Faculty of Cultural Sciences

Module Catalog
MA 3D Animation for Film & Games

Masters of Arts

Technology
Arts Sciences
TH Köln

Inhalt

Module Catalog | 3D Animation for Film & Games, M.A.

1 Program Description

The postgraduate program 3D Animation for Film & Games is aimed at media professionals from the fields Film, Games, Media Design, Architecture and so on who want to expand their skill set in 3D animation and to explore the intersection between film and games that opened up due to technological innovation.

In addition to a successful Bachelor's degree or comparable academic degree, admission to the program requires at least twelve months of practical experience in a relevant field. The Master's program thus gains its specific profile in the targeted interweaving of scholarship, art and craft, tradition and innovation, practice and future orientation.

The MA 3D Animation for Film & Games program is strongly project-oriented and lasts four semesters. It is designed to allow students to work part-time if they want to (a job in the industry, the development of a personal project, etc.). Attendance time is therefore kept as compact as possible. Students have 12 contact hours per week (not including project work and self-study time), all day on Mondays and on Wednesday evenings.

The program offers a highly international and interdisciplinary environment where students receive guidance in the development of numerous 3D animation projects as well as the theoretical foundations necessary for a critical approach to the design and research of animated projects.

2 Graduate Profile

Occupation-related learning goals and competencies:

At the beginning of their studies, students must have at least one year of experience in a profession relevant to the animation industry. The project-centered program builds on these experiences and deepens them. Continuous industry feedback is an integral part of teaching. Students acquire a rich set of theoretical, technical and design-practical skills to independently conceptualize, execute and manage artistic-academic and artistic-economic 3D projects for either film, games or immersive media. Expanding beyond traditional media, the program also equips students with the skills to apply their 3D project expertise across various sectors. They will gain proficiency in adapting their animation and visualization skills for diverse applications, not limited to film and games but extending to broader media landscapes.

(Inter-) Cultural learning goals and competencies:

3D artists and animators must come to terms with the values and consequences of their productions. The program encourages students to take on this responsibility as culture creators by training them in critical judgment. Animated audio visions, film and digital games alike, are distributed globally as digital products. They, therefore, have an even greater impact than traditional art and entertainment far beyond the boundaries of the culture in which they were created. Increasingly, animation projects are designed and realized in intercultural teams. The course, therefore, focuses on intercultural and transnational aspects of animation projects.

Academic learning goals and competencies:

Global research into computer-generated linear and non-linear audio visions is evolving rapidly. Students are exposed to the core facets of contemporary academic issues surrounding the creation, application, and influence of these CG artifacts. Lectures and seminars facilitate the acquisition of theoretical development methods such as research, analysis, criticism, and

synthesis. The program fosters independent academic and artistic research, allowing the graduates to be capable communicators of their art form and culminating in a Master's thesis that showcases students' competencies and laying the foundations for an academic career.

The final master's thesis provides a platform for students to demonstrate their acquired competencies through an in-depth study of a chosen subject. Program graduates are equipped to tackle intricate tasks in the realm of 3D animation. Their comprehensive understanding enables them to conceive strategic blueprints and translate them into real-world applications. By pairing intricate content creation with theory-driven instruction, the program cultivates innovative minds capable of adapting to technological, aesthetic, and economic shifts within the field of animation.

3 Fields of Activity

Developing 3D Animations for Films, Games, and Immersive Technologies:

Graduates shape the evolving field of 3D animation at the intersection of film, games, and immersive technologies. They create artifacts in said media in the role of the 3D artist / animator. Graduates work in interdisciplinary and international teams, as employees in various studios of different sizes and foci, and as freelancers and entrepreneurs. Graduates of the MA 3D Animation for Film & Games contribute significantly to artistic expression, popular entertainment, knowledge transfer, and opinion-making in digital culture.

