

Art and Technology, AAU, 3rd Semester 2015

Dynamic Art and Technology / Teknologi og dynamisk kunst



Still of 20 Hz by Semiconductor.





School: CAT

Study board: Art & Technology

Study regulation: BA Study Program in Art & Technology, The Faculty of Humanities, AAU, September 2014.

Semester code: ArT3 - HSA160047

Study regulations code: HSA16121

Dynamic Art and Technology (Teknologi og dynamisk kunst)

Semester Theme

For this year's edition of Dynamic Art and Technology, the theme is 'Uninvisibilty'. 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. Projects should take something in nature that is normally invisible, for example, energy, waves, sound, or micro/macroscopic processes, and construct an artistic representation of it that appeals to our senses and evokes an emotional response.

To support the theme, students will have the opportunity to work with wind sensor data provided in collaboration with measurements engineer Rémi Gandoin from DONG Energy. Wind data includes speed, direction, pressure, and temperature measured at various locations surrounding Denmark and England. Since wind sampling locations are in water, wave buoy and ultrasound data are also available.

Semester Project Deliverables

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 a time-based 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 refu-



table 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?

BIBLIOGRAPHY

List of references following the Harvard 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 labeled with a brief description and cited in the main text. You are also required to make a video documentation of the final artifact and hand it in with the report.

Three hard copies of the project report must be produced (one for the examiner, one for the censor and one for the department secretary and archiving purposes). The video and any other relevant digital media (e.g., images, sounds) should be provided on a CD/DVD and submitted with the printed report in a pocket inside the back cover.

All material in the report that is not the original creation of the students in the group must be properly acknowledged by using the Harvard 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: Lance F		Lance F	Putnam	
Secretary:		Anne Nielsen		
Supervisors:		Palle Dahlstedt, Lance Putnam		
 Module 8: Dynamic Art and Technology (15 ECTS) Artistic and Academic Methodology III (Affective Design) Digital Representation II (Rapid Prototyping) Programming II 				
Coordinato	r:	Lance F	Putnam	
Teaching s	taff:	Palle Da	ahlstedt, Lance Putnam, Ståle Stens	lie
Module 9: • Pro	Programmin ogramming III	g Interac	tive Systems (5 ECTS)	
Coordinato	r:	Lance F	Putnam	
Teaching st	taff:	Lance F	Putnam	
 Module 10: Art and Technology Concept Design (5 ECTS) Method Design and Analysis Concept Design and Diagrams 				
Coordinato	r:	Ståle Stenslie		
Teaching s	taff:	Ståle Stenslie		
Module 11: Art in Context I – Art Theory (5 ECTS) Theory of Art and Aesthetics 				
Coordinator: Elizabeth Jochum				
Teaching staff: Eli		Elizabeth Jochum, Morten Søndergaard		
Contact:				
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Departmer	nts:			
КОМ	Department	of Commu	unication and Psychology	
AD	Department	of Archite	cture, Design and Media Technolog	y (Architecture and Design)
MT	Department of Architecture, Design and Media Technology (Media Technology)		y (Media Technology)	
BYG	Department of Civil Engineering			
PLAN	Department of Development and Planning			



Module 8 - Dynamic Art and Technology (Teknologi og dynamiske kunst) (15 ECTS)

HSA330021H

Location:	ArT3
Study Board:	Art & Technology
Module coordina- tor:	Lance Putnam
Method of work and language:	Method of working: Group and project work. English
Module contents:	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 artifacts, and the experience of artifacts expressing temporal, spatial, and affective transitions. A variety of audio/visual technologies and engineered solu- tions will be tested and applied in the creation of products, artifacts and installa- tions 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 technologies skills and produce artistic effects focused on performative interaction between humans and machines.

In connection with the module, courses may be offered within the following areas:

- Artistic and Academic Methodology III (Affective Design)
- Creative Sensor Networks
- Digital Representation II (Rapid Prototyping)
- Programming II

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, artifacts, performances and installations, which results in the expression of transitions both physically and emotionally.

