Module Guide
Media Technology

Faculty Electrical Engineering and Media Technology

Examination regulations 01.07.2019

Date: Friday 07.10.2022 08:48

MT-01

Module code	MT-01
Module coordination	Prof. Dr. Franz Daiminger
Course number and name	F1101 F2101
Lecturer	Prof. Dr. Franz Daiminger
Semester	1, 2
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	8
ECTS	10
Workload	Time of attendance: 120 hours self-study: 180 hours Total: 300 hours
Language of Instruction	German

F1101

Type of Examination

written ex. 90 min.

F2101

Type of Examination

written ex. 90 min.

MT-02

Module code	MT-02
Module coordination	Prof. Dr. Detlef Brumbi
Course number and name	F1102 F2102
Lecturers	Prof. Dr. Werner Bogner Prof. Dr. Detlef Brumbi
Semester	1, 2
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	8
ECTS	10
Workload	Time of attendance: 120 hours self-study: 180 hours Total: 300 hours
Language of Instruction	German

MT-03

Module code	MT-03
Module coordination	Prof. Dr. Martin Jogwich
Course number and name	F1103 F2103
Lecturers	Prof. Dr. Martin Jogwich Prof. Dr. Gerhard Krump
Semester	1, 2
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	8
ECTS	10
Workload	Time of attendance: 120 hours self-study: 180 hours Total: 300 hours
Type of Examination	written ex. 90 min., written ex. 60 min.
Duration of Examination	150 min.
Language of Instruction	German

MT-04

Module code	MT-04
Module coordination	Prof. Dr. Detlef Brumbi
Course number and name	F1104 F3103 Web-Programming
Lecturers	Prof. Dr. Marcus Barkowsky Prof. Dr. Detlef Brumbi Prof. Stephan Windischmann
Semester	1, 3
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	8
ECTS	9
Workload	Time of attendance: 120 hours self-study: 135 hours virtual learning: 15 hours Total: 270 hours
Language of Instruction	German

F1104

Type of Examination

written ex. 90 min.

F3103 WEB-PROGRAMMING

Type of Examination

written ex. 90 min.

MT-05

Module code	MT-05
Module coordination	Prof. Stephan Windischmann
Course number and name	F3102 F4102
Lecturers	Prof. Dr. Peter Faber Prof. Stephan Windischmann Prof. Dr. Goetz Winterfeldt
Semester	3, 4
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	8
ECTS	9
Workload	Time of attendance: 120 hours self-study: 150 hours Total: 270 hours
Language of Instruction	German

Module Objective

Know the principles of web applications

Use Joomla

Create a Joomla Template

Basic programming with PHP and SQL

F3102

Type of Examination

written ex. 90 min.

F4102

Objectives

Know the principles of web applications

Use Joomla

Create a Joomla Template

Basic programming with PHP and SQL

Learning Content

1. Introduction
2. Internet applications
Joomla CMS as an example
3. PHP
a) Introduction
b) HTTP and HTML
c) Basics
d) Arrays
e) Functions
f) Form evaluation
g) Data manipulation
h) Object-oriented programming
4. Database Systems
a) Introduction and Terms
b) SQL basics
c) PHP and SQL

Entrance Requirements

Knowledge about HTML, CSS, Javascript as learned in course Web-Programming

Type of Examination

written ex. 90 min.

Methods

Project work, lectures and exercises

Remarks

Online resources:
PHP.net
SelfHTML von Stefan Münz, de.selfhtml.org

Recommended Literature

Lerdorf, Rasmus; Tatroe, Kevin:Programmieren mit PHP.Deutsche Übersetzung von Peter Klicman. 1. Auflage. Oktober 2002. ISBN 3-89721-177-7.

MT-06

Module code	MT-06
Module coordination	Prof. Dr. Gerhard Krump
Course number and name	F2015 F3104
Lecturer	Prof. Dr. Gerhard Krump
Semester	2, 3
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	8
ECTS	9
Workload	Time of attendance: 120 hours self-study: 150 hours Total: 270 hours
Language of Instruction	German

F2015

Type of Examination

written ex. 90 min.

F3104

Type of Examination

MT-07

Module code	MT-07
Module coordination	Prof. Dr. Gerhard Krump
Course number and name	F3101 F4101
Lecturer	Prof. Dr. Gerhard Krump
Semester	3, 4
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	8
ECTS	10
Workload	Time of attendance: 120 hours self-study: 180 hours Total: 300 hours
Language of Instruction	German

F3101

Type of Examination

written ex. 90 min.