Cross-Sector 3D Content Creation

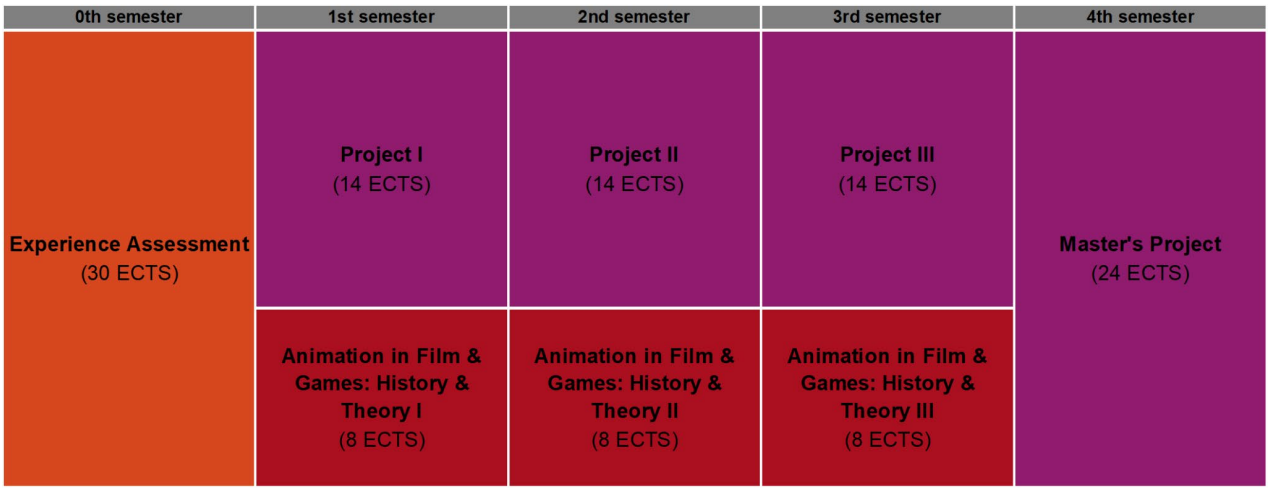
Graduates are instrumental in bridging digital technology with traditional sectors. Their expertise in 3D creation enhances various industries, including online learning platform providers, the automotive sector, or medical applications. By developing immersive experiences, compelling design assets, digital prototypes, or intricate simulations, they extend the reach of digital 3D technologies across numerous economic and social sectors, facilitating innovative growth in these industries.

Communicating and Researching 3D Animations:

Graduates are creators and conveyors of knowledge regarding the artistic, technical development, and the societal and cultural impacts of 3D animations. They delve into and educate in areas such as 3D Animation Design, 3D Modelling, Animation Programming, and Media Studies. This includes diverse forms of research, its communication and transfer: industry research, applied and fundamental research in universities, journalistic communication, consulting, and activities in public and private institutions like museums, galleries, libraries, and cultural offices.

Education occurs at varied levels: industry-based training, vocational schools, and higher education. Graduates significantly contribute to the broad distribution of 3D animation and media literacy, enhancing understanding and application of these pivotal skills across societal sectors.

4 Study Plan



5 Alternative Study Plan

There is no alternative study plan for the M.A. 3D Animation for Film & Games.

6 Modules

6.1 Experience Assessment

Module Code:	MA.3D.001
Module Title:	Experience Assessment
Type of Module:	Mandatory
ECTS Credits:	30
Language:	English
Duration of Module:	6 months
Recommended for Semester:	0 (Semester prior to the Studies)
Frequency:	Annual
Module Coordinator:	Prof. Bjoern Bartholdy, Prof. Sophia Zauner
Lecturers:	Evaluation Committee: Prof. Björn Bartholdy, Prof. Sophia Zauner, and various faculty and staff
Learning Outcome:	The “Experience Assessment” module enables students to: ● provide the evaluation committee with official documentation of their highest academic certificate/degree ● demonstrate their professional-practical experience (equivalent to at least one year in total) that is relevant to the production of animated audiovisions. This experience must be completed before students enroll. However, the twelve months may be the cumulative total of various positions/projects ● demonstrate their skills and experience in, as well as their knowledge of, media production ● prove their sincere interest in, and personal ambition toward, the exploratory production of animated audiovisions, as well as the theoretical interrogation of, and reflection upon, audiovisual media generally and their own creations specifically ● demonstrate their capacity to self-manage individual efforts as well as their ability to effectively work with a team ● demonstrate their ability to actively participate in academic discourse concerning media theoretical concepts, methodologies, and inquiries
Module Content:	1) Experience Assessment ● Applicants provide… ○ Required documentation, including personal details, proof of at least one year of relevant professional experience in animated audio-visual productions, and academic qualifications (B.A. or M.A.). ○ A unique assignment to be completed within eight weeks of its release. This involves submitting a comprehensive outline for an audiovisual project, including visual components, and an application video. Additionally, applicants are required to present a current online portfolio and an essay discussing a relevant issue in media theory. 2) Preparatory Tutorials ● Successful applicants complete a set of software-related and academic tasks to allow them to transition into their studies more easily.
Teaching and Learning Methods:	Discussion, evaluation of application materials and assignments
Assessment Method:	Project, term paper (not graded)
Workload (25 - 30 h ≙ 1 ECTS credit):	900
Contact hours:	0
Self-study:	900

