

# Master Module Catalogue

## **Introduction to Digital Media**

### **1<sup>ST</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

required

#### **MODULE NUMBER**

M-MA-1

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Peter von Maydell  
Prof. Dr. Andreas Breiter

#### **LECTURER**

Various

#### **CONTENTS**

- Introduction to the program's aims resources and possibilities.
- Introduction to advanced research on the design and development of digital media
- Introduction to research and design methods for digital media
- Introduction to critical positions (impact, limitations, possibilities, responsibilities) within science, art and technology in respect to digital media
- Introduction to intercultural communication and cooperation
- Students present their different cultural backgrounds, their individual strengths and weaknesses using different media.
- Developing case studies on intercultural aspects
- Analysis, construction and presentation of typical intercultural clashes
- Advanced topics of scientific and artistic work (debate, judgment and writing and presentation in any of the above fields.

#### **AIMS**

Students will develop a common understanding about research and design of digital media.

Students will learn about the essentials in the field of intercultural communication and cooperation.

Students will acquire skills in understanding current debates in digital media and develop critical judgment of the cultural, social, economic and ecologic impact of digital media.

#### **LIST OF REFERENCES**

- Hofstede, Geert (2001): Culture's Consequences – Comparing Values, Behaviors, Institutions and Organizations Across Nations, 2nd edition, Thousand Oaks, CA.
- Popper, K. R. (1959). The logic of scientific discovery. New York: Basic Books.
- Chalmers, A. F. (2005). What is this thing called science? (3. ed.). Maidenhead: Open Univ. Press.

#### **TYPES OF EXAMINATION**

Essays, group presentations, documentation on issues of intercultural communication

**NUMBER OF WEEKLY SEMESTER HOURS**

4

**WORKLOAD (ECTS)**

6

**FORMAL REQUIREMENTS**

none

**REQUIREMENTS AS REGARDS CONTENT**

none

**FREQUENCY**

winter term

**LANGUAGE**

English

**WORKLOAD**

Attendance 60 h | Individual Preparation and Recapitulation: 120 h | 180 h

## **Media Informatics**

### **1<sup>ST</sup>/2<sup>ND</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

compulsory optional

#### **MODULE NUMBER**

M-MI

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. R. Malaka

#### **LECTURER**

Various

#### **COMMENT**

Two courses with usually 6 CP each. If less than 6 CP then the missing CP need to be added to "Free Electives". If more than 6 CP then "Free Electives" comprises less CP, accordingly

#### **CONTENTS**

The contents are depending on the chosen alternatives.

Examples:

- M-MI/1 Advanced Computer Graphics
- M-MI/2 Entertainment Computing
- M-MI/3 Embodied Interaction
- M-MI/4 Selected Topics of Interactive Systems (N.N.)
- M-MI/5 Virtual Reality and Physically-Based Simulation
- M-MI/6 Massively-Parallel Algorithms
- M-MI/7 Management Information Systems - Business Intelligence
- M-MI/8 Informationstechnikmanagement - ITIL
- M-MI/9 Digital Experience Design
- M-MI/10 E-Commerce Management
- M-MI/11 Geometric Data Structures for Computer Graphics

#### **AIMS**

The courses offer a spectrum of relevant areas in Digital Media. The students can select from these courses in order to develop an individual profile of expertise. The courses are advanced courses that also introduce students to research questions in Digital Media.

#### **LIST OF REFERENCES**

depending on chosen alternatives

#### **TYPES OF EXAMINATION**

depending on chosen alternatives

#### **NUMBER OF WEEKLY SEMESTER HOURS**

depending on the chosen alternatives

#### **WORKLOAD (ECTS)**

12 CP - see comments

**FREQUENCY**

any term

**LANGUAGE**

English / Deutsch

**WORKLOAD**

depending on chosen alternatives

## **Media Design**

### **1<sup>ST</sup>/2<sup>ND</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

compulsory optional

#### **MODULE NUMBER**

M-MD

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dennis Paul

Roland Kerstein

#### **LECTURERS**

Prof. Dennis Paul

Prof. Peter von Maydell

Petra Klusmeyer

Roland Kerstein

#### **CONTENTS**

The objective of the course is to provide the students with an overview of the most relevant tools, materials, mechanics and strategies of media design. The students will be introduced to the University's facilities and laboratories relevant to the study of digital media.

#### **AIMS**

This course also aims to bridge the differences between the students' different understandings of design and its manifold purposes. By discussing and developing smaller design projects, the course will help to evolve a common design vocabulary to foster communication in the following master project and master thesis.

#### **REFERENCES**

If applicable literature lists will be handed out according to the topics at the beginning of each course.

#### **NUMBER OF WEEKLY SEMESTER HOURS**

4

#### **WORKLOAD (ECTS)**

6

#### **FORMAL REQUIREMENTS**

none

#### **REQUIREMENTS AS REGARDS CONTENT**

none

#### **FREQUENCY**

annually

#### **LANGUAGE**

English

## **Media Theory**

### **1<sup>ST</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

compulsory optional

#### **MODULE NUMBER**

M-MT

#### **LECTURER IN CHARGE OF THE MODULE**

Prof. Dr. Andrea Sick

#### **LECTURER**

Prof. Dr. Andrea Sick

#### **CONTENTS**

The course provides an introduction to technical and aesthetic, as well as to symbolic and communicative qualities of a wide range of media. The historical development and changes of media in correlation with scientific, economic, political and social processes, as well as media's contribution to modes of perception and forms of knowledge will be discussed from a perspective primarily built on cultural studies. The scope of this inquiry includes an exploration of media art based on specific works.

#### **TYPES OF EXAMINATION**

presentation and paper

#### **NUMBER OF WEEKLY SEMESTER HOURS**

4

#### **WORKLOAD (ECTS)**

6 CP

#### **FREQUENCY**

winter term

#### **LANGUAGE**

English

## **Special Topics in Digital Media**

### **1<sup>ST</sup>/2<sup>ND</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

compulsory optional

#### **MODULE NUMBER**

M-MA-2

#### **COMMENT**

Usually two courses of 6 CP. Free choice between Media Design (M-MD), Media Informatics (M-MI), Media Theory (M-MT).

