

Wicked Project Work

Timing: 4th semester

Scope: 10 ECTS

Content: The purpose of the course is to work on a more complicated project (“wicked project”) in a collaboration with a business partner completing an implementation and presenting it to the partner and the public.

Learning objectives:

Knowledge

The student must have knowledge of:

- The business domain of the partner
- Appropriate theories and practice of the problem domain
- Chosen development tools and practices
- the complete SDLC

Skills

The student can:

- Undertake and participate in a larger and more complicated project (“wicked project”)
- Choose appropriate systems development methods
- Analyze the problem and search for appropriate knowledge and practices
- Choose and evaluate appropriate development tools
- Develop and evaluate a suitable architecture for the system
- Setup the necessary supporting hardware, OS, database etc.
- Make test and quality assurance
- Communicate with the business partner

Competencies

The student can:

- Cooperate within a challenging project
- Participate in project leading
- Deliver a solution and present it to the partner and public
- Present prototypes and solution to the partner
- Act as a responsible partner in software development

The examination:

Internal oral exam of 20 minutes duration based on a project.

Assessment:

7-point grading scale. Grading is based on an overall assessment of the oral presentation and examination

Cybersecurity

Timing: 1st year of study **Scope:** 10 ECTS

Content: The purpose of the course is to introduce cybersecurity and penetration testing. Throughout the course we will look at key concepts and tools used in penetration testing.

Learning objectives:

Knowledge

The student must have knowledge of:

- Fundamental cybersecurity concepts
- The Linux operating system
- Tools used for penetration testing

Skills

The student can:

- Perform network analysis
- Discover vulnerabilities in known hosts
- Exploit vulnerabilities to gain access or maintain access to discovered hosts
- Use the tools associated with analysis, discovery and exploitation

Competencies

The student can:

- Find information on new vulnerabilities and how they can be exploited
- Use their knowledge to conduct penetration tests

The examination:

Internal oral exam of 15 minutes duration based on known questions.

Assessment:

7-point grading scale. Grading is based on an overall assessment of the oral presentation and examination.