Recommended Prerequisites:	none
Required Prerequisites:	Successful completion of all aspects of the application process
Recommended Reading:	…
Use of the Module in Other Degree Programs:	…
Particularities:	…
Last update:	Nov. 2024

6.2 Project I

Module Code:	MA.3D.002
Module Title:	Project I
Type of Module:	Mandatory
ECTS Credits:	14
Language:	English
Duration of Module:	16 weeks
Recommended for Semester:	1
Frequency:	Annual
Module Coordinator:	Prof. Bjoern Bartholdy, Prof. Sophia Zauner
Lecturers:	Prof. Bjoern Bartholdy (Media Design), Prof. Sophia Zauner (3D Animation for Film and Non-Linear Media), Prof. Rolf Muetze (VFX & Animation), N.N.
Learning Outcome:	Project Development & Realization I: Students transform a scene from film, theater, or similar platforms into three-dimensional digital spaces by using Motion Capture technology to capture human performance, refining and cleaning up this data, subsequently applying it to digital humans and integrating it into a game engine to strengthen their technical expertise and artistic sensibilities in converting raw motion-captured data into visually captivating 3D environments, and to prepare them for advanced applications of mocap and game engine techniques in following courses. Virtual Character I: Students will be able to design and model a unique humanoid 3D character, by starting from initial conceptualization and progressing through detailed 3D translation with an emphasis on proper retopology and efficient edge flow to enhance their technical mastery and creative approach to 3D character design, setting the foundation for advanced design tasks and requirements for future courses.
Module Content:	Project Development & Realization I: In this project-based course, student teams delve into the interplay between technical and artistic components in transforming scenes from film, theater, or similar platforms into three-dimensional digital spaces. The initial stages of the course highlight the application of Motion Capture (Mocap) technology. This hands-on experience enables students to strengthen their technical expertise while honing their artistic sensibilities in capturing and simulating realistic human movements. The subsequent phase involves meticulous refinement of the motion-captured data, emphasizing both precision and aesthetic judgment. The cleaned and adjusted data is then applied to digital human models and incorporated into a game engine. Through this intricate process, students gain the necessary skills to convert raw motion-captured data into refined, visually captivating 3D environments.

	Virtual Character I: Students complete the task of designing and modeling a unique humanoid 3D character. From initial conceptualization to detailed 3D translation, students refine their skills in 3D modeling throughout the progression of the course. The final objective is to produce a completed 3D model of the initially conceived character, emphasizing proper retopology and efficient edge flow. This course is designed to enhance both the technical mastery and the creative approach to 3D character design.
Teaching and Learning Methods:	Lectures, seminars, tutorials, practical exercises
Assessment Method:	Project (Virtual Character I not graded)
Workload (25 - 30 h ≙ 1 ECTS credit):	420
Contact hours:	90
Self-study:	330
Recommended Prerequisites:	none
Required Prerequisites:	none
Recommended Reading:	…
Use of the Module in Other Degree Programs:	…
Particularities:	…
Last update:	Nov. 2024

6.3 Animation in Film & Games: History & Theory I

Module Code:	MA.3D.003
Module Title:	Animation in Film & Games: History & Theory I
Type of Module:	Mandatory
ECTS Credits:	8
Language:	English
Duration of Module:	16
Recommended for Semester:	1
Frequency:	Annual
Module Coordinator:	Prof. Bjoern Bartholdy, Prof. Sophia Zauner
Lecturers:	Prof. Bjoern Bartholdy, Prof. Sophia Zauner, Prof. Federico Alvarez, Dr. Laura Frings, N.N.
Learning Outcome:	Media Studies I: Students will be able to critically analyze and historically contextualize works of audiovisual art, especially in animation and games, through an in-depth study of the social, cultural, and technological evolution of audiovisuality, engagement with relevant theories, and a fusion of academic and artistic viewpoints, all while honing their academic writing prowess to deepen their understanding of the audiovisual media's history and theories and empower them to utilize historical and theoretical insights in enhancing their creative endeavors and fostering critical reflection.