#### **CONTENTS**

##### **Media Informatics**

See corresponding module descriptions

##### **Media Design**

The content of the course focuses on more specific topics. The range may extend from topics with a clearly technological focus investigating very specific new, digital or emergent technology from a designers point of view, to topics investigating niche aspects of media design or media art.

##### **Media Theory**

Drawing on exemplary topics, the course conveys methods to analyze media, as well as theories that describe general qualities of media, mediality and media technologies. Current developments will be of special interest in this regard. Relationships to artistic, creative and technological processes will be researched and identified.

#### **AIMS**

In this module, advanced courses on Digital Media have to be selected. The advanced courses will teach in depth knowledge on selected topics of Digital Media.

#### **LIST OF REFERENCES**

depending on chosen alternatives.

#### **TYPES OF EXAMINATION**

depending on chosen alternatives.

#### **NUMBER OF WEEKLY SEMESTER HOURS**

depending on the chosen alternatives

#### **WORKLOAD (ECTS)**

12 CP - see comments

#### **FREQUENCY**

any term

#### **LANGUAGE**

English/Deutsch



**WORKLOAD**

depending on chosen alternatives

## **Project Preparation**

### **2<sup>ND</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

required

#### **MODULE NUMBER**

M-MA-31

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. A. Breiter

Prof. Kilian Schwoon

#### **LECTURER**

Various

#### **CONTENTS**

Preparing the work on a complex problem with importance to science, arts and design, the students concern themselves with:

- Definition of the problem
- Research of the state of the art
- Outline of objectives

M. Sc. students are required to focus on media informatics in their work, M. A. students on media design.

#### **AIMS**

The students are able to define and outline a project dealing with complex problems of digital media. They acquire knowledge in the relevant field of media design, media informatics and media theory, which is leading to a successful Master project.

#### **LIST OF REFERENCES**

depending on project topic, to be determined in consultation with advisor

#### **TYPES OF EXAMINATION**

presentations and papers, depending on the chosen alternative.

#### **NUMBER OF WEEKLY SEMESTER HOURS**

4

#### **WORKLOAD (ECTS)**

6 CP

#### **FREQUENCY**

summer term

#### **LANGUAGE**

English

**WORKLOAD**

depending on the chosen alternative.

## **Free Electives**

### **2<sup>ND</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

free electives

#### **MODULE NUMBER**

M-UN

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. U. Bormann

#### **LECTURER**

Various

#### **COMMENT**

The field of "Free Electives" nominally comprises 6 CP. The real number of points depends on the alternatives chosen in other fields of electives. Lacking/surplus CP will be charged against these.

#### **CONTENTS**

In the field of »Free Electives«, modules from all offers of the University of Bremen can be selected, if their content does not overlap with that of other modules.

#### **AIMS**

The field of "Free electives" enables students to improve their individual skills within the studies offered by the University of Bremen and the University of the Arts Bremen. Students may select electives from the digital media lectures as well as lectures from other degree programs or on key qualifications. The aims / competences they achieve depend on the lectures they selected.

#### **LIST OF REFERENCES**

Depending on the chosen lecture(s).

#### **TYPES OF EXAMINATION**

Depending on the chosen lecture(s).

#### **NUMBER OF WEEKLY SEMESTER HOURS**

depending on the chosen alternatives

#### **WORKLOAD (ECTS)**

6 CP see comments

#### **FREQUENCY**

any term

#### **LANGUAGE**

English / Deutsch

#### **WORKLOAD**

Depending on the chosen lecture(s).

## **Master Project**

### **3<sup>RD</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

required

#### **MODULE NUMBER**

M-MA-32

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. A. Breiter

Prof. Kilian Schwoon

#### **LECTURER**

Various

#### **COMMENT**

At the HfK, the project can be subdivided into two or more areas with different advisors.

#### **CONTENTS**

Working on a complex problem with importance to society, science, and arts or artistic design, the students concern themselves with:

- Organization of both individual work and team work
- Analysis of the problem
- Definition of objectives
- Research of the state of the art
- Theoretical reasoning
- Design of a solution
- Implementation
- Examination of the results
- Preparation of intermediate and final results for publication or other forms of public display, exhibitions or other forms of public display.

M.Sc. students are required to focus on media informatics in their work;

M.A. students on media design.

#### **AIMS**

The students are able to work theoretically, empirically, and practically on complex problems of digital media production and use in a medium-size, self-organized team or individually. They do not only apply existing knowledge in science, the arts and design, but also develop new concepts and methods.

#### **LIST OF REFERENCES**

Depending on the project topic; to be determined in consultation with advisor

#### **TYPES OF EXAMINATION**

project work, project report, and colloquium

#### **NUMBER OF WEEKLY SEMESTER HOURS**

20 (Media Informatics)

20 (+ 2 Tutorial) (Media Design)

**WORKLOAD (ECTS)**

30 CP

**FREQUENCY**

winter term

**LANGUAGE**

English

**WORKLOAD**

Attendance (plenum): 120 h | work on the project: 780 h | 900 h

## **Master Thesis**

### **4<sup>TH</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

required

#### **MODULE NUMBER**

M-MA-4

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. A. Breiter

Petra Klusmeyer

#### **LECTURER**

Various

#### **COMMENTS**

Additionally the "Master Colloquium" M-MA-42 for M.A. students on media design.

#### **CONTENTS**

Development and preparation of an original and comprehensive creative-artistic final thesis including a research proportion. Students link creative-artistic and scientific competences applying methods from science, arts and design.

#### **AIMS**

The students are able to work theoretically, empirically, and practically on complex problems and innovative solutions in the field of digital media production and use. To this end, they employ methods of science as well as of the arts and artistic design. They work on their own initiative, set up schedules, and meet deadlines.