F4101

Type of Examination

written ex. 90 min.

MT-08 DESIGN BASICS

Module code	MT-08
Module coordination	Prof. Susanne Krebs
Course number and name	F1106 Design Basics 1 F2104 F2106 Design Basics 2
Lecturers	Prof. Susanne Krebs Johannes Paffrath
Semester	1, 2
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	12
ECTS	13
Workload	Time of attendance: 180 hours self-study: 210 hours Total: 390 hours
Language of Instruction	German

F1106 DESIGN BASICS 1

Type of Examination

project work, written ex. 60 min.

F2104

Type of Examination

project work

F2106 DESIGN BASICS 2

Type of Examination

project work

MT-09 MEDIA DESIGN 1

Module code	MT-09
Module coordination	Prof. Susanne Krebs
Course number and name	F4104 Media Design I
Lecturer	Prof. Susanne Krebs
Semester	4
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	4
ECTS	4
Workload	Time of attendance: 60 hours self-study: 60 hours Total: 120 hours
Language of Instruction	German

MT-10 ANIMATION BASICS

Module code	MT-10
Module coordination	Prof. Joerg Maxzin
Course number and name	F3106 Animation Basics
Lecturer	Prof. Joerg Maxzin
Semester	3
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Level	Bachelor
Semester periods per week (SWS)	4
ECTS	4
Workload	Time of attendance: 60 hours self-study: 60 hours Total: 120 hours
Type of Examination	project work
Weight	4 x
Language of Instruction	German

Module Objective

The students have acquired general basics of animation, which are the prerequisite for further subjects in the degree program media technology, such as film, 3D animation and visualization or even forms of interactive media design.

Expertise
The students have gained an overview of the historical beginnings up to today's application forms of animation and have appropriated general principles on the topic.

Methodological skills
In their own practical exercises, the students have mastered tasks from the field of animation in all stages of production, from the design, through the elaboration, to the post-processing and final production.

Personal competence
The students have practiced interdisciplinary work in practical exercises for animation and have also gained teamwork and social skills by working in groups.

Applicability in this Program

MT-15 Modellierung

MT-19 Bachelorarbeit

MT-24 Visualisierung und Animation

MT-31 Praxisbegleitende Lehrveranstaltungen

MT-32 Industriepraktikum

Applicability in this and other Programs

Basis for film, animation and 3D visualization.

Entrance Requirements

None

Learning Content

1. **Introduction**
    - 1.1. The term animation
    - 1.2. Perception of moving images
    - 1.3. Application examples
2. **History of animation**
    - 2.1. Origin of animation
    - 2.2. Types of animations
    - 2.3. Today's application fields
3. **Working with time-based media**
    - 3.1. Introduction to time-based 2D software
    - 3.2. Practical exercises in 2D software
4. **Introduction to stop motion technology**
    - 4.1. Finding ideas
    - 4.2. Storyboarding for animation
    - 4.3. Creating Animatics
5. **Designing protagonists**
    - 5.1. Inner design - character
    - 5.2. Outer design - appearance

6. **Shaping Scace**
    - 6.1. Design of stages and environments
    - 6.2. Basics of lighting
7. **Animation Basics**
    - 7.1. Dramaturgy for animation
    - 7.2. Principles of animation
8. **Camera and movement**
    - 8.1. Space and time in animation
    - 8.2. Basics of recording technology
9. **Introduction to post-production**
    - 9.1. Introduction to compositing software
    - 9.2. Practical exercises in compositing software
10. **Practical application of post-production**
    - 10.1. Working with single image sequences
    - 10.2. Sound editing
    - 10.3. Output of animations as a movie

Teaching Methods

Lecture with tutorials. Work in groups. Final presentation of semester results.

Remarks

Support through the e-learning platform. Exhibition visits.

Recommended Literature

Hiltunen, A.: *Aristoteles in Hollywood,* 1. Auflage, Bergisch Gladbach, Bastei Lübbe, 2001

Johnston, O.; Thomas, F.: *The Illusion of Life: Disney Animation,* 1. Auflage, New York, Hyperion, 1995

Kersken, S.: *Praxiswissen Flash CS3,* 1. Auflage, , Beijing, O'Reilly, 2007

Meyer, T.: *After Effects für Einsteiger,* 1. Auflage, Heidelberg, Spektrum Akad. Verlag, 2008

Muybridge, E.: *The Human Figure in Motion*, New York: Dover Publications, 1955 - Original von 1880

Shaw, S.: *Stop Motion - Craft Skills for Model Animation,* 1. Auflage, Amsterdam: Elsevier, 2008

