



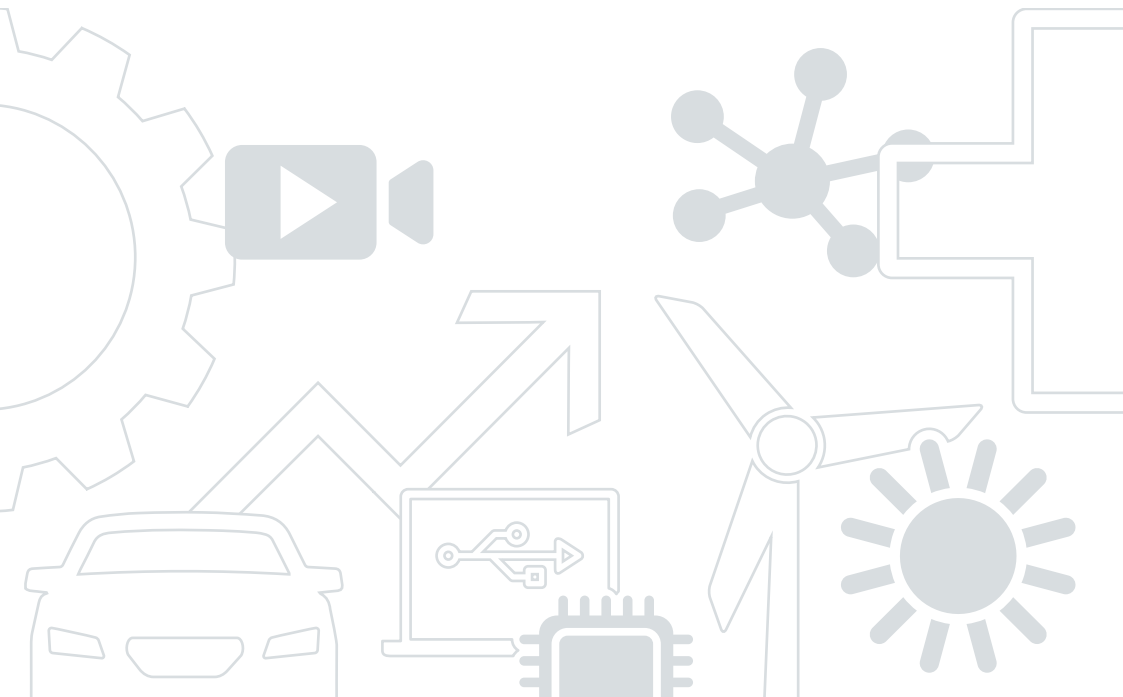
THU

Technische
Hochschule Ulm
University of
Applied Sciences

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SPDM – INTERNATIONAL SEMESTER PROGRAM IN DIGITAL MEDIA

Technische Hochschule Ulm
University of Applied Sciences



SPDM - Semester Program in Digital Media

International Semester Exchange Program

2023/2024

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Important Dates

Academic Calendar	
Fall semester:	Spring semester:
Classes start: Beginning of October	Classes start: Beginning of March
Holidays: 2 weeks in Dec/Jan (Christmas)	Holidays: 2 weeks in May/June (Pentecost)
Exams: 2 weeks in Jan/Feb	Exams: 2 weeks in July

Orientation days	
Fall semester:	Spring semester:
Arrival: September 4 th , 2023 or October 4 th , 2023	Arrival: 1 st working day of March
Orientation: Beginning of September / Beginning of October	Orientation: Beginning of March
Preparatory German intensive course:	Preparatory German intensive course:
1 or 2 weeks in September (depending on previous knowledge)	1 or 2 weeks in March (depending on previous knowledge)

Course Dates

You can find the actual course dates in our information leaflets:

[Semester dates – Spring](#)

[Semester dates - Fall](#)

Exams

In case a student fails a course, i.e. is awarded a grade of 4.7 or worse, a re-examination may be done within 2 weeks after the announcement of the exam results. The examiner decides both the date and the form of the re-examination.

For conducting the re-examination, the candidate has to be present in person. The exam may not be taken at the home university.

Coordination

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International Semester Program in Digital Media (SPDM)

The program:

We are pleased to welcome those who are interested in the Digital Media bachelor course, which combines design and technology of digital media.

Please notice, that our semester program is only open for enrollment by design students. We offer project-oriented classes conducted in German and English, with German students also enrolled.

In the first two semesters (basic course, 'Grundstudium'), the students learn the fundamentals of design, media technology and programming. Advanced lectures on the subject areas of publication, production and interactive systems follow in the third, fourth and sixth semesters (main course, 'Hauptstudium'). These are supplemented by lectures on the programming of web applications and computer graphics. During the practical semester (fifth semester), students work in graphics/design offices, audio/video studios or internet agencies on commercial media projects. The course will be completed with a practice-oriented final examination in the seventh semester.

