Template for Semester Descriptions of Study Programmes at Aalborg University

ArT & Technology Semesterguide 3. semester

Semester details

School: MPACT

Study board: ArT & Technology

Study regulations:

BA Study Program in Art & Technology, The Faculty of Humanities, AAU, September 2015: http://www.fak.hum.aau.dk/digitalAssets/109/109056_ba_art_2015_hum_aau.dk.pdf

Semester framework theme

Making the Intangible Wearable

For this year's edition of Dynamic Art and Technology, the theme is 'Making the Intangible Wearable'. In nature, there are many active phenomena occurring that completely evade our senses. For example, we can only see a very narrow and limited-resolution band, visible light, of the entire electromagnetic spectrum. Overcoming such limitations is a difficult task. While in the past clothes were mostly used as a protection from weather or different surfaces, or to express one's personality, mood, attitude or current feelings, in recent years we see an increasing integration of technology into textiles and clothing. This technology enhances the capabilities of the wearer as well as the capabilities of the clothes. Therefore, in this semester we will try to overcome the limitations of our physical body or the spectators' limitations through wearable artefacts. Projects should take a phenomenon from nature (natural or human-made) that is normally invisible or intangible, for example, bodily signals, energy, waves, sound, or micro/macroscopic processes, radio-signals, etc. and construct a wearable artefact that allows the wearer or spectator to experience those.

Students are meant to design and implement interplay of wearable technology and sensory extension. The technological side must provide a dynamic and reactive aspect that enhance the human senses and makes intangible/invisible phenomena wearable. The final implemented prototype needs to be wearable and mobile, so that it can be worn while walking.

Each group must work in close communication with their supervisor, with the idea to exhibit a poster of the intended design and a prototype version of the performative clothing experience (at Rendsburggade 14, 9000 Aalborg). As part of the yearly ArT exhibition the students have to additionally organize a joined catwalk across all groups. For this each group will have to determine a member responsible for organizing the catwalk together with the other groups.

Semester organisation and time schedule

This semester, students will be divided into groups of four to five students and each group will work on a single project with the goal of creating an interactive wearable art installation and/or performance to be included in the end-of-semester exhibition.

The project reports will present your research in a particular area of investigation. They should clearly present the motivation, design, implementation, and analysis of the artwork. The report should include the following sections:

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 what the problem is you are investigating. You may also present a hypothesis to be supported or rejected through your own experiments.

BACKGROUND

This should contain previous work in the area you are investigating. This is of major importance in conducting any type of research, academic or otherwise. You should clearly identify antecedents and point out both the importance and shortcomings of each in relation to your own work. Always reference refutable sources (i.e., peer-reviewed journals, books, etc.) and, when possible, primary sources (i.e., the original author of the work) to avoid misinformation. Google and Wikipedia are okay only as starting points.

DESIGN

Here is where you outline your process of creation and the decisions you made along the way. Elaborate on and justify your artistic, aesthetic, and technical choices. Describe your experiment design and any methods you may have used.

IMPLEMENTATION

How was the final work constructed? Include overall system diagrams and exhibition arrangement. Detail the most important aspects of the implementation and place the rest in the appendix. One should be able to fully and unambiguously re-create your artwork based on the information in this section.

ANALYSIS

Was your work successful? Support this with experimental data. If you made an initial hypothesis, do your observations support or reject it?

FUTURE WORK

Is there anything you could have done better? How? If you were to develop this project more, what would you work on next?

CONCLUSION

This is where you bring it all together. It is NOT simply a summary of what you have done---that is supplied by the abstract. You should connect all the dots and synthesize new insights here. What can others learn from this?

REFERENCES

List of references following the APA referencing style.

APPENDIX

Include all data produced during your investigation. This can include experimentation/observation logs, transcriptions of interviews, survey data, source code, etc. Note that the main text can reference the information in this section.

All figures, tables, and images in the report must be labelled with a brief description and cited in the main text. You are also required to make a video documentation of the final artefact and hand it in with the report.

All material in the report that is not the original creation of the students in the group must be properly acknowledged by using the APA referencing style. Failure to do this will be considered plagiarism and will lead to immediate failure and possibly also to expulsion from the program.

Semester coordinator and secretary assistance

Semester coordinator: Markus Löchtefeld

Secretariat assistance: Anne Nielsen

Module description (description of each module)

Module title, ECTS credits

Dynamic Art and Technology

15 ECTS

Location

3. Semester

Module coordinator

Markus Löchtefeld

Type/Method and language

Group and project work

English

Learning objectives:

The objective of Module 8: Dynamic Art and Technology is to introduce students to basic problem areas and solutions regarding the creation of products, artefacts, performances and installations, which results in the expression of transitions both physically and emotionally.