#### **LIST OF REFERENCES**

- Depending on project topic
- to be determined in consultation with advisor

#### **TYPES OF EXAMINATION**

Master thesis:

- Subject matter related to the selected topic, typically corresponding to the respective master's project
- Scientific research or development of artistic methods in the context of a complex problem in the field of digital media
- Application of scientific results and methods as well methods of the arts and artistic design
- Presenting work in science or the arts or artistic design in speech, writing, and digital media
- Participating in research or artistic discourse

M.Sc. students are required to focus on media informatics in their work;

M.A. students on media design.

Seminar for graduates:

- Students present a topic of their Master Thesis.
- Students discuss with advisors and other students concerning
- topics and development process of their thesis.

**NUMBER OF WEEKLY SEMESTER HOURS**

none

**WORKLOAD (ECTS)**

30 CP (Media Informatics)

24 CP (Media Design)

**FREQUENCY**

could be appointed anytime with the advisor

**FORMAL REQUIREMENTS**

Successful development and working on research and design questions aiming at the master thesis.

Applying for the master thesis and/or master colloquium requires providing proof of at least 60 CPs.

**LANGUAGE**

English

**WORKLOAD**

Bearbeitung der Aufgabenstellung: 840 h | Vorbereitung und Durchfuehrung des Kolloquiums: 60 h |  
900 h



**Master Colloquium**

**4<sup>TH</sup> SEMESTER**

**DEGREE PROGRAM**

Media Design

**TYPES OF COURSES WITHIN MODULE**

Required

**MODULE NUMBER**

M-MA-42

**LECTURER IN CHARGE OF THE MODULE**

Petra Klusmeyer

**LECTURERS**

Various

**CONTENTS**

Presentation and discussion of the research and design questions and working steps of the master thesis.

**AIMS**

Regular presentation and discussion of contents and methodology with the tutoring lecturers and the fellow students.

**TYPES OF EXAMINATION**

Colloquium

**NUMBER OF WEEKLY SEMESTER HOURS**

4

**WORKLOAD (ECTS)**

6 CP

**FORMAL REQUIREMENTS**

Successful development and working on research and design questions aiming at the master thesis. Applying for the master thesis and/or master colloquium requires providing proof of at least 60 CPs.

**FREQUENCY**

could be appointed anytime with the advisor

**LANGUAGE**

English

## **Advanced Computer Graphics**

### **MODULE EXAMPLE FOR MEDIA INFORMATICS (MI)**

#### **1<sup>ST</sup>/2<sup>ND</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

elective

#### **MODULE NUMBER**

M-MI/1

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. G. Zachmann

#### **LECTURER**

Prof. Dr. G. Zachmann

#### **CONTENTS**

Diese Vorlesung führt in die fortgeschritteneren und komplexeren Methoden der Computergraphik ein.

- Datenstrukturen und Theorie der Rendrepräsentationen (Meshes)
- Fortgeschrittene Methoden der Texturierung (realistischere Bilder)
- Verallgemeinerte baryzentrische Koordinaten und Parametrisierung von Meshes
- Fortgeschrittene Shader-Programmierung (Effekte)
- Culling Techniken (Beschleunigung)
- Ray-Tracing (photo-realistische Bilder)
- Alternative Objektbeschreibungen (Modellierung)
- Anti-Aliasing (Qualitätssteigerung)

Diese Themen werden ggf. um weitere, aktuelle Themen ergänzt oder modifiziert.

#### **AIMS**

Die Studierenden verfügen über:

- Verständnis einiger der fortgeschritteneren und komplexeren Methoden der Computergraphik.
- Vertiefte Kenntnis einiger Themen aus der Grundlagenvorlesung.
- Fähigkeit, aktuelle Forschungsliteratur zu diesen Themen zu verstehen und komplexe Methoden in diesen Bereichen zu implementieren.
- Erweiterter Horizont über das spannende und große Gebiet der Computergraphik durch die Behandlung von Themen, die in der Grundlagen-Vorlesung "Computergraphik" noch nicht behandelt wurden.

#### **LIST OF REFERENCES**

- Andrew Glassner (ed.): An Introduction to Ray Tracing; Morgan Kaufman;
- Peter Shirley: Realistic Ray Tracing; AK Peters;
- Foley, van Dam, Feiner, Hughes: Computer Graphics -- Principles and Practice; Addison Wesley;
- Tomas Akenine-Möller, Eric Haines

#### **TYPES OF EXAMINATION**

i.d.R. Bearbeitung von Übungsaufgaben und Fachgespräch oder mündliche Prüfung

#### **NUMBER OF WEEKLY SEMESTER HOURS**

4

**WORKLOAD (ECTS)**

6 CP

**REQUIREMENTS AS REGARDS CONTENT**

Computergraphics, basic programming abilities in C++

**FREQUENCY**

generally every 2nd term

**LANGUAGE**

Deutsch/English

**WORKLOAD**

Attendance (Lectures and Tutorials): 56 h | Individual Preparation and Recapitulation: 124 h | 180

## **Entertainment Computing**

### **MODULE EXAMPLE FOR MEDIA INFORMATICS (MI)**

#### **1<sup>ST</sup>/2<sup>ND</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

elective

#### **MODULE NUMBER**

M-MI/2

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. R. Malaka

#### **LECTURER**

Prof. Dr. R. Malaka

#### **CONTENTS**

Entertainment computing is a multifaceted and complex field of application, which involves, beside the creative aspects, many subareas of informatics. Therefore, learning subjects include interaction design, graphic design and dramaturgy relating to the entertainment computing applications as well as technical basics from the fields of HCI, 3D computer graphics, game AI and game engine design.

#### **AIMS**

Application-oriented contents from different sectors of entertainment computing are taught. This includes design aspects (e. g., game/story design, interaction design, etc.) and technological knowledge (e. g., game engines, real-time rendering or digital content creation tools). We deal with the application fields of entertainment technologies, e. g., serious games or mixed reality for performances. Participants shall gain further practical experiences with established tools.