	Methods & Tools I: Students can write scripts to address small scope problems in animation by learning the fundamentals of procedural programming, including key elements such as data types and control structures. They will engage with these concepts using a contemporary programming language like Python and will be trained to develop their computational thinking skills, breaking down intricate challenges into smaller, manageable tasks to establish a foundational understanding of programming principles, cultivate a problem-solving mindset through computational thinking, and directly apply this knowledge in the realm of animation. Animation History I: Students can describe, discuss, and understand the historic development of animation, including both its aesthetics and techniques by delving into the fundamentals of analog animation from both technological and aesthetic standpoints, explore the origins and early days of animation, studying notable entities such as Disney and other pivotal advancements in North American animation and analyze contemporary artworks from the gaming realm, comparing and contrasting them to understand the evolution of the medium to cultivate a comprehensive historical perspective on animation, build a robust vocabulary for discussing its aesthetics and techniques, and grasp the intricate relationship between analog and digital animation Tutorials I: students will have the ability to harness their understanding of the technical basics of Digital Content Creation (DCC) tools, translating this knowledge into a clear comprehension of how objects are visualized in 3D, by immersing themselves in the foundational principles and technical intricacies of DCC tools, focusing on modeling best practices through tutorials and hands-on exercises, to build a fundamental technical understanding, allowing them to confidently approach and excel in advanced character development tasks in the 'Project I - Virtual Character I' module.
Module Content:	Media Studies I: The modern development of audiovisual media — from the theater of illusion to live action and animated film to television to digital games to augmented and virtual reality — is characterized by the successive accumulation of skills and technologies to generate and capture images and sound, and thus also by increasing complexity. This seminar will serve as an introduction to the social, cultural, and technological history of modern audiovisuality, from the Renaissance to the present time, and will confront participants with relevant cultural and aesthetic theories concerning audiovisual media. Methods & Tools I: This course offers an introduction into programming for individuals with little to no previous programming experience. Students will acquire a foundation in the key elements of procedural programming (data type and control structures) as well as improve their capabilities in computational thinking using a contemporary programming language (e.g. Python). Animation History I: The seminar “Animation History I” will cover the fundamentals of analog animation from a technological and aesthetical perspective and discuss the basic principles of this field. It includes the pre-forms and early days of animation. It will also take a closer look at the work of selected studios such as Disney and illustrate other significant developments in the animation industry of North America. To complement the cinematic animations, contemporary artworks from the field of games are also consulted and analyzed in comparison. Tutorials I: This course, using a flipped classroom model, is specifically designed as a preparatory foundation for the ‘Project I - Virtual Character I’. The emphasis of this course is on understanding how objects are represented in 3D space and mastering Modeling best practices. The first part of the course focuses on the basic principles used in Digital Content Creation (DCC) tools to represent Objects in 3D space. The subsequent portion of the course is dedicated to Modeling best practices. Through tutorials and exercises, students learn and apply optimal edge loop configurations for creating appealing and functional deformations in character models.

Teaching and Learning Methods:	Lectures, seminars
Assessment Method:	Term papers (Tutorials I not graded)
Workload (25 - 30 h ≙ 1 ECTS credit):	240
Contact hours:	60
Self-study:	180
Recommended Prerequisites:	none
Required Prerequisites:	none
Recommended Reading:	…
Use of the Module in Other Degree Programs:	…
Particularities:	…
Last update:	Nov. 2024

