Course Description

While there is much progress with virtual reality (VR) and related technologies, designing interactive VR scenarios is still an open question, with rules, conventions, and best practices being discovered and invented every day. We will discuss questions such as: how do you tell a story in VR? What are the unique affordances of VR and how do you design experiences around them? What are the best interaction paradigms, and which paradigms are best for which scenarios and purpose? Answering such questions requires an understanding of the concepts of immersive technology, rooted in psychology and neuroscience, as well as translating these scientific concepts and findings into principles of experience design and evaluation. Additionally, learning VR experience and interaction design requires hands on trial and error. We will focus on VR experiences, since these are currently easier to develop, but the students will also be exposed to wearable augmented
reality (AR) devices.

**Course structure:**

Weeks 1-2: Introductory lectures: Introduction to the science and technology of VR, key concepts and applications.

Weeks 3-4: Brainstorming and team building: Coming up with simple but interesting VR experiences to implement and evaluate.

Week 5: Requirements gathering: each team comes up with functional specification and requirements.

Week 6: Specification: each team comes up with a technical specification document.

Weeks 7-10: Project implementation with iterative refinement: Development of a prototype of the VR experience and preparation of the evaluation study.

Week 11: Evaluation study: Conducting pilot studies to evaluate the user experience and impact of the VR/AR prototype.

Week 12: Final presentation: In-class presentation of the student projects and evaluation results of the pilot study.

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**Course Goals**

The goal of the seminar is to introduce the students to the cutting-edge research and practice in the fields of VR, with emphasis on experience and interaction design. The students will gain an understanding of the unique concepts of these immersive technologies based on psychological and neuroscientific research findings. This will enable the students to design and implement basic but successful VR experiences. A particular emphasis is placed on providing the students with the knowledge and skills to evaluate VR/AR user experiences and their impact using qualitative and quantitative research methods. The majority of the design, development, and evaluation will take place during class.

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**Grading**

**Course requirements and grade components:**

Class attendance and participation, participation in studies as a subject, every student will
commit to 2 hour of participation in VR studies in the communication school BA and MA studies

- **Reading assignments**
- Submission of a short poster paper in the CHI extended abstract format (2-6 pages), Presentation of the seminar project and evaluation study findings
  - VR design, concept and implementation – demo (40%)
- Research or evaluation study – report paper (50%)
- Concept Video submission (10%)

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**Reading List**

Mandatory reading:


Further reading:


Recommended books: