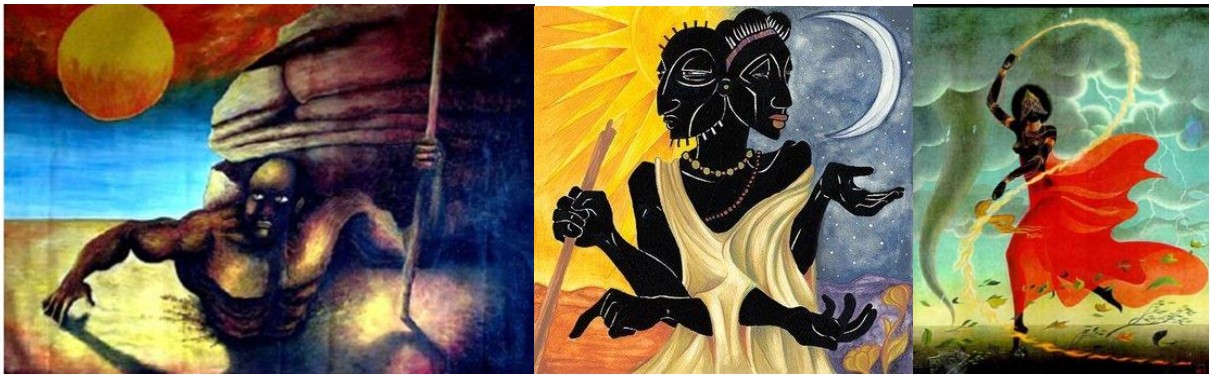
AALBORG UNIVERSITET



Skabelon for semesterbeskrivelse for uddannelser ved Aalborg Universitet

Kunst & Teknologi Semesterplan 5. Semester

Studienævn: Kunst, Sundhed og Teknologi

Studieordning: BA I Kunst og Teknologi, Det Humanistiske Fakultet, AAU, September 2019:

https://studieordninger.aau.dk/2021/26/2413

Semesterets temaramme

The semester is taught in English.

The module introduces the production and creation of narrative artefacts and narrative universes with special emphasis on the integration of interactive narratives and physical stages. The module is supported by theoretical and practical courses and seminars within concept development of narrative installations of various kinds, video editing, scripting, and possibly special ad hoc activities evolving from the production processes of the students. Furthermore, the module seeks to establish collaborative processes and projects with external partners.

Courses

In connection with the module, the following courses will be offered:

- Narratives and Interaction
- Artistic and Academic Methodology V
- Video Editing

Other courses may be offered within the following areas:

- Dramaturgy
- Manuscript

Semesterets organisering og forløb

The semester is organized around a collaborative performance project: the development of an intermedia performance in collaboration with Trekanten Kulturhus located in Aalborg Øst (www.trekanten.info). ArT 5 students will work collaboratively to develop a performance based on

Yoruba mythology with an emphasis on participatory and interactive dramaturgy. The semester groups will be organized according to assigned production roles, and students will work together to develop a cohesive, unified performance project. Trekanten is a co-producing partner, and students will work with members from the organization to promote and curate the live performance.

Important Dates

Week 36 – Friday 10 September 20h: Live performance of *Medea* at Aalborg Teater
(Tour of theater at 16h, performance at 20h). (Required participation)

Week 38 - Production week ABR exam projects: 20-24 Sept

Exhibition of ABR projects Friday 24th of September.

Week 39 - Hand in of ABR report on Friday October 1st

Week 40 - Introductory meetings with Trekanten and Manuscript Workshop (Mon, Tues, Wed October 4, 5, 6 -- 10h-15h, Artistic & Academic Methodologies)

Week 41 - ABR Oral Exam: 11-15 October (*one day only)

Week 43 - Joint Semester Seminar (Required Participation)

Week 47-48: Production Weeks at Trekanten (Required Participation)*

The dates reserved for Trekanten Residency are **November 24-December 2.** This includes load-in, rehearsals, live performances, and load-out. Exact dates and times TBD.

Dates and times of performance will be determined by the Production Team, but most likely:

Nov 24 - Load-In
Nov 25 - Nov 27 Technical Rehearsals
Nov 29 - Teacher Walk Through (Preview Performance/Dress Rehearsal) Nov 30-
Dec 2 - Public Performances
Dec 3 - Load-Out 12pm

Report Guidelines

Please use the following template to format your Semester Report.

ABSTRACT

A short paragraph summarizing the main aspects of the investigation---context, problem, results, and insights.

INTRODUCTION

This is where you set the context for your work. What is the big picture? What is the motivation for investigating this area?

PROBLEM STATEMENT

Here you concisely state the problem that you are investigating. You may also present a hypothesis to be supported or rejected through your own experiments.

BACKGROUND (STATE-OF-THE-ART)
Present the state-of-the-art of the given topic/area you are investigating (e.g. intermedia performance, mixed-reality performance, participatory performance, post-dramatic Theatre virtual theatre, cyborg

performance, etc). This grounding is important when conducting any type of research, as it demonstrates your knowledge of the field and helps locate your contribution within that field. Clearly identify significant theoretical frameworks and significant art works/performances and how they relate to your research area. Always reference reputable sources (i.e., peer-reviewed journals, books, etc.) and, when possible, primary sources (i.e., the original author of the work).

DESIGN METHODS

What specific academic and artistic methods are you employing in your study? How will you test your hypotheses, or carry out the research aspects of your project? Identify at least 3 methods (1 artistic, 2 academic) that will form the backbone of your investigation.

IMPLEMENTATION

How was the final work developed and constructed? Include overall system diagrams, floorplans, scenic designs, renderings, illustrations and other supporting evidence of the exhibition. Detail the most important aspects of the implementation and place the rest in the appendix. (For ArT 5, a completed manuscript/playtext should be included in the Appendix). Ideally, a reader should be able to re-create your artwork/performance based on the information in this section.

ANALYSIS

Was your work successful? Support this with qualified analysis using the academic and artistic methods you outline in DESIGN METHODS section. If you made an initial hypothesis, do your observations support or reject it? What were the strengths and limitations of this study/project? Were there results that were inconclusive? What might account for that?

How well did your project help you to realize learning objectives of the Project Module? (It is a good idea to review these). *Where possible, link the outcomes of your project to specific knowledge, skills and competencies outlined in the main project module*.