6.4 Project II

Module Code:	MA.3D.004
Module Title:	Project II
Type of Module:	Mandatory
ECTS Credits:	14
Language:	English
Duration of Module:	16 weeks
Recommended for Semester:	2
Frequency:	Annual
Module Coordinator:	Prof. Bjoern Bartholdy, Prof. Sophia Zauner
Lecturers:	Prof. Bjoern Bartholdy (Media Design), Prof. Sophia Zauner (3D Animation for Film and Non-Linear Media), Prof. Rolf Muetze (VFX & Animation), N.N.
Learning Outcome:	Project Development & Realization II: Students will be able to create detailed and immersive XR (Extended Reality) spaces by mastering 3D scanning technologies to capture and digitize real-world environments and objects, efficiently process and optimize this scanned data for XR applications and use their modeling and texturing skills to add additional details, to empower them to construct XR environments that are not only technically accomplished but also rich in detail and interactivity. This process will enhance their technical skills and artistic insight, ensuring they can effectively consider layout, scale, and user navigation in creating immersive experiences. Virtual Character II: Students will create a high-quality render of their textured character, by employing advanced techniques in UV mapping to prepare their models for texturing, then meticulously applying textures to their characters. Followed by lighting their character and mastering the rendering processes. To enhance their understanding and skills in the crucial areas of texturing, lighting and rendering. This enables them to produce work that meets industry standards, showcasing their technical abilities and artistic acumen in 3D character design.

Module Content:	Project Development & Realization II: This project explores the use of 3D scanning technology in creating immersive XR (Extended Reality) spaces. Students will work in teams and learn the principles and techniques of 3D scanning, gaining hands-on experience with scanning devices and software. They will capture and digitize real-world objects and environments using scanning technologies such as LiDAR, structured light scanning, and photogrammetry. The course focuses on integrating scanned assets into virtual, augmented, and mixed reality environments. Students will process and optimize scanned data for XR platforms, enhancing their skills in modeling, texturing, and creating cohesive XR spaces. Virtual Character II: Building upon their work from the previous semester, students in this course will further refine their original humanoid 3D characters. The course focuses on the creation and application of UV maps, essential for texturing their character models. Following the texturing process, students will learn to produce a high-quality render of their fully textured character. This course promotes the progression of technical proficiency while fostering an advanced understanding of UV mapping, texturing, and rendering in the context of 3D character design.
Teaching and Learning Methods:	Lectures, seminars, tutorials, practical exercises
Assessment Method:	Project (Virtual Character II not graded)
Workload (25 - 30 h ≙ 1 ECTS credit):	320
Contact hours:	90
Self-study:	330
Recommended Prerequisites:	none
Required Prerequisites:	…
Recommended Reading:	…
Use of the Module in Other Degree Programs:	…
Particularities:	…
Last update:	Nov. 2024

6.5 Animation in Film & Games: History & Theory II

Module Code:	MA.3D.005
Module Title:	Animation in Film & Games: History & Theory II
Type of Module:	Mandatory
ECTS Credits:	8
Language:	English
Duration of Module:	16 weeks
Recommended for Semester:	2
Frequency:	Annual
Module Coordinator:	Prof. Bjoern Bartholdy, Prof. Sophia Zauner

Lecturers:	Prof. Bjoern Bartholdy (Media Design), Prof. Sophia Zauner (3D Animation for Film and Non-Linear Media), N.N.
Learning Outcome:	Media Studies II: Students will critically evaluate storytelling techniques across different media platforms, such as film, comics, games, and VR, by engaging with narrative theories and applying narrative vocabulary and concepts, to deeply analyze a range of narrative forms and their implementations to refine their ability to make informed judgments about narrative strategies, which will inform their own storytelling approaches and enhance the narrative sophistication of their future creative projects. Methods & Tools II: Students will develop sophisticated interactive content within a game engine by gaining mastery over the functionality of game engines, leveraging visual scripting tools, and utilizing the engines' advanced animation systems, to equip themselves with the practical skills and theoretical knowledge necessary to innovate and excel in the game development industry. This capacity to create interactive content is designed to prepare them for future educational and professional challenges, enabling them to craft dynamic and engaging experiences for users. Animation History II: Students will be able to critically discuss and evaluate the historical and aesthetic developments of animation across various regions, by engaging with a diverse range of animations, studying the impact of cultural, historical, and technological factors, and analyzing the use of animation in visual effects, advertising, and television design, to enrich their critical-analytical skills and deepen their appreciation of global animation practices. This knowledge enables them to place contemporary animation in a broader context, enhancing their own creative and academic work within the field of animation. Tutorials II: Students will be able to independently execute UV mapping for complex 3D character models by engaging with tutorial videos and hands-on exercises that instill a comprehensive understanding of UV mapping principles and their practical application, to ensure they possess the preparatory technical skills essential for advanced character design, enabling them to seamlessly transition into the 'Project II - Virtual Character II' module with confidence in their ability to contribute effectively to the character texturing process.
Module Content:	Media Studies II: In this seminar students will explore different forms of storytelling in various media, e.g., film, comics, games, VR, etc.. They will gain an understanding of each medium’s narrative conventions and ways to break with them. Consequently, students will expand their narrative vocabulary and concepts to ultimately include these insights into their own work. Methods & Tools II: The focus of the sub-module is on game engines. The students learn to work with established 3D game engines such as Unity 3D (https://unity3d.com/de), Unreal Engine (https://www.unrealengine.com/). They understand the general functions of these engines (main program, rendering engine, audio engine, physics engine and ai) and learn how to develop interactive content in these integrated development environments. Additionally they learn to create scripting logic by utilizing the game engines' visual scripting functionalities. Animation History II: The second part of this seminar series expands the students’ animation literacy by analyzing exemplary regional phenomena such as Europe, Eastern Europe, or East Asia. Additionally, aspects of the application of animation in fields such as visual effects, advertising, and television design will be featured and discussed. Tutorials II: Utilizing a flipped classroom approach, this course has been designed as a crucial preparatory step for the 'Project II - Virtual Character II' module. The initial half of the course exposes students to the fundamental principles of UV mapping. Through the use of tutorial videos and hands-on exercises, learners will develop a robust understanding of UV mapping, a critical technique in texturing 3D objects.

