

# Module Handbook

MA Digital Games

**cgl**  
Cologne Game Lab  
Faculty of  
Cultural Sciences

Technology  
Arts Sciences  
**TH Köln**

<b>MA PROJECT PREPARATION</b>					
<b>ID</b>	<b>Workload</b>	<b>Credits</b>	<b>Semester</b>	<b>Frequency</b>	<b>Duration</b>
<b>MA.001</b>	<b>300 h</b>	<b>10 ECTS</b>	<b>1</b>	<b>Annual</b>	<b>16 Weeks</b>
Courses			Contact Hours	Self-Study	Size of Groups
1) MA Colloquium			16 h	27 h	15-20
2) MA Project			0 h	257 h	1-5
<u>Learning Outcomes / Competencies</u>					
This module enables students to:					
<ul style="list-style-type: none"> <li>• learn how to work on a project through various conceptual, artistic, and technological iterations from an integrated point of view;</li> <li>• improve their ability to execute a game project on a management level;</li> <li>• optimize their skills to set up, rework, and update a game design document;</li> <li>• expand their ability to look beyond their individual specialization, focusing on the “big picture”.</li> </ul>					
<u>Module Content</u>					
<p>The module “MA Project Preparation” offers students – individually or collaboratively – the opportunity to establish the basis for their master thesis. In exchange with peers and professors, students discuss strategies, experiment, test, and prototype core elements of their MA Projects. These iterative processes will enable the participants to develop a distinct vision of their game and will help them define their project artistically as well as technologically. Depending on the specific topics and the development status of the different projects, students will solve basic conceptual problems such as narration, game mechanics, visual design, sound, and technology.</p>					
<u>Teaching Methods</u>					
Seminars					
<u>Prerequisite Subjects</u>					
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<u>Assessment Methods</u>					
Homework or course work, documentation, presentation, practical exercises					
<u>Prerequisites for CP</u>					
Active participation, documentation, presentation					
<u>Used in Other Courses</u>					
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<u>Significance of Module Grade for Final Grade</u>					
0%					
<u>Module Director(s) and Module Instructor(s)</u>					
Module Director(s): Prof. Dr. Roland Klemke					
Module Instructor(s): Prof. Björn Bartholdy (Media Design), Prof. Bernd Diemer (Game Design), Prof. Dr. Gundolf S. Freyermuth (Media & Game Studies), Prof. Dr. Emmanuel Guardiola (Game Design), Prof. Markus Hettlich (Game Informatics), Prof. Nanette Kaulig (3D Animation & CG Art for Games), Prof. Dr. Roland Klemke (Game Informatics), Prof. Dr. Cécile Le Prado (Sound Design for Games), Prof. Odile Limpach (Economics & Entrepreneurship for Games)					
<u>Other Information</u>					
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## OPTIONAL CORE ELECTIVE COURSES - ADVANCED GAME DEVELOPMENT 1: GAME ARTS

ID MA.002.1	Workload 150 h	Credits 5 ECTS	Semester 1	Frequency Annual	Duration 16 Weeks
Courses			Contact Hours	Self-Study	Size of Groups
1) Advanced Game Arts*			25 h	65 h	10-15
2) Design Critique			25 h	25 h	10-15
3) Sound Design			2,5 h	7,5	15-20
*Students without sufficient prior experience in Game Arts may replace this course by a designated course from BA Digital Games. In this case, they cannot substitute any other MA course in their second core elective.					
<p><u><a href="#">Learning Outcomes / Competencies</a></u></p> <p>This module enables students to:</p> <ul style="list-style-type: none"> <li>• acquire advanced game arts competencies;</li> <li>• optimize their art and design skills – for example in the fields of conceptual artwork, illustration, 2D and 3D graphics and animation and interface;</li> <li>• train specialized practical skills focusing on the concept and preproduction phase of their MA project;</li> <li>• gain critical knowledge of the visual design of games relevant to their MA project;</li> <li>• acquire theoretical knowledge essential to their MA projects;</li> <li>• exercise reflection, judgment, and creativity in solving problems concerning the game art of their MA project.</li> </ul>					
<p><u><a href="#">Module Content</a></u></p> <p>Key Aspects: concept &amp; preproduction.</p> <ul style="list-style-type: none"> <li>• Advanced Game Arts (Game Arts Master Class): Theory and practice of concept art/illustration, 2D/3D graphics and animation, interface, sound design/music in relation to student MA projects.</li> <li>• Design Critique: Discussion and critique of the audiovisual design of contemporary game projects in relation to and depending on student MA projects.</li> </ul>					
<p><u><a href="#">Teaching Methods</a></u></p> <p>Lectures, seminars, tutorials, practical exercises</p>					
<p><u><a href="#">Prerequisite Subjects</a></u></p> <p>---</p>					
<p><u><a href="#">Assessment Methods</a></u></p> <p>Homework or course work, documentation, presentation, practical exercises</p>					
<p><u><a href="#">Prerequisites for CP</a></u></p> <p>Active participation, documentation, presentation</p>					
<p><u><a href="#">Used in Other Courses</a></u></p> <p>---</p>					