During this module students should acquire:

Basic **knowledge** about

artistic works supported by technologies expressing physical and emotional transition

the creation and perception of artefacts expressing physical and emotional transition

a variety of mechanical and electronic technologies used in dynamic art contexts

artistic expression using media technologies for the production of real-time interactivity

academic and artistic methods and tools to be used when working with design and implementation of artefacts or installations that express or trigger physical and emotional movement

Skills in

identifying and formulating an art problem within the semester theme

analysing an artistic problem and developing alternative concepts for the defined problem

motivating the application of certain technologies in connection with the design of installations expressing transitions

identifying, developing and describing the interaction between form, choice of materials and technological solutions with a view to achieving a clear aesthetic expression and performance

applying academic and artistic methodologies, in regard to interaction between technology, choice of materials, aesthetic expression, and user experience in connection with the development of dynamic artefacts and installations

Competencies in

describing and analysing works and installations which use adaptive technologies

employing autonomous technologies in design and implementation of artefacts or installations expressing physical and emotional movement

contextualizing own artistic solutions (to state-of-art, socio-cultural requisites and consequences, art theoretical and aesthetic dimensions, etc.)

describing the completed design in an academic form and communicating this in a project report, portfolio, etc.

Academic content

The basis of this module is human perception of movements and transitions, both physical and emotional. Students will work with principles of creation for time-based artefacts, and the experience of artefacts expressing temporal, spatial, and affective transitions. A variety of media technologies and engineered solutions will be tested and applied in the creation of products, artefacts and installations in the project unit, including mechanical and electronic alternatives of creating and controlling movement, position in space and autonomous motion.

During the semester, students work theoretically and experimentally with projects that challenge their creative and technical skills and produce artistic effects focused on different types of interaction between humans and machines.

Scope and expected performance

15 ECTS credits. 1 ECTS credit = 27,5 hours of work. 15 ECTS = 412,5 hours of work consisting of preparation for course sessions, course participation, group work, exercises, counselling and exams.

Module activities (course sessions etc.)

Course: Artistic and Academic Methodology III (Affective Design)

Affective design is about designing strong and specific emotions in user(s). The lecture series will first introduce the wider field as inspired by Human Computer Interaction (HCI) before focusing on the academic methodologies to analyse and evaluate artistic artworks based on Affective Design. These techniques will allow you to actually understand what the audience experiences when engaging with your artwork. Further the lecture series aim to provide the students with a theoretical toolkit that help produce more effective, convincing and impressive works of art.

Assessment: through the semester project.

Lesson 1: Introduction to Affective Computing

Lecture

Lecturer: Anthony Brooks

In this lecture we will have an introduction and principals of the field of Affective Design/Computing and how to apply it for the creation of artistic artefacts.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Picard, R. W. (1997) Affective Computing, pp. 21 – 25. MIT Press	10		No
Höök, K. (2012). Affective computing. The Encyclopedia of Human-Computer Interaction / [ed] Soegaard, Mads and Dam, Rikke Friis, Aarhus, Denmark: The Interaction Design Foundation , 2012	10		Yes

Lecture 2+3: Questionnaire and Interview Design and Analysis

Lecture + Workshop

Lecturer: Anthony Brooks

In these two lectures we will cover the basics of how to design and conduct interviews and questionnaires. Additionally we will look at several methods for analysing the results. As part of these lectures you will be required to design and conduct interviews regarding an art installation and analysis the results.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Leung, Wai-Ching. "How to design a questionnaire." *student BMJ* 9 (2001).	3		Yes
Bradley, Margaret M., and Peter J. Lang. "Measuring emotion: the self-assessment manikin and the semantic differential." *Journal of behavior therapy and experimental psychiatry* 25.1 (1994): 49-59.	10		No

Lecture 4+5+6: Video Analysis

Lecture + Workshop

Lecturer: Anthony Brooks

In these lectures you will be introduced on how to conduct video analysis of the affective reactions of the audience created by artworks. We will cover how to analyse video recordings, important elements you want to identify and how to properly quantify those elements.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Blandford, A., Furniss, D., & Makri, S. (2016). Qualitative HCI research: Going behind the scenes. Synthesis Lectures on Human-Centered Informatics, 9(1), 1-115.	115		Yes

Course: Digital Representation II (Rapid Prototyping)

This course will introduce the main techniques for 2D and 3D prototyping. In addition, it will introduce techniques for digital creation and cutting of textiles.

Lesson 1: Introduction to prototyping and rapid prototyping based on digital designs

Lecture

Lecturer: Peter Skotte

Make sure your computer is set up with 2D and 3D editing software. The 2D software should be able to

handle vectors and the 3d software should be able to output .stl files. For 2D: Adobe Illustrator or Autocad

are recommended and for 3D: Sketchup or Maya are recommended but other and free alternatives are

possible to use in the course.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lecture Notes			Yes

Lesson 2: 2D/3D representations and Tools

Lecture

Lecturer: Peter Skotte

How to rapidly make physical representations of digital 2D material. What is possible and what are the

limits? Demonstration of methods available generally and at AAU.