Learning objectives:

During this module students should acquire:

Basic knowledge about

- artistic works supported by technologies expressing physical or emotional transition
- the creation and perception of artifacts expressing physical or emotional transition
- a variety of mechanical and electronic technologies of creation of movement and embedding of autonomy
- artistic expression using audio technologies for the production of sound-based interactivity
- academic and artistic methods and tools to be used when working with design and implementation of artifacts or installations that express or trigger emotional or physical movement

Skills in

- identifying and formulating an art problem within the theme of the module
- analyzing 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 artifacts and installations.

Competencies in

- describing and analyzing works and installations which use adaptive technologies
- employing autonomous technologies in design and implementation of artifacts or installations expressing emotional or physical movement
- contextualising 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.

The module is completed with:

Examination 8

An external combined written and oral examination in **Module 8: "Dynamic Art and Technology".** 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.

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: The 2014 study regulations state 25 minutes, but the correct duration is 20 minutes per student. For more information see

<u>http://www.fak.hum.aau.dk/digitalAssets/83/83714_tillaeg_so_gruppeproever_hum_aau_2012.pdf</u>. 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.

In the evaluation of the examination performance, the grade 12 will only be awarded to students who demonstrate that they have fulfilled the objectives for the subject exhaustively or with only few insignificant omissions.

Exam dates:	Week 3, 2016
Exhibition dates:	December 1-2, 2015
Hand-in date:	December 17, 2015, 10am
То:	Anne Nielsen



Artistic and Academic Methodology III (Affective Design) (1.5 ECTS)

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 before focusing on the artistic methodology of Inverse Thinking. This is a variation of negative teleology, where a work of art seemingly defeat a constructive purpose. Inverse Thinking is therefore a method aiming at the production of opposites or negations that postulate rather different choices from what one actually intends. Such kinds of chameleon tactics are often used by activists to produce strongly affective experiences that provoke opinions and discussions. The intention behind this is to cause deeper reflections on the issues at hand. The goal of the Inverse Thinking method is to both test and challenge artistic concepts as well as promote reflection on the issue at hand. 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:	Lecture
	Introduction to Affective Design The lecture will introduce the origin of and various concepts behind affective design and how it might be used to produce strong, affective experiences. The students will get an overview of the field both in Human- Computer-Interaction (HCI) and artistic practice.
	Ståle Stenslie
	Picard, R. W. (1997) Affective Computing, pp. 21 – 25. MIT Press. Tikka, H. (2003). Affective environments: configuring the affective user? In Discovering New Media, Working Papers, University of Art and Design Helsinki UIAH, publication series F 26, Helsinki. Download from http://mlab.uiah.fi/culturalusability/papers/Tikka_paper.html
Lesson 2:	Lecture
	Shock, Awe and Fear Strong emotions can both attract and scare audiences. The lecture will present how to use inverse thinking in production of psychophysically challenging works of art.
	Ståle Stenslie
	The 'Sensation' exhibition. (1997). Download from: http://www.artdesigncafe.com/ Norman-Rosenthal-Sensation-Royal-Academy-of-Arts-London-1997 http://www.flashartonline.com/interno.php? pagina=articolo_det&id_art=649&det=ok&title=SENSATION
	slides and other resources
Lesson 3:	Lecture
	Inverse Thinking The lecture will present Inverse Thinking as a relevant methodology to produce strong and provocative works of art. Various projects from different fields will be presented, analysed and discussed. Research and document relevant artistic projects for presentation in class
	Ståle Stenslie
	Julius, A. (2002). Transgressions – The offences of art, pp. 16–51. Thames & Hudson, London.
	slides and other resources
Lesson 4:	Lecture
	Affective Art. Can it really be produced? Can affect be manipulated? Or is it the outcome of a 'lucky strike' or the 'stroke of genius'? The lecture will discuss the predictability and pro-