COLLABORATION

Each group member should provide individual descriptions and self-evaluations of their individual contribution to the production team, and reflect on the collaboration with the external partners. One or two paragraphs per student (should be written in the first person).

FUTURE WORK

If given the opportunity, how would you expand on this work? What new research directions or avenues of exploration have opened up as a result of your project? Is there anything you could have done better? If you were to develop this project further, what would you work on next?

CONCLUSION

This is where you reflect on your individual efforts, and connect back to the broader field of Art and Technology. It is not merely a summary of what you did. Rather, you should succinctly connect all the dots and synthesize new insights here. What can others learn from your work?

REFERENCE LIST

List of references following the APA referencing style. https://www.apastyle.org Please

ensure your report follows APA guidelines for citation and formatting.

APPENDIX

Please include short project video with ArT Title Slide.

Semesterkoordinator og sekretær

Semesterkoordinator: Elizabeth Jochum

Sekretær: Elsebeth Bækgaard

Modulbeskrivelse (en beskrivelse for hvert modul)

Modultitel, ECTS angivelse

Narrativer og Interaktion
15 ECTS

Placering

5. Semester

Modulansvarlig

Elizabeth Jochum

Type og sprog

Gruppe- og projektarbejde
English

Læringsmål:
Formålet med modulet "Narrativitet og interaktion" er at give den studerende en introduktion til problemstillinger og løsninger i forhold til udarbejdelse af artefakter og projekter, hvor forskellige former for strukturering af narrativ information og formelementer spiller en rolle, f.eks. interaktiv storytelling, narrative samarbejdsprojekter, hypertexts m.v. Modulet består af teoretiske og praktiske fag og seminarer inden for narrativitet (interaktiv), dramaturgi, analyse, forståelse og skabelse af iscenesatte universer, udarbejdelse af manuskripter og storyboards.

I dette modul skal den studerende opnå:

Grundlæggende **viden** om

- centrale teorier inden for narrativitet med særlig fokus på narrativer i interaktive miljøer
- metoder for udarbejdelse af narrativer
- centrale teorier inden for (interaktiv/reaktiv) dramaturgi og performance-design
- teorier og metoder vedrørende integration af fysiske og digitalt understøttede rum
- kunstneriske og teknologiske strategier inden for performance-design og performative events
- manuskripter og storyboards og interaktionsdesign som centrale metoder for udarbejdelse af narrative medieinstallationer
- kunstneriske og videnskabelige metoder for samarbejde med eksterne samarbejdspartnere.

Færdigheder i at

- identificere og formulere en kunstnerisk problemstilling og/eller et tema inden for "Narrativitet og interaktion" samt udvikle forskellige kunstneriske koncepter og løsninger på en udvalgt problemstilling/et udvalgt tema
- omsætte grundlæggende viden og teorier om narrativitet og medieteknologi til kunstneriske koncepter
- identificere dramaturgiske udfordringer inden for interaktiv narration, scenografi og performance
- anvende og implementere (interaktive) dramaturgiske interaktionsmodeller, der kombinerer fysiske og digitale udtryksformer

- anvende teknologiske løsninger med hensyn til interaktive narrativer og performance-design.

Kompetencer i at

- udvikle idéer og koncepter for (interaktive) narrative artefakter, der kombinerer fysiske og digitale udtryksformer
- analysere og udvikle narrative artefakter og events, der kombinerer virtuelle og fysiske rum
- anvende forskellige typer af digitale performance-teknologier
- analysere og udarbejde manuskripter og storyboards i forbindelse med interaktiv storytelling
- kontekstualisere egne kunstneriske løsninger i en sammenhæng (i forhold til f.eks., sociokulturelle , kunstteoretiske, politiske og/eller æstetiske dimensioner m.v.)
- beskrive, analysere og dokumentere kunstneriske artefakter og events på et professionelt niveau og formidle dette til eksterne samarbejdspartnere.

Indhold

Modulet giver en introduktion til fremstilling og udarbejdelse af artefakter og universer med særlig vægt på integration af interaktive narrativer og iscenesættelse. Modulet understøttes af teoretiske og praktiske fag og seminarer inden for analyse og konceptudvikling af forskellige typer narrative artefakter og installationer, videoredigering, scripting og lignende, i forbindelse med den studerendes produktionsprocesser. Modulet har desuden fokus på at samarbejdsprocesser og -projekter med eksterne samarbejdspartnere, og på samarbejdsprocesser med andre grupper om et større projekt på tværs af semesteret.

English

The module introduces the production and creation of narrative artefacts and narrative universes with special emphasis on the integration of interactive narratives and physical stages. The module is supported by theoretical and practical courses and seminars within concept development of narratives installations of various kinds, video editing, scripting, and possibly special ad hoc activities evolving from the production processes of the students. Furthermore, the module seeks to establish collaborative processes and projects with external partners.

Omfang og forventet arbejdsindsats

15 ECTS points. 1 ECTS point = 27,5 times arbejde. 15 ECTS = 412,5 timers arbejde bestående af forberedelse til undervisning, undervisningsdeltagelse, gruppearbejde, øvelser, vejledning og eksamener.

Modulaktiviteter (kursusgange m.v.)

The semester theme is intercultural and intermedial performance. Students will work together to adapt a text and concept for a live performance based on non-western myths. The semester groups will be organized according to production roles, and will work together to develop a cohesive, unified performance project based on mythology.

The live performance will be presented for the public in Trekanten Kulturhus auditorium during Week 47. At the beginning of the semester, students will be assigned roles in a production company. Each student is assigned to a role/team that is responsible for coordinating a specific technical aspect of the production (such as lighting, scenery, costumes, sound design, public relations, or producing/fundraising). This exposure provides students with the opportunity to gain
experience in areas that might be new to them while also developing skills necessary for collaboration - skills essential for future work in the creative industries and applicable to the broader professional world.

Active participation in the development, production team, group work, and performances is required for successful completion of the semester.

Course: Narratives, Dramaturgy, and Media I (M15) Course

Sessions:

Lesson 1: Introduction to Performance & Media (Lecture) Instructor:

E. Jochum

This course introduces students to the topic for the semester project, and provides a general introduction to theories of performance, religion and myth and oral traditions and their relevance for contemporary art and technology practice.