#### **TYPES OF EXAMINATION**

regular processing of exercises and a technical discussion

#### **NUMBER OF WEEKLY SEMESTER HOURS**

4

#### **WORKLOAD (ECTS)**

6 CP

#### **FREQUENCY**

generally every 2nd term

#### **LANGUAGE**

English

#### **WORKLOAD**

Attendance (Lectures and Tutorials): 56 h | Individual Preparation and Recapitulation: 124 h | 180 h

## **Embodied Interaction**

### **MODULE EXAMPLE FOR MEDIA INFORMATICS (MI)**

**1<sup>ST</sup>/2<sup>ND</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

elective

#### **MODULE NUMBER**

M-MI/3

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. R. Malaka

#### **LECTURER**

Prof. Dr. R. Malaka

Dr. R. Porzel

#### **CONTENTS**

In human-computer interaction, we know interfaces such as keyboards, mice and joysticks. In spite of technological progress, the basic patterns of interaction and input devices did not change much during the last few decades. But new trends postulate a radical change towards the “invisible computer” with naturally usable interfaces, so that they are literally invisible. The corresponding interaction artifacts are immediately usable, the users grasp their meaning by interacting with them. Embodied interaction considers the user and the computer system in their context and in their physical environment.

#### **AIMS**

The ability to create new human-computer interfaces by using algorithms from computer graphics, video analysis and language technology shall be developed. For these applications, knowledge from the fields of computer games, mobile assistance systems and other application fields of digital media is imparted.

#### **LIST OF REFERENCES**

- Paul Dourish (2001) Where The Action Is: The Foundations of Embodied Interaction, MIT Press October 2001.
- Popper, K. R. (1959). The logic of scientific discovery. New York: Basic Books.
- Rainer Malaka and Robert Porzel, Design Principles for Embodied Interaction.
- In: Mertsching, B.; Hund, M.; Aziz, Z. (eds.): KI 2009. Advances in artificial intelligence, Springer, Heidelberg, 2009, pp. 711-718.

#### **TYPES OF EXAMINATION**

regular processing of exercises and a technical discussion

#### **NUMBER OF WEEKLY SEMESTER HOURS**

4

#### **WORKLOAD (ECTS)**

6 CP

**FREQUENCY**

irregular

**LANGUAGE**

English

**WORKLOAD**

Attendance (Lectures and Tutorials): 56 h | Individual Preparation and Recapitulation: 124 h | 180 h

**Selected Topics of Interactive Systems**

**MODULE EXAMPLE FOR MEDIA INFORMATICS (MI)**

**1st AND 2nd SEMESTER**

**DEGREE PROGRAM**

Media Informatics and Media Design

**TYPES OF COURSES WITHIN MODULE**

elective

**MODULE NUMBER**

M-MI/4

**LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. R. Malaka

**LECTURER**

N.N.

**CONTENTS**

- Beyond WIMP
- Ubiquitous data processing
- Wearable computers and mobile interaction
- Touch-sensitive and tangible interfaces
- Adaptive interfaces and agents
- Interfaces of multi-media systems
- Virtual environments
- Specific vs. universal design
- Conception and development: prototyping
- Visual design
- Trends in HCI

**AIMS**

- Knowledge of interaction design beyond WIMP
- Knowledge of different development methods
- Ability to carry out work analyses and to solve problems of task distribution between human and computer, ability to develop interfaces beyond WIMP
- Ability to include design patterns in the own development
- Ability to include special features (accessibility, localization, security) in the development
- Technical and communicative competence
- Ability to judge
- Legal competence in the sense of the Ethical Guidelines of the GI

**LIST OF REFERENCES**

- Diaper, D. and N. Stanton (eds.) The Handbook of Task Analysis for Human-Computer Interaction. CRC Press, New York, NY 2003
- Lazar, J., J.H. Feng, and H. Hochheiser Research Methods in Human-Computer Interaction. Wiley, New York, NY 2009
- Sears, A. and J.A. Jacko (eds.) Human-Computer Interaction: Development Process. CRC Press, New York, NY 2009

**TYPES OF EXAMINATION**

Two homeworks, presentation, technical discussion, oral examination

**NUMBER OF WEEKLY SEMESTER HOURS**

4

**WORKLOAD (ECTS)**

6 CP

**REQUIREMENTS AS REGARDS CONTENT**

Interactive Systems

**FREQUENCY**

every summer term

**LANGUAGE**

English

**WORKLOAD**

Attendance (Lectures and Tutorials): 56 h | Individual Preparation and Recapitulation: 124 h | 180 h



## **Virtual Reality and Physically-Based Simulation**

### **MODULE EXAMPLE FOR MEDIA INFORMATICS (MI)**

#### **1st AND 2nd SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

elective

#### **MODULE NUMBER**

M-MI/5

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. G. Zachmann

#### **LECTURER**

Prof. Dr. G. Zachmann

#### **COMMENT**

#### **CONTENTS**

Virtuelle Realität (VR) befindet sich an der Überschneidung von Computer-Graphik, physikalisch-basierter Simulation, und Human-Computer-Interaction (HCI). VR befaßt sich mit neuartigen Eingabegeräten, intuitiver und direkter Interaktion, Immersion, Echtzeit-Rendering und physikalisch-basierter Simulation in Echtzeit. Bei letzterem geht es um die möglichst realistische Simulation von natürlichen Phänomenen, z.B. Feuer, von Stoff, z.B. als Kleidung, oder dem Verhalten starrer Objekte bei Stößen.

VR hat sich inzwischen in verschiedenen Anwendungsbereichen als wichtiges Werkzeug durchgesetzt, u.a. im Automobil- und Flugzeugbau und der Medizin. Außerdem lassen sich viele Techniken und Lösungen auch im Bereich der Computerspiele anwenden.

In dieser Vorlesung werden zunächst grundlegende Methoden und Algorithmen vorgestellt.

Anschließend werden Themen behandelt, die für ein komplexes VR-System relevant sind (z.B. Objekt-Verhalten, Kollisionserkennung, akustisches Rendering, etc.).