Literature

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

	p.	of p.	
Lecture Notes			Yes

Lesson 3-6: Hands-On

Workshop

Lecturer: Peter Skotte

Work on own designs to gain practical experience with creating physical representations of digital

designs. Digital fabrication methods for, 3D printing, designing and cutting textiles, and using a Vacuum Former. Demonstration of new methods available at AAU.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lecture Notes			Yes

Course: Programming II

Programming II follows Programming I, introducing more advanced programming constructs and real-time multimedia systems. Specifically, students will learn about structures and object-oriented programming, real-time sound and graphics, and basic user interaction.

Lesson 1: Programming Basics Recap

Lecture

Lecturer: Markus Löchtefeld

Review of basic programming constructs: variables, functions, arrays, loops, and control structures. Introduction to structures. For this class I prepared a flipped classroom lecture. A video/presentation that goes over all basic elements again. You are supposed to watch it before class, so that you can identify possible knowledge gaps and we can have an informed discussion about what is unclear so far and you can ask questions and for more details on these topics. We will fill class with questions and quizzes

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lecture Notes			Yes

Lesson 2 + 3: Object Oriented programming

Lecture

Lecturer: Markus Löchtefeld

Introduction to object-oriented concepts: class versus instance/object, member variables/functions, constructors, public versus private members.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lecture Notes			Yes
Programming Interactivity: A Designer's Guide to Processing, Arduino, and Openframeworks. " O'Reilly Media, Inc.", 2009.		30	No
"Objects" - Daniel Shiffman 2008 https://processing.org/tutorials/objects/			Yes

Lesson 4+5: 2D Graphics & Mouse and Keyboard input

Lecture

Lecturer: Markus Löchtefeld

Introductory to 2D graphic concepts and coordinate systems in response to user input. Drawing of primitive graphics, working with shapes and colours, images and simple image manipulation in Processing.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lecture Notes			Yes

Lesson 6+7: Introduction to Sound

Lecture

Lecturer: Markus Löchtefeld

Introduction to simple methods of creating Sound using Processing's Audio Libraries and how to integrate it into more complex programming structures.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lecture Notes			Yes

Lesson 8: Wearable Technologies

Lecture

Lecturer: Markus Löchtefeld

Introduction into prototyping and programming wearable technologies. Topics will include the extension of the Arduino platform for wearables (Lillypad), suited Sensors and Actuators and Algorithms for detection of human physiological states. Prototyping skills for the creation of interactive clothing will be tackled as well.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lecture Notes			Yes
Olsson, T., Gaetano, D., Odhner, J., & Wiklund, S. (2008). Open Softwear: Fashionable prototyping and wearable computing using the Arduino.		104	Yes

Examination

An external combined written and oral examination in **Module 8: "Dynamic Art and Technology"** (Teknologi og dynamisk kunst).

Form of examination: b)

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

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

Evaluation: Grading according to the 7-point scale.

Proportional weighting: An aggregate grade is awarded for the artefact, the written and oral performances.

The assessment results in an individual grade.

Credits: 15 ECTS

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

Module description (description of each module)

Module title, ECTS credits   Programming Interactive Systems   5 ECTS
Location   3. Semester
Module coordinator   Markus Löchtefeld
Type/Method and language

Individual or small groups

English

Learning objectives:

During this module students should acquire:

Basic **knowledge** about

real-time input/output streams used in programming interactive systems

serial communication protocols used for inter-application communication, internet-based communications, etc.

basic user interface design principles for realizing a software interface for human-computer interaction

data mapping strategies used in building interactive systems

Skills in

applying technical knowledge to develop and demonstrate the use of an interactive system

analyzing use of the artefact

synthesizing knowledge in written documentation

Competencies in

evaluating artefacts from a technical perspective

identifying further learning needs in the area of programming interactive systems.

Academic content

In this module, students learn about basic principles of software and how different digital systems can be designed to create alternative forms of interactions between man and machine. Students will learn principles of object-oriented programming and how algorithms can be developed in order to design new forms of human-computer interaction.

Scope and expected performance

5 ECTS credits. 1 ECTS credit = 27,5 hours of work. 5 ECTS = 137,5 hours of work consisting of preparation for course sessions, course participation, group work, exercises, counselling and exams.

Module activities (course sessions etc.)

Course: Programming III

(2 ECTS)

Lesson 1: Communication Protocols

Lecture

Lecturer: Markus Löchtefeld

Basic concepts in digital communication: what is a protocol, packets (header + data), addresses and ports, generating/parsing serial byte streams.