The Digital Media course requires a particularly good aptitude for teamwork, creative problem-solving and communication. Contact with our international partner universities and a requirement to learn English to a professional level help open up opportunities abroad.

Normal course length: Seven semesters (including the practical semester) Final qualification: Bachelor of Arts (BA)

The maximum acceptance capacity for international students in our course program is 1-2.

Course Overview

The following lectures are possible:

SPDM Courses	Credits (ECTS)	
	Fall semester	Spring semester
Interaction Design I	10	
Programming	4	
Computer Graphics		7
Interaction Design II		5
Project in Photography		7
German as a foreign language (depending on the level)	2,3 or 5	2, 3 or 5

Language Courses:

Ulm University of Applied Sciences is offering an intensive German language course for students with no or little knowledge of German. The course takes place before the start of the program and runs two weeks. Students with previous knowledge of German can take part in an introductory one-week block course to refresh their German and learn about aspects of culture and daily life. The program is also accompanied by parallel German language classes for different levels during the semester.

Interaction Design I

Course of study	Digital Media
Abbreviation if required	IXD1
Semester	Fall semester, 2 nd year (3 rd semester)
Language of instruction	German / English
Curriculum specification	Compulsory for the Bachelor's Degree – Digital Media in the 3 rd semester
Academic form / SWS	In-class work and project: 8 hours/week
Credit points	10 ECTS-Credits
Course Requirements	Successful completion of the courses: Webdesign basics and Interface Design
Educational objective / Competency	<p>After the successful completion of this course, the students will be able:</p> <ul style="list-style-type: none"> • to successfully apply User-centered design (UCD) methodology in order to evaluate, plan, design and develop large scale websites • to observe and evaluate product and service related design factors holistically from differing perspectives (strategic design) • responsibly coordinate tasks within a project team • accurately document and convincingly present the project (challenge and solution incl. work approach and results)
Content	<ul style="list-style-type: none"> • Project overview • The User-centered design (UCD) process • Important aspects of User-centered interaction design (Research and analysis; Personas and goals; Scenarios and requirements; Information architecture and application structure; Element definition; Page types and flow; Sketching, paper prototyping; Key-Scenarios and action sequences; Design attributes and direction; Wireframes; Design elements and language; Visual design and prototyping) • Discussion of subtasks and work progress • Documentation and presentation of work results
Mode of evaluation	Course work, successful completion of the PP test

Programming

Course of study	Digital Media
Abbreviation if required	PROG
Semester	Fall semester, 1 st year (1 st semester)
Language of instruction	German / English
Curriculum specification	Compulsory for the Bachelor's Degree – Digital Media in the 3 rd semester
Academic form / SWS	4 hours/week
Credit points	4 ECTS-Credits
Course Requirements	none
Educational objective / Competency	<p>Upon successful completion of this course, students will be able to:</p> <p>Expertise</p> <ul style="list-style-type: none"> • Describe basic algorithms and data structures • Create simple algorithms • Design small class structures designs • Implement limited programming tasks in an object-oriented language • Develop programs using a contemporary integrated development environment <p>Methodological Competence</p> <ul style="list-style-type: none"> • Apply systematic approaches to software development • Analyze problems and evaluate current alternative solutions <p>Social and personal skills</p> <ul style="list-style-type: none"> • Discuss work results with fellow students and tutors
Content	<ul style="list-style-type: none"> • Basics (programming paradigm, von Neumann architecture, number representations, algorithms) • Procedural programming (elementary data types, arithmetic expressions, control structures, single and multi-dimensional arrays, strings, static methods) • Object-oriented programming (classes and objects, data abstraction, composition, inheritance, dynamic memory allocation) • Algorithms and Data Structures (conversion between different representations of numbers, simple search algorithms) • Modeling (design of object structures)
Examination requirements	none

Computer Graphics

Course of study	Digital Media
Abbreviation if required	CG
Semester	Spring semester, 2 nd year (4 th semester)
Language of instruction	German / English
Curriculum specification	Compulsory for the Bachelor's Degree – Digital Media in the 4 th semester
Academic form / SWS	6 hours/week
Credit points	7 ECTS-Credits
Educational objective / Competency	<p>Upon successful completion of the course, students understand the basic design, the structure and functions of 3D computer graphics. Independent application of basic and secondary methods and techniques with a focus on the individual CGFX- based imaging at the center.</p> <p>Control of the parameters of image composition and visualization, including all relevant design rules used by the independent planning and detailed working out of virtual representations are taught and consolidated.</p>
Content	<ul style="list-style-type: none"> • Historical background of computer graphics • Explanation relevant to the fundamentals of computer graphics geometry (for example: coordinate systems, two- and three-dimensional elements, projection methods) • The formal-aesthetic-oriented introduction: Basics of visualization, Image design rules • Introduction to composition, structure and function of CG programs • Technical Tutorial: Modeling, shaders, materials and textures, camera control, lighting, rendering • Independent planning and development of a CGFX based still (image)
Examination requirements	Successful completion of the PP test