Geplante Themen:

- Einführung, Begriffe, Immersion, Anwendungen
- VR-Geräte: Displays, Tracking, Software-Design
- Stereo-Rendering
- Fehlerkorrektur: Tracking-Korrektur, Filterung,
- Techniken für Real-time Rendering
- Grundlegende immersive Interaktionstechniken: Gestenerkennung, Navigation, Selektion, Greifen, Menüs in 3D
- Komplexere immersive Interaktionstechniken: World-in-Miniature, Action-at-a-Distance, etc.
- Kollisionserkennung
- Force-Feedback: Rendering von Kräften
- Akustisches Rendering
- Partikelsysteme
- Feder-Masse-Systeme

Die Übungen sind sämtlich praktischer Natur.

Es wird voraussichtlich auf dem cross-plattform-fähigen VR-System InstantReality aufgesetzt. Die Programmiersprache kann von den Teilnehmern gewählt werden; zur Auswahl stehen Java, Javascript, und C++.

Gerne dürfen Sie auch in kleinen Teams die Aufgaben bearbeiten.

**AIMS**

- Technologien und Konzepte der VR kennen; verschiedene virtuelle Umgebungen klassifizieren können
- wichtige 3D- und immersive Interaktionsmetaphern kennen
- grundlegende Algorithmen und Methoden zur Simulation virtueller Umgebungen kennen

**LIST OF REFERENCES**

- William R. Sherman, Alan B. Craig: Understanding Virtual Reality. Morgan Kaufmann, 200
- Don Brutzman, Leonard Daly: X3D: Extensible 3D Graphics for Web Authors. Morgan Kaufmann, 2007.
- Daniel Fleisch: A Student's Guide to Vectors and Tensors. Cambridg

**TYPES OF EXAMINATION**

i.d.R. Bearbeitung von Übungsaufgaben und Fachgespräch oder mündliche Prüfung

**NUMBER OF WEEKLY SEMESTER HOURS**

4

**WORKLOAD (ECTS)**

6 CP

**REQUIREMENTS AS REGARDS CONTENT**

Course: "Computergraphic" is recommended, programming abilities in Java or C++ are required. In the 2nd part you'll need to use ordinary differential equations.

**FREQUENCY**

winter term

**LANGUAGE**

Deutsch/English

**WORKLOAD**

Attendance (Lectures and Tutorials): 56 h | Individual Preparation and Recapitulation: 124 h | 180 h

## **Massively Parallel Algorithms**

### **MODULE EXAMPLE FOR MEDIA INFORMATICS (MI)**

#### **1st AND 2nd SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

elective

#### **MODULE NUMBER**

M-MI/6

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. G. Zachmann

#### **LECTURER**

Prof. Dr. G. Zachmann

#### **COMMENT**

#### **CONTENTS**

Diese Vorlesung führt Studenten in die grundlegenden und einige fortgeschrittene Methoden und Techniken der massiv-parallelen Algorithmen ein.

Einige der vorgesehenen Themen sind:

- die Programmierumgebung CUDA C;
- die Speicher-Hierarchie und verschiedene Speicher-Charakteristiken;
- die GPU Architektur
- parallele Reduktion;
- coalesced memory access;
- massiv-parallele Matrix-Algorithmen;
- Prefix-Sum und deren Anwendungen in der Bildverarbeitung;
- Textur-Filterung;
- Paralleles Sortieren (odd-even, bitonic, adaptive bitonic);
- Bildverarbeitung;
- Thrust;

#### **AIMS**

Die Ära der single-core Prozessoren ist zu Ende.

Inzwischen gibt es neue, massiv-parallele Prozessoren (GPUs), die hunderte bis tausende von Threads parallel abarbeiten können.

Diese entwickeln sich zur Zeit als Co-Prozessoren, die große Teile der Berechnung den (multi-core) CPUs abnehmen.

Möglicherweise werden sich GPUs als neue Architektur für die Haupt-Prozessoren – gerade auch auf mobilen Geräten – etablieren, da diese mehr Compute-Power pro Energieeinheit bieten.

Die große Zahl von parallelen Cores stellt das Design von Algorithmen und Software allerdings vor neue Herausforderungen, damit diese von der großen Parallelität profitieren können.

Das Hauptziel dieser Vorlesung ist es, Studenten in die Lage zu versetzen, für solch massiv-parallele Hardware Algorithmen zu entwerfen.

Simulation wird inzwischen gemeinhin als die dritte Säule der Wissenschaft angesehen (neben den Experimenten und der Theorie).

In der Simulation wird ein ständig wachsender Bedarf an Rechenleistung benötigt; gerade diese wird aber durch die Verfügbarkeit von GPUs fast schon zu einer Commodity auf dem Desktop.

Daher gibt es viele wissenschaftliche Bereiche, in denen Studenten das Wissen, das sie in dieser Vorlesung erwerben, gewinnbringend einsetzen können, wie z.B.:

- Computer science (e.g., visual computing, database search)
- Computational material science (e.g., molecular dynamics simulation)
- Bio-informatics (e.g., alignment, sequencing, ...)
- Economics (e.g., simulation of financial models)
- Mathematics (e.g., solving large PDEs)
- Mechanical engineering (e.g., CFD and FEM)
- Physics (e.g., ab initio simulations)
- Logistics (e.g. simulation of traffic, assembly lines, or supply chains)

Am Ende dieser Vorlesung werden Studenten

- aktive Erfahrungen bei der Entwicklung von Software und Algorithmen für massiv-parallele Architekturen gesammelt haben;
- eine Anzahl von massiv-parallelen Algorithmen-Patterns kennen;
- in der Lage sein, eigene massiv-parallele Algorithmen zu entwickeln;
- CUDA kennen.

In der ersten Hälfte der Vorlesung werden Studenten sich anhand von kleinen und mittelgroßen Übungen und Frameworks mit der parallelen Programmier-Umgebung CUDA vertraut machen.

In der zweiten Hälfte werden Studenten an einem eigenen Projekt arbeiten.

