

Digital Media, Master's Program Media Informatics Branch University of Bremen

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<https://cgvr.cs.uni-bremen.de/>



About University of Bremen

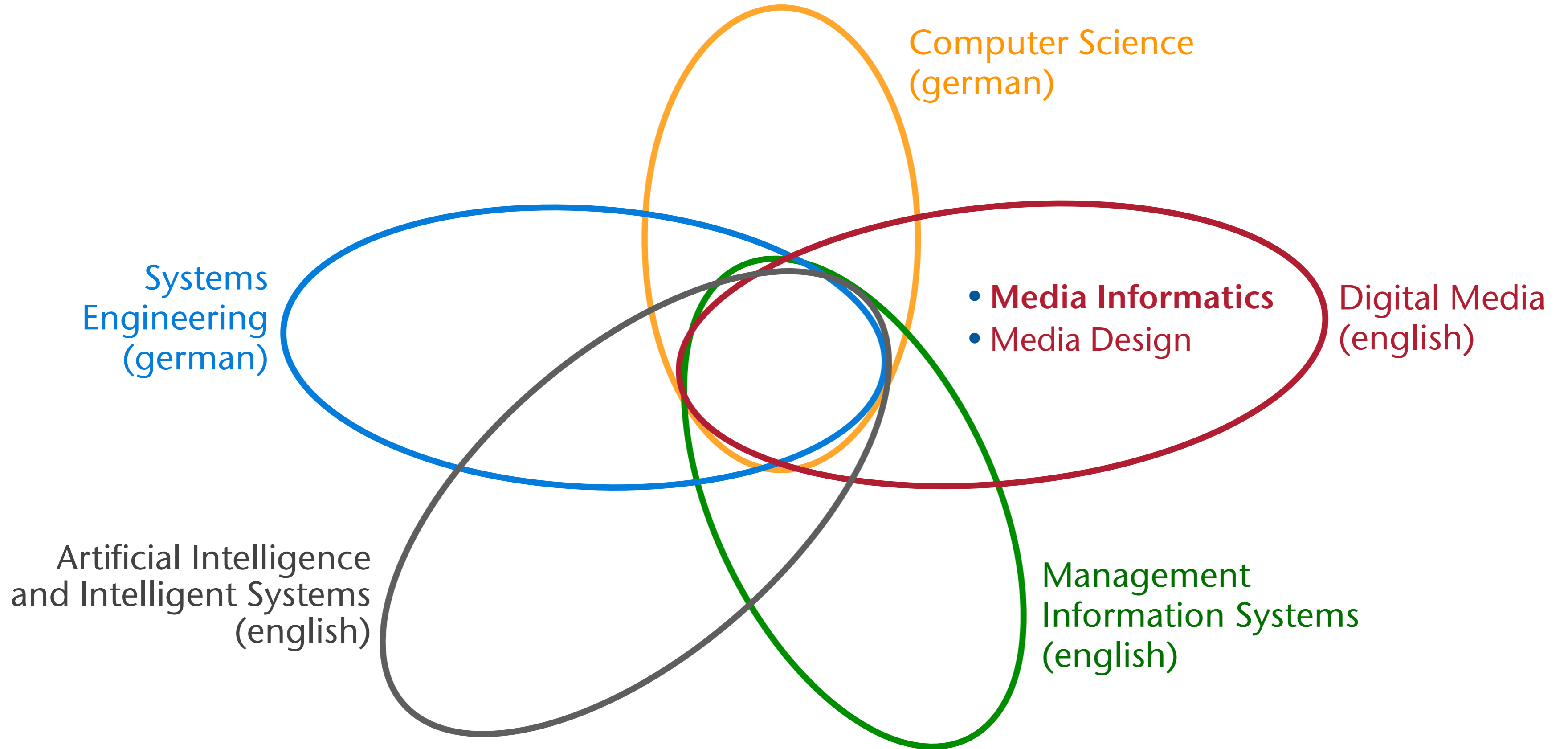


- Mid-sized German university (~ 20,000 students)
- Enrollment numbers increasing (as opposed to other universities)
- 12 faculties (STEMs and Humanities)
- Research-oriented public university
- Science park around campus (lots of job opportunities)
- International:
 - 17% int'l students
 - Lower costs of living than other big cities
 - Central Student Advisory Service (ZSB)





Landscape of Study Programs in Computer Science





The Structure of the Program

- Unique feature: hosted by **two** universities
 - University of Bremen (research-oriented)
 - University of the Arts in Bremen (arts/design)
- Two strands in the program:
 - 1. Enrollment at Uni of Bremen: focus on computer science part of digital media**
 - 2. Enrollment at Uni of Arts: focus on design of digital media**
- Courses at either university are shared with the other
- All courses in English