[Significance of Module Grade for Final Grade](#)

7.69%

[Module Director\(s\) and Module Instructor\(s\)](#)

Module Director(s): Prof. Björn Bartholdy

Module Instructor(s): Prof. Björn Bartholdy (Media Design), Prof. Nanette Kaulig (3D Animation & CG Art for Games), Prof. Dr. Cécile Le Prado (Sound Design for Games)

[Other Information](#)

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## OPTIONAL CORE ELECTIVE COURSES - ADVANCED GAME DEVELOPMENT 1: GAME DESIGN

ID MA.002.2	Workload 150 h	Credits 5 ECTS	Semester 1	Frequency Annual	Duration 16 Weeks
Courses			Contact Hours	Self-Study	Size of Groups
1) Advanced Game Design Practices I*			25 h	55 h	10-15
2) Game Design Theory I			12,5 h	17,5 h	10-15
3) Critical Play I			12,5 h	17,5 h	10-15
4) Sound Design			2,5 h	7,5 h	15-20
*Students without sufficient prior experience in Game Design may replace this course by a designated course from BA Digital Games. In this case, they cannot substitute any other MA course in their second core elective.					
<p><u><a href="#">Learning Outcomes / Competencies</a></u></p> <p>Students acquire advanced game design competencies as well as specialized practical skills and theoretical knowledge essential to their MA projects.</p> <p>This module enables students to:</p> <ul style="list-style-type: none"> <li>• acquire and experiment with advanced game design skills, specifically in rapid prototyping, mechanics, level design, character design, and AI for games;</li> <li>• apply appropriate research and analytical skills to design prototypes, mechanics, and levels that correspond to the intended game design targets of their MA projects;</li> <li>• exercise reflection, judgment, and creativity in solving design problems related to their MA project;</li> <li>• play and critically analyze digital games relevant to their MA projects and apply their research to improve their own MA projects.</li> </ul>					
<p><u><a href="#">Module Content</a></u></p> <ol style="list-style-type: none"> <li>1) Rapid prototyping; advanced mechanics, level design and character design, AI for games; “on-demand” game design practices, in relation to and depending on student MA projects.</li> <li>2) Game design theory, specifically relating to rapid prototyping, mechanics, level and character design, AI for games; “on-demand” game design theory, in relation to and depending on student MA projects.</li> <li>3) Analyses of historical and recent games relevant to student MA projects.</li> </ol>					
<p><u><a href="#">Teaching Methods</a></u></p> <p>Lecture, seminar, tutorial, practical exercises</p>					
<p><u><a href="#">Prerequisite Subjects</a></u></p> <p>---</p>					
<p><u><a href="#">Assessment Methods</a></u></p> <p>Homework or course work, presentation, practical exercises, documentation, written test or oral exam</p>					
<p><u><a href="#">Prerequisites for CP</a></u></p> <p>Active participation, completion of homework, course work or practical exercises</p>					

[Used in Other Courses](#)

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[Significance of Module Grade for Final Grade](#)

7.69%

[Module Director\(s\) and Module Instructor\(s\)](#)

Module Director(s): Prof. Bernd Diemer, Prof. Dr. Emmanuel Guardiola

Module Instructor(s): Prof. Bernd Diemer (Game Design), Prof. Dr. Emmanuel Guardiola (Game Design), Prof. Dr. Cécile Le Prado (Sound Design for Games)

[Other Information](#)

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## OPTIONAL CORE ELECTIVE COURSES - ADVANCED GAME DEVELOPMENT 1: GAME PROGRAMMING

ID MA.002.3	Workload 150 h	Credits 5 ECTS	Semester 1	Frequency Annual	Duration 16 Weeks
Courses 1) Game Tool Development 2) Advanced Game Programming* 3) Sound Design  *Students without sufficient prior experience in Game Programming may replace this course by a designated course from BA Digital Games. In this case, they cannot substitute any other MA course in their second core elective.			Contact Hours  25 h  25 h  2,5 h	Self-Study  45 h  45 h  7,5 h	Size of Groups  10-15  10-15  15-20
<p><u><a href="#">Learning Outcomes / Competencies</a></u></p> <p>This module enables students to:</p> <ul style="list-style-type: none"> <li>• gain competencies in the field of advanced game programming as well as improve skills and knowledge essential to their MA projects;</li> <li>• improve their knowledge and skills in the fields of front end game engine design and server-based technologies with particular regard to their MA projects;</li> <li>• exercise reflection, judgment, and creativity in solving problems in the field of game programming with particular regard to their MA projects.</li> </ul>					
<p><u><a href="#">Module Content</a></u></p> <ol style="list-style-type: none"> <li>1) Front End Technologies: 2D/3D Graphics and media programming for desktop, mobile and browser technologies in relation to student MA projects.</li> <li>2) Advanced Game Programming / Back End Technologies: Java Application Server, ASP.NET, and databases in relation to student MA projects.</li> </ol>					
<p><u><a href="#">Teaching Methods</a></u></p> <p>Lectures, seminars, tutorials, practical exercises</p>					
<p><u><a href="#">Prerequisite Subjects</a></u></p> <p>---</p>					
<p><u><a href="#">Assessment Methods</a></u></p> <p>Homework or course work, documentation, presentation, practical exercises.</p>					
<p><u><a href="#">Prerequisites for CP</a></u></p> <p>Active participation, documentation (digital), presentation</p>					
<p><u><a href="#">Used in Other Courses</a></u></p> <p>---</p>					
<p><u><a href="#">Significance of Module Grade for Final Grade</a></u></p> <p>7.69%</p>					