#### **LIST OF REFERENCES**

- Jason Sanders, Edward Kandort: CUDA by Example. Addison-Wesley, Pearson Education.
- Wen-Mei W. Hwu: GPU Computing Gems Jade Edition. Morgan Kaufmann.
- David B. Kirk, Wen-Mei W. Hwu: Programming Massively Parallel Processors. Morgan Kaufmann.
- NVidia

#### **TYPES OF EXAMINATION**

i.d.R. Bearbeitung von Übungsaufgaben und Fachgespräch oder mündliche Prüfung

#### **NUMBER OF WEEKLY SEMESTER HOURS**

4

#### **WORKLOAD (ECTS)**

6 CP

#### **REQUIREMENTS AS REGARDS CONTENT**

Algorithmic thinking, some knowledge about programming C/C++

#### **FREQUENCY**

generally every 2nd term

#### **LANGUAGE**

Deutsch/English

#### **WORKLOAD**

Attendance (Lectures and Tutorials): 56 h | Individual Preparation and Recapitulation: 124 h | 180 h

**Management Information Systems - Business Intelligence**

**MODULE EXAMPLE FOR MEDIA INFORMATICS (MI)**

**1<sup>ST</sup>/2<sup>ND</sup> SEMESTER**

**DEGREE PROGRAM**

Media Informatics and Media Design

**TYPES OF COURSES WITHIN MODULE**

elective

**MODULE NUMBER**

M-MI/7

**LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. A. Breiter

**LECTURER**

Prof. Dr. A. Breiter

A. Lange

**COMMENT**

**CONTENTS**

1. Management Information Systems and Business Intelligence: Overview of Terms and Concepts
2. Requirements Analysis
3. Knowledge Management
4. Decision Support Systems & Artificial Intelligence
5. Data Warehouse & Online Analytical Processing
6. Analytical Methods & Data Mining
7. Data Quality & Data Governance
8. Standards and Interoperability
9. Recent developments (Web 2.0, Big Data, Complex Data, ...)

**AIMS**

- Grundlegende Begriffe, Konzepte und Methoden des Themengebietes „Management Informationssysteme & Business Intelligence“ kennen und erläutern können.
- Vertiefende Fragestellungen auf Basis der vermittelten Konzepte er- und bearbeiten können.
- Forschungsorientierte Literaturlarbeit durchführen können.
- Eine wissenschaftliche Ausarbeitung selbstständig verfassen können.
- Fragestellung, Vorgehensweise sowie Ergebnisse der Arbeit an einer wissenschaftlichen Fragestellung präsentieren können.
- Forschungsarbeiten anderer bewerten können. (Peer-review)

**LIST OF REFERENCES**

- Choo, C.W.(1998): The Knowing Organization, Oxford University Press, New York, NY
- Inmon, W. H. (2002). Building the Data Warehouse. New York: Wiley Computer Publishing.
- Marakas, G. M. (2003). Modern Data Warehousing, Mining, and Visualization. Co

**TYPES OF EXAMINATION**

i. d. R. Bearbeitung von fallbezogenen Problemstellungen, mündlicher Vortrag und schriftliche Ausarbeitung.

**NUMBER OF WEEKLY SEMESTER HOURS**

4

**WORKLOAD (ECTS)**

6 CP

**REQUIREMENTS AS REGARDS CONTENT**

**FREQUENCY**

generally every 2nd summer term

**LANGUAGE**

English

**WORKLOAD**

Attendance (Lectures and Tutorials): 56 h | Individual Preparation and Recapitulation: 124 h | 180 h

## **IT Service Management with ITIL**

### **MODULE EXAMPLE FOR MEDIA INFORMATICS (MI)**

#### **1<sup>ST</sup>/2<sup>ND</sup> SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

elective

#### **MODULE NUMBER**

M-MI/8

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. A. Breiter

#### **LECTURER**

Prof. Dr. A. Breiter

#### **CONTENTS**

1. IT service management – Comparing ITIL version 3 to version 2
  - Service Strategy
  - Service Design
  - Service Transition
  - Service Operation
  - Continual Service Improvement.
2. Managing data centers
  - System management
  - Information Security management
3. IT controlling
  - Key performance indicators
  - IT Balanced Scorecard
4. IT Governance
  - Green IT – Fair IT?

In connection with this content, especially the following theoretical/methodological basics will be dealt with:

- Methods of modeling IT service processes (according to ITIL)
- Methods of IT controlling (balanced scorecards, TCO)
- Methods of IT governance (according to COBIT)

#### **AIMS**

- Independent work on problems of IT management, especially in the fields of
  - IT service management – IT Infrastructure Library (ITIL)
  - IT controlling
  - Data center management
- Research-oriented literature work
- Independent writing of a research paper
- Presentation ability by presenting the research paper to the plenum

**LIST OF REFERENCES**

- Krcmar, H. (2009). Informationsmanagement (5., vollst. überarb. und erw. Aufl.). Berlin [u.a.]: Springer.
- OGC. (2007). Service Design. Norwich: Office of Government Commerce. The Stationery Office.
- OGC. (2007). Service Strategy. Norwich: Office of G

**TYPES OF EXAMINATION**

i. d. R. Bearbeitung von fallbezogenen Problemstellungen, mündlicher Vortrag und schriftliche Ausarbeitung.

**NUMBER OF WEEKLY SEMESTER HOURS**

4

**WORKLOAD (ECTS)**

6 CP

**REQUIREMENTS AS REGARDS CONTENT**

Knowledge about "IT Service Management"

**FREQUENCY**

generally every 2nd term

**LANGUAGE**

English

**WORKLOAD**

Attendance (Lectures and Tutorials): 45 h | Individual Preparation and Recapitulation: 135 h | 180 h



## **Digital Experience Design**

### **MODULE EXAMPLE FOR MEDIA INFORMATICS (MI)**

#### **1st AND 2nd SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

elective

#### **MODULE NUMBER**

M-MI/9

#### **LECTURERS IN CHARGE OF THE MODULE**

Dr. D. Krannich

#### **LECTURER**

Dr. D. Krannich

#### **COMMENT**

#### **CONTENTS**

- Usability vs. Experience Design
- Experience Design and User Experience Design
- Evaluation and Analysis of Digital Experience
- User research methods
- Analyze of users, activities and context of use
- Analyze interaction design problems