Drama is ritual. Rituals are grounded in myth, and ancient societies were linked by the creation and understanding of mythological narratives. In some cultures, these myths were performed and written down, while other cultures maintained oral traditions. In both cases, myths "move" through performances and across culture, space, and time. During the course, we will read and consider narrative adaptations of myths across cultures and media throughout performance history, with a particular focus on non-western mythology and Yoruba myths. We will also examine Greek myths and Norse mythology and their adaptation, such as Robert Wilson's *Edda Cycle*, Wagner's *Ring Cycle*, Peter Brook's *Mahabarata*, Shinto Mythology and anime, and others. Special focus will be given to understanding how ancient myths continue to shape narrative structure and culture in the present, and on intercultural adaption and appropriation.

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Griffith, M. "Telling the Tale: A Performing Tradition from Homer to Pantomime." *Cambridge Companion to Greek and Roman Theatre* (2007).	22		yes
Performance (M. Carlson) Ch 3.	30		yes
The Narrative Imagination (Nussbaum) Introduction	20		yes
Dignas, B. & Audley-Millerm L. *Wandering Myths: Transcultural Uses of Myth in the Ancient World*. (2018) Preface.	26		yes

Lesson 2: Live Performance – *Medea* (Performance at Aalborg Theatre)

Instructor: E. Jochum

Medea is a Greek tragedy written by Euripides and first performed in 431 BCE at the Festival of Dionysus. It is one of the most popular Greek tragedies in contemporary theatre. tells the story of Jason and Medea. After leaving their homelands, Jason and Medea find themselves in Corinth, where Jason abandons Medea and their two children in order to marry the process of Corinth. Medea takes her revenge by killing the princess and her two sons. This is an example of Greek mythology, which typically centered on the lives of heroes and deities and mythological creations, and were originally oral traditions (18th century BCE), but were later written down in the epic poems and tragedies and comedies written during 5th century BCE. The play has been rewritten, adapted, and performed in theatre and film for centuries, and inspired a participatory, theatre for social change project. We will read the play, watch the performance at Aalborg Theatre, and have a discussion about myth, adaptation, media, and narrative. We will also look at the Rhodessa Jones' *The Medea Project: Theatre for Incarcerated Women* to explore how an arts-based approach could help reduce the numbers of women returning to jail. The project is an example of Arts as Social Change.

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Ritual and myth. Cambridge Companion to Greek and Roman Theatre (2007).	100		yes
Euripedes. *Medea*. Transl. Ian Johnston. 2008.	62		yes
Aristotle. *The Poetics*.	40		yes
The Medea Project. Interview with Rhodessa Jones: Theatre for Incarcerated Women/HIV Circle. Web: https://themedeaproject.weebly.com	3		yes

Lesson 3: Narratives, Myths & Intercultural Performance

(Lecture) Instructor: E. Jochum

The traditional beliefs and practices of African people like their history remains largely unfamiliar and unknown to the European and North American public compared to more popular worldwide mythologies like the Greco-Roman, Norse, Celtic, Aztec and Mayan myths. A large portion of these stories are oral traditions that haven't survived to the present day or have been "rewritten" with the introduction of the modern Abrahamic religions. This lesson introduces some of the core concepts, theories and contradictions involved with interpretations and adaptations of oral and written traditions. We will also examine intercultural theory, decolonial and postcolonial theory and their effects on narrative, dramaturgy and performance practice.

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Fischer-Lichte, E. "Reconceptualizing Myth and Ritual", *Theatre, Sacrifice and Ritual*. (2006)	29		yes
Soyinka, W. *Myth, Literature and the African World* (1992)	50		yes
Miller, Joseph. "The African Past Speaks: Essays on Oral Tradition and History." (1980)	30		yes
Schechner, R. "A Reply to Rustom Barucha." Asian Theatre Journal (1984) pp. 245-243.	15		yes

Lesson 4. Post-Dramatic Theatre & Theatre Anthropology (Lecture)

Instructor: E. Jochum

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lehman, H.T. 1999. Postdramatic Theatre. Ch. 2-4.	100		yes
Fischer-Lichte, E. 2008. Transformative Power of Performance.	62		yes
Schechner, R. and Turner, V. 1985. Between Theatre and Anthropology. Ch 1 “Points of Contact Between Anthropological and Theatrical Thought.”	32		

Lesson 5: Performance & New Media (Lecture)

Instructor: E. Jochum

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Saltz, D. 2015. Performance and New Media: Taxonomies for a Changing Field. “ Sahring the Stage with Media”.	40		yes
Salter, C. 2010. *Entangled*. Ch. 8 Interaction. MIT Press.	40		yes
Dixon, S. 2007, *Digital Performance* CH. 23 “Performing Interactivity.		30	yes

Lesson 6: Mixed Reality Performance (Lecture)

Instructor: E. Jochum

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Intermediality in Theatre & Performance (2006) (Kattenbelt) “Modes of Experience”	30		yes
Performing Mixed Reality (Benford & Gianacchi) (2011) Ch 4 The Experience of Mixed Reality: Spectating, Authoring, and Orchestrating	40		yes

Lesson 7 + 8: Designing for the Theatre (Workshop at Trekanten or Teater Nordkraft)

Instructor: E. Jochum with Jonas Hvidt from Teater Nordkraft on Lighting and Sound Design

Lesson 9

Technical Production Meeting (Workshop at Trekanten)

Instructor: E. Jochum

Lesson 10

Dress Rehearsal and preparation for final presentation. (Trekanten)

Instructor: E. Jochum

Course: Video Editing (M15)

Course sessions

Lesson 1: Camera and Film Lighting Lessons I (Lecture)

Lecturer: Thomas Busk

This course introduces students to the basic of the digital camera, and covers topics such as settings, cameraset-up, exposure,etc. Students will work in groups to document their art projects, from design to completion, and produce a 3-minute video. It is strongly recommended that students use the projects in the Multimedia Programming Elective: Robotic Art for their Video Editing project.

	Pri. lit. no ofp.	Sec.lit. no ofp.	Dig. upload
Adobe handout – course pack	25		yes

Lesson 2: Camera and Film Lighting Lesson - II (Workshop)

Lecturer: Thomas Busk

This hands-on workshop teaches the fundamentals of film lighting. Students will apply these principles in work on their video documentation projects.