	grammability of affections.
	Ståle Stenslie
	Badiou, A. Fifteen Theses on Contemporary Art. Lacanian Ink 22. Downloaded from http://www.lacan.com/frameXXIII7.htm
Lesson 5:	Lecture
	Reflections in Inverse Thinking I The lecture will dissect and discuss various concepts prepared by students Script up to three scenarios using Inverse Thinking as a methodology. Present in class.
	Ståle Stenslie
Lesson 6:	Lecture
	Reflections in Inverse Thinking II The lecture will dissect and discuss various concepts prepared by students Script up to three scenarios using Inverse Thinking as a methodology. Present in class.
	Ståle Stenslie

Digital Representation II (Rapid Prototyping) (1.5 ECTS)

This course will introduce the main techniques for 2D and 3D prototyping. In addition, it will introduce techniques for quick prototyping of interactive systems.

There are many good tools for 2D and 3D editing, and in the course we will mainly use Inkscape (2D) and Sketchup (3D), which are freely available. For the interactive systems prototyping we will use the graphical programming environment Pure Data (PD, puredata.info) which is often used for prototyping interactive audio-visual artworks and installations. Make sure that you have these programs installed before the course.

The assignments in the module could preferably be integrated in the creative process of the main semester project, so that the acquired techniques are applied in context.

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Lesson 1+2:	Lecture/Workshop
	Introduction to prototyping and rapid prototyping based on data sets and digital designs. Tools, techniques, representations, file formats. Overview of the resources at AAU
	Assignment to be carried out in the semester project groups: Produce one physical object based on a combination of an imported or generated data set and digital design. To be presented in lesson 3.
	Palle Dahlstedt
Lesson 3:	Lecture/Workshop
	Student presentations of assignments results: objects, concept and process. Discussion.
	Palle Dahlstedt
Lesson 4:	Lecture/Workshop
	Introduction to Pure Data (PD): The data-flow paradigm, event processing, GUI. Before the lecture, make sure you have installed PD-Extended (from http://puredata.info).
	Palle Dahlstedt
Lesson 5+6:	Lecture/Workshop
	Pure Data continued. How to bring 2D and 3D objects into PD. Working dynamically with



	data sets and objects in visualization and sound.
	Assignment: Create an interactive/responsive visualization of an imported or generated data set using PD. To be submitted as a patch file together with a one-page description through Moodle before Nov 22.
	Palle Dahlstedt
Program	ming II (2 ECTS)
Lesson 1:	Lecture
	Communication Protocols Basic concepts in digital communication: what is a protocol?, packets (header + data), ad- dresses and ports, generating/parsing serial byte streams.
	Lance Putnam
	Lecture notes.
	Further information on multimedia protocols (not required): 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
	VRPN (virtual reality): Taylor II, R. M. et al. (2001). VRPN: A device-independent, network-transparent VR peripheral system. http://www.cs.unc.edu/Research/vrpn/VRST_2001_conference/vrst_vrpn_paper_reprint.pdf
Lesson 2:	Workshop
	Serial Workshop I: Digital to Physical Workshop on sending data serially from a computer to an Arduino to control something physical.
	Lance Putnam
	Lecture notes.
Lesson 3:	Workshop
	Serial Workshop II: Physical to Digital