Further information on multimedia protocols:

DMX (lighting and stage):

Elation Professional. (2008). DMX 101: A DMX 512 handbook.
  http://ritelites.com/yahoo_site_admin/assets/docs/dmx101_handbook.296102453.pdf

Kar, U. (2013). The DMX512 Packet, http://www.dmx512-online.com/packt.html.

HTTP (hypertext/web):

Marshall, J. (2012). "HTTP Made Really Easy", http://www.jmarshall.com/easy/http/.

tutorialspoint. (2014). "HTTP Quick Guide",
  http://www.tutorialspoint.com/http/http_quick_guide.htm.

MIDI (musical instruments):

MIDI Manufacturers Association. (2009). MIDI and music synthesis.
  http://www.midi.org/aboutmidi/tut_midimusicsynth.php

MIDI Manufacturers Association. (1995). MIDI Message Table 1,
  http://www.midi.org/techspecs/midimessages.php.

OSC (sound control):

Wright, M. (2002). The Open Sound Control 1.0 specification. http://opensoundcontrol.org/spec-1_0

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lecture Notes			Yes
Reas, C., & Fry, B. (2014). *Processing: a programming handbook for visual designers and artists* Second Edition. Mit Press. pp.588-600		22	No

Lesson 2 + 3: Serial Communication Workshop: Physical + Digital Communication

Lecture and Workshop

Lecturer: Markus Löchtefeld

Workshop on sending data serially from a computer to an Arduino to control something physical as well as sending data serially from an Arduino to a computer. Using a sensor to control a graphical object.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lecture Notes			Yes
Reas, C., & Fry, B. (2014). *Processing: a programming handbook for visual designers and artists* Second Edition. Mit		40	No

Press. pp.633-673		

Lesson 4 + 5: Shape Generation Workshop

Lecture and Workshop

Lecturer: Markus Löchtefeld

Shape generation techniques for (artistic) 2D/3D representation and visualization. Introduction to advanced programming concepts such as recursion and how to exploit these for artistic visualizations.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lecture Notes			Yes
Greenfield, G. (2012). Generative art: a practical guide using Processing, by Matt Pearson.		50	No

Lesson 6+7: Basic User Interface Design

Lecture

Lecturer: Markus Löchtefeld

In this lecture we will explore the basics of user interface design including simply perceptual and memory principles, simple, design laws, Hick's Law and Fits's Law. Furthermore we will explore how to implement these in Processing using ControlP5.

Literature

	Pri. lit. no of p.	Sec. lit. no of p.	Dig. upload
Lecture Notes			Yes
MacKenzie, I. Scott. *Human-computer interaction: An empirical research perspective*. Newnes, 2012.		50	Yes

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Examination

An internal combined written and oral examination in **Module 9: "Programming Interactive Systems"** (Programmering af interaktive systemer).

The examination is a 7-day assignment on a set subject.

Form of examination: b)

The examination will take the form of a conversation between the student, the examiner and an internal censor on the basis of the artefact and report prepared by the student(s).

Number of pages: the written part must not exceed 5 pages.

Evaluation: Grading according to the 7-point scale.

Credits: 5 ECTS

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

Module description (description of each module)

Module title, ECTS credits
Art and Technology Concept Design
5 ECTS

Location
3. Semester

Module coordinator
Palle Dahlstedt

Type/Method and language
Individual work in relation to course activities
English

Learning objectives:

During this module, students should acquire:

Basic **knowledge** about

various qualitative methods in relation to the analysis and understanding of users, places and their usages, etc.

quantitative methods in relation to the analysis and understanding of users, places and their usages, etc.

theories and methods of artistic and experimental practices

Skills in

conceptualizing various forms of interactive or relational experience

employing and combining various methods of concept development

presenting artistic concepts to various target groups

Competencies in

designing and conceptualizing interactive installation and/or place-based events

handling complexity related to concept design processes

identifying own learning needs and to structure own learning related to concept design.

Academic content

The module "Art Concept Design" focuses on concept design processes and method development of interactive installations and/or place-based events. The module 21introduces academic methods such as qualitative or quantitative of research and analysis and methods of artistic experimental creativity as measures in artistic concept development processes. Furthermore, the module introduces oral and written presentation techniques.

Scope and expected performance

5 ECTS credits. 1 ECTS credit = 27,5 hours of work. 5 ECTS = 137,5 hours of work consisting of preparation for course sessions, course participation, group work, exercises, counselling and exams.

Module activities (course sessions etc.)

The course introduces both theoretical and practical elements leading to the creation of a concept. Lectures and exercises will be combined throughout the course. Different perspectives on concept design for art and technology will be discussed, as well as methods for structured development of ideas. The goal is to make the students able to develop and present a concept for a project clearly and convincingly. Students should be able to disseminate the idea, intention, relevance, and strategy for realization behind a forthcoming, possible project.