Williams, R.: *The Animator's Survival Kit*, 1. Auflage, London: Faber and Faber, 2001

MT-11 BASIC SKILLS OF FILM&VIDEO PRODUCTION

Module code	MT-11
Module coordination	Prof. Jens Schanze
Course number and name	F1105 F2107
Lecturers	Ilona Meier Prof. Jens Schanze
Semester	1, 2
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	6
ECTS	6
Workload	Time of attendance: 90 hours self-study: 90 hours Total: 180 hours
Language of Instruction	German

MT-12 APPLICATION OF PRACTICAL SKILLS IN FILM/VIDEO PRODUCTION

Module code	MT-12
Module coordination	Prof. Jens Schanze
Course number and name	F3107 F4105
Lecturer	Prof. Jens Schanze
Semester	3, 4
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	10
ECTS	11
Workload	Time of attendance: 150 hours self-study: 180 hours Total: 330 hours
Language of Instruction	German

MT-13 ECONOMIC

Module code	MT-13
Module coordination	Prof. Dr. Thomas Geiß
	Accounting, Financial planning
Course number and name	F1107 business management F4106 F7101
Lecturers	Prof. Dr. Marcus Barkowsky Prof. Dr. Thomas Geiß Prof. Dr. Goetz Winterfeldt
Semester	1, 4, 7
Duration of the module	3 semester
Module frequency	annually
Course type	required course
Level	undergraduate
Semester periods per week (SWS)	6
ECTS	7
Workload	Time of attendance: 90 hours self-study: 120 hours Total: 210 hours
Weight	7
Language of Instruction	German

Module Objective

Learning outcomes
On completing the module the students will have achieved the following learning outcomes onthe basis of scientific methods:
Subject skills
Students are able to plan, analyse and control a business having regard to both the procurement
and deployment of capital and the need to maintain financial equilibrium. They are able to
acquire a grounding in the investment and financial management of businesses and organisations from a functional and institutional standpoint.
Social skills
Students can contribute appropriate positions to planning and decision-making processes and
present them to different target groups.
Method skills
Students are able to anaylse different methods in an objective, purposeful manner.

Personal skills
Students are aware of the consequences of target-dependent decisions and are able to
incorporate these in their own value system.

Entrance Requirements

non

Learning Content

- Finance and Investments – Basic economics
o Finance and investment – introduction
o Companies on the product and financial markets
o Money and interest
- Investment
o Investing in macroeconomic and microeconomic context

Investement planning
o Dynamic investment approaches
o Static investment approaches
o Investment analysis using Excel
- Finance
o Financial markets and financial intermediaries
o Profitability (capital cost): definition, measurement and assessment
o Liquidity: definition, measurement and assessment
o Risk: definition, measurement and assessment
o Capital structure and borrowing policy

Teaching Methods

lecture, Case study, best practise, excercise

Remarks

non

Recommended Literature

Timmons, Jeffry A., New venture creation, McGraw-Hill Verlag, Boston, 2004

Dowling, Michael J., Gründungsmanagement, Springer Verlag, Berlin, 2003

Overwiew GEM Report 2016 (Global Monitor)

FGF-Report 2016 (Förderkreis Gründungs-Forschung – Entrepreneurship Research)

Success and Risk Factors in the Pre-Startup Phase, Marco van Gelderen, Roy Thurik, Niels Bosma, Small Business Economics (2006)

Journal of Business Venturing

ZfKE (Zeitschrift für KMU und Entrepreneurship)

Drukarczyk, Jochen / Lobe, Sebastian: Finanzierung, 11th ed., Stuttgart, 2014.
Perridon L./Steiner M./Rathgeber, A., Finanzwirtschaft der Unternehmung, 16th ed., München 2012.

Wöhe, G./Bilstein, J./Ernst, D./Hächer, J., Grundzüge der Unternehmensfinanzierung, 10th ed..,
München, 2009

MT-14

Module code	MT-14
Module coordination	Dr. Martin Balle
Course number and name	F3105
Lecturer	Dr. Martin Balle
Semester	3
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	2
ECTS	2
Workload	Time of attendance: 30 hours self-study: 30 hours Total: 60 hours
Type of Examination	written ex. 90 min.
Duration of Examination	90 min.
Language of Instruction	German

F3105

Type of Examination

part of module exam

MT-15 MODELING

Module code	MT-15
Module coordination	Prof. Joerg Maxzin
Course number and name	F4103
Lecturer	Prof. Joerg Maxzin
Semester	4
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Level	Bachelor
Semester periods per week (SWS)	4
ECTS	4
Workload	Time of attendance: 60 hours self-study: 60 hours Total: 120 hours
Type of Examination	project work
Weight	4 x
Language of Instruction	German

Module Objective

Through their own exercises, the students gained basic knowledge in the conception, implementation and output of three-dimensional self-created content.