	a graphical object.
	Lance Putnam
	Lecture notes.
Lesson 4:	Lecture and Workshop
	Shape Generation Workshop I Shape generation techniques and exporting to 3D object files.
	Lance Putnam
	Lecture notes.
Lesson 5:	Lecture and Workshop
	Shape Generation Workshop II Shape generation techniques and exporting to 3D object files.
	Lance Putnam
	Lecture notes.
Lesson 6:	Lecture
	Working With Time I Using timing information to control animation and other temporal events. Topics include getting the time, sleeping, differential timing, and basic animation strategies using interpola- tion, signals, and other mathematical functions.
	Lance Putnam
	Lecture notes.
Lesson 7:	Lecture
	Working With Time II Using timing information to control animation and other temporal events. Topics include getting the time, sleeping, differential timing, and basic animation strategies using interpola- tion, signals, and other mathematical functions.
	Lance Putnam
	Lecture notes.
Lesson 8:	Lecture
	Using Libraries Finding, installing, and using other C++ libraries. Package managers and the com- pile/install/link process. Keywords in the typical API header: namespace, #define, enum, typedef, and struct/class.
	Lance Putnam
	Lecture notes.



Module 9 – Programming Interactive Systems (Programmering af interactive systemer) (5 ECTS)

HSA330022F

Location:	ArT3
Study Board:	Art & Technology
Module coordina- tor:	Lance Putnam
Method of work and language:	Individual or small groups. English
Module contents:	Programming Interactive Systems is a module where students learn about basic principles of software and how different digital systems can be designed to create alternative forms of interactions between man and machines. Students will learn about principles of object-oriented programming languages and how algorithms can be developed in order to design new forms of HCI (Human-Computer Interaction).
In connection with the	e module, courses may be offered within the following areas:

- Programming III
 Disited Networks
- Digital Networks

Learning objectives:

During this module students should acquire:

Basic knowledge about

- digital communication protocols: MIDI, OSC, DMX, serial, etc.
- networking applications: inter-application communication, internet-based communications, etc.
- basic user interface design principles for realizing a software interface for human-computer interaction
- data mapping strategies in software / firmware

Skills in

- applying technical knowledge to the development of a human-computer interface and an algorithmic - and demonstrate its use (application)
- 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.

The module is completed with:

Examination 9

An internal combined written and oral examination in **Module 9: "Programming Interactive Systems".** 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 oral examination should demonstrate that the student has fulfilled the objectives outlined above.

In the evaluation of the examination performance, the grade 12 will only be awarded to students who demonstrate that they have fulfilled the objectives for the subject exhaustively or with only few insignificant omissions.

Exam dates:	October 5-6, 2015
Hand-in date:	September 28, 2015
То:	Anne Nielsen

Programming III (1 ECTS)

Lesson 1:	Lecture
	Programming Review and Structures Review of basic programming constructs: variables, functions, arrays, loops, and control structures. Introduction to structures.
	Lance Putnam
	Review assignments and literature from Programming I. "Data Structures - C++ Documentation", http://www.cplusplus.com/doc/tutorial/structures/
Lesson 2:	Lecture
	Object-oriented Programming I Introduction to object-oriented concepts: class versus instance/object, member vari- ables/functions, constructors/destructors, public versus private members.
	Lance Putnam
	"Classes (I) - C++ Documentation", http://www.cplusplus.com/doc/tutorial/classes/. "Classes (II) - C++ Documentation", sections "The keyword this" and "Static members", http://www.cplusplus.com/doc/tutorial/classes2/.
Lesson 3	Lecture
2000011-0.	
	Callback Functions and Real-time Sound Callback functions as used in real-time (multimedia) systems and the notion of inversion of control (the Hollywood "we'll call you" principle). Programming real-time audio. Topics include samples as a representation of sound pres- sure, sampling rate, input/output streams, channels, processing blocks, and sound file playback.
	Callback Functions and Real-time Sound Callback functions as used in real-time (multimedia) systems and the notion of inversion of control (the Hollywood "we'll call you" principle). Programming real-time audio. Topics include samples as a representation of sound pres- sure, sampling rate, input/output streams, channels, processing blocks, and sound file playback. Lance Putnam
	Callback Functions and Real-time Sound Callback functions as used in real-time (multimedia) systems and the notion of inversion of control (the Hollywood "we'll call you" principle). Programming real-time audio. Topics include samples as a representation of sound pres- sure, sampling rate, input/output streams, channels, processing blocks, and sound file playback. Lance Putnam Lecture notes.
Lesson 4:	Callback Functions and Real-time Sound Callback functions as used in real-time (multimedia) systems and the notion of inversion of control (the Hollywood "we'll call you" principle). Programming real-time audio. Topics include samples as a representation of sound pres- sure, sampling rate, input/output streams, channels, processing blocks, and sound file playback. Lance Putnam Lecture notes. Lecture
Lesson 4:	Callback Functions and Real-time Sound Callback functions as used in real-time (multimedia) systems and the notion of inversion of control (the Hollywood "we'll call you" principle). Programming real-time audio. Topics include samples as a representation of sound pres- sure, sampling rate, input/output streams, channels, processing blocks, and sound file playback. Lance Putnam Lecture notes. Lecture Real-time Graphics I Programming real-time graphics. Introductory concepts in real-time graphics programming: the window, frame rate, anima- tion versus draw callbacks, and drawing basic shapes. Basics of meshes including drawing primitives, vertices, and colors.