The course will also introduce the idea of method in art and science, and the basics of quantitative and qualitative methods.

In parallel with the lectures, you will work on an individual assignment, the development of a concept related to your semester project. In the end, there will be a written examination, where the concept assignment is analyzed and discussed from a particular theoretical angle, which will be revealed during the course.

Those texts marked "Readings" below are compulsory. Those marked "Further readings" are there if you want to go deeper, but not required readings.

Lecturers:

Palle Dahlstedt (lecture 1, 3-6, 8), dahlstedt@hum.aau.dk

Anca Horvath (lecture 2, 7), ancah@hum.aau.dk

Lecture 1: Introduction to the course - What is concept? What is Method?

We go through the scope of the course, and discuss what the words "concept" and "method" can mean in art and science.

Lecturer: Palle Dahlstedt

Readings:

Chapter 1: The Uncertainty of Science, from Richard Feynman's book The Meaning of it All

Analytical Index, p.5-8, from Feyerabend: Against Method

Critical and Analytical Thinking infographic (see below)

Further readings:

Concepts, from Stanford Encyclopedia of Philosophy

Scientific Method, from Stanford Encyclopedia of Philosophy

Lecture 2: Concept and Method in Art: Conceptual Art and Beyond

We look at the history of conceptual art, and a number of artworks are discussed and analyzed.

Lecturer: Anca Horvath

Readings:

Sol LeWitt: Paragraphs on Conceptual Art, Sentences on Conceptual Art, 1969

Lawrence Weiner: Declaration of Intent, 1968 and Statements, 1968

Alexander Alberro: Reconsidering Concpetual Art, foreword to Conceptual Art : a critical anthology, MIT Press, 1999

(PDF below)

Further readings:

Conceptual Art intro + fact sheet

Conceptual Art in Stanford Encyclopedia of Philosophy (good breakdown of its philosophical content)

Lecture 3: Designing and Developing Concepts: Creative Strategies

We look at a number of strategies for concept creation and development, including excercises.

Lecturer: Palle Dahlstedt

Readings:

Robson: Ch 3 - Developing Your IdeasFile (PDF below)

Lecture 4: Conceptual Mapping and Mindmapping

Two important techniques for structured creation and development of ideas are presented and discussed, including excercises.

Lecturer: Palle Dahlstedt

Critical and Analytical Thinking (infographic)

Alberro: Reconsidering Conceptual Art, 1999

Robson: Ch 3 - Developing Your Ideas

Collection of ideation techniques from various web sites.

Vullings & Heleven: 27 Creativity Tools for Divergent and Convergent Thinking

2018-09-18 Course: Concept Design and Diagrams (M10, C) (ART_BA)

https://www.moodle.aau.dk/course/view.php?id=25902 3/4

Readings:

Concept Maps: What the heck is this?, Joseph D. Novak

Chapter 1: What is a Mind Map, from Tony Buzan: The Ultimate Book on Mind-Mapping

In the lecture, I also mention the mind-mapping tool I personally have used for more than ten years, FreePlane,

which is free, open source, and multi-platform. Here's a link:

https://www.freeplane.org/wiki/index.php/Main_Page

Lecture 5: Theories of Creative Process

Some theories of creative processes are presented and discussed. Such theories can both be used to analyze how

things unfold in a creative process, but are also crucial to gain an understanding of the role of, for example tools and

medium, in such processes, and of the interplay between ideas and sketches.

Lecturer: Palle Dahlstedt

Readings:

Palle Dahlstedt: Between Material and Ideas: A Process-Based Spatial Model of Artistic Creativity, in J. McCormack,

M. d'Inverno (eds.), Computers and Creativity (PDF below)

Margaret A. Boden: Computer Models of Creativity, 2009 (PDF below)

Lecture 6: Presenting your Concept A summary of essential oral and visual presentation

skills, including excercises.

A summary of essential oral, visual and written presentation skills, including excercises.

Lecturer: Palle Dahlstedt

Further readings:

See below for a collection of links to useful websites about presentation skills, for research, art/design and pitching

of business ideas.

Lecture 7: Quantitative and Qualitative Methods in Science and Art

What kinds of methods are used in science, and why and when are they used? Can similar methods be used in art?

Are the purpose of methods in art and science the same?

Lecturer: Anca Horvath

Readings:

From C. Gray & J. Malins: Visualizing Research: A Guide to the Research Process in Art and Design:

Chapter 1: Planning the journey: introduction to research in Art and Design (PDF below)

Chapter 4: Crossing the terrain: establishing appropriate research methodologies (PDF below)

Lecture 8: Presentations

In this lecture all students present the result of your concept design assignment.