	The latter half of the course guides students in practically applying these principles to prepare UVs for their characters. This hands-on approach not only reinforces their understanding of UV mapping but also equips them with the skills necessary to execute the process independently.
Teaching and Learning Methods:	Lectures, seminars
Assessment Method:	Term papers (Tutorials II not graded)
Workload (25 - 30 h ≙ 1 ECTS credit):	240
Contact hours:	60
Self-study:	180
Recommended Prerequisites:	…
Required Prerequisites:	…
Recommended Reading:	…
Use of the Module in Other Degree Programs:	…
Particularities:	…
Last update:	Nov. 2024

6.6 Project III

Module Code:	MA.3D.006
Module Title:	Project III
Type of Module:	Mandatory
ECTS Credits:	14
Language:	English
Duration of Module:	16 weeks
Recommended for Semester:	3
Frequency:	Annual
Module Coordinator:	Prof. Bjoern Bartholdy, Prof. Sophia Zauner
Lecturers:	Prof. Bjoern Bartholdy (Media Design), Prof. Sophia Zauner (3D Animation for Film and Non-Linear Media), Prof. Rolf Muetze (VFX & Animation), N.N.
Learning Outcome:	Project Development & Realization III: Students will create an animation project tailored to a selected medium by conceptualizing and designing an innovative animation project, utilizing advanced digital technologies, mastering animation tools, and implementing creativity techniques to meet the demands of the chosen medium to hone their project design and management abilities, adapt to new technological trends, and refine their critical analysis skills. This process will not only manifest their technical and creative acumen but also prepare them to contribute meaningfully to the evolving landscape of the animation industry."

	Virtual Character III: Students will construct a professionally rigged and animated 3D character, by applying advanced rigging techniques and conducting initial animation tests, building upon the textured 3D character developed in previous coursework, to develop a deep understanding of character motion and control, equipping them with essential skills for the animation industry.
Module Content:	Project Development & Realization III: Students will design and execute an animation project for a medium of their choice, such as Virtual Reality, Augmented Reality, Performance Capture, Installations, Film, or Games. The distinguishing feature of the project should be its innovative nature.Throughout the course, students will deepen their knowledge and enhance their skills in key areas. This includes project design, digital technologies, creativity techniques, animation tools, and medium-specific requirements. By undertaking this project, students will engage with innovative methods and technological advancements in the animation industry, leading to a comprehensive understanding and the ability to produce unique work. Virtual Character III: Building upon the textured 3D character developed in previous semesters, students will advance into the complex stages of character creation, focusing on rigging and initial animation tests. They will learn to construct a robust rig for their character, a crucial step for enabling realistic animation. The course's ultimate goal is to equip students with a fully realized, professionally rigged, and animated 3D character, which will enhance their portfolio by the end of their studies.
Teaching and Learning Methods:	Lectures, seminars, tutorials, practical exercises
Assessment Method:	Project (Virtual Character III not graded)
Workload (25 - 30 h ≙ 1 ECTS credit):	320
Contact hours:	90
Self-study:	330
Recommended Prerequisites:	none
Required Prerequisites:	…
Recommended Reading:	…
Use of the Module in Other Degree Programs:	…
Particularities:	…
Last update:	Nov. 2024

