Introduction to The AMOS Project

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AMOS A01

Course Goals 1 / 2 [1] [2] [3] [4]

To introduce students to agile methods by creating useful open-source software in a team

[1] Professional = ambition + collaboration with external partner
[2] Agile methods = our focus here, specifically Scrum + XP
[3] We teach both overall processes as well as best practices
[4] Useful software is software that has value to someone!

Course Goals 2 / 2

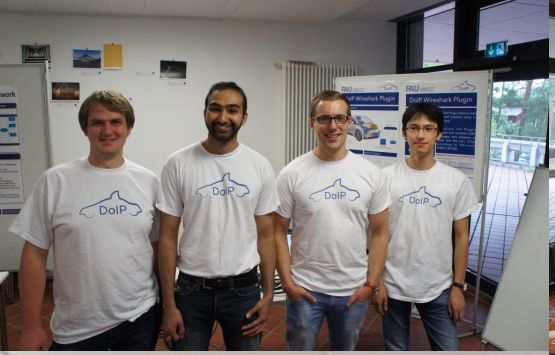
Learning objectives

- Gain conceptual understanding and practical skills of using
  - agile software development methods
  - software project management tools
  - software development tools
- Learn how to work
  - with an external stakeholder
  - in a (student) project team

Project objectives

- Develop useful open-source software
- Perform a great demo on demo-day!

Industry Partners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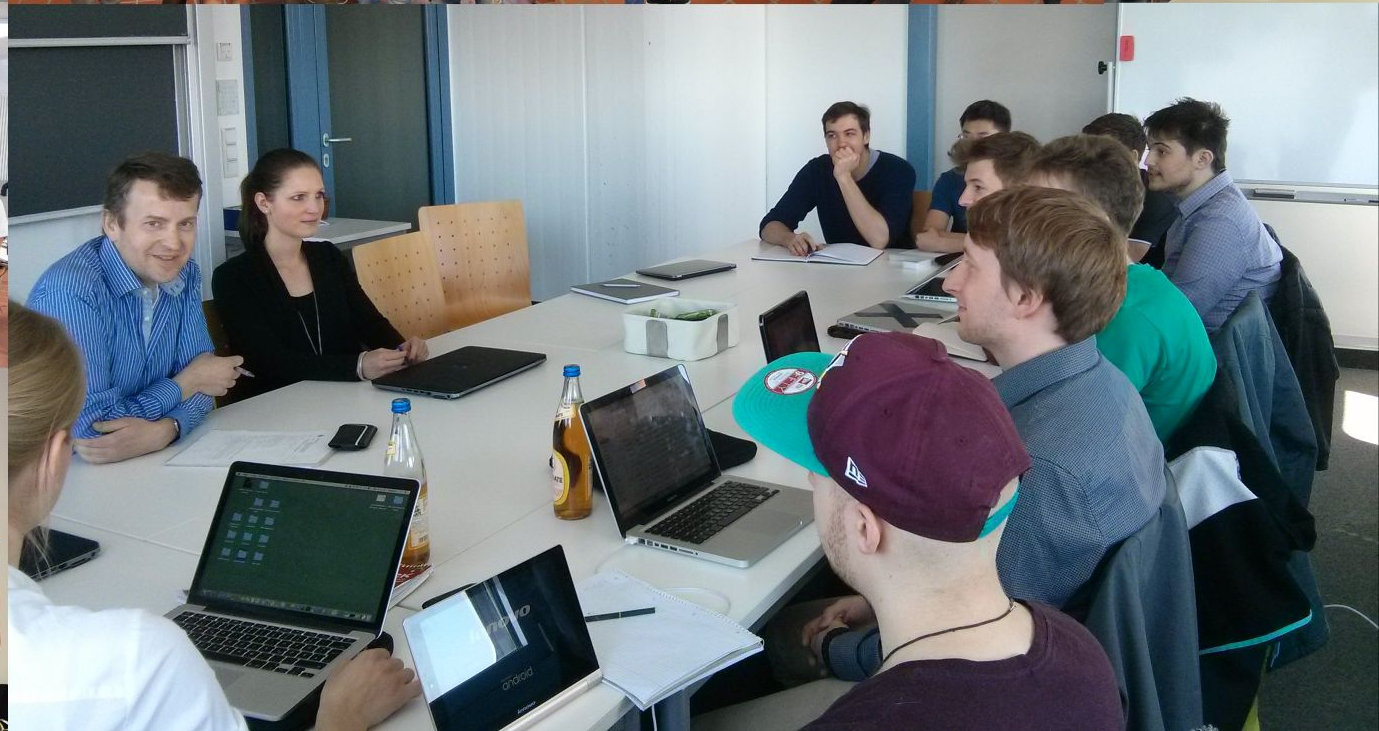
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Skills Required for Course