Lecturer: Palle Dahlstedt

Examination

An internal combined written and oral examination in **Module 10 "Art and Technology Concept Design"** (Konceptudvikling for oplevelsesteknologi).

Form of examination: b)

The examination is a free assignment, which is evaluated by one examiner and awarded a pass/fail grade.

For the examination students have to submit a written presentation of an artistic concept within the subject field of Art & Technology. The written part must not exceed 5 pages. The oral examination consists of a student presentation followed by a discussion between the student and the examiner.

Evaluation: pass/fail. In case of a Fail grade, an additional examiner will also evaluate the assignment.

Substitution: the examination may be substituted by satisfactory and active participation in courses, i.e. 80% presence and submission of all assignments set during the course.

Credit: 5 ECTS

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

Module description (description of each module)

Module title, ECTS credits

History of Art and Technology II

5 ECTS

Location

1. Semester and 3. Semester

Module coordinator

Line Marie Bruun Jespersen

Type/Method and language

Individual work in relation to course activities

English

Learning objectives:

During this module, students should acquire:

Basic **knowledge** about

the history of art and technology, including selected styles of art and scientific theories within the area of art and technology

aesthetic theories within the field of art and technology

central works of selected art periods and genres

Skills in

analyzing works of art within selected art periods and genres

applying central concepts and analytical methods within the history of art and technology – and acquiring familiarity with their historical context and conditions

Competencies in

comparing various works from selected art periods as regards artistic expression, technological contents, and experience effect

applying central works from the history of Art & Technology as a framework for reflection and inspiration in relation to their own works

Academic content

The module is an introduction of the students to the history of art and technology with special emphasis on the theories and techniques, which have been or are currently prevailing in the areas of art experience and aesthetics.

Together with History of Art and Technology I the module introduces the students to examples of artists, artworks and historic events that are significant to the history of Art and Technology.

Using the teaching forms of lectures, workshops and seminars, the module will introduce problems regarding description and analysis of artworks.

Scope and expected performance

5 ECTS credits. 1 ECTS credit = 27,5 hours of work. 15 ECTS = 137,5 hours of work consisting of preparation for course sessions, course participation, group work, exercises, counselling and exams.

Module activities

History of Art and Technology

What is art, what is and what is technology? These questions are fundamental for the study of art and technology. This course will provide tools and a conceptual framework for engaging with these questions – both in practice and when discussing and debating issues around art and technology. The form of the course will be a historical approach, which means that we will explore how the question of art and technology has been approached by artists and thinkers mainly through the 20th Century. The historical approach also serves to highlight how the relationships between art, technology and the world are closely conditioned by historical circumstances and formed through specific cultural practices. A central focus will be to engage with artistic practices and art works. These artifacts and modes of artistic creation will be a point of departure for leaning about how technology shape and is shaped by human interaction.

There are scheduled two sessions for exercises on texts and topics taught in lectures and supervision in relation to the written assignments. Signe and Line will be in charge of these sessions.

20.09. ArT1 and ArT3. This session combines texts from the course and significant art works in a series of exercises that focus on using the various theoretical positions to broaden and deepen the understanding of the art works.

11.10 ArT1. Supervision in relation to the written assignment, and peer-to-peer feedback.

ArT3. Discussion of extracts of key texts on systems and networks, which thematically bridge between lectures in the HAT cours and the ArT3 semester theme. Students will be asked to analyze and discuss the texts and selected art works, and to relate their findings to their semester projects.

A part of the course is a short written paper. Hand in is the 9th of November. A more detailed description of the assignment will be handed out during Lecture 1.

1. Lecture

Ars and Techne - Technology and artistic practices

Foundational framework for understanding the present day relationship between art and technology. Historical conditions, modernization and the separation of art and technology. At least in some conceptions and discourses, particularly in the humanities a separation between art and technology have been defined and maintained, while in other conceptions and discourses, art and technology coexist and cross-pollinate vigorously on various levels. (Shiner, Latour)

In the first lecture we will look at significant historical examples of these different notions of the relationship between art and technology. The examples are:

Renaissance: Ars and Techne, Leonardo da Vinci and the concept of the Homo Universalis

Kant, Modern Aesthetics, Enlightenment and the separation of the domains of knowledge belonging to art and technology (introduces a schism between art (aesthetics) and technology (progress)

The lecture will also look at different roles technology play in various contemporary art works: from (production) tool to material, and how these different uses of technology impact the art works. (McLuhan: medium is the message/McLuhan: Understanding Media/Edward E. Shanken: Art and Electronic Media/ Mumford: Art and Technics: The tool and the object/Latour On Technological Mediation)