6.7 Animation in Film & Games: History & Theory III

Module Code:	MA.3D.007
Module Title:	Animation in Film & Games: History & Theory III
Type of Module:	Mandatory
ECTS Credits:	8
Language:	English
Duration of Module:	16 weeks

Recommended for Semester:	3
Frequency:	Annual
Module Coordinator:	Prof. Bjoern Bartholdy, Prof. Sophia Zauner
Lecturers:	Prof. Bjoern Bartholdy (Media Design), Prof. Sophia Zauner (3D Animation for Film and Non-Linear Media), Dr. Laura FringsN.N.
Learning Outcome:	Media Studies III: Students will critically analyze the impact of emerging media trends on society and culture by exploring advanced digital media aesthetics, understanding varying media theoretical methodologies, and engaging with contemporary issues such as artificial intelligence and the climate crisis, to foster a responsible and forward-thinking mindset that is crucial for media professionals in a rapidly evolving digital landscape. Methods & Tools III: Students will construct basic machine learning models by utilizing user-friendly visual programming tools and comprehend and apply the foundational concepts and techniques of artificial intelligence and machine learning to cultivate a practical understanding of AI and ML that supports the development of computational thinking and prepares them for the evolving demands of technology-driven environments. Animation History III: Students will critically review the history and development of computer-based and 3D animation by studying the history and development of animation, the historic development of computer animation, new fields of animation, the animation economy and current tendencies in animation to develop a deep understanding of the animation industry's evolution, fostering an informed perspective that can influence their creative decisions and professional growth within the realm of animation. Tutorials III: Students will construct a basic rig for a 3D model by engaging with tutorial videos and practical exercises to understand the fundamental principles of rigging to ensure they are well-prepared for the advanced rigging challenges in the 'Project I - Virtual Character Creation II' module, equipping them with the necessary foundation to excel in complex character development.
Module Content:	Media Studies III: This seminar foregrounds the future of diverse media trends (e.g., artificial intelligence, the climate crisis, the post-truth era, etc.) as well as their influence on the political, social, and cultural landscape. It seeks to answer pivotal questions that go beyond understanding the evolution of the media industry, such as how media changes can affect human work and leisure and how humans can bear responsibility in a world where they are no longer central. To allow students to become active participants of this wider discussion, they will also engage with various research methodologies to understand better, how their own artistic practice fits into that field. Methods & Tools III: This course provides an introductory journey into the world of Artificial Intelligence (AI) and Machine Learning (ML) for individuals with little to no prior programming experience. Utilizing a user-friendly visual programming tool (e.g. Orange https://orangedatamining.com/) , students will gain a solid foundation in the fundamental concepts and methods that underpin these fields. Animation History III: In the third semester the seminars on Animation History will concentrate on the history of computer based animation in general and specifically review the development of 3D Animation. The students concern themselves with the current state of the art of 3D Animation in film, games and expanded animation. Furthermore, they will engage with the animation industry and its contemporary trends.

	Tutorials III: Leveraging a flipped classroom methodology, this course is crafted as a pivotal preparatory step for the 'Project I - Virtual Character Creation II' module. The primary focus of this course lies in understanding the intricacies of rigging. The course offers students a deep dive into the basic concepts of the rigging process. Using tutorial videos and hands-on exercises, learners will grasp the crucial principles needed to construct a rig.
Teaching and Learning Methods:	Lectures, seminars
Assessment Method:	Term papers (Tutorials III not graded)
Workload (25 - 30 h ≙ 1 ECTS credit):	240
Contact hours:	60
Self-study:	180
Recommended Prerequisites:	…
Required Prerequisites:	…
Recommended Reading:	…
Use of the Module in Other Degree Programs:	…
Particularities:	…
Last update:	Nov. 2024

6.8 Master's Project

Module Code:	MA.3D.007
Module Title:	Master's Project
Type of Module:	Mandatory
ECTS Credits:	24
Language:	English
Duration of Module:	16 weeks
Recommended for Semester:	4
Frequency:	Every semester
Module Coordinator:	Prof. Bjoern Bartholdy, Prof. Sophia Zauner
Lecturers:	Prof. Bjoern Bartholdy (Media Design), Prof. Sophia Zauner (3D Animation for Film and Non-Linear Media), Prof. Rolf Muetze (VFX & Animation), N.N.
Learning Outcome:	Students will complete an innovative Master's Project in animation or related media, supported by an in-depth media-theoretical thesis by employing advanced conceptualization, design, and prototyping skills; focusing intensively on either the practical project or the theoretical part based on personal preference; ensuring the individuality of contribution within team projects; and writing a comprehensive thesis to demonstrate their ability to work independently and creatively within a professional context, apply academic and practical methods to complex problems, engage with interdisciplinary challenges, and present and defend their work effectively, thus showcasing their readiness for the professional field and contributing to the discourse within the animation industry.