Lesson 3 + 4: Fundamentals of Editing: Parts 1 and 2 (Workshop)

Lecturer: Thomas Busk

This hands-on workshop provides students with an overview of editing principles and features of Adobe Premiere, the timeline-based video editing application. The course also introduces important concepts in film editing, such as editing patterns, coherence, continuity, transitions, montage, and music.

Course: Artistic & Academic Methodologies: Participatory Methods (M15) Lesson

1: Performing Perception Practice (Lecture + Workshop in Trekanten)
Lecturer: Sandro Masai

This lecture introduces techniques for improvisation and choreography in modern dance and physical theatre. The students will practice the concept of 'thinking through the body', physically working with the dynamics of presence and movement, while reflecting upon the performer-audience interaction. tical exercises, group discussions and the use of video in qualitative research.

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
David Benyon (2014). *Designing Interactive Systems – A Comprehensive Guideto HCI, UX and Interaction Design.* Harlow, UK: Pearson	5		Yes
Koskinen, I., Zimmerman, J., Binder, T., Redstrom, J., Wensveen, S., (2011). *Design Research Through Practice: From the Lab, Field and Showroom.* Waltham, MA, USA: Morgan Kaufmann.	whole book		Yes

Lesson 2: Performing Perception Practice – Part 2 (Lecture + Workshop in

Trekanten)

Lecturer: Sandro Masai

This lecture introduces techniques for improvisation and choreography in modern dance and physical theatre. The students will practice the concept of 'thinking through the body', physically working with the dynamics of presence and movement, while reflecting upon the performer-audience interaction. Practical exercises, group discussions and the use of video in qualitative research.

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Dalsgaard, P. and Hansen, L. K. (2008). *Performing Perception – Staging Aesthetics of Interaction*.	33		Yes
Heath, C., Hindmarsh, J. and Luff, P. *Video In Qualitative Research – Analysing Social Interaction in Everyday Life* (2010). Sage Publications Ltd.	23		Yes

Lesson 3: Performance Design – Devised and Performed – Part 1 (Lecture + Workshop in Trekanten) Lecturer: Sandro Masai

Design Methods applied to Performance Art. "What? (strategy) Why? (vision) How? (tactics)" Practical exercises (project communication within the groups and external partners – moodboards, sketches and graphics) and group discussions.

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
David Benyon (2014). *Designing Interactive Systems – A Comprehensive Guideto HCI, UX and Interaction Design.* Harlow, UK: Pearson	5		Yes
Koskinen, I., Zimmerman, J., Binder, T., Redstrom, J., Wensveen, S., (2011). *Design Research Through Practice: From the Lab, Field and Showroom.* Waltham, MA, USA: Morgan Kaufmann.	whole book		Yes

Lesson 4: Performance Design – Devised and Performed – Part 2 (Lecture + Workshop in Trekanten) Lecturer: Sandro Masai

Design Methods applied to Performance Art.: "What? (strategy) Why? (vision) How? (tactics)" Practical exercises (project communication within the groups and external partners – moodboards, sketches and graphics) and group discussions.

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
"Audience Agency in Participatory Performance" (2015), Astrid Breel, *Participations: Journal of Audience and Receptions Studies*	20		Yes

Eksamen

Mundtlig pba. Projekt

Eksamensform:

Eksamen afvikles som en samtale mellem de(n) studerende, eksaminator og den interne medbedømmer på baggrund af de(n) studerendes projektrapport, som kan være en rapport eller portefølje, samt det produkt, som de(n) studerende har udarbejdet. Projekteksamen vil også omfatte andre emner fra modulfagene.

Aflevering: i grupper eller individuelt

Omfang: det skriftlige arbejde må ikke overstige 10 sider pr. studerende (15 sider ved individuelle rapporter).

Eksamensvarighed: 20 minutter pr. studerende og 10 minutter til bedømmelse og karaktergivning pr. gruppe, dog maksimum 2 timer.

Bedømmelse: 7-trins skalaen

Bedømmelsesform: Intern eksamen

Examination – ALL EXAMINATIONS WILL BE HELD IN ENGLISH, unless otherwise requested with special arrangement.

Oral exam based on a project
The examination will take the form of a conversation between the student, the examiner and another internal examiner on the basis of the project report prepared by the student(s), which may be in the form of a report or portfolio as well as the product created by the student. The project exam will also address other content from the module courses.

Form of examination: b)

Number of pages: the written work must not exceed 10 pages per student (15 pages in the case of individual
reports).

Duration of examination: 20 minutes per student and 10 minutes for assessment and communication of grades per group, however, the duration of the examination is maximum 2 hours.

The assessment is made of the individual student based on the learning objective. The assessment must also be based on an overall evaluation of the project report, the presentation, the joint discussion and the individually oriented questions. In order for the examinee to pass the exam, all these aspects must be satisfactory. The project report is thus part of the overall basis for the assessment, and is not given an independent grade.

Criteria: The written report, the product and the oral examination should demonstrate that the student has fulfilled the objectives outlined above.

Modulbeskrivelse (en beskrivelse for hvert modul)

Modultitel, ECTS angivelse

Mixed Reality Teknologier
5 ECTS

Placering

5. Semester

Modulansvarlig

David Meredith

Type og sprog

Individuelt eller I mindre grupper
Dansk

Læringsmål:

I dette modul skal den studerende opnå: Grundlæggende **viden** om

- teorier og metoder, der anvendes inden for udarbejdelse af mixed reality-systemer
- forbinde fysiske og virtuelle miljøer
- metoder til evaluering af erfaringer og tilstedeværelse i forskellige miljøer
- design af mixed reality-miljøer.

Færdigheder i at

- anvende metoder til udvikling af augmented, mixed og virtual reality-miljøer
- anvende metoder til sporing af genstande
- anvende metoder til analyse og genkendelse af menneskelige bevægelser
- analysere forbindelsen mellem virkelige, augmented, mixed eller virtual reality-miljøer
- analysere brugeroplevelser og tilstedeværelse i augmented, mixed eller virtual reality-miljøer.

