Bachelor	Foundation		No	2	Yes		7
Degree Programme	Department	Module Area: Specialised Courses	Mandatory	Semester	across Departments		Credits

Prerequisites

Digital Media 1

Module : Unit

Basics of Digital Media 2 (Advanced Course)

Content

Following on from the basic course, the technological concepts of digital media and systems are deepened as well as **technology-related critical knowledge**.
The introduction to coding is extended to parametric design and generative design.
As starting points for a wide range of media and techniques, digital-analog transformations (e.g. CNC milling machine, knitting machine or 3D robot arm) can be experimentally examined and transferred into creative and artistic designs.
Physical computing is taught in theory and practice in an application-oriented way in order to realize prototypical installations with physical interactions.
The specialization course offers artistic and creative, experimental and research-based approaches to a dynamically developing field **in the context of social developments.**
Critical historical classifications are to be researched specifically for the students' own designs.

Qualification Goals

Positive experiences with their own digital competence beyond social norms
Experiencing the role of their own positionality in the context of digital media
Ability to familiarize yourself with programming and write your own programs for your own designs, prototypes or installations
Basic algorithmic thinking
Basic knowledge of parametric design
Knowledge of in-depth critical knowledge in the context of your own design
Creative and reflective approach to digital media and interaction concepts

Form of Examination

active participation in the course discourse
presentation

workload	Presence Time
210	**70**

Facilitator | Teacher

in addition to being an expert in digital media: should have basical experience and critical knowledge about intersectional forms of discrimination and the power dynamics that enable them.

Rhythm | Alternatives

2nd semester, usually summer term

Module : Unit

Basics of Digital Media 2 (Advanced Course)

Methodology

Talking Groups – Talking Circle about their own positionality, social norms
Group Discussions about critical knowledge in Tech
Lectures and student's input about critical knowledge in Tech
Embodiment Interventions for Technical Concepts (sorting algorithms, ...)
Representation of BIPoC, women, queer people, ...
Emotional involvement (Barnard)
4 levels of group cooperation

Examples

Coding as a tool used by mostly old women in the World War 1 and 2 for espionage and recording troops and war material movements in knitted garment
Critical Knowledge in Tech: ENIAC programmers, Dame Stephanie Shirley, Katherine Johnson, Timnit Gebru, Safiya Umoja Noble
Translating Processing code into G-Codes for CNC milling machine
Hacking an old (1980s) knitting machine (Brother KH series) and connect it to modern computer (AYAB)
Discovering sorting algorithms in a group by sorting wooden blocks of different hights

Reader / Ressources

Josie Barnard: The Multimodal Writer. Creative Writing Across Genres and Media, London, 2019.
Goutrié, Christine: Rassismus- und herrschaftskritische Faktographie. In: Zeitschrift für Medienwissenschaft. Jg. 14, Heft 26 (1/2022): X | Kein Lagebericht, 24–36. DOI: https://doi.org/10.25969/mediarep/18123.
Online Toolbox (ARTIS deliverable D9.11, due Jan 2025)
Noble, Safiya Umoja. Algorithms of Oppression: How Search Engines Reinforce Racism. USA: NYU Press, 2018.