	Lecture notes.
Lesson 5:	Lecture
	Real-time Graphics II Working with textures and images.
	Lance Putnam
	Lecture notes.
Lesson 6:	Lecture
	Object-oriented Programming II Introduction to object-oriented concepts: inheritance and polymorphism.
	Lance Putnam
	"Friendship and inheritance - C++ Documentation", sections "Inheritance between classes", "What is inherited from the base class?", and "Multiple inheritance", http://www.cplusplus.com/doc/tutorial/inheritance/. "Polymorphism - C++ Documentation", http://www.cplusplus.com/doc/tutorial/polymorphism/.
Lesson 7:	Lecture
	Mouse and Keyboard Input Responding to standard mouse and keyboard events (e.g., button down/up, move, drag).
	Lance Putnam
	Lecture notes.
Lesson 8:	Lecture
	Creating an Audiovisual Instrument Combining the presented topics in graphics, sound, and user input to create a real-time audiovisual instrument.
	Lance Putnam
	Lecture notes.



Module title, ECTS credits and STADS code:

(from study regulations)

Module 10 – Art and Technology Concept Design (Konceptudvikling for oplevelsesteknologi) (5 ECTS)

HSA330023F

Location:	ArT3
Study Board:	Art & Technology
Module coordina- tor:	Ståle Stenslie
Method of work and language:	Individual work in relation to course activities English
Module contents:	The module "Art Concept Design" focuses on concept design processes and method development of interactive installations and/or place-based events. The module introduces academic methods such as qualitative or quantitative of re- search and analysis and methods of artistic experimental creativity as measures in artistic concept development processes. Furthermore, the module introduces oral and written presentation techniques.

Objectives

In connection with the module, courses may be offered within the following areas:

- Method Design and Analysis
- Concept Design and Diagrams

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

The module is completed with:

Examination 10

An internal combined written and oral examination in Module 10 "Art and Technology Concept De-



sign"

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. One examiner evaluates the assignment. 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.

Hand-in date: I BA (check Moodle) To: Anne Nielsen	
Hand-in date: IBA (check Moodle)	
Exam dates: TBA (check Moodle)	

Scope and expectations: See objectives. Students are expected to participate actively in lectures

Participants: ArT3

Prerequisites for participation: None other than having fulfilled 1st and 2nd semester at ArT

Module activities (course sessions etc.)

Concept and Method Designs in ArT (2 ECTS)

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 of designing concepts for an artistic intervention will be discussed. The goal is to make the students able to 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..

