Introduction to The AMOS Project

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AMOS A01

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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
 - o in a (student) project team

Project objectives

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

Industry Partners







































































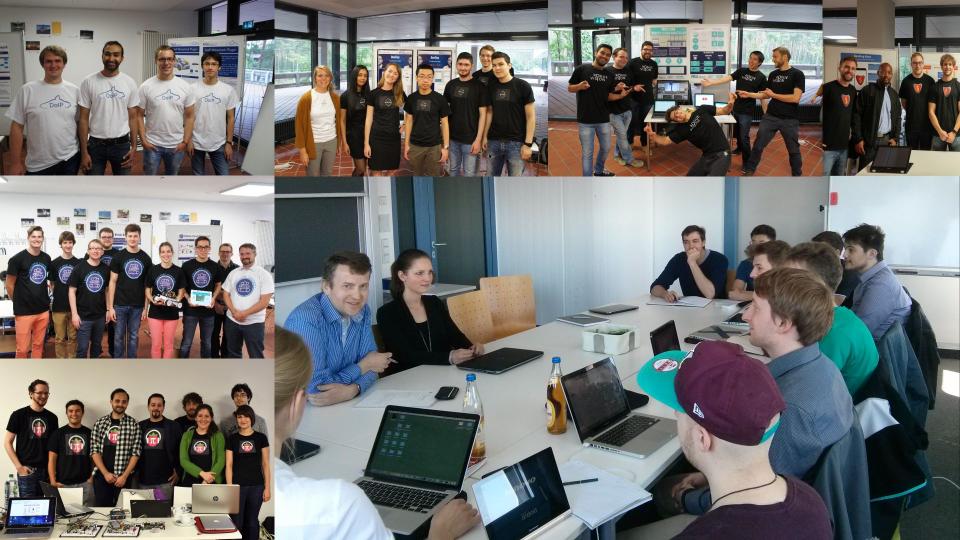












Skills Required for Course

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

- 1. Team contract
- 2. Team logo / T-shirt
- 3. Planning documents
- 4. Feature board
- Code repository
- 6. Impediments backlog
- 7. Standup emails
- 8. Happiness index

#2 Scrum and AMOS

- 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

#3 Agile processes

- Software development
- Plan-driven development
- 3. Agile methods
- 4. Scrum

#4 Agile planning

- 1. Product goal
- 2. Product glossary
- 3. Product backlog
- 4. Sprint planning
- 5. Release planning
- 6. Definition of done
- 7. Roadmapping

#5 Agile programming

- 1. Daily scrum
- 2. Programming
- 3. Refactoring
- Test-driven development
- Code review
- Build processes

#6 Agile coaching

- 1. Agile coaching
- 2. Process improvement
- 3. Sprint retros
- 4. Release retros
- Project retros
- 6. Documentation

#8 Workshop

1. Workshop

#12 Demo day prep

- 1. Demo day slide
- 2. Demo video

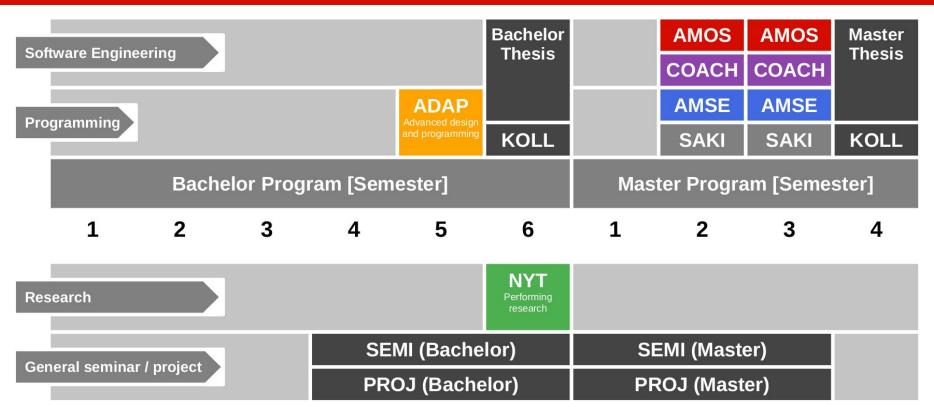
#14 Demo day

1. Demo day!

#15 Project retro

- 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	
	СОАСН	+	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	-		
	СОАСН	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

 - As measured by class quizzes
- 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]

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

https://profriehle.com

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]



Course Language [1]

Class

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

Project

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

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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