

# Lehre / Lehrkonzept

Applied Software Engineering

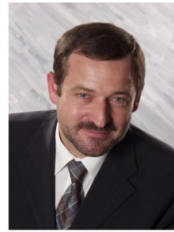
Praktische Softwaretechnik

It is Friedrich-Alexander University Erlangen-Nürnberg – FAU, in short.  
Corporate identity wants us to say “Friedrich-Alexander University”.



**Klaudia Dussa-Zieger**

Method Park AG



**Bernd Hindel**

Method Park AG



**Martin Jung**

Develop Group



**Detlef Kips**

Develop Group



**Wolfgang Mauerer**

Siemens (CT)



**Erich Meier**

Method Park



**Norbert Oster**

FAU (I2)



**Dirk Riehle**

FAU (OSS)



**Peter Wilke**

FAU (I5)

## Professors

Hindel: PSWT, SPM

Kips: PSWT, OOAD (UML)

Riehle: PSWT, ADAP, AMOS, ARCH, FLOSS, PROD, NYT

## Academic lecturers

Oster: PSWT, TSWS (with Dussa-Zieger)

Wilke: DP

## Industry lecturers

Dussa-Zieger: TSWS (with Oster)

Jung: ARCH (with Riehle), OOAD (with Kips)

Mauerer: NYT (with Riehle)

Meier: PROD (with Riehle)

1. **Product Manager**
  2. **Engineering Manager**
  3. **Software Architect**
  4. **Software Developer**
  5. **Researcher**
- } **Project Manager**

Project management is viewed as a combination of product and engineering management.

- 1. Established Companies**
- 2. Start-up companies**
- 3. Research labs**

We teach for three different work contexts after school.

We are particularly keen on helping create student start-ups:

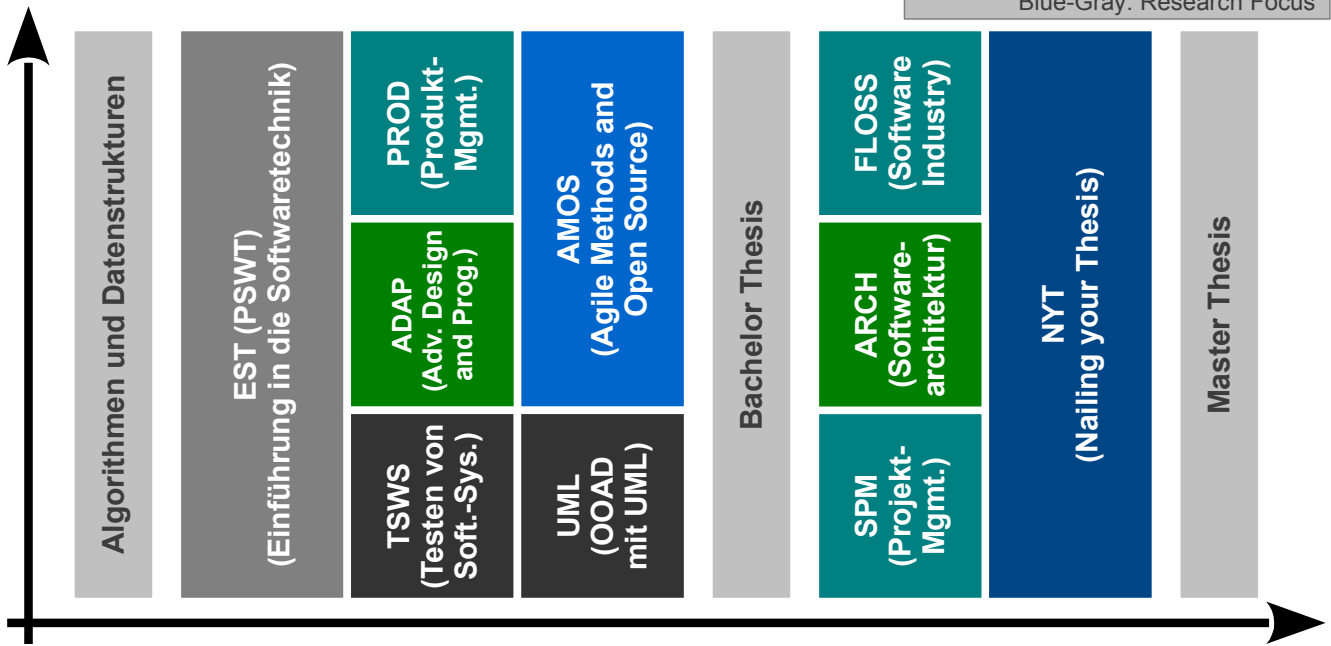
See <http://startupinformatik.de> and  
the AMOS project, our flagship project course

# Curriculum

Green + Gray: Technical Focus

Turquoise: Managerial Focus

Blue-Gray: Research Focus



For course syllabi, literature, and schedules see <http://osr.cs.fau.de/teaching/overview/>

PROD – Product Management (English)

SPM – Software-Projektmanagement (German)

ADAP – Advanced Design and Programming (German)

OOAD (a.k.a. UML) – Objektorientierte Analyse und Design (German)

AMOS – The AMOS Project / Agile Methods and Open Source (English)

TSWS – Testen von Softwaresystemen (German)

FLOSS – Free, Libre, and Open Source (Business) (English)

ARCH – Software Architecture (German)

NYT – Nailing your Thesis (Performing Scientific Work) (English)

## Project-Oriented Teaching Approach (Examples)

In **“Nailing your Thesis” (NYT)**, a large software vendor asked:

“We strictly follow test-driven development (TDD). For six months last year, however, we decided to 'just hack it' and ignore TDD to speed up development. Later, we cleaned up. It is not clear what was more productive. **Please investigate.**”

In **“Agile Methods and Open Source” (AMOS)**, another software vendor asked:

“We would like to enhance the functionality of our products by embedding social media information from Twitter, Facebook, etc. We don't know how this could look like. **Please develop a concept prototype.**”

In **“Product Management” (PROD)**, yet another software vendor asked:

“We need to understand the mobile devices opportunity for our product. The importance of the opportunity is not clear to us. **Please develop a business plan and a product road-map** for a possible push into the mobile market.”

Most of our courses work with industry partners for meaningful class exercises.

Typically, “class exercises” are semester-long projects:

- The industry partner provides a question / challenge;
- The lecturer ensures process and learnings;
- The students rise up to the challenge.

Out of NYT come research Master and Ph.D. students.

Out of AMOS come student start-ups.

# Industry Partners



See <http://osr.cs.fau.de/industry/partners/> for (somewhat) up-to-date list of industry partners.

## Links and Materials

- Lehr- und Forschungsallianz Praktische Softwaretechnik
  - Home page: <http://pswt.cs.fau.de/>
- Open Source Research Group (Professur für Open-Source-Software)
  - Home page: <http://osr.cs.fau.de>
  - Teaching overview: <http://osr.cs.fau.de/teaching/overview/>
  - Group reports: <http://osr.cs.fau.de/category/general/letters-to-stakeholders/>
  - Industry partners: <http://osr.cs.fau.de/industry/partners/>
  - Publications: <http://dirkriehle.com/publications/>



# Thank you! Questions?

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[dirk@riehle.org](mailto:dirk@riehle.org) – <http://dirkriehle.com> – [@dirkriehle](#)

Final Theses: <http://osr.cs.fau.de/fun>