Universität der Künste Berlin

Sound Studies and Sonic Arts

Summer Term 2026
Phase Focus
Module Practice
Course Title **[AV] Immersive Environments** | Seminar
Course Times and Location Wednesdays | 3-7 pm | LIE 318
Instructors Martin Sulzer
Email m.sulzer@udk-berlin.de
Office Hours and Location upon request
Possible Credit Points Practice 2CP/4CP (G), Free Focus 2CP/4CP (NG)

Course Description

This seminar provides an overview of essential tools for creating immersive visual media, focusing on **Planetarium projections** gain a brief insight into **immersive art**.

The course offers an in-depth, interdisciplinary and experimental exploration of audiovisual practices, including video recording, signal processing, procedural image creation and 3D rendering. The methods will range from basic, minimalist uses to highly complex interactive ones.

We will have a look at the history of immersion and discuss conceptual characteristics of immersive media. The course will examine how to translate audiovisual ideas into the Planetarium and 360° formats, discussing real-time environments for domes, live performances, and interactive art, while addressing challenges like motion sickness.

Practically, you will get an introduction to a diverse set of tools typically used for planetariums. We start with 360° camera recordings and move on to 3D rendering and procedurally generated visualizations. After the course, you will know the technical workflows for full-dome production.

[AV] Cluster 2026 – Consecutive Format
This seminar is part of the [AV] Cluster 2026 and is mandatory for students who intend to participate in the Planetarium project "Portale 2026" during the Project Phase in winter semester 2026/27.

This seminar must be taken together with "[AV] Immersive Audio" (Prof. Daisuke Ishida). The two [AV] seminars form a consecutive unit and can only be attended jointly. Enrollment in these seminars constitutes a binding commitment to continue with the Project Phase in winter semester 2026/27. Partial participation (only one seminar or only the project) is not possible. Students are additionally encouraged to attend "Sound and Vision" (Jan Thoben).

Project Phase 2026/27 – Planetarium Project "Portale 2026"
In collaboration with Zeiss-Großplanetarium Berlin and SoundS UdK Berlin, the Project Phase "Portale 2026" offers students the opportunity to develop audiovisual fixed-media works for the planetarium context.

Sound Studies and Sonic Arts

Requirements for attending

No prior knowledge of coding or 3D software needed.
Personal computer with preinstalled software (Specific versions TBD):

- TouchDesigner
- Epic Games Launcher & Unreal Engine

Max. 12 students

Exam / Credit Points

2CP (graded: Practice; not graded: Free Focus): Regular attendance and active participation. A showcase of an immersive audio-visual study piece is planned on the 15.07.2026

Consecutive assignment leading to a total of 4CP for the course (optional, graded: Practice, grading: mean of both grades, not graded: Free Focus):
Presenting an audiovisual assignment at the end of September at Timelab at HHI Fraunhofer Institute
+ Documentation of the piece (no longer than 1500 words, due 1 Oct. 2026).

Schedule

15.04.2026 – Introduction

- **AM:** Ambisonics introduction
- **PM:** Seminar overview, Introduction to immersive media

29.04.2026 – 360° Recording

- **AM:** Introduction to 360° recording techniques and test shoots
- **PM:** Sync, playback, exporting, and testing
- **Assignment:** 360° audiovisual recording

13.05.2026 – Experiencing Immersion

- **AM:** Experiences the recorded materials via surround sound, VR headsets, and projection
- **PM:** Experience the pieces made for Portale 2023 + 2024

20.05.2026 – Reaper+IEM Plugins, Softwares

- **AM:** Reaper + IEM Plugins
- **PM:** Overview of various software tools for immersive media and first steps in TouchDesigner

21.05: Visit the "Sound and Vision" seminar by Jan Thoben (Optional)

Sound Studies and Sonic Arts

03.06.2026 – Max+Spat, Speed in Immersive Media and Audio Reactivity

- **AM:** Max MSP + ircam Spat
- **PM:** Exploration of what slow, fast, and rhythm mean across different media formats.
  How to do audio-reactive and procedurally generated visuals in TouchDesigner

17.06.2026 – Visual Dynamics & Dome Rendering

- **AM:** TBD
- **PM:** An analysis of what dynamic and contrast mean in the context of imagery Techniques for exporting
  and rendering content specifically for the fulldome format.

24.06.2026 – Present & Consultations

- **AM:** Present artistic ideas for the July showcase
- **PM:** Individual project consultations

A group excursion to the planetarium is being planned, with the date to be determined.

15.07.2026

- 2CP Showcase of an immersive audio-visual study piece in room 318

Late September 2026

- 4CP assignment showcase at Timelab at the HHI Fraunhofer Institute

Supporting Media

artworks
Scanning the Horizon: An Immersive Archive, Benjamin Busch, 2021–22, Interactive VR installation with point cloud scans and audio interviews, Online: queerspaces.berlin

Ent-, Libby Heaney, 2022, immersive 360 projection with 4 channel sound, video 10min or generative unreal app, time variable.

texts
Aesthetics Of Interaction In Digital Art, 2013, Katja Kwastek, The MIT Press
https://archive.org/details/AestheticsOfInteractionInDigitalArt

Game engine free verse. Artist Diary
https://odraplatform.com/game-engine-free-verse_artist_diary