University of Bremen



University of the Arts, Bremen





Model Study Plan of Media Informatics



Semester ↓	1	Introduction to Digital Media DMM-MA-1 6 CP	Free Electives DMM-UN 12 CP	Media Theory DMM-MT 6 CP	Media Design DMM-mi-MD 12 CP	Media Informatics DMM-mi-MI 12 CP
	2	Project Preparation DMM-MA-31 6 CP		Special Topics DMM-MA-2 6 CP		
	3	Master's Student Team Project DMM-MA-32 30 CP				
	4	Master Thesis DM-mi-MA-4 30 CP				

This is a recommendation only, you are free to move modules around



The Student Team Project



- Big chunk of your credit points (30 CP's = 1 semester full-time!)
- Students work and learn in teams on a relatively "big" project:
 - Learn software development on a larger scale
 - 8-15 students
 - Output: working and usable software, incl. user study, video documentation, web site, paper
 - Outcomes: learn how to work in team, learn how to organize teamwork
- Includes usually programming, and design/modeling work



Example Student Team Project: Virtual Coral Reef



In close collaboration with Leibniz Centre for Tropical Marine Research



Example Student Team Project in Our Research *Mars Mission Testbed*



In close collaboration with German Space Agency, and other research institute around Germany



Typical Jobs with a Degree in Digital Media



- More generalist than specialist → management jobs
- Interface between computer science and media/design/communication/web/human-computer-interfaces
- Work involves: development of mobile apps, games, web shops, learning software, ...
 - Software development, design of interfaces, design of workflows, ...
 - Consider societal implications of the tools/workflows of the company ...



Helpful Skills and Mindset for the Media Informatics Strand



- Computer science part:
 - Logical & analytical thinking
 - Love for programming, algorithms, programming languages
 - Maths (just usage/understanding of math, no theorem-proving)
- Media & Design part:
 - Creativity
 - Love of aesthetics & visual communication
- Distribution between the two can be "tuned" somewhat to your liking
- More of a generalist's mindset, instead of specialist
- English (mostly reading & writing)



Details on the Application Process



- Application:
 - Portal: <https://digitalmedia-bremen.de/profile/master/application-and-requirements/>
 - Proof of English at level C1 (or comparable)
 - Deadline: May 31
 - Notification: end of July
 - Enrollment (always for winter semester): until end of September
 - Semester fee: 430,- Euros per semester (includes train&tram for whole of Germany)
- Application documents: letter of motivation, grades of your bachelor's, portfolio showcasing media informatics related works
- Stats: ~150 applications, ~100 eligible, ~60 get invited



What Our Students Learn in Our Bachelor's Program ("Prerequisites")



- Media informatics (2 semesters intro course)
- Programming and algorithms (Java)
- Theory of media and communication
- Design and arts
- Maths (2 semesters, linear algebra, analysis, stochastic)
- Computer graphics (algorithms, OpenGL programming)
- Human-computer interaction
- Other CS topics: programming, software engineering, computer engineering, databases, web technologies, ...



Model Study Plan in the Bachelor's Degree Media Informatics



1	Gestalterische Grundlagen 1 DMB.mi-MG-11 6 CP	Mathematik 1 IBGT-M1 9 CP	Medienwissenschaften 1 DMB-MW-11 4 CP	Grundlagen der Medieninformatik 1 DMB-MI-11 6 CP	Grundlagen der Programmierung DMB-MI-21 6 CP
2	Gestalterische Grundlagen 2 DMB.mi-MG-12 6 CP	Mathematik 2 IBGT-M2 6 CP	Freie Wahl DMB-mi-UN 4 CP	Grundlagen der Medieninformatik 2 DMB-MI-12 6 CP	Objektorientierung, Algorithmen und Datenstrukturen DMB-MI-22 9 CP
3	Spezielle Gebiete der Digitalen Medien 1 DMB-MA-21 6 CP	Interdisziplinäres Modul DMB-MA-1 6 CP	Media Engineering DMB-MI-5 6 CP	Computergraphik DMB-MI-6 6 CP	Mensch-Technik-Interaktion DMB-MI-7 6 CP
4	Gruppenprojekt DMB-MA-3 15 CP		Technische Grundlagen der Informatik DMB-MI-23 6 CP		Medienwissenschaften 2 DMB-mi-MW-12 6 CP
5	Spezielle Gebiete der Digitalen Medien 2 DMB-MA-22 18 CP			Web / Netze / Datenbanksysteme DMB-MI-8 6 CP	Medieninformatik Wahl 1 DMB-MI-9-1 6 CP
6	Bachelorarbeit DMB-mi-MA-4 15 CP		Freie Wahl DMB-mi-UN 4 CP	Medieninformatik Wahl 2 DMB-MI-9-2 12 CP	



For More Information



- Go to: <https://digitalmedia-bremen.de/>
- Send email to program coordinator Claudia Kessler: claudia.kessler@hfk-bremen.de
- For newcomers to the Digital Media program: <http://hej.digital/>
- Ask me: zach@cs.uni-bremen.de
- Go to Center of CS Studies: <https://www.szi.uni-bremen.de>
(german only, sorry, but DeepL can help)