#### **AIMS**

- understand the difference between pragmatic and hedonic qualities of a product
- apply the concepts of usability, user experience and emotional design
- understand what kind of factors influence an experience
- learn how to design for a specific experience
- measure usability and user experience
- use common design patterns to design user interface
- conceptualize, implement and evaluate (mobile) apps and web sites

#### **LIST OF REFERENCES**

#### **TYPES OF EXAMINATION**

projects in small groups; show and tell; written paper

#### **NUMBER OF WEEKLY SEMESTER HOURS**

4

#### **WORKLOAD (ECTS)**

6 CP

#### **REQUIREMENTS AS REGARDS CONTENT**

#### **FREQUENCY**

generally every 2nd term

**LANGUAGE**

English

**WORKLOAD**

Attendance (Lectures and Tutorials): 56 h | Individual Preparation and Recapitulation: 124 h | 180 h

## **E-Commerce Management**

### **MODULE EXAMPLE FOR MEDIA INFORMATICS (MI)**

#### **1st AND 2nd SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

elective

#### **MODULE NUMBER**

M-MI/10

#### **LECTURERS IN CHARGE OF THE MODULE**

Dr. J. Pöppelbuß

#### **LECTURER**

Dr. J. Pöppelbuß

#### **COMMENT**

#### **CONTENTS**

- E-commerce business models and strategies
- Marketplace analysis for e-commerce
- Regulatory, ethical and social environments of e-commerce
- E-commerce infrastructure
- E-marketing and customer relationship management
- E-commerce security
- E-commerce payment systems
- Mobile and social e-commerce

#### **AIMS**

- Ability to define different types e-commerce systems and to describe their major business and revenue models
- Ability to understand e-commerce strategies and to describe the process of e-commerce strategy (re-)definition and implementation
- Ability to understand the legal, social, ethical and business environments within which e-commerce operates
- Ability to relate technical infrastructure and support services like payment and security to e-commerce implementation
- Ability to identify and describe factors for e-commerce success
- Ability to describe social networks, virtual worlds, and social software as facilitators of social e-commerce
- Ability to elaborate and present a deeper understanding of e-commerce strategies and technologies at an academic level

#### **LIST OF REFERENCES**

- Chaffey (2011): E-Business and E-Commerce Management
- Jelassi & Enders (2008): Strategies for E-Business
- Turban et al. (2012): Electronic Commerce 2012

**TYPES OF EXAMINATION**

presentations, written paper (individually and/or in small groups)

**NUMBER OF WEEKLY SEMESTER HOURS**

4

**WORKLOAD (ECTS)**

6 CP

**REQUIREMENTS AS REGARDS CONTENT**

**FREQUENCY**

every winter term

**LANGUAGE**

English

**WORKLOAD**

Attendance (Lectures and Tutorials): 56 h | Individual Preparation and Recapitulation: 124 h | 180 h

## **Geometric Data Structures for Computer Graphics**

### **MODULE EXAMPLE FOR MEDIA INFORMATICS (MI)**

#### **1st AND 2nd SEMESTER**

#### **DEGREE PROGRAM**

Media Informatics and Media Design

#### **TYPES OF COURSES WITHIN MODULE**

elective

#### **MODULE NUMBER**

M-MI/11

#### **LECTURERS IN CHARGE OF THE MODULE**

Prof. Dr. G. Zachmann

#### **LECTURER**

Prof. Dr. G. Zachmann

#### **COMMENT**

#### **CONTENTS**

- Quadtrees / Octrees, Texturkompression, Isosurfaces, Terrain-Visualisierung.
- KD-trees, BSP-Trees, Boolesche Operationen auf Objekten, Textursynthese,
- Bounding-Volumen-Hierarchien.
- Kinetische Datenstrukturen, Collision Detection.
- Konvexe Hülle.
- Voronoi- und Delaunay-Diagramme, Platzierungsprobleme, Approximation des TSP.
- Range-Tree und Priority-Search-Tree, Range Queries auf dem Gitter.
- Bemerkung: die genaue Zusammenstellung der Themen wird jedesmal ein wenig variiert bzw. erweitert.

Die Vorlesung bewegt sich an der Schnittstelle zwischen Computational Geometry und Computer-Graphik. Daher werden keine praktischen, sondern nur (einfache) theoretische Übungsaufgaben gestellt werden.

#### **AIMS**

Die Studierenden verfügen über

- Kenntnis und Beherrschung einiger für die Computer-Graphik (und andere Bereiche) sehr wichtiger geometrischer Datenstrukturen.
- Tieferes Verständnis für die Gründe, warum bestimmte Algorithmen dadurch sehr effizient werden.
- Kenntnis einiger exemplarischer Anwendungen dieser Datenstrukturen in der Computer-Graphik
- Gewisse Fertigkeit im Beweisen der Korrektheit und in der Komplexitätsanalyse geometrischer Algorithmen.

#### **LIST OF REFERENCES**

- Mark de Berg, Otfried Cheong, Marc van Kreveld, Mark Overmars: Computational Geometry: Algorithms and Applications; Springer
- Franco P. Preparata, Michael Ian Shamos: Computational Geometry: An Introduction; Springer (schon etwas älter, aber immer noch

#### **TYPES OF EXAMINATION**

i.d.R. Bearbeitung von Übungsaufgaben und Fachgespräch oder mündliche Prüfung

**NUMBER OF WEEKLY SEMESTER HOURS**

4

**WORKLOAD (ECTS)**

6 CP

**REQUIREMENTS AS REGARDS CONTENT**

Simple mathematic and algorithmic thinking.

**FREQUENCY**

generally every 2nd term

**LANGUAGE**

Deutsch/English

**WORKLOAD**

Attendance 56 h | Individual Preparation and Recapitulation: 124 h | 180 h

## **Smart Materials**

### **MODULE EXAMPLE OF SPECIAL FIELDS OF DIGITAL MEDIA (MD)**

#### **DEGREE PROGRAM**

Digital Media

#### **TYPES OF COURSES WITHIN MODULE**

elective

#### **MODULE NUMBER**

B-MA-2/1

#### **LECTURER IN CHARGE OF THE MODULE**

Prof. Dennis Paul

#### **LECTURERS**

Prof. Dennis Paul

teaching appointments

#### **CONTENT OF COURSES WITHIN MODULE**

In this module, students will deal with a group of materials that can be used for medial productions due to their special properties such as changeability. After the stocktaking of existing materials (e. g. thermochromatic colours, nitinol wires or electroluminescent surfaces) and their application, they will develop ideas and scenarios for their own artistic-creative productions.

