MMD Esbjerg, Content Management Systems 2

(Mandatory)

Timing: 2nd year of study – third semester **Scope: 7,5** ECTS

Content: The purpose of this course is to get a deeper understanding of capabilities inside Wordpress including child-theme development, security and Search Engine Optimization.The purpose of this course is to develop the knowledge, skills and competencies of the student to understand the role of Content Management Systems when developing web applications. Furthermore, the aim of the course is that the student achieves a solid skill in handling and managing Wordpress websites from the installation, template design, implementation, configuration and further development.

Learning objectives:

Knowledge

The student must have knowledge of:

- The importance of Search Engine Optimization and how to implement it using Wordpress.
- Different types of cyberattacks a website can be compromised with and defenses to avoid it.
- How to manage a Wordpress website with multiple users, roles and capabilities.

Skills

The student can:

- Handle Wordpress in terms of installation, configuration and modification.
- Implement a custom theme for Wordpress with advanced techniques such as translation and collection of user data.
- Setup, configure and design a Wordpress website for different purposes such as blogs and webshops.
- Apply Search Engine Optimization to a Wordpress-based website.
- Protect a Wordpress website against certain cyber attacks.

Competencies

The student can:

- Manage different types of websites created in Wordpress.
- Autonomously stay informed and acquire new knowledge within international CMS and web application trends as well as other associated innovative technologies related to CMS and web application development.

The examination:

Internal oral exam of 20 minutes duration based on a project that's build throughout the semester. The exam has the form "known questions", where the students gets all the questions in advance and prepare them at home. At the exam one question is drawn and answered without additional preparation time.

Assessment:

7-point grading scale. Grading is based on an overall assessment of the oral presentation and examination, but not on the submitted project.

MMD Esbjerg, Digital Marketing

(Mandatory)

Timing: 2nd year of study **Scope: 7,5** ECTS

Content: The purpose of this course is to train the student to be able to understand the background and trends which affect digital marketing and social media. The student must understand the global social media platforms and the digital macro environment.
Digital Marketing strategies, tools and activities will be the focal point of this course.

Learning objectives:

Knowledge

The student must have knowledge of:

- Central theories and methods to develop digital marketing and social media
- Selection between different theories and methods contributes in realizing the company's digital marketing strategy, including social media strategy
- How to deal with digital marketing, choosing activities and online behavior
- Requirements and opportunities for dialogue and commitment in digital marketing including social media

Skills

The student can:

- Set up objectives and key areas for the digital marketing strategy of the company
- Evaluate the relevant digital marketing on platforms and social media based on needs and behaviour of the target group
- Plan and implement digital marketing activities, like user involvement and use of social media platform
- Set goals and KPIs (Key Performance Indicators) for a company
- Evaluate the potential and opportunities for sale and service of the company's products through digital marketing.

Competencies

The student can:

- Independently transform knowledge and skills to practical solutions within digital marketing and social media activities
- Participate in the development and implementation of a digital marketing strategy

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, but not on the submitted project.

MMD Esbjerg, Advanced JS apps

Timing: 2nd year of study Scope: 5 ECTS

Content: The purpose of this course is to train the student to be able to develop more advanced application with JS frameworks(VueJS), and integrate/connect their application to an external database/API(cloudless/open API). Using(consuming) these sources as backend services, the students will be taught how to use current cloud technologies with asynchronous/synchronous communication. The student will be able to setup and program basic CRUD web applications and exploring JavaScript's higher order functions, as well as use a modern CSS framework(vuetify, tailwind, etc).

Learning objectives:

Knowledge

The student must have:

- Common JavaScript-based framework knowledge (VueJS, React, AngularJS, ...)
- Common JavaScript, HTML, (S)CSS understanding
- Relevant knowledge about HTTP, Hosting, FTP, API/Databases
- Relevant knowledge about Command Line Interface (CLI), GitHub

Skills

The student has acquired the skills needed to:

- Set up a development environment: NodeJS, NPM, GitHub, etc
- Understand and use cloud-based communication technology
- Setup/Use a REST API and interact with it through the frontend
- Understanding of the lifecycle hooks and design pattern of the web application and installing plug-ins/add-ons to the framework
- Creating and Implementing frontend animations

Competencies

The student has acquired the competencies needed to:

- Choose suitable framework for implementation of web application in a specific project context
- Choose a suitable setup and programming language for implementation of web application in a specific project context
- Developing a solution based on specific project context

The examination:

The final grade will be based on an equal part of your exam presentation and dialogue plus your exam product that you have handed in (functional prototype).

