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Das Inhaltverzeichnis wird von der Zentralen Studienberatung erstellt.

Universität Bremen

Description of the study program

The study program Digital Media is a master program jointly offered by University of Bremen and University of the Arts Bremen. It aims at students who are enthusiastic both about art and science and want to acquire competences both in the design and the technology of media linked by a solid understanding of media theory.

Collision, Encounter, Symbiosis, Synthesis

The reconciliation of formerly separated disciplines can yield new perspectives. Thus, in the Digital Media study program, computer science meets design, while engineering interconnects with the arts. Design, development and application of complex multimedia systems have long since ceased to be feasible by simply placing design elements on top of functional ones or vice versa – closer cooperation, a fusion of disciplines is necessary. Digital Media in Bremen takes on that challenge.

Human-Computer Interaction, Interactive Installations, Digital Media as a form of interaction in society

Media connect people, and digital media do so using connected computers that in turn interact with humans. But interaction has many facets, involving new devices, scientific evaluation, user experience design, (serious) games, cognitive background as well as interactive art in a virtual or physical form and ultimately cultural and social questions.

The computer is the central tool for digital media and programming is the skill that allows "creating your own media without the bonds of existing software tools" (D. Shiffman). So building on this essential skill as a prerequisite the program addresses algorithmic questions, e.g. in computer graphics or machine learning, questions of human centered software design as well as generative design, the process of designing by writing a computer program, that be seen as a prototypical example of the interdisciplinary approach involved.

Overall, the digital media program aims not at achieving outstanding mastership in one specialized area, it aims at mastering all these different approaches to media in an integrated way on a convincing level.

Balance, authenticity, freedom

The unique inter-university cooperation of the Digital Media study program lets students select from a comprehensive offer of courses, putting them in a position to authentically experience all aspects of Digital Media. Students will profit from the university's atmosphere of research and the University of the Arts' creative environment. Flexible study conditions and project oriented learning allow for the creation of individual profiles and fields of focus.

This combination of two worlds is the unique opportunity of the digital media program in Bremen.

Focus areas

All students in the program take part in media design courses at the University of the Arts Bremen, media informatics courses at the University Bremen and media theory courses at either university. However, everyone has to choose either media design or media informatics as personal focus area. This choice is important as it determines

- Whether the application including the previous bachelor degree is evaluated for artistic or scientific/technical quality in the admission process.
- At which of the two universities to be enrolled.
- The focus area in the courses taken.*
- The focus area of the master project course taken.*
- The area in which the master thesis will be written.
- Whether a Master of Arts or Master of Science degree is obtained.

*These points are not formally binding.

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Admission Criteria and Requirements

In short, the admission to the focus area media informatics (University of Bremen) requires a bachelor with relation to media informatics and to show experience in computer science (programming and algorithms, beyond using existing tools) and design.

Admission is formally regulated by the admission procedure of the study program[1], the following is a summary of the usual case without guarantee. Admission requires

- A bachelor in Digital Media, Computer Science, Design, Media Production or a similar field of at least 180CP (150CP at the time of application).

- The bachelor must be relevant for the chosen focus area:
    - In the case of media informatics this means, it must show substantial competence in programming and algorithms as well as relation to media. In particular the latter can also be shown with a portfolio of own works (see below).
    - For the focus area media design applicants must show artistic talent as demonstrated by the portfolio as well as a personal interview.

- A letter of motivation.

- English skills C1 according to CEFR, TOEFL (90 points), IELTS Band 6,5/7 (submitted for final enrollment) or self evident e.g. from studies in natively English speaking countries.

- A portfolio of own works showing the competence of the applicant for digital media in the chosen focus area. This is a collection of relevant works created by the applicant during the bachelor degree or in other contexts, showing expertise both in media design and technology. It must be clear, what part of the work has been done by the applicant and what part has been done e.g. by team members or is stock

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[1] Aufnahmeordnung für den hochschulübergreifenden Masterstudiengang „Digitale Medien" an der Hochschule für Künste Bremen und an der Universität Bremen vom 16. Dezember 2015

material. Examples are photos, drawings, illustrations, videos, user interfaces, tangible user interfaces, (computer) games, web pages, artistic installations, programs with relation to media, visualization of data, robots acting as a medium, a thesis with relation to media. Where necessary the contribution and its relevance to digital media should be explained in the portfolio. In the case of media informatics the portfolio should both include self developed computer programs and media that involve some level of design.