Kompetencer i at

- analysere og konstruere augmented, mixed og virtual reality-miljøer
- analysere og konstruere motion capture-systemer
- analysere og konstruere systemer, som forbinder information mellem virkelige, augmented, mixed eller virtual reality-miljøer.

Indhold

Formålet med dette modul er at give den studerende en introduktion til teorier og metoder inden for mixed reality-teknologier i forhold til udarbejdelse af interaktive eller reaktive narrativer og forestillinger, der kombinerer virtuelle og fysiske rum. Modulet består af teoretiske og praktiske fag og seminarer om anvendelsen af teknologier til udarbejdelse af performative miljøer og/eller installationer.

Omfang og forventet arbejdsindsats

5 ECTS points. 1 ECTS point = 27,5 times arbejde. 5 ECTS = 137,5 timers arbejde bestående af forberedelse til undervisning, undervisningsdeltagelse, gruppearbejde, øvelser, vejledning og eksamener.

Modulaktiviteter (kursusgange m.v.)

This course will provide a thorough introduction to creating real-time interactive multimedia content using the *TouchDesigner* visual programming language (https://derivative.ca/). The course will consist of 12 half-day sessions. Sessions 1-5 and 7-11 will each consist of two 45-minute lectures, followed by a 90 minute supervised exercise session. In sessions 6 and 12, each group will present a live performance of a 5-minute interactive multimedia work created in *TouchDesigner*. The performances will be followed by discussion and feedback from both the lecturer and other students. In order to pass the course, a student must make a significant contribution to the creation and performance of two multimedia works of satisfactory complexity and sophistication using TouchDesigner, which they will present to the lecturer and other students in sessions 6 and 12. In these works, the students must demonstrate that they have attained a good command of using TouchDesigner as an expressive tool for real-time interactive multimedia performance.

As this is the first time that the course will run, it is not possible at this stage to give a detailed description of the content of each of the 12 sessions. However, topics covered in the course will include the following:

- Introduction to basic TouchDesigner concepts
- Components (COMPs), including object components (3D objects for rendering) and interactive 2D panel components
- 2D image processing and generation with Texture Operators (TOPs)
- Motion tracking, audio, animation and control signal processing with Channel Operators (CHOPs)
- 3D surface processing and generation with Surface Operators (SOPs)
- Scripting TouchDesigner in Python with Data Operators (DATs)
- Using materials and shaders (Material Operators, MATs)
- Creating interactive virtual and augmented reality environments
- Projection mapping
- Motion tracking with Leap Motion

- Networking with OSC

For an introduction to TouchDesigner, see the following:
https://derivative.ca/UserGuide/First_Things_to_Know_about_TouchDesigner

The course is evaluated by active participation.

In order to pass the course, a student must make a significant contribution to the creation and performance of two multimedia works of satisfactory complexity and sophistication, using TouchDesigner, which they will present to the lecturer and other students in sessions 6 and 12. In these works, the students must demonstrate that they have attained a good command of using TouchDesigner as an expressive tool for real-time interactive multimedia performance.

Eksamen

Aktiv deltagelse/løbende evaluering
Aktiv deltagelse i modulets forelæsningsrække og andre fagrelaterede aktiviteter er påkrævet. Aktiv deltagelse forudsætter, at den studerende læser obligatorisk litteratur, deltager i 80 % af modulets forelæsninger og andre fagrelaterede aktiviteter, bidrager til modulets diskussioner gennem oplæg og deltager aktivt i diskussioner samt afleverer alle opgaver.

Hvis en studerende ikke opfylder kravene til aktiv deltagelse, afholdes følgende re-eksamen:

Intern skriftlig eksamen i modulet "Mixed Reality Teknologier"

Bedømmelsesform: Bestået/ikke bestået

Aflevering: individuelt

Eksamen er en bunden opgave af syv dages varighed. Opgaven bedømmes af én eksaminator.
I tilfælde af at opgaven ikke bestås, vil den også blive bedømt af en medbedømmer.
Omfang: det skriftlige arbejde må ikke overstige 10 sider.

Modulbeskrivelse (en beskrivelse for hvert modul)

Modultitel, ECTS angivelse

Praksisbaseret forskning indenfor Kunst og Teknologi
5 ECTS

Placering

5. Semester

Modulansvarlig

Signe Meisner Christensen

Type og sprog

Individuelt arbejde eller mindre grupper i forhold til fagets aktiviteter
Dansk

Læringsmål:
I dette modul skal den studerende opnå:
Grundlæggende **viden** om:

- udvalgte teorier om praksisbaseret forskning indenfor kunst og teknologi
- kvantitative og kvalitative metoder inden for praksisbaseret forskning
- de historiske og epistemologiske aspekter af praksisbaseret forskning ifht. kunst
- formater for formidling af viden om praksisbaserede forskningsresultater
- bedømmelseskriterier for praksisbaserede forskningsprojekter
- planlægning, organisering og realisering af praksisbaserede forskningsprojekter eller udstillinger.

Færdigheder i at

- konceptualisere og formulere et relevant praksisbaseret forskningsproblem eller forskningsområde
- udvikle koncepter for praksisbaserede forskningseksperimenter ifht kunst
- anvende bedømmelseskriterier som en del af praksisbaseret forskning
- anvende metoder for praktisk planlægning, realisering og bedømmelse af praksisbaserede forskningsprojekter.

Kompetencer i at

- udvikle et praksisbaseret forskningsdesign ifht. kunst
- udvikle og realisere praksisbaserede forskningsprojekter inden for kunst og teknologi

Academic content

The module “Art-Based Research” focuses on the meeting between artistic experimental practices and academic, analytical methods. The module focuses on the interrelation between theoretical and practical approaches. Art-based research takes the form of projects based on a set or self-chosen problem formulation or problem field. The projects investigate this interrelation by means of artistic artefacts (e.g. installations, exhibitions, performances, events, etc.) and academic methods such as the production and analysis of empirical data. The module introduces theories related to art-based research, combined with the practical planning and realization of art-based research projects.

Omfang og forventet arbejdsindsats

5 ECTS points. 1 ECTS point = 27,5 times arbejde. 5 ECTS = 137,5 timers arbejde bestående af forberedelse til undervisning, undervisningsdeltagelse, gruppearbejde, øvelser, vejledning og eksamener.