General skills

- Willingness and ability to work in a team
- Ability to acquire skills during the project

Role-specific skills

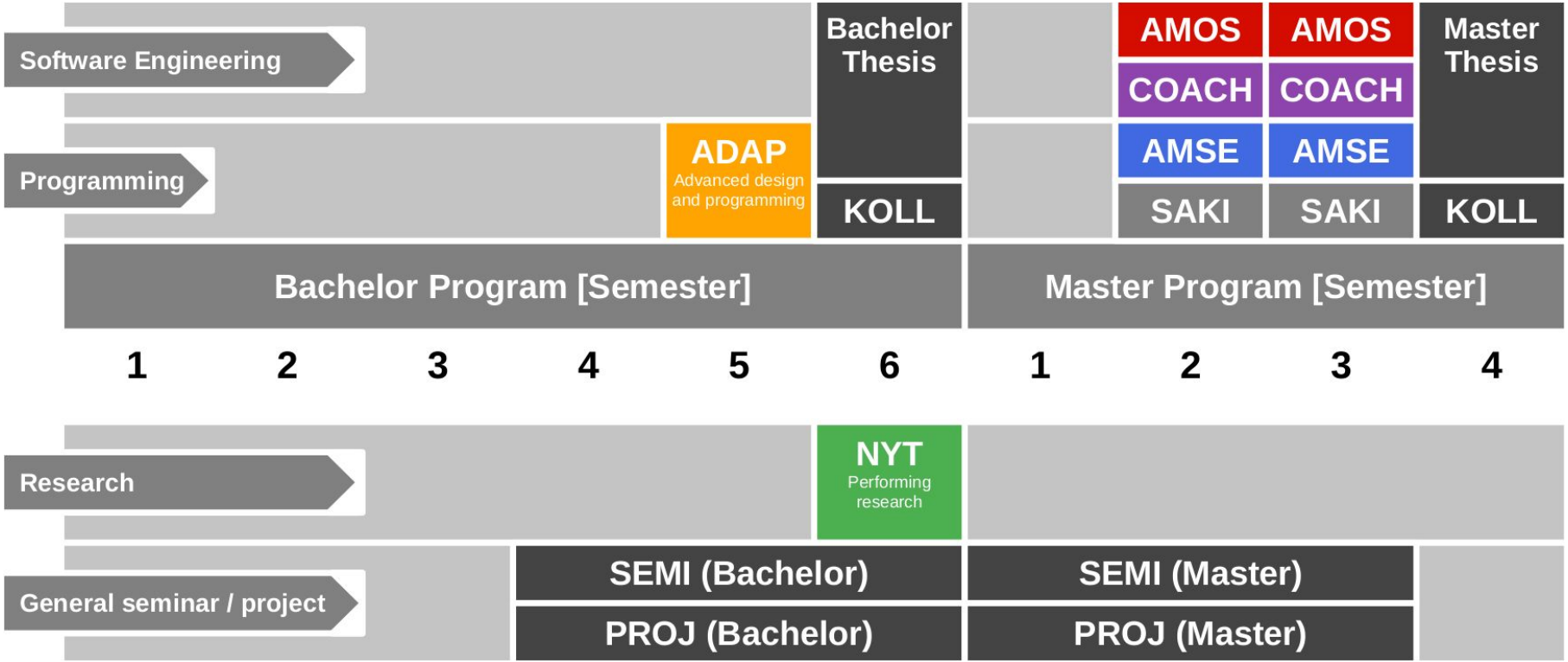
- Product owner (PO) role
  - Strong conceptual thinking, ability to communicate well, affinity to technology
- Software developer (SD) role
  - Technology (specific to project), development tools like git, test-driven development
- Scrum Master (SM) role
  - Past successful experience as an AMOS product owner or software developer

Structure and Content of Course

#1 Team and tools	#2 Scrum and AMOS	#3 Agile processes	#4 Agile planning	#5 Agile programming
1. Team contract 2. Team logo / T-shirt 3. Planning documents 4. Feature board 5. Code repository 6. Impediments backlog 7. Standup emails 8. Happiness index	1. The AMOS process 2. The team meeting 3. Sprint review 4. Sprint release 5. Sprint retrospective 6. Sprint planning 7. Bill of materials 8. Software architecture	1. Software development 2. Plan-driven development 3. Agile methods 4. Scrum	1. Product goal 2. Product glossary 3. Product backlog 4. Sprint planning 5. Release planning 6. Definition of done 7. Roadmapping	1. Daily scrum 2. Programming 3. Refactoring 4. Test-driven development 5. Code review 6. Build processes