Expertise

The students have acquired the competence to apply various 3D modeling techniques using 3D software. In addition, they are able to texture surfaces of 3D geometries differently and to render images of created 3D scenes.

Students can simulate light and shadow situations in virtual space and capture 3D scenes with virtual cameras. In addition, they have general and 3D-specific basic knowledge of animation. The students are able to create and edit 3D animation sequences.

Methodological skills

In their own exercises, the students mastered tasks of 3D modeling and subsequent 3D techniques in all stages of production.

Personal competence

The students are able to analyze the task of 3D modeling and to use learned methods to develop independent approaches to 3D implementation.

Applicability in this Program

MT-19 Bachelorarbeit

MT-24 Visualisierung und Animation

MT-31 Praxisbegleitende Lehrveranstaltungen

MT-32 Industriepraktikum

Applicability in this and other Programs

Basic knowledge for 3D visualization and animation.

Entrance Requirements

Basics of design, photography and animation.

F4103

Type of Examination

project work

MT-16 STATISTICS IN MEDIA TECHNOLOGY

Module code	MT-16
Module coordination	Prof. Dr. Christine Wünsche
Course number and name	F5101
Lecturer	Prof. Dr. Christine Wünsche
Semester	5
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	4
ECTS	5
Workload	Time of attendance: 60 hours self-study: 90 hours Total: 150 hours
Type of Examination	written ex. 90 min.
Duration of Examination	90 min.
Language of Instruction	German

F5101

Type of Examination

written ex. 90 min.

MT-17

Module code	MT-17
Module coordination	Prof. Dr. Gerhard Krump
Course number and name	F7102
Lecturer	Antje Rabe
Semester	7
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	2
ECTS	3
Workload	Time of attendance: 30 hours self-study: 30 hours Total: 60 hours
Language of Instruction	German

MT-18

Module code	MT-18
Module coordination	Prof. Dr. Gerhard Krump
Course number and name	F7100 Z5100 Z5101
Semester	5, 7
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	8
ECTS	8
Workload	Time of attendance: 120 hours self-study: 150 hours Total: 270 hours
Language of Instruction	German

MT-19

Module code	MT-19
Module coordination	Prof. Dr. Gerhard Krump
Course number and name	F7105 F7106
Semester	7
Duration of the module	1 semester
Module frequency	each semester
Course type	required course
Semester periods per week (SWS)	0
ECTS	15
Workload	Time of attendance: 0 hours self-study: 450 hours Total: 450 hours
Type of Examination	bachelor thesis
Language of Instruction	German

F7105

Type of Examination

bachelor thesis

F7106

Type of Examination

oral examination

MT-20

Module code	MT-20
Module coordination	Prof. Dr. Gerhard Krump
Course number and name	F4107 F5103
Lecturer	Prof. Dr. Gerhard Krump
Semester	4, 5
Duration of the module	2 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	8
ECTS	10
Workload	Time of attendance: 120 hours self-study: 180 hours Total: 300 hours
Language of Instruction	German

MT-21

Module code	MT-21
Module coordination	Prof. Stephan Windischmann
Course number and name	F5104
Lecturer	Prof. Stephan Windischmann
Semester	5
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	4
ECTS	5
Workload	Time of attendance: 60 hours self-study: 90 hours Total: 150 hours
Type of Examination	written examination
Language of Instruction	German

MT-22 MEDIA DESIGN 2

Module code	MT-22
Module coordination	Prof. Susanne Krebs
Course number and name	F5105 Media design 2
Lecturer	Prof. Susanne Krebs
Semester	5
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	4
ECTS	5
Workload	Time of attendance: 60 hours self-study: 90 hours Total: 150 hours
Language of Instruction	German

MT-23 INTERNET TV

Module code	MT-23
Module coordination	Prof. Jens Schanze
Course number and name	F5106
Lecturer	Prof. Jens Schanze
Semester	5
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	6
ECTS	6
Workload	Time of attendance: 90 hours self-study: 90 hours Total: 180 hours
Type of Examination	project work
Language of Instruction	German

MT-24 VISUALIZATION AND ANIMATION

Module code	MT-24
Module coordination	Prof. Joerg Maxzin
Course number and name	F7103
Lecturer	Prof. Joerg Maxzin
Semester	7
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Level	Bachelor
Semester periods per week (SWS)	4
ECTS	5
Workload	Time of attendance: 60 hours self-study: 90 hours Total: 150 hours
Type of Examination	project work
Weight	5 x
Language of Instruction	German

Module Objective

The students have learned in their own exercises, based on general basics of animation and 3D modeling, specific techniques for the creation of virtual characters.

