

Software Design Course: Experts for Digitization

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TH Aschaffenburg
university of applied sciences

Aschaffenburg University of Applied Sciences

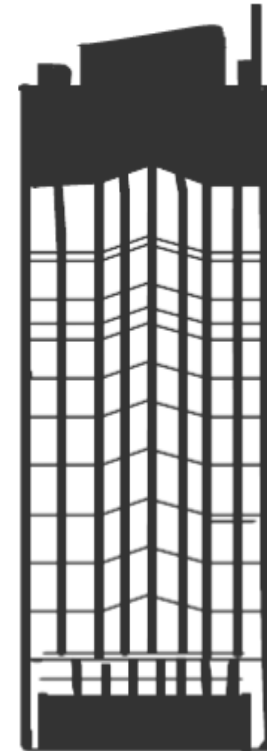
- May 1994:** Foundation
- October 1995:** Start of lectures
- October 2000:** Independence
- March 2019:** Renaming to „Technische Hochschule“
- current:** more than 3.300 students
2 faculties
13 Bachelor's programmes
6 Master's programmes



Historical campus in Aschaffenburg

Central Question:

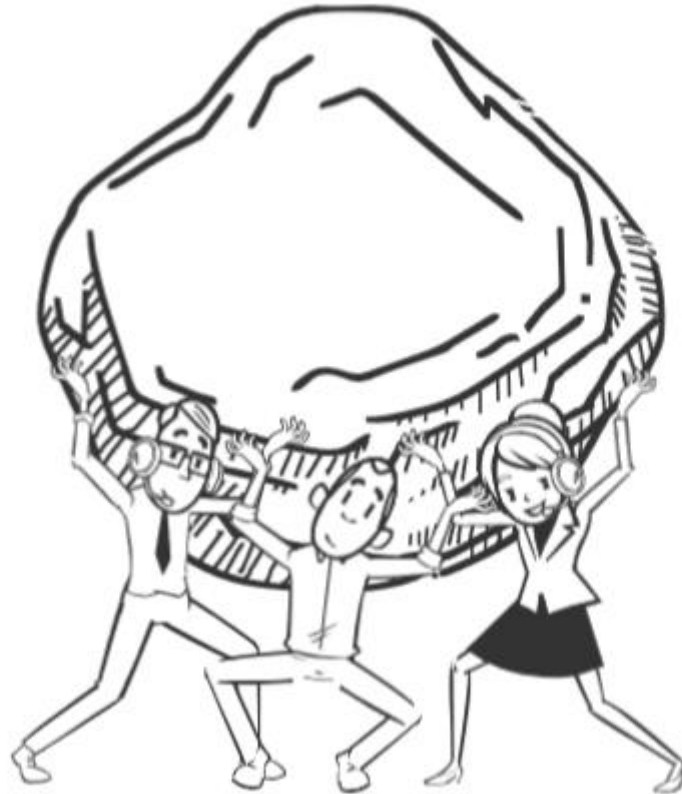
How do you build software "right"?



#professionalSoftwareDevelopment

*So that everything works smoothly
you need strong teams and good planning!*

#professionalSoftwareDevelopment



What is Software Design in Aschaffenburg?

#studyInAB

Combining technological excellence and project management

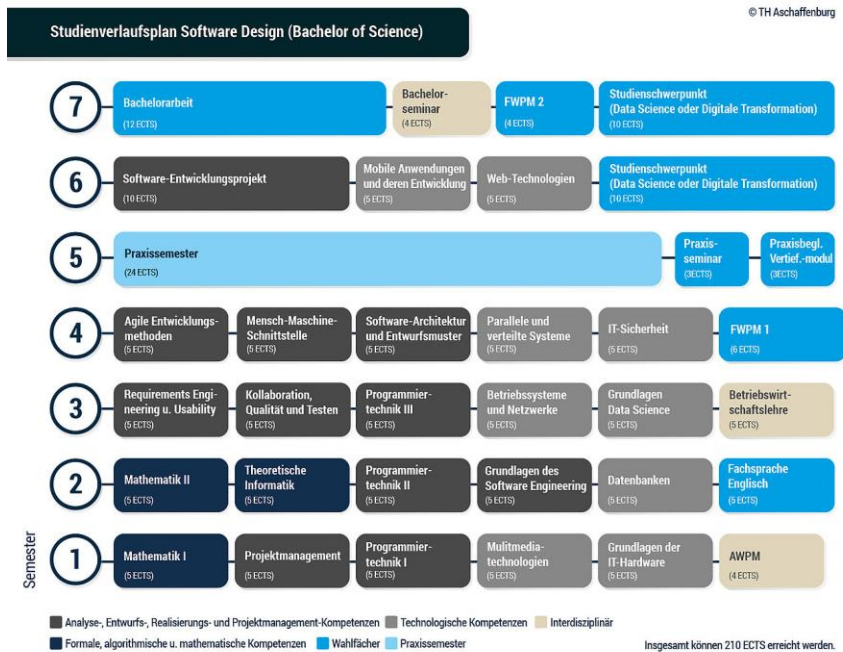
Because strong teams build cool software!



