

Modul Creative Technology

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 Ausgabestelle: Institut für Multimedia Production (IMP)
 Geltungsbereich: Studiengang
 Klassifizierung: Intern
 Version: V01.00
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Modul

Name	Minor Creative Technology		
Short	MINCT	ECTS-Punkte	4
Typ	Compulsory elective module (Wahlpflichtmodul)		
Responsible	Jan Fiess		
Lead idea	<p>Students get the skillset to create experimental interactive media installations and immersive design. Using TouchDesigner, we develop customizable real-time prototypes. We create artistic-technical solutions for events, interactive media and motion design.</p> <p>Summary:</p> <ol style="list-style-type: none"> 1. create content (eg. audiovisual, generative, AI visuals, haptic, installation) 2. make it interactive (eg. sensors, gesture recognition, interactive music viz) 3. deliver content (eg. Projection mapping, LEDs, motors, wearables, ...) 		
Prerequisites	No formal requirements. Basic knowledge of media production, design or programming is an advantage.		
Learning outcomes	<p>Students understand the communication between different media components and acquire basic skills in visual programming. They can develop flexible, artistic-technical prototypes and adapt them in real time. The course overlaps with other fields, such as event management, interactive media, and motion design, with a special focus on TouchDesigner.</p> <p>Our highlight will be an exhibition, a theatre production or another event, possibly with the Live Com department.</p>		
Proof of performance	Three-parts:		

	<ol style="list-style-type: none"> 1. Group project (max. 3 people) with haptic interface and audiovisual installation 2. written documentation (Readme.md on GitHub) 3. Video documentation. Submission: 01.01.2026.
Re-examination	Re-examination / revision possible

Course language	English
Required competences	Interest in audiovisual applications and basic knowledge in the use of creative software. The ability to work in a team, a willingness to experiment and an independent way of working are required.
Topics	<ul style="list-style-type: none"> • course overview (intro to Creative Technology, overview topics, demos and inspirations) • intro to TouchDesigner: what, why, where from, possibilities, installation, basic concepts in practical exploration) • simple video player (Moviefilein TOP, manipulation with UI sliders and buttons) • generative graphics (Noise + Displacement, Feedback) • projection mapping (hands-on 2D Workflow, image streams with Siphon / Spout, projector calibration using DSLR) • control graphics with sensors (live and wireless data communication for realtime installations using OSC) • control gadgets with actors (DMX / Art-Net basics, headlights, fans, ...) • immersion concepts (methods, industry, big players, ...) • projection mapping advanced (edge Blending, 3D mapping workflow, PBR, content creation with AI, useful video codecs) • make content interactive (use external sources, adapt them and make them your own, gesture control with Mediapipe, audio trigger + music visualization) • haptic input devices (Overview hardware for controlling interactive systems (z. B. Leap Motion, Lidar, Kinect, ...)) • pixel mapping + running lights <p>Extra topics (individually, on demand)</p> <ul style="list-style-type: none"> • CAD und 3D print Basics for gadgets and interfaces • integration live videos from other sources (eg. cameras, NDI, Internet) • classic web tech in TouchDesigner • wearables for live performances

Teaching and learning methods	Interactive course with learning-by-doing, group and individual coaching, practical phases in presence and self-study, continuous project progress and individual extra topics.
Structure	hybrid of self-study and n-attendance: Attendance dates: <ul style="list-style-type: none">• 01. – 02.10.2025 (Bern)• 05. – 06.11.2025 (Chur)• 17. – 18.12.2025 (tbd) Compulsory coaching in November Submission of project incl. documentation and video on 01.01.2026
Literature	<ul style="list-style-type: none">• official TouchDesigner documentation (https://docs.derivative.ca)• beginner course TouchDesigner by Elburz: https://t1p.de/w5vry• further tutorials: TouchDesigner learning path: https://learn.derivative.ca/courses/100-fundamentals/• great collection of all possible topics: https://alltd.org/