[Module Director\(s\) and Module Instructor\(s\)](#)

Module Director(s): Prof. Markus Hettlich

Module Instructor(s): Prof. Markus Hettlich (Game Informatics), Prof. Dr. Roland Klemke (Game Informatics), Prof. Dr. Cécile Le Prado (Sound Design for Games)

[Other Information](#)

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## ADVANCED MEDIA & GAME STUDIES 1

ID	Workload	Credits	Semester	Frequency	Duration
MA.003	150 h	5 ECTS	1	Annual	16 Weeks
Courses			Contact Hours	Self-Study	Size of Groups
1) Media and Game Studies			25 h	35 h	15-20
2) Media Economics & Entrepreneurship			10 h	30 h	15-20
3) MA Colloquium			10 h	40 h	15-20

### Learning Outcomes / Competencies

In this module, students will be familiarized with central points of discussion in contemporary Media and Game Studies as well as Media Economy. They will be encouraged to theoretically contemplate problems and questions arising in the context of their MA projects from the perspectives of media history and theory as well as media economics.

1) Part one of this module enables students to:

- gain insight into current research and theories of media and game studies as well as theories relating to their MA projects;
- strengthen their ability to reflect and discuss their own creative work from the perspective of media and game studies.

2) Part two of this module enables students to:

- demonstrate an in-depth understanding of games as economic systems and games as part of the economic system;
- analyze contemporary approaches to funding, marketing, and monetizing digital games;
- strengthen their ability to reflect on and discuss their own creative work from the perspective of media economy.

3) Part three of this module enables students to:

- discuss the theoretical concepts of their MA theses;
- receive in-depth feedback on the theoretical concepts featured in their MA theses from their peers as well as from their professors.

### Module Content

- 1) New points of discussion on contemporary media and game studies, for example transmedia theory, in particular the relation between games and movies (the “cinematization” of games, the “gamification” of movies) and the relation between mechanics and storytelling in digital games, etc.; player studies; “on-demand theory” – theoretical contemplation of questions and problems arising in the context of student MA projects.
- 2) Advanced Media Economy: theory of games as economic systems, from virtual to real economies: contemporary approaches to funding, monetizing, and marketing digital games (for example, from retail to in-game sales, from classical financing to crowd funding, etc.).
- 3) Presentation and discussion of the theoretical framework of student MA theses.

<p><a href="#"><u>Teaching Methods</u></a></p> <p>Seminar, presentations, practical exercises</p>
<p><a href="#"><u>Prerequisite Subjects</u></a></p> <p>---</p>
<p><a href="#"><u>Assessment Methods</u></a></p> <p>Written homework or course work (blog, wiki, paper), presentation</p>
<p><a href="#"><u>Prerequisites for CP</u></a></p> <p>Active participation, completion of homework or course work</p>
<p><a href="#"><u>Used in Other Courses</u></a></p> <p>---</p>
<p><a href="#"><u>Significance of Module Grade for Final Grade</u></a></p> <p>7.69%</p>
<p><a href="#"><u>Module Director(s) and Module Instructor(s)</u></a></p> <p>Module Director(s): Prof. Dr. Gundolf S. Freyermuth</p> <p>Module Instructor(s): Dr. André Czauderna (Media &amp; Game Studies), Prof. Dr. Gundolf S. Freyermuth (Media &amp; Game Studies), Prof. Odile Limpach (Economics &amp; Entrepreneurship for Games)</p>
<p><a href="#"><u>Other Information</u></a></p> <p>---</p>