Lesson 1:	Lecture
	Artistic Methods. The lecture gives an overview of artistic approaches to concept design processes and method development relevant to interactive installations and/or location specific events. The students will get a basic understanding of what concept design is and why it is so important to artistic practice.
	Ståle Stenslie
	Marinetti. F. T.: The Futurist Manifesto. 1909. http://cscs.umich.edu/~crshalizi/T4PM/futurist-manifesto.html Leavy, Patricia (2008) Method Meets Art: Arts-Based Research Practice. Guilford Press. P. 4 – 16.
Lesson 2:	Lecture
	Qualitative Methods in ArT. The lecture will present qualitative methods useful for the analysis and understanding of



	users, places and their usages for creating valuable experiences.
	Ståle Stenslie
	Norman K. Denzin, Yvonna S. Lincoln (2011) The SAGE Handbook of Qualitative Research. SAGE.
Lesson 3:	Lecture
	Quantitative Methods in ArT. The lecture will present quantitative methods in relation to the analysis and understanding of users, places and their usages relevant to ArT practice.
	Ståle Stenslie
	Borgdorff, Henk, Artistic research within the fields of science. Download from http://www.utbildning.gu.se/digitalAssets/1322/1322679_artistic-research-within-the-fields- of-science.pdf
	slides and other resources
Lesson 4:	Lecture
	Concepts, Language and Concept Designs. What is a concept? Why do they matter? Are they limits to our thinking? Or do they fertilize us with meaning? How to use them for communication and conveying the message? The lecture will include a workshop in writing, presenting and discussing artistic concepts. The main task is to design and conceptualize an interactive installation and/or place-based event. This should then be presented in class for group discussion.
	Ståle Stenslie
	Schwartzman, M. See Yourself Sensing – Redefining Human Perception. Black Dog Pub- lishing, 2011. Note: this book contains several examples of how to mediate installati- ons/media art in a concise and precise manner.
	slides and other resources
Lesson 5:	Lecture
	Conceptual Activism. Overview of the complex ecosystem behind various conceptual and activist interventions. The lecture will present relevant examples for analysis and discussion. Further the lecture will discuss artistic intentions and ideas in comparison to actual, completed artworks. Reading the mandatory texts and participating in discussion.
	Ståle Stenslie
	Julius, Anthony. Transgressions – The Offences of Art. Thames & Hudson, London 2002. P. 16 – 21.
	slides and other resources
Lesson 6:	Lecture
	Big Data as Artistic Concept and Method Big Data has recently become a key term that both serves as a conceptual framework and practice based tool for artistic works. With online applications and social networks such as Facebook, YouTube, Instagram and Photosynth, artists are given access to millions, if not billions of photos, videos and other data. How can these Big Data and the tools to crunch them be used methodologically to produce works of art? Or Gigamap our digital realities? Or twisted to be used differently and discursively from the daily data bombardment caused by Big Data themselves? The lecture gives a historical, philosophical and critical introduction to Big Data and how it



	has been used in artistic contexts. The aim of the lecture is to provide the students with qualitative and artistic methods that easily can be used on site during the course' excursion/mapping of Aalborg. Students are expected to read the mandatory texts and participate in class discussion.
	Ståle Stenslie
	Dumbill (2012) What is Big Data? https://beta.oreilly.com/ideas/what-is-big-data Lev Manovich (2013) Software Takes Command (International Texts in Critical Media Aes- thetics). Bloomsbury Academic. Birger Sevaldson. GIGA-MAPPING: visualization for complexity and systems thinking in design: http://www.nordes.org/opj/index.php/n13/article/view/104/88 Fry, Ben (2008) Visualizing Data. O'Reilly Media, Inc.
	slides and other resources
Lesson 7:	Workshop
	Aalborg Concept I The workshop shall design and conceptualize an interactive installation and/or place-based events relevant to Aalborg. The concept should use one or several of the methods pre- sented throughout the course.
	Ståle Stenslie
	set and recommended readings
	slides and other resources
Lesson 8:	Workshop
	Aalborg Concept II Continuation and group wise final presentation of results from the workshop started in Lesson 7.
	Ståle Stenslie
	set and recommended readings
	slides and other resources