Module Content:	Master's Project: Students produce an artistic-academic media project for either film, game or other related areas including a media theoretical thesis. The project demonstrates their ability to conceptualize and realize a worthwhile, marketable product with due regard to technological and economic standards, as well as aesthetic, cultural and social considerations. Alternatively, students may choose to pursue an academic research project including media application. Students receive consultation throughout the Master's project from the professors. Project Presentation and Defense: Students present their projects to the module directors as well as faculty and staff.
Teaching and Learning Methods:	Mentoring, discussion, presentation
Assessment Method:	Thesis, project, oral exam
Workload (25 - 30 h ≙ 1 ECTS credit):	720
Contact hours:	30
Self-study:	690
Recommended Prerequisites:	…
Required Prerequisites:	Completion of all prior modules (=96 ECTS)
Recommended Reading:	…
Use of the Module in Other Degree Programs:	…
Particularities:	…
Last update:	…

7 Module Matrix

Module / Lehrveranstaltungen				ECTS - Punkte		Handlungsfelder / Aufteilung ECTS-Punkte					Zuordnung Kompetenzen Absolvent*innenprofil					Zuordnung Studiengangkriterien			
				Teilmodul	Gesamt	Design-Practical Aspects 3D Animation	Technical Aspects 3D Animation	Cross-Sector Content Creation	Project Management	Media Studies	3D Competencies	Cross-sector visualization competency	Academic Competencies	Communication Competencies	Intercultural Competencies	Digitalisierung	Interntio-nalisierung	Interdis-ziplinarität	Transfer
0	Experience Assessment	M 1.1	Experience Assessment	23	30	9	9		2	3	x	x	x	x		x		x	x
		M 1.2	Preparatory Tutorials	7			4			3	x		x			x		x	x
1	Project I	M 2.1	Project Development & Realization I	9	14	4	3	1	1		x	x		x	x	x	x	x	x
		M 2.2	Virtual Character I	5		3	2				x	x		x	x	x	x	x	x
1	Animation: Theory & History I	M 3.1	Media Studies I	3	8					3			x	x	x	x	x		
		M 3.2	Methods & Tools I	2			2				x	x				x			x
		M 3.3	Animation History I	2		1				1	x		x	x	x	x	x	x	
		M 3.4	Tutorials I	1			1				x	x				x		x	x
2	Project II	M 4.1	Project Development & Realization II	9	14	3	3	2	1		x	x		x	x	x	x	x	x
		M 4.2	Virtual Character II	5		3	2				x	x		x	x	x	x	x	x
2	Animation: Theory & History II	M 5.1	Media Studies II	3	8	1				2	x		x	x	x	x	x	x	x
		M 5.2	Methods & Tools II	2			2				x	x				x		x	x
		M 5.3	Animation History II	2		1				1	x	x	x	x	x	x	x	x	
		M 5.4	Tutorials II	1			1				x	x				x		x	x
3	Project III	M 6.1	Project Development & Realization III	9	14	3	3	2	1		x	x		x	x	x	x	x	x
		M 6.2	Virtual Character III	5		3	2				x	x		x	x	x	x	x	x
3	Animation: Theory & History III	M 7.1	Media Studies II	3	8					3			x	x	x	x	x	x	
		M 7.2	Methods & Tools II	2			2				x	x				x		x	x
		M 7.3	Animation History II	2		1				1	x	x	x	x	x	x	x	x	
		M 7.4	Tutorials II	1			1				x	x				x		x	x
4	Master's Project	M 8.1	Master's Project	20	24	5	5	3	2	5	x	x	x	x		x		x	x
		M 8.2	Project Presentation and Defense	4		1	1	1		1	x	x	x	x		x		x	x

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