Modulaktiviteter (kursusgange m.v.)

Course: Art-Based Research (M17)

Course Sessions

Session 1: What is art-based research? (lecture)

Lecturer: Signe Meisner Christensen

The lecture will present and discuss various theoretical approaches to art-based research and introduce to the overall content and learning goals of the course. Over the past decade, art-based research has become a prominent field of knowledge in the art field as well as a tool of investigation in other disciplines and sectors beyond the discipline of art. This lecture will unpack how art-based research offers an alternative approach to the nature of knowledge and examine how artistic research challenges a number of tacit

assumptions about knowledge at work in academia. This lecture will outline and unpack notions of knowledge that are put forward by various approaches to art-based research. We will also discuss how these perspectives on knowledge and method may be mobilized and made useful when conducting practice-based student projects in between art and technology.

	Pri. lit. no of p.	Sec. lit. no of p	Dig. upload
Kirkkopelto, E. (2020) "From Quasi-objects to Artistic Components. Science Studies and Artistic Research" in *Dialogues between Artistic Research and Science and Technology Studies,* Borgdorff, Peters & Pinch (eds.) New York, Londond,Routledge, pp. 31-45.	14		14
Borgsdorff, H. (2012) "The Debate on Research in the Arts", in *The Conflict of the Faculties, Perspectives in Artistic Research and Academia*, Leiden University Press, pp. 28-56	28		28
Slager, H. (2009) "Art and Method" in Artists with PhDs. On the New Doctoral Degree in Studio Art, Elkins, J. (ed.), Washington, New Academia Publishing, pp. 57-70.		13	13

Session 2: The role of experience in art-based research (lecture + exercises)

Lecturer: Signe Meisner Christensen

One defining aspect of the nature of art-based forms of knowledge is that they rely on experience and reflective thinking. This lecture will engage with the role of experience and reflective thinking in art-based forms of research. In the accompanying workshop, we will apply this method in guided exercises.

	Pri. lit. no of p.	Sec. lit. no of p	Dig. upload
Jacob, M.J. (2013) "Experience as Thinking" in *Art as a Thinking Process,* Ambrozic, M. & Vettese, A., Sternberg Press, pp. 100-113.	13		13
Sullivan, G. (2010) "Art Practice as Research" in *Art Practice as Research, Inquiry in Visual Arts,* pp. 95-120, Sage Publishing.		25	25

Session 3: The role of performativity in Artistic Research (lecture + exercises)

Lecturer: Signe Meisner Christensen

In this lecture we will engage with performativity as a concept and as a methodological framework for addressing the transformative nature of knowledge in art-based research. What does it mean that artistic research is performative? The lecture will investigate the concept of performativity and what the 'doing' in art practice entails for how knowledge gets produced. Of special focus here will be how artistic practice not merely impart something about reality. It also changes reality.

	Pri. lit. no of p.	Sec. lit. no of p	Dig. upload

Hantelmann, D. (2010) *How to do Things with Art: What Performativity Means in Art, Zürich, JRP/Ringier pp. 1-40*	40		40

Session 4: The role of the experiment in art and science (lecture + exercises)

Lecturer: Signe Meisner Christensen

This lecture will provide a frame for how the notion of "experiment" differs in models of experimentation in between art, science, and technology. During the past decade discussions of experimentation in art have become increasingly influenced by notions of artistic research. The lecture will be followed by guided exercises and reflections about how artistic experimentation can be articulated as a set of procedures for investigating the relations between humans, society, and technology

	Pri. lit. no of p.	Sec. lit. no of p	Dig. upload
Borgdorff, H., Peters, P., Pinch, T. (2020) "Dialogues between Artistic Research and Science and Technology Studies, An Introduction", in pp. 1-15	15		15
Pickering, A. (2016) "Art, Science and Experiment" in *Journal of Fine Art Research*, 1(1): 7, pp. 1-5		5	5

Session 5: Hermeneutics and Art-based research (lecture + exercises)

Lecturer: Signe Meisner Christensen

Hermeneutics is an established discipline in the humanities and in academic research. It can also be engaged with as a procedure for questioning and understanding the world, which implies to examine and make conscious the fore-sights and fore-conceptions that one brings to the world. Art-based research may radicalize such a procedure by examining our biased pre-conceptions when encountering the world. This lecture will introduce to hermeneutics as a method for art-based research.

	Pri. lit. no of p.	Sec. lit. no of p	Dig. upload
Gadamer, H.G. (1988/1975) "The Hermeneutic Circle" in *Epistemology, The Big Questions,* Alcoff, L.M. (ed.) Mass., Blackwell Publishing, pp. 232-247	15		15

Session 6: Embodiment and Art-Based Research I: Phenomenology and feminism (lecture + exercises)

This lecture focuses on art inquiry as embodied explorations of the world. The main question will be: what is

the relationship between embodiment and knowledge in art-based research? In the lecture, we will turn to phenomenology as a theoretical base for accounting for the knowledge status of embodied experience in art. And as supplement to this, the lecture will include a feminist perspective on embodiment as situated knowledge.

Lecturer: Signe Meisner Christensen

	Pri. lit. no of p.	Sec. lit. no of p	Dig. upload
Danvers, J. (2010) "The Knowing Body: Art as an Integrative System of Knowledge" in *Art Education in a Postmodern World*, Hardy, T. (ed.), Intellect, pp. 77-90	13		13
Merleau-Ponty, M. (1945) *Phenomenology of Perception,* pp. 69-74	5		5
Haraway, D. (1988) "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective" in *Feminist Studies*, 14:3, pp. 575-599		24	24

Session 7: Embodiment and Art-Based Research II: Performance (lecture+ exercises)

This lecture engages with performance as a method and an approach to art-based research.

Lecturer: Signe Meisner Christensen

	Pri. lit. no of p.	Sec. lit. no of p	Dig. upload
Pelias, R.P. (2008) "Performative Inquiry, Embodiment and its Challenges" in *Handbook of the Arts in Qualitative Research: Perspectives, Methodologies, Examples, and Issues*, Knowles G. & Coles A. pp. 186-194 http://sk.sagepub.com.zorac.aub.aau.dk/reference/handbook-of-the-arts-in-qualitative-research/n16.xml	8		8

Session 8: Participatory approaches to art-based research (lecture + exercises)

Lecturer: Signe Meisner Christensen

For the past two decades, art practices that incorporate the active participation of groups, individuals, audiences or communities into the process of artistic creation have been proliferating. This lecture engages with the question of what participation brings to art-based research. How can participatory approaches be mobilized as valid methods for art-based research? And how can research be understood as something we do together with others?