Module 11 – Art in Context I – Art Theory (Kunst i kontekst I – kunstteori) (5 ECTS)

HSA330024D

Location:	ArT3
Study Board:	Art & Technology
Module coordina- tor:	Elizabeth Jochum Module teachers are additionally: Morten Søndergaard
Method of work and language:	Individual work in relation to course activities. English
Module contents:	The module is an introduction to relevant artistic and aesthetic theories from a variety of research disciplines and research traditions (i.e. history of art and literature, rhetoric, philosophy, sociology, technology) and an introduction to the analytical methodologies of these disciplines and their position within theories of science related to the study's subject field. Students will analyze art and design artefacts applying methodologies and theories presented in the course. The module consists of lectures, workshops and seminars.

In connection with the module, courses may be offered within the following area:

Theory of Art and Aesthetics

Learning objectives:

During this module, students should acquire:

Basic knowledge about

- basic aesthetic theories and their significance for art and experience design
- · basic methods of aesthetic analysis of artworks and art projects
- basic art theories on the relation between artist, the recipient, and the work of art

Skills in

- applying various basic aesthetic concepts and artistic models in connection with analysing projects of art, their contexts and their participants
- presenting and discussing various aesthetic and artistic positions and their significance for the field of art and technology

Competencies in

- writing academic analysis of artistic projects and aesthetic artefacts
- applying aesthetic theories and methods in design, description and evaluation of artistic projects and experiences
- conducting case specific studies, applying one or more theories and methods of the field

The module is completed with:

Examination 11

An internal written examination in Module 11 "Art in Context I – Art Theory"

Form of examination: c)

The examination is a 7-day assignment on a set subject, which is evaluated by one examiner and



awarded a pass/fail grade. Number of pages: the written work must not exceed 12 pages. 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

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

Exam dates:	TBA (check Moodle)
Hand-in date:	TBA (check Moodle)
То:	Anne Nielsen/Moodle

Scope and expectations:

The basic goal of the course is to teach the students to operate with aesthetic theories when they analyze artifacts, and to have a basic notion of the different meta-theoretical discourses (phenomenology, hermeneutics, structuralism, (neo)kantianism, poststructuralism) in the field of modern culture and art 'before the digital revolution' (decadence, modernism, avant-garde, kitsch, and postmodernism).

It is also a sub-goal of the course to teach the students to write expositions based on theories and the analysis of artifacts.

The students are expected to read one primary text for each lecture – and each lecture will center on this text. The students are expected to prepare either to do 5 minutes talks about the primary text, i.e. using one of the basic elements of expository writing – resume, paraphrase, controlling idea, argument or voice; Or, to use the text in the analysis of an artwork. During the course, each student should do one presentation in order to qualify for the (reduced) final assignment. The course will be concluded with each student writing an exposition on a chosen topic from the course that will be marked. If the student has qualified for it (minimum 80% physical attendance and all assignments), the length of the exposition should be max. 5 pages with a free topic from the semester's teaching. If the student does not qualify, the examination will be as described above under 'form of examination./c)'.

Theory of Art and Aesthetics (2 ECTS)

Lesson 1:	Lecture
	Art Theory – Content and Context I This lecture introduces students to historical and contemporary theories of art in con- text, demonstrating how attempts to define and categorize art works and the nature of aesthetic experience have shifted historically and in relation to technological inova- tions, cultural and religious transformations, commercial influence, and scientific theory and understanding.
	Elizabeth Jochum
	Required Readings: <i>Art Theory: A Very Short Introduction</i> (Cynthia Freeland): Introduction, Chapter 1, 2, 3
	slides and other resources
Lesson 2:	Lecture
	Art Theory – Content and Context II