Individual examination is 20 min per. Student divided into the following structure:

- 7,5min presentation
- 7,5min examination
- 5min voting

Assessment:

7-point grading scale. Grading is based on an overall assessment of the oral presentation and examination, but not on the submitted project.

MMD Esbjerg, Basic development environment

Timing: 2nd year of study Scope: 5 ECTS

Content: The purpose of this course is to train the student in multiple areas of web development. The student will be able to understand and use TypeScript syntax for types. To introduce the students to a strongly typed programming language, thus giving them better coding skills and tools for scaling(large) application and workflow.
Furthermore acquiring knowledge and skills, in the use of Command Line Interface (CLI), and elaborated usage of Git and GitHub to grasp a better understanding of workflow, version control and collaboration. The course will also cover how to automatically test a website to ensure that nothing breaks with future changes.

Learning objectives:

Knowledge

The student must have:

- Common knowledge of HTML and CSS
- Relevant knowledge about JavaScript and a JS Framework(e.g., Vue, React)
- What the Command Line Interface (CLI) is and how to use it
- Advanced Git-topics like branches and pull requests

Skills

The student has acquired the skills needed to:

- Research, try and test different code examples within an environment
- Write basic TypeScript syntax and declare Types
- Setup and use TypeScript in a JS framework (e.g., Vue, React)
- Implement and run automatic UI tests in different browsers
- Setup a development environment centered around continuous integration and delivery
- Utilize the development environment through the CLI

Competencies

The student has acquired the competencies needed to:

- Understand and upgrade JavaScript to Type Script and use TypeScript in JS framework (e.g., Vue, React)
- Develop a website with version control and automated UI testing as a part of a CI/CDbased development process

The examination:

15 min video divided into 7.5 min for each course subject (kw & tbmh)

Assessment:

7-point grading scale. Grading is based on an overall assessment of the video. No oral examination

MMD Esbjerg DTP ADOBE

Timing: 2nd year of study – third semester**: 5** ECTS

Content: The purpose of this course is to get a deeper understanding of capabilities inside Wordpress including child-theme development, security and Search Engine Optimization.
The purpose of this course is to develop the knowledge, skills and competencies of the student to understand the role of Content Management Systems when developing web applications. Furthermore, the aim of the course is that the student achieves a solid skill in handling and managing Wordpress websites from the installation, template design, implementation, configuration and further development.

Learning objectives:

Knowledge

The student must have knowledge of:

- The importance of Search Engine Optimization and how to implement it using Wordpress.
- Different types of cyberattacks a website can be compromised with and defenses to avoid it.
- How to manage a Wordpress website with multiple users, roles and capabilities.

Skills

The student can:

- Handle Wordpress in terms of installation, configuration and modification
- Implement a custom theme for Wordpress with advanced techniques such as translation and collection of user data
- Setup, configure and design a Wordpress website for different purposes such as blogs and webshops
- Apply Search Engine Optimization to a Wordpress-based website
- Protect a Wordpress website against certain cyber attacks

Competencies

The student can:

- Handle different kinds of material for the production of advanced digital user interfaces
- Join in teams and handle the design and development of advanced digital user interfaces
- Autonomously stay informed and acquire new knowledge within international design trends, innovative technologies and advanced digital user interfaces.

The examination:

The exam is an individual 5 minute pitch of a 24 hour project and a hand-in DTP portfolio.

Assessment:

7-point grading scale. Grading is based on an overall assessment of the oral presentation, the 24h assignment and the portfolio.

MMD Esbjerg, Elective 3. Sem. MMD – Title: Game Experiences

Timing: 2nd year of study Scope: 5 ECTS

Content: This elective course will have a primary focus on the development of 3D games/applications. The student will be introduced to the development of 3D models as well as animation techniques and subsequent export, as well as implementation in a 3D engine. The course will also grant the students familiarity with coding techniques used in the context of development for games. The course will be divided into two modules of which the two modules, respectively, will focus on the graphic expression and implementation + coding.

Learning objectives

Knowledge

The student will gain knowledge about:

- Interactive and / or digital genres, technologies, formats and platforms, related to computer games and game design
- User involvement and interactive story design
- Complex technological and technical issues, including advanced software / hardware and other equipment.

Skills

The student is able to:

- Independently design, develop, plan and implement digital interactive media and concepts
- Plan, organize and manage the processes of creating an interactive digital media solution
- Use specialized techniques, software and other relevant digital tools in relation to the production and development of interactive media

Competencies

The student is able to:

- Become the link between form, content, disciplines and the commercial potential of an interactive media application
- Enter into professional and interdisciplinary collaboration in the development of interactive media applications and for different media platforms
- Handle complex and development-oriented production processes

The examination:

The exam is an oral group exam based on a project and report. It is graded internally and according to the 7-point scale. A single individual grade is given based on an overall evaluation of the project, report and the oral group presentation.