- German skills are not required as the whole program is in English. However, German is of course helpful to get along in everyday life.

There is a limited number of study places available (18 in media design, 30 in media informatics) which are issued according to the quality of the application as rated by a commission regarding

      a) bachelor grade (converted to the German system),

      b) bachelor relevance to chosen focus area,

      c) portfolio and

      d) optionally professional experience.

General admission is only possible for the winter term starting mid October, with application deadline 30. April. Advanced students who have already obtained at least 10 master level credit points (1/3 of a nominal semester) in the area of digital media can apply for the summer term as well.

Career Perspectives

The program targets students who want to work in media at the border between design and technology and want to take an encompassing approach to this field. In so far the program qualifies for a range of different jobs without targeting a specific job profile closely. For the focus area media informatics these in particular include jobs in media related software development (webpages, apps, games, e-commerce) and the user interface / user experience side of general software or hardware development including media production equipment / software. Classical media jobs like public relations or media production are also an option with the additional benefit of a deeper technical and design background but not specifically targeted.

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Curriculum

The Digital Media master takes 4 semesters (2 years). The curriculum provides a remarkable large freedom of choice. The first semester starts with "Introduction to Digital Media" with the purpose to give everyone the same common basis to build on in addition to the diverse backgrounds from different bachelors. The rest of the first year consists of courses that can be chosen from a list of offered courses in different categories depending on personal interest[2]. The second year is project based with a one-semester group project and the master thesis. The group project can be chosen from usually three possible topics. It is organized by the participating students and allows much freedom in where to contribute to the project. The master thesis is an individual project that leads to a written scientific thesis the topic of which is individually agreed upon.

Digital Media (Master)				
1.	Introduction to Digital Media	Media Informatics	Media Design	Media Theory	Free Electives
2.	Project Preparation	Media Informatics	Media Design	Special Topics in Digital Media	Free Electives
3.	Master project				
4.	Master thesis				

In the following the courses that have been offered from winter 2015 to summer 2017 are listed as a reference and overview of the topics that can be chosen within the program:

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[2] A list of currently and past offered courses can be found at
http://www.uni-bremen.de/studium/lehrveranstaltungen/veranstaltungsverzeichnis.html
by clicking on „Digital Media (Master)".

- **Media Informatics**: Cognitive Modeling, Wearable Computing, IT Servicemanagement, Virtual Reality and Physically-Based Simulation, Spatial reasoning for computational cognitive systems, Visuo-auditory narrativity and the moving image, The Algorithmic Dimension in Art, Design of Information Systems, Advanced Computer Graphics, Entertainment Computing, Massively-Parallel Algorithms, Cognitive Computing, Evidence Based Design, Visual Perception, Cognitive Qualitative Descriptions and Applications, Gamification and Game Studies, Advanced Topics in Interaction Design, Computational Geometry, Embodied Interaction

- **Media Design**: Fictioning (sonic or whatever), The Simulation Project, better life, Matter Matters, Out of Body, The quantified velodrome, Translucent Boundaries – a digital poetry experiment

- **Media Theory**: Transcultural Communication, Media – Migration-Flight, Freedom {of Coding} and Standards, Transitions - Identities in {Digital} Collectives (An Introduction)

- **Special Topics in Digital Media**: Art and Digital Media, Digital Society, Information Management in Humanitarian and Recovery Operations Before and After Disaster, E-Government 2030, The Future of Information Systems Education Connected Commerce Camp, In data we trust: Fairness, accountability and transparency, Self-Service Technologies, (all Media Informatics, Design or Theory topics)

- **Master Project**: Animation, BigGamiEduData, ASTEROID, Adaptive Exergames, Embodied Cognitive Experiences, The Art of Making, Navigation Failures in Physical-, Virtual- and Mixed-Reality Spaces, (Individual project at University of the Arts), see also http://digitalmedia-bremen.de/en/project-type/semester-projects/

Way of learning

The diversity of topics and in particular the different traditions in science and arts result in courses using different ways of learning. In design courses

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students usually work on specific projects, individually or in small teams, guided by the teacher of the course.

Most media theory courses are seminars where texts from the literature are read, presented and discussed. Both types of courses are in small groups.