	Pri. lit. no of p.	Sec. lit. no of p	Dig. upload
Bishop, C. (2006) "Introduction/Viewers as Producers" in *Participation, Documents of Contemporary Art,* Cambridge, Whitechapel, pp. 10-17.	7		7
Braddock, C. (2017) "Animism, Animacy and Participation in the Performances of Darcell Apelu" in *Animism in Art and Performance,* Braddock (ed.),	10		10

Palgrave Mackmillan pp. 198-2008			
Bishop, C. (2012) “The Social Turn: Collaboration and Its Discontents” in *Artificial Hells, Participatory Art and the Politics of Spectatorship,* pp. London, Verso, pp. 11-40		29	29

Session 9 & 10: Research laboratory and exhibition

Lecturer: Signe Meisner Christensen

Week 38 is dedicated to production for the course deliverables. Monday and Wednesday we will be focusing on production, project presentations and feedback. For presentations groups will present their art-based research problem statement, their research designs and methods, their theoretical bearing and their expected outcomes. On Friday, we will turn the laboratory into an exhibition space and use this to reflect on the status of the exhibition as a presentation format for art-based research.

	Pri. lit. no of p.	Sec. lit. no of p	Dig. upload
Krysa, J. (2020) “Exhibitionary Practices at the Intersection of Academic Research and Public Display” in *Institution as Praxis, New Curatorial Directions for Collaborate Research,* Rito C. & Balaskas, B. (eds.) Sternberg Press, pp. 62-76	14		14
Borgdorff, H. (2012) “Ingredients for the Assessment of Artistic Research” in *The Conflict of the Faculties, Perspectives on Artistic Research and Academia*, Leiden University Press, pp. 200-214	14		14
Biggs, K. (2011) "Evaluating Quality in Artistic Research" in Biggs(ed.), *Routledge Companion to Research in the Arts.* Routledge: London, New York, pp. 405-424		19	19

Eksamen

Eksamensform:

Mundtlig
Ekstern mundtlig eksamen i modulet ”Praksisbaseret forskning inden for kunst og teknologi”.

Forudsætning for indstilling til prøven:

Det er en forudsætning for deltagelse i eksamen at de studerende udvikler og præsenterer et praksisbaseret forskningsprojekt som præsenteres i en videnskabelig rapport, der afleveres forud for eksamen.

Aflevering: i grupper eller individuelt
Det er en forudsætning for deltagelse i eksamen at de studerende udvikler og præsenterer et praksisbaseret forskningsprojekt som præsenteres i. en videnskabelig rapport, der afleveres forud for eksamen.
Omfang af det skriftlige arbejde må ikke overstige 10 sider pr. gruppe.

Eksamensvarighed: 20 minutter pr. studerende inkl. bedømmelse og karaktergivning, dog maksimum 1 time pr gruppe.

Bedømmelsesform: 7-trins-skala.

Oral exam
Form of examination: a)

Oral group-based exam.

Duration of oral exam: 20 min per student including grading and assessment. Max 1 hour per group.

Evaluation: Graded.
Credits: 5 ECTS

The examination should demonstrate that the student has fulfilled the objectives outlined above

Modulbeskrivelse (en beskrivelse for hvert modul)

Modultitel, ECTS angivelse

Multimedieprogrammering (valgfag)
5 ECTS

Placering

5. Semester

Modulansvarlig

Markus Löchtefeld

Type og sprog

Individuelt eller i mindre grupper
Dansk

Læringsmål:

I dette modul skal den studerende opnå:

Grundlæggende **viden** om

- avancerede emner inden for softwareudvikling og algoritmer, som er relevante for design og implementering af multimediesoftware (f.eks. software design mønstre, programmering af mobile enheder, robotter og robotbevægelse, netværksprogrammering og maskinlæring).

Færdigheder i at

- anvende en række programmeringsteknikker og -metoder på mellemhøjt og højt niveau i forbindelse med udvikling af effektive multimedie applikationer
- anvende avancerede programmeringsteknikker i kombination med kunstneriske teorier og perceptionsteorier.

Kompetencer i at

- analysere multimedietekniske problemstillinger og udvælge, anvende og vurdere relevante teknologier i forbindelse med udvikling af effektive løsninger
- anvende kvantitativ analyse til at vurdere multimedieløsninger

- anvende avancerede begreber inden for multimedieprogrammering og softwareudvikling.

Indhold

Formålet med modulet er at styrke den studerendes kompetencer inden for udvikling af avancerede multimedieapplikationer. Modulet forudsætter et godt forhåndskendskab til programmering og skal styrke den studerendes kompetencer inden for udvikling af software og fysiske systemer gennem mere komplekse algoritmer og programmeringsteknikker.

Omfang og forventet arbejdsindsats

5 ECTS points. 1 ECTS point = 27,5 times arbejde. 5 ECTS = 137,5 timers arbejde bestående af forberedelse til undervisning, undervisningsdeltagelse, gruppearbejde, øvelser, vejledning og eksamener.

Modulaktiviteter (kursusgange m.v.)

The aim of this course is to introduce students to the theoretical and practical dimensions of robotic art. The course places equal emphasis on aesthetic and technical concerns so students may develop competencies in the creation of an aesthetically engaging robotic art works. Students learn how to design, program and execute a computer-controlled work of art using models such as random walks and Markov chains and Flocking. Students also confront issues in planning, coordination, and control that arise when transitioning from computer simulation to the physical world. Students are required to develop and experiment with robotic prototypes they will construct themselves. Prior experience in imperative and object-oriented programming (e.g., C++ or Processing) is required. As part of the course the students will have to complete a group-based mini-project incorporating a research project using computer-controlled robotics. The mini-project must be accompanied by a written report and oral presentation summarizing the project, method, approach, and conclusions (3 pages maximum).