<b>REFLECTION &amp; COMMUNITY 1</b>					
<b>ID</b>	<b>Workload</b>	<b>Credits</b>	<b>Semester</b>	<b>Frequency</b>	<b>Duration</b>
<b>MA.004</b>	<b>150h</b>	<b>5 ECTS</b>	<b>1</b>	<b>Annual</b>	<b>16 weeks</b>
Courses			Contact Hours	Self-Study	Size of Groups
1) Individual and Group Mentoring			15 h	15 h	1-5
2) Game Lab Lectures			20 h	10 h	150-200
3) Teaching & Research Practice			30 h	60 h	1-5
<u><a href="#">Learning Outcomes / Competencies</a></u>					
This module enables students to:					
<ul style="list-style-type: none"> <li>enrich their identity and build their confidence as artists, designers, or programmers through individual and group mentoring from professors in their specialization;</li> <li>gain a sophisticated analytical and critical perspective on their own creative work;</li> <li>acquire teaching and/or research skills as well as enrich their identity and build their confidence as academics through their work as teaching or research assistants;</li> <li>broaden their intellectual and professional horizons through lectures from theoreticians and practitioners in the field of game development and research.</li> </ul>					
<u><a href="#">Module Content</a></u>					
<ol style="list-style-type: none"> <li>Individual and group mentoring with a focus on academic, artistic, and professional development.</li> <li>Game Lab Lectures: 10 to 12 guest lectures offering a variety of perspectives from both game development and game studies.</li> <li>Teaching &amp; Research Practice: Students work as research assistants in CGL's research projects or as teaching assistants in CGL's Bachelor program – of course, with guidance from their professors.</li> </ol>					
<u><a href="#">Teaching Methods</a></u>					
Lectures, individual and group mentoring					
<u><a href="#">Prerequisite Subjects</a></u>					
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<u><a href="#">Assessment Methods</a></u>					
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<u><a href="#">Prerequisites for CP</a></u>					
Active participation					
<u><a href="#">Used in Other Courses</a></u>					
The Game Lab Lectures are open to all CGL students, whereas the other elements of the module are exclusively offered to MA Digital Games students.					
<u><a href="#">Significance of Module Grade for Final Grade</a></u>					
0%					
<u><a href="#">Module Director(s) and Module Instructor(s)</a></u>					
Module Director(s): Prof. Dr. Björn Bartholdy, Prof. Dr. Gundolf S. Freyermuth					

Module Instructor(s): Prof. Dr. Björn Bartholdy (Media Design), Prof. Bernd Diemer (Game Design), Prof. Dr. Gundolf S. Freyermuth (Media & Game Studies), Prof. Dr. Emmanuel Guardiola (Game Design), Prof. Markus Hettlich (Game Informatics), Prof. Nanette Kaulig (3D Animation & CG Art for Games), Prof. Dr. Roland Klemke (Game Informatics), Prof. Dr. Cécile Le Prado (Sound Design for Games), Prof. Odile Limpach (Economics & Entrepreneurship for Games)

[Other Information](#)

A general introduction to the Reflection & Community-Modules (including information on the procedures of Mentoring and Teaching & Research Practice) will be provided at the beginning of the first semester. The schedule of the Game Lab Lectures will be announced at the beginning of each semester.

## MA PROJECT DEVELOPMENT

ID	Workload	Credits	Semester	Frequency	Duration
MA.005	300 h	10 ECTS	2	Annual	16 Weeks
Courses			Contact Hours	Self-Study	Size of Groups
1) MA Colloquium			16 h	27 h	15-20
2) MA Project			0 h	257 h	1-5
<p><a href="#">Learning Outcomes / Competencies</a></p> <p>This module enables students to:</p> <ul style="list-style-type: none"> <li>• revisit the prototyping process with a focus on their project;</li> <li>• understand how their individual specialization participates in the prototyping process;</li> <li>• develop a (creative) management point of view;</li> <li>• deepen their knowledge of play-testing;</li> <li>• optimize their ability to integrate play-testing into the iterative process of game development;</li> <li>• improve their ability to develop academic research proposals and aesthetic concepts that combine artistic and academic perspectives.</li> </ul>					
<p><a href="#">Module Content</a></p> <p>In the module “MA Project Development”, students use their results and insights gained in the module “MA Project Preparation” to further develop and prototype their MA projects. Expertise from the fields of game arts, game design, and game programming is utilized to create playable prototypes. Through play-testing, user feedback concerning the quality of the content, the audiovisual design, and the usability and playability is collected. This player-centric approach improves the prototype through several iterations and leads to a more refined and detailed concept that forms the basis for the research proposal of the Master Thesis, which has to be submitted by the end of the term.</p>					
<p><a href="#">Teaching Methods</a></p> <p>Seminars</p>					
<p><a href="#">Prerequisite Subjects</a></p> <p>---</p>					
<p><a href="#">Assessment Methods</a></p> <p>Homework or course work, documentation, presentation, practical exercises</p>					
<p><a href="#">Prerequisites for CP</a></p> <p>Active participation, documentation (digital), presentation</p>					
<p><a href="#">Used in Other Courses</a></p> <p>---</p>					
<p><a href="#">Significance of Module Grade for Final Grade</a></p> <p>15.38%</p>					
<p><a href="#">Module Director(s) and Module Instructor(s)</a></p> <p>Module Director(s): Prof. Dr. Roland Klemke</p>					

Module Instructor(s): Prof. Björn Bartholdy (Media Design), Prof. Bernd Diemer (Game Design), Prof. Dr. Gundolf S. Freyermuth (Media & Game Studies), Prof. Dr. Emmanuel Guardiola (Game Design), Prof. Markus Hettlich (Game Informatics), Prof. Nanette Kaulig (3D Animation & CG Art for Games), Prof. Dr. Roland Klemke (Game Informatics), Prof. Dr. Cécile Le Prado (Sound Design for Games), Prof. Odile Limpach (Economics & Entrepreneurship for Games)

[Other Information](#)

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## OPTIONAL CORE ELECTIVE COURSES - ADVANCED GAME DEVELOPMENT 2: GAME ARTS

ID MA.006.1	Workload 150 h	Credits 5 ECTS	Semester 2	Frequency Annual	Duration 16 Weeks
Courses 1) Advanced Game Arts* 2) Design Critique 3) Sound Design  *Students without sufficient prior experience in Game Arts may replace this course by a designated course from BA Digital Games. In this case, they cannot substitute any other MA course in their second core elective.			Contact Hours  25 h  25 h  2,5 h	Self-Study  65 h  25 h  7,5 h	Size of Groups  10-15  10-15  15-20
<p><u><a href="#">Learning Outcomes / Competencies</a></u></p> <p>This module enables students to:</p> <ul style="list-style-type: none"> <li>• acquire advanced game arts competencies;</li> <li>• optimize their art and design skills in fields such as conceptual artwork, illustration, 2D and 3D graphics and animation and interface;</li> <li>• train specialized practical skills focusing on the concept and preproduction phase of their MA project;</li> <li>• gain critical knowledge of the visual design of games relevant to their MA project</li> <li>• acquire theoretical knowledge essential to the artistic production of their MA projects;</li> <li>• exercise reflection, judgment, and creativity in solving problems concerning the game art of their MA project.</li> </ul>					
<p><u><a href="#">Module Content</a></u></p> <p>Key Aspects: concept &amp; preproduction.</p> <ol style="list-style-type: none"> <li>1) Advanced Game Arts (Game Arts Master Class): Theory and practice such as concept art/illustration, 2D/3D graphics and animation, interface, sound design/music in relation to student MA projects.</li> <li>2) Design Critique: Discussion and critique of the audiovisual design of contemporary game projects in relation to and depending on student MA projects.</li> </ol>					
<p><u><a href="#">Teaching Methods</a></u></p> <p>Lectures, seminars, tutorials, practical exercises</p>					
<p><u><a href="#">Prerequisite Subjects</a></u></p> <p>---</p>					
<p><u><a href="#">Assessment Methods</a></u></p> <p>Homework or course work, documentation, presentation, practical exercises</p>					
<p><u><a href="#">Prerequisites for CP</a></u></p> <p>Active participation, documentation (digital), presentation</p>					
<p><u><a href="#">Used in Other Courses</a></u></p> <p>---</p>					

Significance of Module Grade for Final Grade

7.69%

Module Director(s) and Module Instructor(s)

Module Director(s): Prof. Björn Bartholdy

Module Instructor(s): Prof. Björn Bartholdy (Media Design), Prof. Nanette Kaulig (3D Animation & CG Art for Games), Prof. Dr. Cécile Le Prado (Sound Design for Games)

Other Information

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## OPTIONAL CORE ELECTIVE COURSES - ADVANCED GAME DEVELOPMENT 2 – GAME DESIGN

ID MA.006.2	Workload 150 h	Credits 5 ECTS	Semester 2	Frequency Annual	Duration 16 Weeks
Courses			Contact Hours	Self-Study	Size of Groups
1) Advanced Game Design Practices II*			25 h	55 h	10-15
2) Game Design Theory II			12,5 h	17,5 h	10-15
3) Critical Play II			12,5 h	17,5 h	10-15
4) Sound Design			2,5 h	7,5 h	15-20
*Students without sufficient prior experience in Game Design may replace this course by a designated course from BA Digital Games. In this case, they cannot substitute any other MA course in their second core elective.					
<u><a href="#">Learning Outcomes / Competencies</a></u>					
Students acquire advanced game design competencies as well as specialized practical skills and theoretical knowledge essential to their MA projects.					
This module enables students to:					
<ul style="list-style-type: none"> <li>• acquire and experiment with advanced game design skills, specifically in digital narrative, world building, user centric design, interaction and interface design;</li> <li>• apply appropriate research and analytical skills to design narratives, worlds, interactions, and interfaces that correspond to the intended game design targets of their MA projects;</li> <li>• exercise reflection, judgment, and creativity in solving design problems related to their MA project;</li> <li>• play and critically analyze digital games relevant to their MA projects and utilize their research to improve their own MA projects.</li> </ul>					
<u><a href="#">Module Content</a></u>					
1) Advanced digital narration, world building, user-centric design, interaction and interface design; “on-demand” game design practices, in relation to and depending on student MA projects.					
2) Game design theory, specifically relating to digital narrative, world building, user centric design, interaction and interface design; theoretical reflection of questions and problems that arise in the development of student MA projects. “On-demand” game design theory, in relation to and depending on MA projects.					
3) Analyses of historical and contemporary games relevant to student MA projects.					
<u><a href="#">Teaching Methods</a></u>					
Lecture, seminar, tutorial, practical exercises					
<u><a href="#">Prerequisite Subjects</a></u>					
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<u><a href="#">Assessment Methods</a></u>					
Homework or course work, presentation, practical exercises, documentation, written test or oral exam					