Expertise

Existing basic knowledge of the students in 3D modeling and animation has been deepened by the module and has been practiced on more complex tasks. The students are now in a position to independently design virtual characters and animate them using different techniques.

Methodological skills

In addition to the design and generation of 3D forms, students have acquired a broad knowledge in the representation of 3D objects, including their surfaces and structures, and can reproduce them in virtual light situations.

Personal competence

The students can realize specific tasks of 3D visualization in single still images, as well as in moving image sequences with adequate techniques, and can assess and decide on animation-relevant and dramatic issues.

Applicability in this Program

MT-19 Bachelorarbeit

MT-31 Praxisbegleitende Lehrveranstaltungen

MT-32 Industriepraktikum

Applicability in this and other Programs

Polyvalent.

Entrance Requirements

Basics in animation and 3D modeling.

F7103

Type of Examination

project work

MT-25

Module code	MT-25
Module coordination	Prof. Dr. Goetz Winterfeldt
Course number and name	
Lecturer	Prof. Dr. Goetz Winterfeldt
Semester	5
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	6
ECTS	6
Workload	Time of attendance: 90 hours self-study: 90 hours Total: 180 hours
Language of Instruction	German

MT-26

Module code	MT-26
Module coordination	Prof. Dr. Udo Garmann
Course number and name	F5107
Lecturer	Prof. Dr. Wolfgang Dorner
Semester	5
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	4
ECTS	5
Workload	Time of attendance: 60 hours self-study: 90 hours Total: 150 hours
Type of Examination	written ex. 90 min.
Duration of Examination	90 min.
Language of Instruction	German

F5107

Type of Examination

part of module exam

MT-27 COMPUTER-NETWORKS

Module code	MT-27
Module coordination	Prof. Dr. Andreas Fischer
Course number and name	F5108 Computer-Networks
Lecturer	Prof. Dr. Andreas Fischer
Semester	5
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	4
ECTS	5
Workload	Time of attendance: 60 hours self-study: 90 hours Total: 150 hours
Language of Instruction	German

MT-28

Module code	MT-28
Module coordination	Prof. Dr. Peter Faber
Course number and name	F5109
Lecturer	Prof. Dr. Peter Faber
Semester	4
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	4
ECTS	4
Workload	Time of attendance: 90 hours self-study: 60 hours Total: 150 hours
Type of Examination	project work
Language of Instruction	German

F5109

Type of Examination

part of module exam

MT-29

Module code	MT-29
Module coordination	Prof. Dr. Marcus Barkowsky
Course number and name	F5107
Lecturer	Prof. Dr. Marcus Barkowsky
Semester	5
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	4
ECTS	5
Workload	Time of attendance: 60 hours self-study: 90 hours Total: 150 hours
Type of Examination	written ex. 60 min.
Duration of Examination	60 min.
Language of Instruction	German

F5107

Type of Examination

written ex. 60 min.

MT-30

Module code	MT-30
Module coordination	Prof. Dr. Goetz Winterfeldt
Course number and name	F7104
Lecturer	Prof. Dr. Goetz Winterfeldt
Semester	7
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	4
ECTS	5
Workload	Time of attendance: 60 hours self-study: 90 hours Total: 150 hours
Type of Examination	project work
Language of Instruction	German

F7104

Type of Examination

project work

MT-31

Module code	MT-31
Module coordination	Prof. Dr. Gerhard Krump
Course number and name	F6101 F6102 F6103 F6104
Semester	2, 3, 4, 5, 6, 7
Duration of the module	6 semester
Module frequency	each semester
Course type	PLV
Semester periods per week (SWS)	12
ECTS	8
Workload	Time of attendance: 180 hours self-study: 60 hours Total: 240 hours
Language of Instruction	German

MT-32

Module code	MT-32
Module coordination	Prof. Jens Schanze
Course number and name	F6105
Semester	6
Duration of the module	1 semester
Module frequency	annually
Course type	required course
Semester periods per week (SWS)	0
ECTS	22
Workload	Time of attendance: 0 hours self-study: 660 hours Total: 660 hours
Language of Instruction	German