Hand-In 1 November 2021

Lesson 1: Foundations of Robotic Art (Lecture)
Lecturer: Elizabeth Jochum

Introduction to the origins and development of robotic art from 20th century-present. This lecture provides an introduction and overview of robotic art from kinetic sculpture to contemporary robotic art.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
"History of Robotic Art" (Eduardo Kac)	11		Yes
Robotics and Art, Computationalism and Embodiment (Simon Penny)	20		Yes
Robotic Creatures: Anthropomorphism and Interaction in Contemporary Art (Ghedini; Bergamasco)	6		Yes

Lesson 2: Expressive Motion - Theories & Approaches (Lecture)
Lecturer: Elizabeth Jochum

This course explores concepts of expressive motion and introduces students to creative approaches for designing expressive movement for robots. What is kinesics? Is imitation and mimesis the only way to design expressive behavior. How can flocking and swarming algorithms? What do these behaviors and motions indicate about narrative? What narrative, interactive, or dramaturgical potential can we tap into using these external physical behaviors? This lecture considers the use of flocking and swarming algorithms in robotic art

installations.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
“Designing Robots with Motion in Mind” (Hoffman and Ju)	32		Yes
"Make Robot Motions Natural" (Amy Laviers)	2		Yes
The Helpless Soft Robot - Stimulating Human Collaboration Through Robotic Movement Milthers, A. D. B., Bjerre Hammer, A., Jung Johansen, J., Jensen, L. G., Jochum, E. A. & Löchtefeld, M., 2019, 2019 CHI Conference on Human Factors in Computing Systems. (CHI EA '19).	6		Yes
"An Experimental Study of Apparent Behavior" (Heider & Simmel)		17	Yes

Lesson 3 + 4: Expressive Motion: Programming I

Lecture + Exercise
Lecturer: Markus Löchtefeld

Introduction to the concepts of state machines, turtle walks and random walks as a means for executing basic motions as well as how to implement those using the Processing programming language. Composing simple motions with state transition networks (Markov chains). Non-functional animations and simulated interactions. Furthermore, basic concepts of Flocking will be introduced.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Random walk - Wikipedia, https://en.wikipedia.org/wiki/Random_walk	1		Yes
Abelson, H. and diSessa, A. A. (1980). Turtle Geometry: The Computer as a Medium for Exploring Mathematics. MIT Press.	3		Yes
Pearson, K. (1905). The problem of the random walk. Nature, 72:294, 318, 342.	3		No
Braitenberg, V. (1984). Vehicles: Experiments in Synthetic Psychology. MIT Press.		3	No
Powell, V. (2014). Markov chains. - http://setosa.io/blog/2014/07/26/markov-chains/index.html	1		Yes
Reynolds, C. W. (1987). Flocks, herds, and schools: A distributed behavioral model. Computer Graphics, 21(4):25-34	6		Yes

Lesson 5+6+7: Soft-Robotics
Workshop
Lecturer: Markus Löchtefeld & Elizabeth Jochum

Soft robots have the potential to change what we use robots for and challenge how we perceive them. Material scientists, roboticists, computer scientists and biologists are working together to challenge the motion of what a robot can be. Researchers are trying to build sustainable robots of materials that perish after they have completed their task. Students will explore the artistic aspects of soft robots as relational and processual objects through hands-on techniques. The workshop explores not what softness is, but what softness can do.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Rus, Daniela, and Michael T. Tolley. "Design, fabrication and control of soft robots." Nature 521.7553 (2015): 467.	23		Yes
Jørgensen, Jonas. "Interaction with Soft Robotic Tentacles." Companion of the 2018 ACM/IEEE International Conference on Human-Robot Interaction. ACM, 2018.	1		No
Laschi, Cecilia, et al. "Soft Robotics: Trends, Applications and Challenges." (2016).		15	Yes

Lesson 8: Conducting HRI Research With Soft Robots
Lecturer: Elizabeth Jochum

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Bartneck, C., Belpaeme, T., Eyssel, F., Kanda, T., Keijsers, M., & Sabanovic, S. (2020). *Human-Robot Interaction – An Introduction*. Cambridge: Cambridge University Press. Ch 2 "What is HRI" & Ch 9 Research Methods	45		Yes
Jørgensen, Jonas. "Appeal and Perceived Naturalness of a Soft Robotic Tentacle." Companion of the 2018 ACM/IEEE International Conference on Human-Robot Interaction. ACM, 2018.	2		Yes
Portney, L.; Watkins, M. (2014) Foundations of Clinical Research: applications to Practice. Ch 13: "Exploratory Research: Observational Designs.	20		No
Anna Dagmar Bille Milthers, Anne Bjerre Hammer, Jonathan Jung Johansen, Lasse Goul Jensen, Elizabeth Ann Jochum and Markus Löchtefeld. 2019. The Helpless Soft Robot - Stimulating Human Collaboration through Robotic Movement. CHI EA '19. ACM, New York, NY, USA	6		Yes

Lesson 9: Project Pitches & Feedback
Lecturer: Elizabeth Jochum & Markus Löchtefeld

In this workshop students will have the chance to present their mini-project ideas to the class

Lecture 10: Final Presentations
Lecture

Lecturers: Elizabeth Jochum & Markus Löchtefeld

In class presentations and screening of the project videos (from Video Editing). Completion of in-class assignment (2-3 page report using IEEE Template). Evaluation and feedback

Eksamen

Aktiv deltagelse/løbende evaluering
Aktiv deltagelse i modulets forelæsningsrække og andre fagrelaterede aktiviteter er påkrævet. Aktiv deltagelse forudsætter, at den studerende læser obligatorisk litteratur, deltager i 80 % af modulets forelæsninger og andre fagrelaterede aktiviteter, bidrager til modulets diskussioner gennem oplæg og deltager aktivt i diskussioner samt afleverer alle opgaver.

Bedømmelsesform: Bestået/ikke bestået

Hvis en studerende ikke opfylder kravene til aktiv deltagelse, afholdes følgende re-eksamen:

Intern skriftlig eksamen i modulet ”Multimedieprogrammering”

Aflevering: individuelt

Eksamen er en bunden opgave af syv dages varighed. Opgaven bedømmes af én eksaminator.

Omfang: det skriftlige arbejde må ikke overstige 10 sider.