Software Design course contents

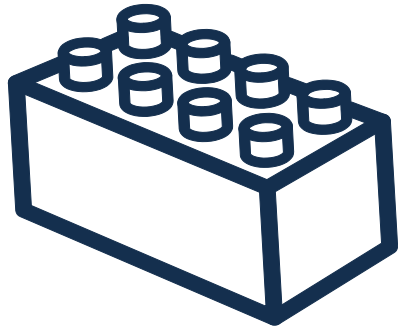
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All of these exciting issues are also reflected in the curriculum....



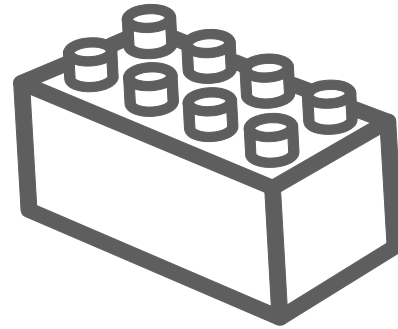
Software Design course contents

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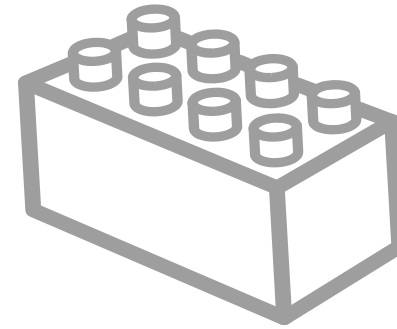
ALGORITHMS, MATHEMATICS

e.g. mathematics, theoretical
computer science



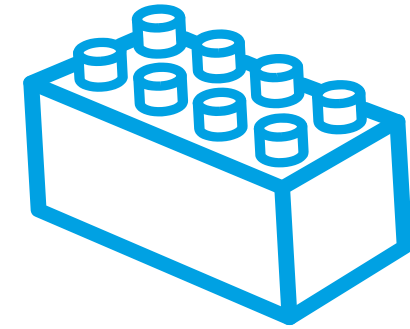
SOFTWARE ENGINEERING, PROJECT MANAGEMENT

e.g. programming technology, QA and
testing, software architecture, agile
development methods