Lecturer: Line, Signe

Set reading

	Pri. lit. no of p.	Sec. lit. n of p.	Dig. upload
Edward A. Shanken, Art and Electronic Media. London. Phaidon Press. 2009. P.13-51	38		x
Marshall McLuhan and Quentin Fiore: The Medium is the Message. Penguin Books 1967. A collection of quotes			x
Mumford: Art and Technics: The tool and the object.			
Total	38		

2. Lecture

Histories of Sound + art

This lecture introduces to the vast and complex impact of sound on art in the 20th century. Sound and its ubiquity in modern society bears testiment to the emergence and transformation of new forms of artistic practices in which technology and mediation play a vital part. Evidence of sound as materiality, physicality, mentality, performativity, mediality playing into scientific (thermodynamic), psychological, cultural, sociological, structural and linguistic 'readings' of modernity is abundant in artistic practices throughout the 20th century - and the course will showcase examples to the effect and perspectives of this (as much as the limited time allows).

Set literature:

	Pri. lit. no of p.	Sec. lit. n of p.	Dig. upload
Douglas Kahn (2012), "Noises of the Avant-Garde" in Sterne, J. (ed): The Sound Studies Reader, London: Routledge, pp. 427-449	22		x
Seth Kim-Cohen (2009) Non-cochlear Sound. Introduction, pp. xv-xxiv	10		x
Peter Weibel: Sound as the Medium of Art	3		x
Claudia Giannetti (1997): "**Aesthetic Paradigms of Media Art".** **Karlsruhe: ZKM,** Source: http://www.mediaartnet.org/themes/aesthetics_of_the_digital/aesthetic_paradigms/. 10 (pri litt) online	10		
Total	55		x

3. Lecture

Machines + Art

Nowhere is the question of art, or the questioning of art's autonomy, more evident than in the discourses and practices of machines. This question(ing) in many ways refers to the issue and philosophical question of the cyborg and the notion of '(post)humanity' - are we machines ourselves? or will the machines replace us? These fundamental issues, and their interconnected challenges of how best to represent the effects of 'modernity', not least 'modern man' in his/her contexts, resonate in art practices throughout the 20th century: from the processing of the effects of world wars and nuclear and ecological threats to our environment and existence; to the advent of modern medicine, space travel and modern democracy. The course will give examples of some of the key formative ideas of the machine, its close and ambiguous relationship to both human creativity and destruction, and how the negotiation of those extremes are evident in concrete art + machine practices - from Dada and concretist Machine Art to Bioart.

Set reading:

	Pri. lit. no of p.	Sec. lit. n of p.	Dig. upload
Andreas Broeckman: Machine Art in the Twentieth Century, MIT Press, chapter 1.	45		

	Pri. lit. no of p.		
Maria Antoine Gonzales Valeria: BIOART ON THE VERGE OF AESTHETIC ONTOLOGY, p.1-18.	18		
Total	63		

Lecturer: Morten Søndergaard

4. Lecture

The loss of idealism in art - early 20th Century

Avant-garde art movements in the beginning of the 20th Century, such as DADA contributed to new understandings of the relation between art and technology and responded to the failure and destructive forces of technological rationalism as it was catalyzed by world war. This lecture will focus on artistic responses to, and critiques of, the role of technology in Europe just after World War 1. We will engage with the idea that technology changes fundamentally the status of reality and human perception.

Lecturer: Signe Meisner Christensen

Set reading:

	Pri. lit. no of p.	Sec. lit. n of p.	Dig. upload
Lewis Mumford (1952) "Art and the Symbol" in *Art and Technics,* Columbia University Press, New York, pp. 3-32	29		
Bruno Latour, "On Technological Mediation - Philosophy, Sociology, Genealogy" in *Common Knowledge* vol. 3 n 2. Pp. 29-43	14		
Robert Hughes, "The Faces of Power" in *The Shock of the New,* pp. 57-111		54	
Total	43	54	

5. Lecture

The shattering of perception – film montage and kinetic art

26.9

This lecture focuses on the relationship between the human body and the machinization of society in early 20th Century. The advent of machinic vision in film, the disciplining of bodies in industrial production – and the cultures of mass consumption – all of this can be understood as material expression of an altered relation between the human body and technological apparatuses. How did these changes become processed in art? We will engage with new artistic forms and film, such as kinetic art and futurism.