[Prerequisites for CP](#)

Active participation, completion of homework, course work or practical exercises

[Used in Other Courses](#)

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[Significance of Module Grade for Final Grade](#)

7.69%

[Module Director\(s\) and Module Instructor\(s\)](#)

Module Director(s): Prof. Bernd Diemer, Prof. Dr. Emmanuel Guardiola

Module Instructor(s): Prof. Bernd Diemer (Game Design), Prof. Dr. Emmanuel Guardiola (Game Design), Prof. Dr. Cécile Le Prado (Sound Design for Games)

[Other Information](#)

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## OPTIONAL CORE ELECTIVE COURSES - ADVANCED GAME DEVELOPMENT 2 – GAME PROGRAMMING

ID MA.006.3	Workload 150 h	Credits 5 ECTS	Semester 2	Frequency Annual	Duration 16 Weeks
Courses 1) Game Tool Development 2) Advanced Game Programming* 3) Sound Design  *Students without sufficient prior experience in Game Programming may replace this course by a designated course from BA Digital Games. In this case, they cannot substitute any other MA course in their second core elective.			Contact Hours  25 h  25 h  2,5 h	Self-Study  45 h  45 h  7,5 h	Size of Groups  10-15  10-15  15-20
<p><u><a href="#">Learning Outcomes / Competencies</a></u></p> <p>This module enables students to:</p> <ul style="list-style-type: none"> <li>• gain competencies in the field of advanced game programming as well as advanced skills and knowledge essential to their MA projects;</li> <li>• improve their knowledge and skills in the fields of front end game engine design and server based technologies with particular regard to their MA projects;</li> <li>• exercise reflection, judgment, and creativity in solving problems in the field of game programming with particular regard to their MA projects.</li> </ul>					
<p><u><a href="#">Module Content</a></u></p> <ol style="list-style-type: none"> <li>1) Front End Technologies: 2D/3D Graphics and media programming for desktop, mobile and browser technologies in relation to student MA projects.</li> <li>2) Advanced Game Programming / Back End Technologies: Java Application Server, ASP.NET and databases in relation to student MA projects.</li> <li>3) Tools and Middleware Technologies: application development, user interface development and databases in relation to student MA projects.</li> </ol>					
<p><u><a href="#">Teaching Methods</a></u></p> <p>Lectures, Seminars, Tutorials, Practical Exercises</p>					
<p><u><a href="#">Prerequisite Subjects</a></u></p> <p>---</p>					
<p><u><a href="#">Assessment Methods</a></u></p> <p>Homework or course work, documentation, presentation, practical exercises</p>					
<p><u><a href="#">Prerequisites for CP</a></u></p> <p>Active participation, documentation (digital), presentation</p>					
<p><u><a href="#">Used in Other Courses</a></u></p> <p>---</p>					

Significance of Module Grade for Final Grade

15.38%

Module Director(s) and Module Instructor(s)

Module Director(s): Prof. Dr. Roland Klemke

Module Instructor(s): Prof. Markus Hettlich (Game Informatics), Prof. Dr. Roland Klemke (Game Informatics), Prof. Dr. Cécile Le Prado (Sound Design for Games)

Other Information

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## ADVANCED MEDIA & GAME STUDIES 2

ID MA.007	Workload 150 h	Credits 5 ECTS	Semester 2	Frequency Annual	Duration 16 Weeks
Courses			Contact Hours	Self-Study	Size of Groups
1) Media and Game Studies			25 h	35 h	15-20
2) Media Economy			10 h	30 h	15-20
3) MA Colloquium			10 h	40 h	15-20

### Learning Outcomes / Competencies

In this module, students will be familiarized with central points of discussion in contemporary Media and Game Studies as well as Media Economy. They will be encouraged to reflect on problems and questions arising in the context of their MA projects from the perspective of media history and theory as well as media economics.

1) Part one of this module enables students to:

- gain insight into current research and theories of media and game studies as well as into theories relating to their MA projects;
- strengthen their ability to reflect and discuss their own creative work from the perspective of media and game studies.

2) Part two of this module enables students to:

- demonstrate knowledge of the economic, managerial, and legal aspects of entrepreneurship;
- strengthen their ability to reflect and discuss their own creative work from the perspective of media economy.

3) Part three of this module enables students to:

- discuss the theoretical concepts of their MA theses;
- receive in-depth feedback on the theoretical concepts their MA theses from their peers as well as from their professors.

### Module Content

- 1) New points of discussion in contemporary media and game studies, for example the schisms between game studies and game design theory or between approaches to game studies borrowed from the social sciences and those borrowed from the humanities; player studies; “on-demand theory” – theoretical reflection of questions and problems arising in the context of student MA projects.
- 2) Contemporary concepts of entrepreneurship: economic and legal aspects of freelancing or founding a startup company, legal aspects of media production (for example intellectual property, copyright); project and time management, leadership and human resources management, financial management, business plans, and idea/concept pitching.
- 3) Presentation and discussion of the theoretical framework of student MA theses.