Interaction Design II

Course of study	Digital Media
Abbreviation if required	IXD2
Semester	Spring semester, 2 nd year (4 th semester)
Language of instruction	German / English
Curriculum specification	Compulsory for the Bachelor's Degree – Digital Media in the 3 rd semester
Academic form / SWS	In-class work and project: 4 hours/week
Credit points	5 ECTS-Credits
Course Requirements	Successful completion of the courses: Webdesign basics, Interface Design and Interaction Design 1
Educational objective / Competency	<p>After the successful completion of this course, the students will be able:</p> <ul style="list-style-type: none"> • to evaluate, plan, design and prototype cross-platform applications • to select and adapt suitable interaction and design patterns to address project-specific design challenges
Content	<ul style="list-style-type: none"> • Project overview • Essential features of good apps – analysis and discussion of good practice examples • Advanced aspects of User-centered interaction design (Ubiquitous Computing: Chances and risks; Platforms and operating systems: Similarities and differences; Forms of interaction; Platform dependency and independence; Design languages and systems; platform specific design patterns; Advanced methods of prototyping and user testing) • Discussion of subtasks and work progress • Documentation and presentation of work results
Examination requirements	Course work, successful completion of the PP test

Project in Photography

Course of study	Digital Media
Abbreviation if required	FOTO
Semester	Spring semester, 1 st year (2 nd semester)
Language of instruction	German / English
Curriculum specification	Compulsory for the Bachelor's Degree – Digital Media in the 2 nd semester
Academic form / SWS	4 hours/week
Credit points	7 ECTS-Credits
Course Requirements	Successful completion of the course: image and film design
Educational objective / Competency	<p>After the conclusion of this course, the students will be able:</p> <ul style="list-style-type: none"> • to understand basic photographic design methods and principles • to use basic photographic design methods and principles in special areas of photography (e.g. product photography, people photography) • to develop photographic ideas and concepts for selected fields of photography and to communicate/visualize them in different variations and levels of detail with graphic and illustrative tools/media (i.e. pre visualization) • to identify and evaluate lighting conditions • to establish selected lighting conditions in the photo studio (continuous light and flash light) in order to solve special problems in the field of product and people photography • to discuss photographs depending on design criteria and to classify them concerning to target-groups and media specific conditions • to explain design decisions within the design process and to give reasons for the individual decisions • to document the photographic design process and to present the final project (oral presentation)
Content	<p>module element (ME) »basics of photography«: introduction to photography, spectrum of photography; development of the medium of photography; principles of analog and digital photography; camera and film formats and their applications in professional use; point of view; focal length; depth of field; aperture and shutter speed; film speed and sensor sensitivity; color temperature; filter;</p> <p>key subject »lighting design«: light sources and lighting situations; available light; artificial light; mixed light; selected lighting situations and techniques in the photo studio; professional exposure measurement;</p> <p>module element (ME) »project work«: sensitization exercises; module people photography, module product photography;</p>

	individual, supervised design process; presentation of the work results;
Examination requirements	Course work, successful completion of the PP test

German language

Semester	Fall semester and Spring semester
Learning objectives	The courses will provide competence in speaking, reading and writing German according to the respective level of the Common European Framework (CEFR).
Textbook	Menschen: Deutsch als Fremdsprache – Kursbuch Hueber-Verlag Menschen: Deutsch als Fremdsprache – Arbeitsbuch Hueber-Verlag Supplementary material provided by course coordinator
Mode of Evaluation	Written exam (and course participation where applicable)

Intensive Course in September (voluntary):

German Language Intensive Course	Lessons per week	Credit points
Beginner Level 1 (A1.1)	30 (5 x 6 lessons, 2 weeks)	2
Ankommen in Deutschland Language and Culture (Previous knowledge of A2 required)	30 (5 x 6 lessons, 1 week)	2

Language Courses during term:

German as a Foreign Language	Lessons per week	Credit points
Beginner Level 1 (A1.1)	8	2
Beginner Level 2 (A1.2)	4	3
Elementary Level 1 (A2.1)	4	5
Elementary Level 2 (A2.2)	4	5
Intermediate Level 1 (B1.1)	4	5
Intermediate Level 2 (B1.2)	4	5

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