- Exploring for example the phenomenology of memory alloys and the typology of electroluminescent displays.
- Identifying of the technical possibilities as well as the boundaries of individual materials
- experimental research on the aesthetic potential of individual materials
- understand the materials behaviors
- development of systems ( for example computer programs ) to simulate material behaviors
- conceiving relevant artistic or design questions
- executing a concrete artist or design project, including planning, research, implementation and documentation

#### **AIMS**

- application oriented introduction to working with smart materials
- development of simulation modules for prototypical applications
- emphasizing practical application in working with smart materials
- experimentation with different forms of formats and compositions
- encouraging independent and creative application, translation and interpretation
- realization of individual artistic or design concepts and projects

#### **LIST OF REFERENCES**

If applicable literature lists, adapted to the actual materials, will be handed out at the beginning of the course.

#### **REQUIREMENTS FOR ACHIEVING CREDIT POINTS**

Regular attendance and active participation

Presentation and/or documentation of the assignments given

**NUMBER OF WEEKLY SEMESTER HOURS**

4

**WORKLOAD (ECTS)**

6 CP

**APPLICABILITY OF THE MODULE FOR OTHER DEGREE PROGRAMS**

Integrated Design and Fine Arts

**FREQUENCY**

annually

**LANGUAGE**

English



## **Introduction to Computer Music**

### **MODULE EXAMPLE FOR SPECIAL TOPICS IN MEDIA DESIGN**

#### **DEGREE PROGRAM**

Digital Media

#### **TYPES OF COURSES WITHIN MODULE**

elective

#### **MODULE NUMBER**

B-MA-2/2

#### **LECTURER IN CHARGE OF THE MODULE**

Prof. Kilian Schwoon

#### **LECTURER**

Prof. Kilian Schwoon

#### **CONTENT OF COURSES WITHIN MODULE**

In this module, students will acquire the theoretical basics and practical-technical competences for using computers for music.

Basic methods of digital sound analysis, sound synthesis and sound processing will be designed; their musical potential will be investigated with the help of historical examples. Practical exercises and own concepts are in the focus of the module:

Students develop and realize musical or sound-artistic concepts with different emphases (design of instruments, composition, improvisation, installation).

#### **REQUIREMENTS FOR ACHIEVING CREDIT POINTS**

Regular attendance and active participation, artistic design concept

#### **TYPE OF COURSE**

Seminar

#### **SUBJECT/DURATION OF EXAMINATION**

Cf. requirements for the award of credit points, MP

#### **NUMBER OF WEEKLY SEMESTER HOURS**

4

#### **WORKLOAD (ECTS)**

6 CP

#### **APPLICABILITY OF THE MODULE FOR OTHER DEGREE PROGRAMS**

Fine Arts, Integrated Design

#### **FREQUENCY**

annually

#### **LANGUAGE**

English

## **Media Art / Media Aesthetics**

### **MODULE EXAMPLE FOR SPECIAL TOPICS IN DIGITAL MEDIA (MT)**

#### **DEGREE PROGRAM**

Digital Media

#### **TYPES OF COURSES WITHIN MODULE**

Elective

#### **MODULE NUMBER**

B-MA-2/3

#### **LECTURER IN CHARGE OF THE MODULE**

Prof. Dr. Andrea Sick

#### **LECTURERS**

Prof. Dr. Andrea Sick  
lecturer at FB9 University  
teaching appointments

#### **CONTENTS OF COURSES WITHIN MODULE**

This module gives an overview over the most important approaches of media art in the fields of aesthetics and art development.

The analysis of arts from the point of view of media science is taught. The correlation between arts and media and the medial procedures of artistic practice is to be made understood.

#### **REQUIREMENTS FOR ACHIEVING CREDIT POINTS**

Regular attendance  
paper/presentation  
term paper

#### **TYPE OF COURSE**

Seminar

#### **TYPE OF LEARNING**

Attendance courses and self-study

#### **SUBJECT/DURATION OF EXAMINATION**

Cf. requirements for the award of credit points, MP

#### **NUMBER OF WEEKLY SEMESTER HOURS**

4

#### **WORKLOAD (ECTS)**

6 CP

#### **APPLICABILITY OF THE MODULE FOR OTHER DEGREE PROGRAMS**

General Sciences on Integrated Design and Fine Arts

#### **FREQUENCY**

annually

#### **LANGUAGE**

English

## **Forms of Intermedial Design**

### **MODULE EXAMPLE OF SPECIAL FIELDS OF DIGITAL MEDIA (MD)**

#### **DEGREE PROGRAM**

Digital Media

#### **TYPES OF COURSES WITHIN MODULE**

Elective

#### **MODULE NUMBER**

B-MA-2/4

#### **LECTURER IN CHARGE OF THE MODULE**

Nuri Ovüç

#### **LECTURERS**

Nuri Ovüç

teaching appointments

#### **CONTENT OF COURSES WITHIN MODULE**

In this module, the students learn how to conceive and develop cross-media events resp. projects. The focus is on the interplay of the different media – new visual contributions/languages/installations will be produced. The contributions will then be integrated in different medial environments.

#### **REQUIREMENTS FOR ACHIEVING CREDIT POINTS**

artistic/design concept, term paper

#### **TYPE OF COURSE**

Seminar and tutorial

#### **TYPE OF LEARNING**

Frontal

#### **SUBJECT/DURATION OF EXAMINATION**

Cf. requirements for the award of credit points, MP

#### **NUMBER OF WEEKLY SEMESTER HOURS**

4

#### **WORKLOAD (ECTS)**

6 CP

#### **FREQUENCY**

annually

#### **LANGUAGE**

English