### Teaching Methods

Seminar, presentations, practical exercises

### Prerequisite Subjects

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[Assessment Methods](#)

Written homework or course work (blog, wiki, paper), presentation

[Prerequisites for CP](#)

Active participation, completion of homework or course work

[Used in Other Courses](#)

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[Significance of Module Grade for Final Grade](#)

7.69%

[Module Director\(s\) and Module Instructor\(s\)](#)

Module Director(s): Prof. Dr. Gundolf S. Freyermuth

Module Instructor(s): Dr. André Czauderna (Media & Game Studies), Prof. Dr. Gundolf S. Freyermuth (Media & Game Studies), Prof. Odile Limpach (Economics & Entrepreneurship for Games)

[Other Information](#)

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<b>REFLECTION &amp; COMMUNITY 2</b>					
<b>ID</b>	<b>Workload</b>	<b>Credits</b>	<b>Semester</b>	<b>Frequency</b>	<b>Duration</b>
<b>MA.008</b>	<b>150h</b>	<b>5 ECTS</b>	<b>2</b>	<b>Annual</b>	<b>16 weeks</b>
Courses			Contact Hours	Self-Study	Size of Groups
1) Individual and Group Mentoring			15 h	15 h	1-5
2) Game Lab Lectures			20 h	10 h	150-200
3) Teaching & Research Practice			30 h	60 h	1-5
<u><a href="#">Learning Outcomes / Competencies</a></u>					
This module enables students to:					
<ul style="list-style-type: none"> <li>• enrich their identity and build their confidence as artists, designers, or programmers through individual and group mentoring from professors in their specialization;</li> <li>• gain a sophisticated analytical and critical perspective on their own creative work;</li> <li>• acquire teaching and/or research skills as well as enrich their identity and build their confidence as academics through their work as teaching or research assistants;</li> <li>• broaden their intellectual and professional horizons through lectures from theoreticians and practitioners in the field of game development and research.</li> </ul>					
<u><a href="#">Module Content</a></u>					
<ol style="list-style-type: none"> <li>1) Individual and group mentoring with a focus on academic, artistic, and professional development.</li> <li>2) Game Lab Lectures: 10 to 12 guest lectures offering a variety of perspectives from both game development and game studies.</li> <li>3) Teaching &amp; Research Practice: Students work as research assistants in CGL's research projects or as teaching assistants in CGL's Bachelor program – of course with guidance from their professors.</li> </ol>					
<u><a href="#">Teaching Methods</a></u>					
Lectures, individual and group mentoring					
<u><a href="#">Prerequisite Subjects</a></u>					
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<u><a href="#">Assessment Methods</a></u>					
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<u><a href="#">Prerequisites for CP</a></u>					
Active participation					
<u><a href="#">Used in Other Courses</a></u>					
The Game Lab Lectures are open to all CGL students, whereas the other elements of the module are exclusively offered to MA Digital Games students.					
<u><a href="#">Significance of Module Grade for Final Grade</a></u>					
0%					
<u><a href="#">Module Director(s) and Module Instructor(s)</a></u>					
Module Director(s): Prof. Björn Bartholdy, Prof. Dr. Gundolf S. Freyermuth					

Module Instructor(s): Prof. Björn Bartholdy (Media Design), Prof. Bernd Diemer (Game Design), Prof. Dr. Gundolf S. Freyermuth (Media & Game Studies), Prof. Dr. Emmanuel Guardiola (Game Design), Prof. Markus Hettlich (Game Informatics), Prof. Nanette Kaulig (3D Animation & CG Art for Games), Prof. Dr. Roland Klemke (Game Informatics), Prof. Dr. Cécile Le Prado (Sound Design for Games), Prof. Odile Limpach (Economics & Entrepreneurship for Games)

[Other Information](#)

The schedule of the Game Lab Lectures will be announced at the beginning of each semester.