#6 Agile coaching	#8 Workshop	#12 Demo day prep	#14 Demo day	#15 Project retro
1. Agile coaching 2. Process improvement 3. Sprint retros 4. Release retros 5. Project retros 6. Documentation	1. Workshop	1. Demo day slide 2. Demo video	1. Demo day!	1. Project report 2. Project retrospective

Course Position in Curriculum



Modules and Courses

		Courses (Lehrveranstaltungen)			
		AMOS-VL	AMOS-UE (Team Meeting)	COACH-VL	Total ECTS
Modules	AMOS-PO	x	x	–	5
	AMOS-SD	x	x	–	9 / 10
	AMOS-SM	+	x	x	3
	COACH	+	x	x	5

Availability of Modules

		University			
		Univ. Erlangen	TU Berlin	FU Berlin	
Modules	AMOS-PO	x	–	–	
	AMOS-SD	x	x	x	
	AMOS-SM	–	x	–	
	COACH	x	–	–	

Course Grading [1] by Role (Module)

Product Owner (AMOS-PO)

- ~~Theory (lectures) = 20% of grade~~
  - ~~2 SWS in 5 ECTS = 20%~~
  - ~~As measured by class quizzes~~
  - ~~Grading scale is [0..10] points~~
- Practice (project) = 100% of grade
  - Contribution to teamwork = 50%
    - As measured in team meetings
    - Grading scale is [0|1|2|3]
  - Independent work = 50%
    - As measured by artifacts
    - Grading scale is [0|1|2|3]

Software Developer (AMOS-SD)

- ~~Theory (lectures) = 10% of grade~~
  - ~~2 SWS in 10 ECTS = 10%~~
  - ~~As measured by class quizzes~~
  - ~~Grading scale is [0..10] points~~
- Practice (project) = 100% of grade
  - Contribution to teamwork = 50%
    - As measured in team meetings
    - Grading scale is [0|1|2|3]
  - Independent work = 50%
    - As measured by artifacts
    - Grading scale is [0|1|2|3]

[1] Also see http://oss.cs.fau.de/teaching/course-resources/grading-schemes-and-scales/

Class Quizzes

Each class session starts with a class quiz

- A quiz will test your understanding of last session's topic
- A quiz typically has 5 questions and will last 10 minutes
- The overall quiz is graded using [0..10] scheme (10 points in total)

A class quiz will open precisely when class starts

- The quiz is administered automatically
- It is your job to have reliable Internet access etc.
- There is no way to make up for a missed quiz

Collaboration and Grading

We are required to grade you individually

If you collaborate, for example,

- by pair programming
- by pair designing

you agree to be graded jointly

Course Registration vs. Exam Registration

Step 1: Course registration (German: Kursanmeldung)

- Students sign up through the course management system
- You may or may not get in, various rules and regulations apply
- The earlier you sign up, the more likely you are to get in

Step 2: Exam registration (German: Prüfungsanmeldung)

- During the first weeks of the course, you can decide to drop out
- Four weeks (or so) into the semester, you can register for the exam
- After exam registration closes, your decision is binding

Receiving a Grade for the Course

If you want to receive a grade

- You must register through your university's exam registration system
  - **Your degree program may have split the course into two (VL + UE)**
  - **Please check asap that the course is available in your degree program!**

In case of problems, please see

- https://oss.cs.fau.de/teaching/course-resources/course-registration/

Otherwise: No grade

No Oral or Written Exam [1] [2]

[1] If both you and we don’t want to
[2] You still have to register for the course

Course Language [1]

Class

- Lecturer: English
- Student: Choice of German or English

Project

- Instructor: English
- Team: Choice of German or English

[1] See https://oss.cs.fau.de/2012/03/10/english-or-german-deutsch-oder-englisch/

Course Organization

Course organization

- See https://amos.uni1.de

Course schedule

- See **Schedule** tab on Course Organization doc

Project descriptions

- See **Project Descriptions** on Course Organization doc

Project teams

- See **Project Teams** tab on Course Organization doc

Work Rhythm

Lectures

- Class day (90min.)

Team meetings

- Next slot after lecture

Project work (self-organized)

- Deliverables due according to schedule

Course Communication

Announcements are sent by email

- Through email aliases
- Through course management system

Administrative questions to teaching team

- Please ask your question in the course forum
- For private questions, use the teaching team email alias

Process questions to your Scrum Master

Thank you! Any questions?

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