TECHNOLOGY

e.g. IT hardware, databases,
data science, mobile apps



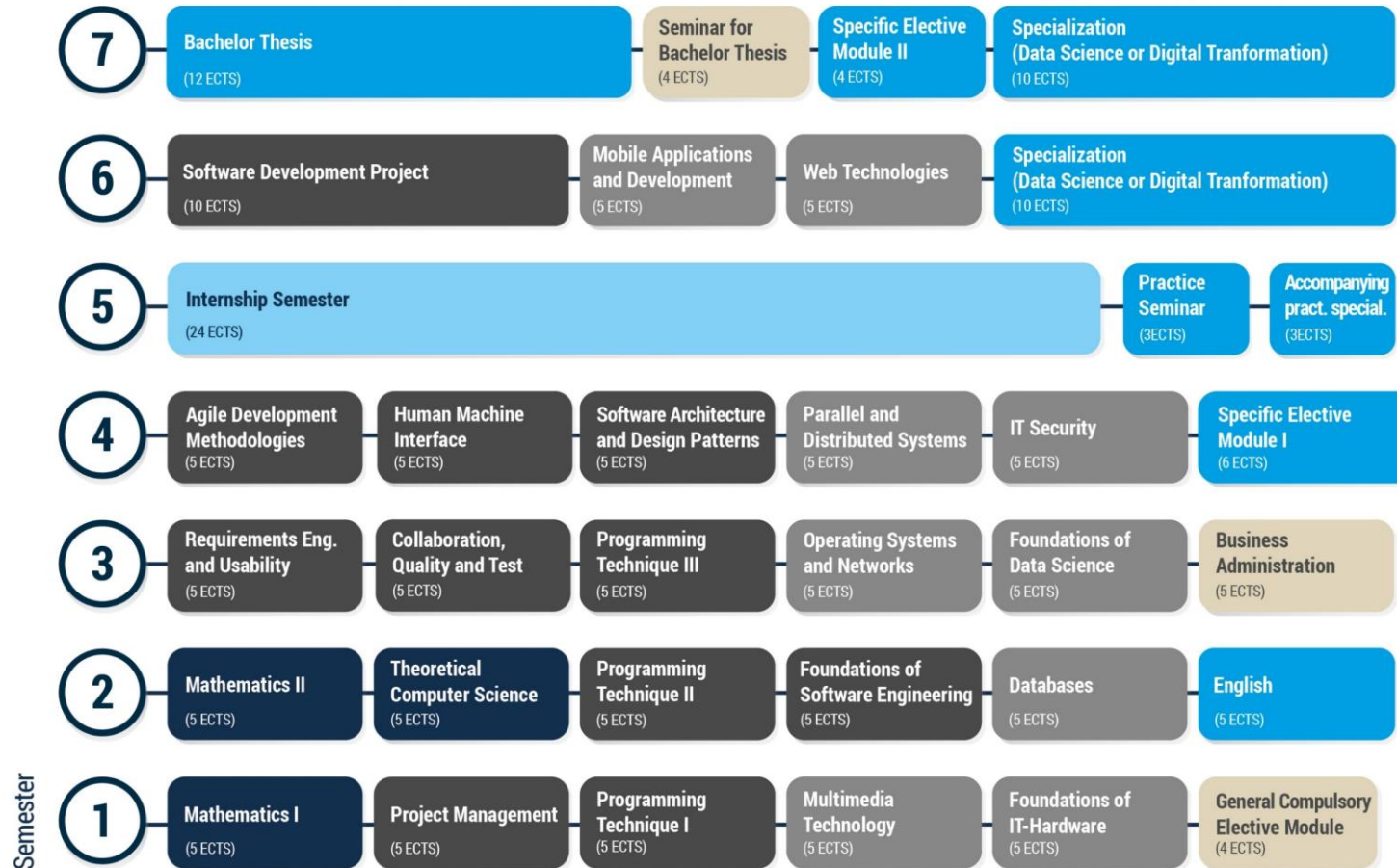
INTERDISCIPLINARY, ELECTIVES

e.g. english, business
administration, different electives

Study plan in large, mark practical parts

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Study Plan Software Design (Bachelor of Science)



Analysis, design, implementation and project management competencies
 Technological competencies
 Interdisciplinary
 Elective modules
 Practice seminar

A total of 210 ECTS can be achieved.

Dual Cooperative Study - Models

BACHELOR - ACADEMIC STUDIES & INTENSIVE IN-COMPANY TRAINING - (3.5 years)



BACHELOR - ACADEMIC STUDIES & APPRENTICESHIP - (4.5 years)



Dual Cooperative Study at the Aschaffenburg UAS

- Academic studies with practical experience in companies **and** apprenticeship with vocational certificate possible
- Sound scientific content with concrete practical relevance
- Application of the latest scientific findings thanks to research and cooperation with various companies in the region

Dual Cooperative Study - Experience from the Students' Perspective

What's good about dual cooperative studies?

- Theory can be experienced directly in practice
- Students may support the company and directly apply what they have learned.
- Contact persons available for many topics in the company.
- Students can get in touch with other (also former) students in the company and get some tips.
- Financially flexible
- Excellent career opportunities



Dual Cooperative Study - Experience from the Students' Perspective

– What are the challenges?

- Separation between working time and study time is not always clear.
- When there are many projects during the semester, it can get quite a bit stressful in between.
- You have to perform to a certain level (but not difficult due to the high practical relevance)

IFI - Initiative for Informatics



- Founded in 2018
- About 60 companies actively support software design and provide internships, in-company training, apprenticeships, ...
- Workshop with IFI and Aschaffenburg UAS
 - specialization: data science and digital transformation
 - internationalization
 - feedback to initial module plan
 - application orientation
 - dual cooperative studies

Software design

means much

PRACTICE



Further opportunities for practical experience in the Software Design program

– Use Case 1: Start-Up Support

- Gründerlab accompanies students from the idea to the founding of a company
- Project events offer the opportunity to apply academic knowledge directly in the context of the start-up project.

– Use Case 2: Teaching/learning cooperation

- Students can apply for and carry out real projects with companies from the region during lectures
- E.g. design thinking project, project management explainer videos

– Use Case 3: Profile Check

- Students gain insight into the requirements and profiles of future employers, e.g. in the context of applicant training and coaching.

– Use Case 4: Experience everyday work

- Students have the opportunity to carry out internships, practical phase (mandatory) and bachelor thesis in companies.