Lecturer: Signe Meisner Christensen

Set reading:

	Pri. lit. no of p.	Sec. lit. n of p.	Dig. upload
Jonathan Crary (2001), "Modernity and the Problem of Attention" in *Suspensions of Perception, Attention, Spectacle, and Modern Culture,* The MIT Press, Cambridge Mass .and London, pp.11-79	68		
Walter Benjamin (2008/1936) "The Work of Art in the Age of Its Technological Reproducibility", in *The Work of Art in the Age of Its Technological Reproducibility and Other Writings on Media,* eds. Jennings, M.W., Doherty, B., and Levin, T.Y., Harward University Press, pp. 19-55		36	
Total	68	36	

6. Lecture

Creativity and Technology

What does creativity mean in relation to technology? Here we will explore models of artistic practice in the 20th century, which challenge not only well-established notions of fine art, but also conventional ideas of technology. We will engage with an "assemblage-approach" one that defies disciplinary boundaries. Such types of artistic investigations can be found in the radical art movement FLUXUS, which spread from USA to Europe and also established a base in Denmark in the early 1960s. As point of departure we will discuss the exhibition on Fluxus: *Introduction to the Fluxus-Galaxy* at Kunsten in 1993. Another artistic experiment is E.A.T. (Experiments in Art and Technology) a non-profit organization founded in 1966 in which artists and engineers collaborated closely on performances that included new technology. Finally Black Mountain College (1953-) developed models for artistic creativity that did not respect boundaries between art and technology.

Set reading:

	Pri. lit. no of p.	Sec. lit. n of p.	Dig. upload
Jussi Parikka (2017) "Systemic(s) Events of Creativity, in *Systemics (or, Exhibion as a Series)* ed. Joasia Krysa, pp. 23-32		10	
Owen F. Smith (2006) "Fluxus Praxis: An Exploration of Connections, Creativity and Community" in Chandler, Annemarie, Neumark, Norie (eds.): *At a Distance: Precursors to Art and Activism on the Internet,* The MIT Press, London and New York, pp. 116-138	22		
Nathalie Heinrich (2014) "Practices of Contemporary Art – A Pragmatic Approach to a New Artistic Paradigm" in Zembylas, Tasos (ed.) *Artistic Practices – Social Interactions and Cultural*	12		

Dynamics, Routledge, London and New York, pp, 32-43			
Total	33	10	

7. Lecture

Art and Information

Teaching format: Lecture (engaging with mail art archive at Kunsten)

This lecture focuses on the relation between art and information. With the emergence of an information society in the second prt of the 20th Century, communication has changed dramatically. We will engage with the phenomenon of mail art network in the form of Mogens Otto Nielsen's Mail Art Archive, which is part of the collection at Kunsten, Museum of Art in Aalborg. Prior to the age of the internet and a digital information culture, mail art artists built trans-national networks, exchanging and circulating all kinds of material and media as art practice. This historical precedent of information art will be connected to later art practices of the late 20th century and 21st century who work under the conditions of a full blown infosphere, which has transformed reality and human relations. The lecture will explore how artists engage critically and creatively with a world shaped by information.

Set reading

	Pri. lit. no of p.	Sec. lit. n of p.	Dig. upload
Tiziana Terranova (2004) "Communication Biopower" in *Network Culture – Politics for the Information Age,* Pluto Press, London and New York, pp. 131-157	26		
Theis Vallø Madsen (2015) "In-between gift exchange economy and an anti-economy of sharing" in *Ants in the Archive,* PhD dissertation, pp. 60-90		30	
Total	26	30	

Lecturer: Signe Meisner Christensen

8. Lecture

Art and Technology in everyday life and in public space

This lecture focus on the sites and contexts of art and technology, outside the gallery spaces, such as art and technology displayed in public spaces,

The lecture will present examples of artists and art works that explore and/or critique the role of technology in contemporary society through intervention into or referencing to the contexts and surroundings. The art works that are in focus in this lectrue, adress technologies such as tv/cinema, commercials/billboards, surveillance and smart technologies, art works that are to be experienced from cars, planes etc. These art works are commenting on or criticizing main themes in western lifestyle , such as consumerism, capitalism and the entertainment industry.

The main examples in the lecture are art works from tha Russian constructivism and artists like Dan Graham, Jenny Holzer, Robert Smithson, Rafael Lozano-Hemmer, Superflex and Jens

Haaning.

Set reading:

	Pri. lit. no of p.	Sec. lit. n of p.	Dig. upload
Rosalind Krauss: Sculpture in the Expanded Field in: In October, Vol. 8 (Spring, 1979) pp. 30-44	14		x
Guy Debord: Society of the Spectacle. Rebel Press. P. 6-18	12		x
Robert Smithson: Fragments of a conversation. http://www.robertsmithson.com/essays/fragments.htm		x	x
Total	28		

Examination

An internal written examination in **Module 11 "History of Art and Technology II"** (Kunst- og teknologihistorie II)**.**

Form of examination: c)

The examination is a 7-day assignment on a set subject. The assignment is evaluated by one examiner and awarded a pass/fail grade.

Number of pages: the written work must not exceed 10 pages.

Evaluation: pass/fail. In case of a Fail grade, an additional examiner will also evaluate the assignment.

Substitution: the examination may be substituted by satisfactory and active participation in courses, i.e. 80% presence and submission of all assignments set during the course.

Credits: 5 ECTS.