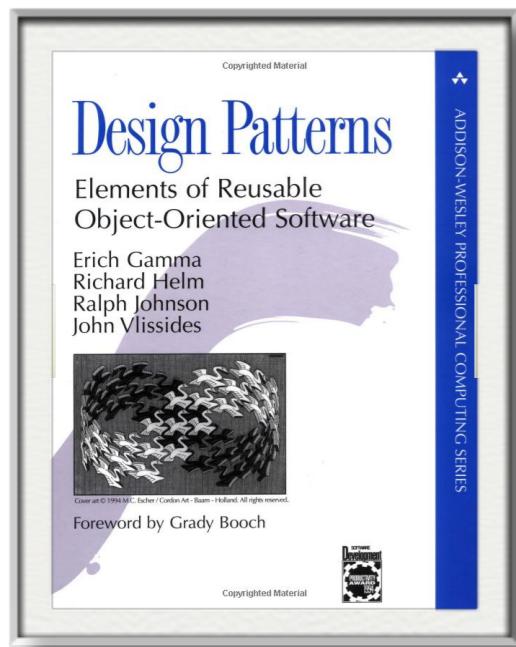
- Every week, we will have an exercise, starting today
- Exercises are expected to be solved in teams of 3 students
- The content of the exercise is relevant for the exam
- Sign-up as a team; if you don't have a team, we will assign you to a team
- All further details will be announced in today's exercise.
- The content of the exercise is relevant for the exam

# Written Exam

- The exam will be on February, 25th 2016 - 14:30 - 16:00  
(The rooms will be announced in the forum. The exam will take 90min.)
- You need to register for the exam in TUCaN  
(There are no further prerequisites; “everyone” can attend the exam.)
- The exam will be an open book exam
- The very best students are expected to be able to solve the entire exam