Software Design - a study with numerous Possible applications

QUALITY MANAGEMENT

Quality assurance and process management,
monitoring and assessment of IT systems

Use Case 2, 4 (projects in the company)
Dual study

SOFTWARE DEVELOPMENT

Software and software systems
development

Use Case 1, 2, 4 (projects in the company)
Dual study

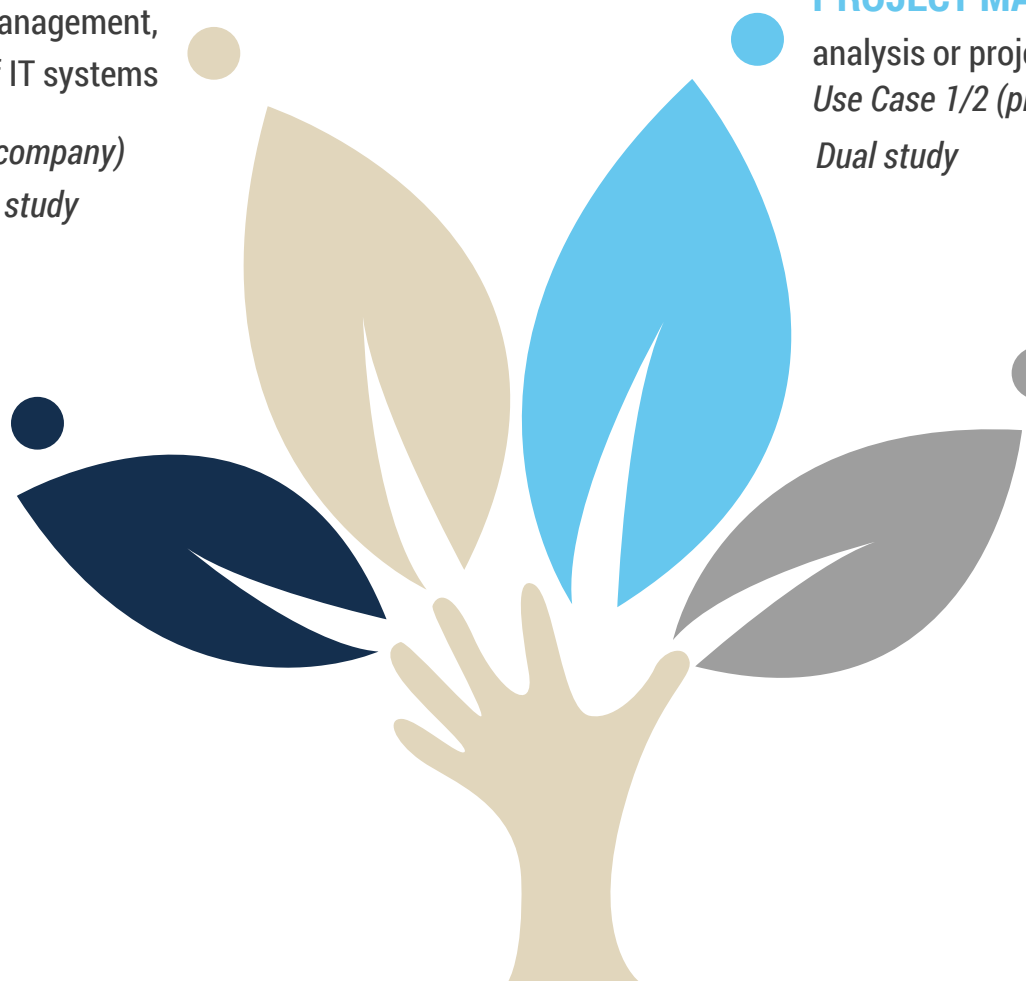
PROJECT MANAGEMENT System

analysis or project management
Use Case 1/2 (projects in the company, start-up)
Dual study

IT-LIFECYCLE

Consulting and sales of IT systems,
commissioning and service of IT systems

Use Case 1, 2, 4 (projects in the company)
Dual study



Software design

Ready to help
shape the future?



Possibilities for international cooperation



Exchange of students



Exchange of staff



Joint summer schools

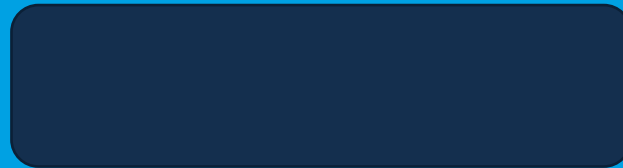


Joint student projects

Become a partner university



Questions?



Thank you for your attention!

2021

TBD



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