Media informatics courses usually have different learning methods in one course, mostly combining a lecture part laying methodical foundations, a hands-on tutorial part and homework such as exercises, presentations, software development or small projects. The master project and thesis are team, respectively individual projects organized and conducted by the participating students with guidance from the responsible advisor.

Overall, while the topics of the courses are scientific or artistic (reflecting the nature of a master degree), the way of teaching is very hands-on requiring the students performing tasks and solving problems that are relevant to the field not merely learning facts and solving examination-type problems.

Specific media production tools, e.g. for video editing, software development or 3D animation are used in homeworks and projects, however the main topic of courses is of more fundamental scientific or artistic nature and students are expected to either already have tool skill or learn these independently.

Research Cooperations

There exist close co-operations with several research institutes inside the university and externally. Most closely to Digital Media related are the following: Center for Computing Technologies (TZI), Centre for Media, Communication and Information Research (ZeMKI), Institute for Information Management Bremen (ifib), German Research Center for Artificial Intelligence (DFKI), Fraunhofer Institute for Medical Image Computing (MEVIS). Theses co-operations may provide the opportunity for writing a master thesis in a specific research context. There also exist co-operations with several companies in the area providing the opportunity to address industry relevant topics in projects and theses.

Limited number of study places

A total of 30 places are available for the media informatics focus (M.Sc.) at University of Bremen as well as 18 places for the media design focus (M.A.) at University of the Arts Bremen.

Application deadline

The application deadline is April 30th for the course starting in the following winter term.

Duration of Study

The program includes 120 ECTS equivalent to four semesters of full-time study.

Degree

The degree depends on the focus area chosen: Master of Science (M.Sc.) for the focus area media informatics at University of Bremen respectively Master of Arts (M.A.) for the focus area media design at University of the Arts Bremen.

Number of teachers in the digital media program

There are 13 teachers (professors and lectures) at University of Bremen and 10 at University of the Arts Bremen teaching in the digital media program.

Students in the first semester

In the last three winter semesters (up to WS16/17) from the students starting at University of Bremen with focus area media informatics 45% were women and 59% from outside Germany.

Cost of living and other expenses

Students have to pay a fee of about 320 EUR per semester (number from the winter term 2017). This includes free public transport. More information can be found at www.uni-bremen.de/semesterbeitrag.[3]

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[3] Students who have been enrolled at a German university for 15 semester or more or who are at least 55 years old have to pay an additional tuition fee of 500 €
(www.uni-bremen.de/studiengebuehren).

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Average expenses for students in Bremen (rental fee, food, recreation, clothes, transport, communication, …) are roughly 800 EUR per month (in 2017).

How to apply

Applications can be submitted via www.uni-bremen.de/master, more information can be found on http://www.digitalmedia-bremen.de. Applicants both for the Master of Science (focus area media informatics) and the Master of Arts (focus area media design) apply via this website. Make sure to select the right focus area.

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Contact

Web

http://digitalmedia-bremen.de,

www.uni-bremen.de

Sekretariat für Studierende International (SfSI)

The Sekretariat für Studierende International (SfSI) helps with the administrative aspects of application, later enrollment as well as advice on housing, working, health insurance, visa and more.

Physical adress	Bibliothekstraße 1, Verwaltungsgebäude, Erdgeschoss, Eingangsbereich
Postal adress	Universität Bremen, Sekretariat für Studierende Postfach 33 04 40, 28334 Bremen
telephone	+49 421 218 61002
fax	+49 421 218-61125
email	apply@uni-bremen.de, master@uni-bremen.de
web	www.uni-bremen.de/sfsi, www.uni-bremen.de/master
time slots:	Mo, Tu & Th 9:00–12:00, We 14:00–16:00 Uhr (CET/CEST)

Questions about the content of the program

Claudia Kessler[4]

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MZH, Raum 1280	Am Speicher XI 8
	Raum 4.14.050
0421 218-63532	0421 9595-1206,

info@digitalmedia-bremen.de

Studienzentrum Informatik

(For questions about the computer science related programs in general)

studienzentrum@informatik.uni-bremen.de

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[4] office hours www.digitalmedia-bremen.de/de/koordination

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Students organization

StugA Digitale Medien (Students Committee for Digital Media)
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0421 218-2571
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http://dm.stuga.informatik.uni-bremen.de

General Students' Committee (AStA)
www.asta.uni-bremen.de

General Information about Bremen

www.bremen.de

Apartments affiliated with the University

www.studentenwerk.bremen.de

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