	The lecture continues the themes and topics introduced in the previous lecture, and considers how the notion of aesthetic taste and beauty has evolved historically and in functions in different contexts.
	Elizabeth Jochum
	Required Readings: <i>Art Theory: A Very Short Introduction</i> (Cynthia Freeland): Chapter 4, 5, 6, 7
Lesson 3:	Lecture
	Art in Context - Aesthetic Theory. A general introduction to aesthetic theory; to the experience and analysis of Art in Contexts; and to the use of the senses (all of them), language and organized thought (theory) when understanding, developing ideas with, producing, and/or criticizing art. Specifically, to the practice of analysing art - as we will be doing the next three les- sons, at Aarhus Kunsthal.
	Morten Søndergaard
	Dewey, John. <i>Art as Experience</i> . New York: Putnam, 1934. (1, 35-37, 47-48, 106-109, 194-200, 272-275.) On Moodle.
Lesson 4:	Excursion to and exercises at Aarhus Kunsthal (lesson 4+5+6)
	Note: You will have to find your own way to Aarhus, and please arrange it so that you are there no later than 10 am. Preferably, a little earlier. Aarhus Kunsthal is located <u>here</u> .
	Our visit is structured thus: First, I will give an introducing to theory as practice, with the following title: Analyzing art, operationalizing theory, crossing aesthetics. An in-situ lecture about the use of experience and language, and the connection of sensing to theories in analyzing art works and their contextual situatedness. The lecture is based on the reading of Dewey from the first lecture, as well as excerpts from the French social thinker and art theorist, Michel de Certeau's book <i>The Practice of Everyday Life</i> .
	Morten Søndergaard
	Certau, Michel de. 'Walking in the City', in The Practice of Everyday Life. London: University of California Press, 1980. (91-110) On Moodle.
Lesson 5:	Encountering objects and situations
	Second, you will work in groups, walking through the exhibition and choose an ele- ment they want to work with (there are a number of 'stages' they should work through), and then start preparing a presentation. Especially, we will be testing Dewey's notion that 'art is the experience of making or encountering the object'. The day will culminate in the students presenting in front of chosen art works / elements / situations (see below). More details will follow on the day.
	Morten Søndergaard
	slides and other resources
Lesson 6:	Presentations
	Thirdly, all groups present their analysis of a chosen artwork or aesthetic situation. The presentation and analysis should draw on theories, either from the study in gen- eral or the AiC course. It may also include other relevant examples and theories.
-	Morten Søndergaard
	As above.



	slides and other resources
Lesson 7:	Lecture
	The Art of Society – Introduction to Luhmann's System of Art. The lecture circles around the paradoxical notion of the so-called autonomy of art seen from a sociological perspective. Art is seen as a specific social system within a broader societal field comprised of various other social systems. The system of art has its own operational mechanisms and societal functions assigning specific mean- ings to common notions such as the work of art, artist, beholder, art theory, etc. Luhmann's systemic view on art is able to discuss the interstices between art and other domains such as science, economy etc.
	Elizabeth Jochum
	Luhmann, Niklas, 2008. "The work of Art and the Self-reproduction of Art." In Harrison, C.; Wood, P. <i>Art in Theory 1900-2000</i> . Oxford: Blackwell Publishing
	Further reading:: Luhmann, Niklas, 2001. <i>The art of the society</i> .Heinrich, Falk, 2008. <i>Interaktiv digital installationskunst.</i> København, Multivers (kap. 4)
Lesson 8:	Workshop
	Art in Context In Practice: Students will present in-class the results of their work from the assignment outlined in Lecture 2. Given a map of the city of Aalborg, groups will select a section of the map, and explore Aalborg identifying at least 3 and no more than 5 unique examples of art in context. This may include facades, sculpture, gardens, objects, paintings, photography, performance, digital art, street art, sound art etc. in a variety of public and private spaces. Students are responsible for preparing and deliverying a 10 minute presentation, with slides, for the class. This will the basis of the written hand-in required for successful completion of the course (due one week following the last day of the course). Requirements for the written assignment will be distributed in class.
	Elizabeth Jochum
	Readings from assigned bibliography.