<b>MA THESIS</b>					
<b>ID</b>	<b>Workload</b>	<b>Credits</b>	<b>Semester</b>	<b>Frequency</b>	<b>Duration</b>
<b>MA.009</b>	<b>750h</b>	<b>25</b>	<b>3</b>	<b>Every Semester</b>	<b>16 weeks</b>
Courses			Contact Hours	Self-Study	Size of Groups
1) MA Project			-	600 h	1-5
2) MA Colloquium			30 h	30 h	15-20
3) Presentation & Defense			30 h	60 h	15-20
<u><a href="#">Learning Outcomes / Competencies</a></u>					
This module enables students to:					
<ul style="list-style-type: none"> <li>• gain the ability to conceptualize and realize comprehensive development and/or research projects at postgraduate level – individually and/or collaboratively;</li> <li>• attain the ability to present artistic artifacts and/or academic research at postgraduate level;</li> <li>• improve their ability to defend as well as critically evaluate their own work;</li> <li>• improve their ability to criticize the creative and academic work of others.</li> </ul>					
<u><a href="#">Module Content</a></u>					
<ol style="list-style-type: none"> <li>1) This semester concludes the development and/or research activities which started with modules “MA Project Preparation” (semester 1) and “MA Project Development” (semester 2). Individually and/or collaboratively, students realize their Master projects, i.e., they create prototypes of digital games or other nonlinear audiovisual works and/or research and write empirical or theoretical studies. They also write their individual MA theses.</li> <li>2) The MA Colloquium offers the students a platform to discuss their work in a group of peers as well as to get constant feedback from their supervisors.</li> <li>3) The module is concluded by a presentation (in front of the whole CGL community) as well as a Thesis defense with CGL faculty.</li> </ol>					
<u><a href="#">Teaching Methods</a></u>					
Mentoring, discussion, presentation					
<u><a href="#">Prerequisite Subjects</a></u>					
60 ECTS					
<u><a href="#">Assessment Methods</a></u>					
Thesis, prototype, presentation, defense					
<u><a href="#">Prerequisites for CP</a></u>					
Thesis, prototype, documentation, presentation, defense					
<u><a href="#">Used in Other Courses</a></u>					
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<u><a href="#">Significance of Module Grade for Final Grade</a></u>					
38.46%					
<u><a href="#">Module Director(s) and Module Instructor(s)</a></u>					

Module Director(s): Prof. Björn Bartholdy, Prof. Dr. Gundolf S. Freyermuth

Module Instructor(s): Prof. Björn Bartholdy (Media Design), Prof. Bernd Diemer (Game Design), Prof. Dr. Gundolf S. Freyermuth (Media & Game Studies), Prof. Dr. Emmanuel Guardiola (Game Design), Prof. Markus Hettlich (Game Informatics), Prof. Nanette Kaulig (3D Animation & CG Art for Games), Prof. Dr. Roland Klemke (Game Informatics), Prof. Dr. Cécile Le Prado (Sound Design for Games), Prof. Odile Limpach (Economics & Entrepreneurship for Games)

[Other Information](#)

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<b>REFLECTION &amp; COMMUNITY 3</b>					
<b>ID</b>	<b>Workload</b>	<b>Credits</b>	<b>Semester</b>	<b>Frequency</b>	<b>Duration</b>
<b>MA.010</b>	<b>150h</b>	<b>5 ECTS</b>	<b>3</b>	<b>Annual</b>	<b>16 weeks</b>
Courses			Contact Hours	Self-Study	Size of Groups
1) Individual and Group Mentoring			15 h	15 h	1-5
2) Game Lab Lectures			20 h	10 h	150-200
3) Teaching & Research Practice			30 h	60 h	1-5
<u><a href="#">Learning Outcomes / Competencies</a></u>					
This module enables students to:					
<ul style="list-style-type: none"> <li>enrich their identity and build their confidence as artists, designers, or programmers through individual and group mentoring from professors in their specialization;</li> <li>gain a sophisticated analytical and critical perspective on their own creative work;</li> <li>acquire teaching and/or research skills as well as enrich their identity and build their confidence as academics through their work as teaching or research assistants;</li> <li>broaden their intellectual and professional horizons through lectures from theoreticians and practitioners in the field of game development and research.</li> </ul>					
<u><a href="#">Module Content</a></u>					
<ol style="list-style-type: none"> <li>Individual and group mentoring with a focus on academic, artistic, and professional development.</li> <li>Game Lab Lectures: 10 to 12 guest lectures offering a variety of perspectives from both game development and game studies.</li> <li>Teaching &amp; Research Practice: Students work as research assistants in CGL's research projects or as teaching assistants in CGL's Bachelor program – of course with guidance from their professors.</li> </ol>					
<u><a href="#">Teaching Methods</a></u>					
Lectures, Individual and Group Mentoring					
<u><a href="#">Prerequisite Subjects</a></u>					
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<u><a href="#">Assessment Methods</a></u>					
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<u><a href="#">Prerequisites for CP</a></u>					
Active participation					
<u><a href="#">Used in Other Courses</a></u>					
The Game Lab Lectures are open to all CGL students, whereas the other elements of the module are exclusively offered to MA Digital Games students.					
<u><a href="#">Significance of Module Grade for Final Grade</a></u>					
0%					
<u><a href="#">Module Director(s) and Module Instructor(s)</a></u>					
Module Director(s): Prof. Björn Bartholdy, Prof. Dr. Björn Bartholdy					

Module Instructor(s): Prof. Björn Bartholdy (Media Design), Prof. Bernd Diemer (Game Design), Prof. Dr. Gundolf S. Freyermuth (Media & Game Studies), Prof. Dr. Emmanuel Guardiola (Game Design), Prof. Markus Hettlich (Game Informatics), Prof. Nanette Kaulig (3D Animation & CG Art for Games), Prof. Dr. Roland Klemke (Game Informatics), Prof. Dr. Cécile Le Prado (Sound Design for Games), Prof. Odile Limpach (Economics & Entrepreneurship for Games)

[\*Other Information\*](#)

The schedule of the Game Lab Lectures will be announced at the beginning of each semester.