# Related Bibliography

Organization | 19



# Essential Bibliography

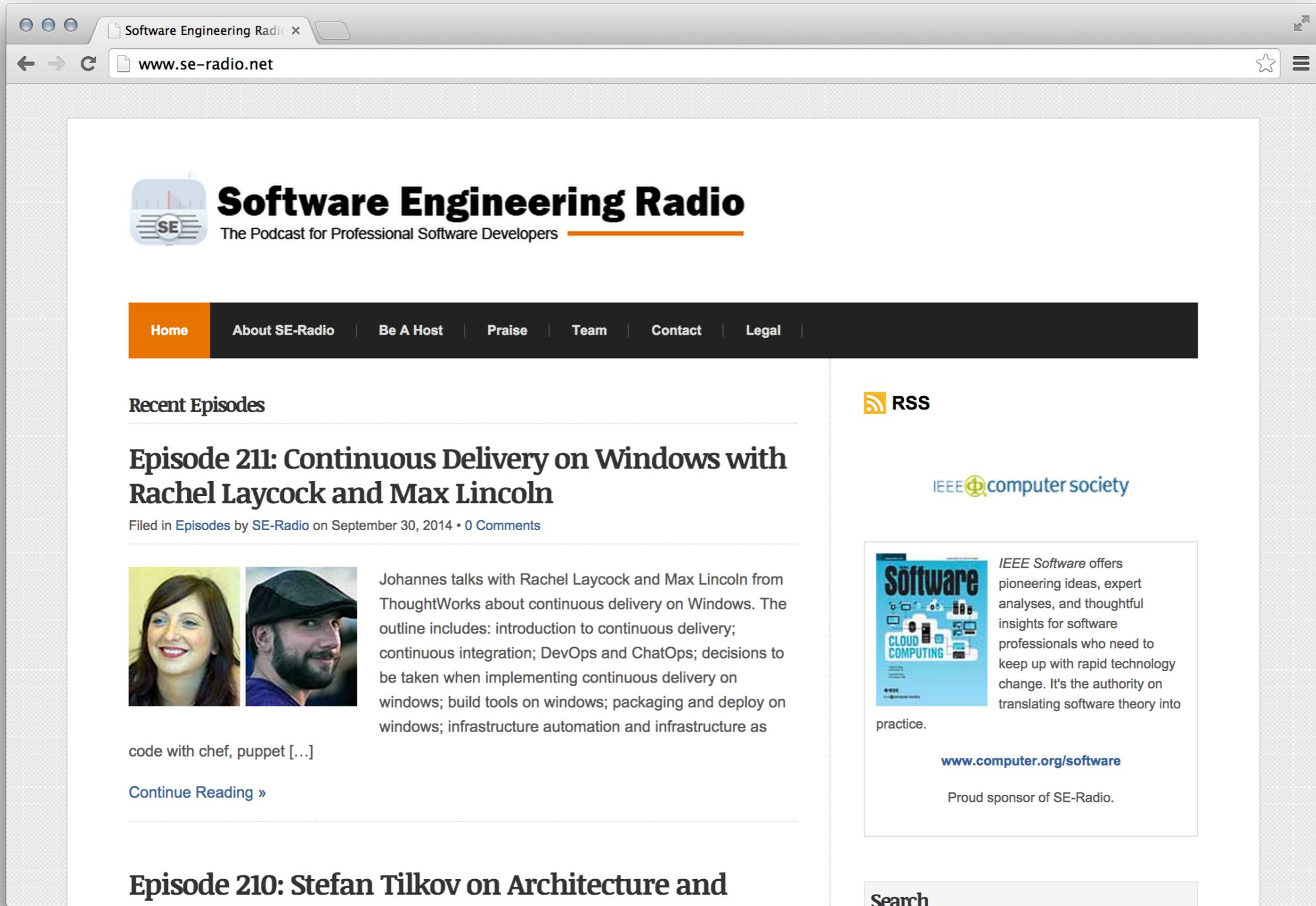
Organization | 20

---

- **Design Patterns - Elements of Reusable Object-Oriented Software**; Erich Gamma, Richard Helm, Ralph Johnson, John Vlissides; Addison-Wesley, 1995
- **Applying UML and Patterns - An Introduction to Object-oriented Analysis and Design**; Craig Larman; Prentice Hall

# A Recommended / Very Useful Podcast

Organization | 21



The screenshot shows a web browser window displaying the Software Engineering Radio website. The title bar reads "Software Engineering Radio" and the address bar shows "www.se-radio.net". The main content area features the "Software Engineering Radio" logo and the tagline "The Podcast for Professional Software Developers". A navigation menu at the top includes links for Home, About SE-Radio, Be A Host, Praise, Team, Contact, and Legal. Below the menu, a section titled "Recent Episodes" highlights "Episode 211: Continuous Delivery on Windows with Rachel Laycock and Max Lincoln", dated September 30, 2014. It includes two small profile pictures of the hosts and a summary of the episode content. To the right, there's an "RSS" feed icon and a sidebar featuring the IEEE Computer Society logo and information about their publication "IEEE Software". A search bar is visible at the bottom right.

**Software Engineering Radio**  
The Podcast for Professional Software Developers

Home | About SE-Radio | Be A Host | Praise | Team | Contact | Legal

Recent Episodes

**Episode 211: Continuous Delivery on Windows with Rachel Laycock and Max Lincoln**  
Filed in [Episodes](#) by SE-Radio on September 30, 2014 • 0 Comments

Johannes talks with Rachel Laycock and Max Lincoln from ThoughtWorks about continuous delivery on Windows. The outline includes: introduction to continuous delivery; continuous integration; DevOps and ChatOps; decisions to be taken when implementing continuous delivery on windows; build tools on windows; packaging and deploy on windows; infrastructure automation and infrastructure as code with chef, puppet [...]

[Continue Reading »](#)

**IEEE Computer Society**

 IEEE Software offers pioneering ideas, expert analyses, and thoughtful insights for software professionals who need to keep up with rapid technology change. It's the authority on translating software theory into practice.

[www.computer.org/software](http://www.computer.org/software)

Proud sponsor of SE-Radio.

Search

# External Talks / Events

Organization | 22

---

- **MSG**

“Requirements Engineering”  
December, 2015

- **Capgemini**

Excursion / One-day Workshop  
December, 2015