30 minutes is allotted per group, divided into 5 minutes for the presentation, and 20 minutes for the exam. Evaluation and voting is 5 min.

Assessment:

7-point grading scale. Grading is based on an overall assessment of the oral presentation and examination, but not on the submitted project.

Fælles valgfag Esbjerg, Dronepilot til video & inspektion

Timing: 2. studieår Omfang: 5 ECTS

Indhold:
Dette valgfag kvalificerer den studerende til at bruge droner til professionelle formål i og uden for byområder.
Brug af droner med tilhørende udstyr, såsom kamera & termografikamera til videoproduktion og inspektion af bygninger samt installationer.
Ved bestået prøve opnår den studerende et dronecertifikat godkendt af Trafik-, Bygge- og Boligstyrelsen, som giver ret til at flyve en drone op til 2 kg til erhvervsmæssige formål i byområder.

Læringsmål:

Viden

Den studerende får viden om:

- regler og love relateret til dronepilot i felten
- lovgivning og etik vedrørende privatlivets fred
- luftrum, andre aktører, kort og grundlæggende meteorologi
- den menneskelige faktor og principper for godt luftmandskab
- sikkerhed og kommunikation omkring droneflyvning
- dronekomponenter og software
- driftsprocedurer før, under og efter flyvning

Færdigheder

Den studerende kan:

- planlægge, udføre og dokumentere flyvninger i overensstemmelse med gældende regler
- vurdere stand og sikkerheden af dronen og dens udstyr
- manøvrere og betjene droner, mens der indsamles videoer og datamateriale
- kommunikere med relevante myndigheder, herunder Trafikstyrelsen og Politiet
- vurdere faktorer, der har indflydelse på operationen, herunder personer, vejrforhold, nødprocedurer mv.
- redigere og præsentere indsamlet materiale fra droneoperationer

Kompetencer

Den studerende kan:

- håndtere udviklingsorienterede situationer i relation til anvendelse af droner
- deltage i fagligt og tværfagligt samarbejde om professionel anvendelse af droner
- tilegne sig ny viden, færdigheder og kompetencer i forhold til anvendelse af droner

Eksamen

Faget udprøves med i alt 2(3) prøver.

- **A1/A3 prøve:** Multiple choise prøve udbydes af trafikstyrelsen, og afholdes på EASV
- **A2 prøve (valgfri):** Multiple choise prøve udbydes af trafikstyrelsen, og afholdes på EASV.
- **Afsluttende intern prøve:** individuel projekt prøve baseret på gennemført praktisk arbejde inklusive skriftlig dokumentation. Bedømmelse efter 7-trins-skalaen. Der gives én individuel karakter ud fra en samlet bedømmelse.

Fælles valgfag Esbjerg, Drone pilot for video & inspection

Timing: 2nd year of study **Scope: 5** ECTS

Content:
This elective qualifies the student to use drones for professional purposes in and outside urban areas.
Use of drones with associated equipment, such as camera & thermography camera for video production and inspection of buildings and installations.
Upon passing the test, the student obtains a drone certificate approved by the Danish Trafik-, Bygge-, og Boligstyrelsen (Transport, Building and Housing Agency), which gives the right to fly a drone up to 2 kg for professional purposes in urban areas.

Learning objectives:

Knowledge

The student will gain knowledge of:

- rules and laws related to drone piloting in the field
- legislation and ethics regarding privacy
- airspace, other actors, maps, and basic meteorology
- the human factor and principles of good airmanship
- security and communication around drone flying
- drone components and software
- operating procedures before, during and after flight

Skills

The student can:

- plan, perform and document flights in accordance with applicable rules
- assess the condition and safety of the drone and its equipment
- maneuver and operate drones while gathering videos and data material
- communicate with relevant authorities, including the Danish Transport Authority and the Police
- assess factors that have an impact on the operation, including people, weather conditions, emergency procedures, etc.
- edit and present gathered material from drone operations

Competencies

The student can:

- handle development-oriented situations in relation to the use of drones
- participate in professional and interdisciplinary collaboration on professional use of drones
- acquire new knowledge, skills, and competencies in relation to the use of drones

Exam

The subject is examined with a total of 2(3) tests.

- **A1/A3 test:** Multiple choice test offered by the Danish Transport Agency and held at EASV.
- **A2 test(optional):** Multiple choice test offered by the Danish Transport Agency and held at EASV.
- **Final internal test:** individual project exam based on completed practical work including written documentation. It is assessed according to the 7-point scale. One individual grade is given based on an overall evaluation.