

Study Board of Art & Technology Fall 2017

Art and Technology, AAU, 3rd Semester 2017 Dynamic Art and Technology / Teknologi og dynamisk kunst



Philips Design. Bubelle Dress

Semester details

School	CAT
Study board	ArT & Technology
Study regulation	BA Study Program in Art & Technology, The
	Faculty of Humanities, AAU, September 2015.

Semester Theme

Wearability

For this year's edition of Dynamic Art and Technology, the theme is 'Wearability'. Clothes are one of the few goods people interact with from the very first day of their life onwards. The style and amount of clothes worn is often based on the social and geographic background, but it also serves different physical purposes. While they can be used as a protection from weather or different surfaces, their most unique trait is that they can also be used to express one's personality, mood, attitude or current feelings. What we wear and how we wear it depends on how we feel, what we want to do on a day, and on external circumstances like the weather or the people who surround us. Projects should extend the idea of clothing by giving expressiveness to clothes and building interactive, technology enhanced clothing experiences. These can be either general purpose, for special events (e.g. Aalborg Karneval) or for special locations (e.g. amusement parks).

Students are meant to design and implement an interplay of wearable technology and fashion design. Not only does the technological side must provide a dynamic and reactive aspect but the overall design needs to be fashionable in the sense that it should be attentive to style and expression. The final implemented prototype needs to be wearable and mobile.

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 should additionally organize a fashion show across all groups.

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 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?

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.

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:

Markus Löchtefeld

Secretary:

Anne Nielsen

Supervisors:

Anthony L. Brooks, Markus Löchtefeld

Overview of the modules

Module 8: Dynamic Art and Technology (15 ECTS)

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

Coordinator:

Markus Löchtefeld

Teaching staff:

Anthony L. Brooks, Markus Löchtefeld, Peter Skotte

Module 9: Programming Interactive Systems (5 ECTS)

• Programming III Coordinator:

Markus Löchtefeld

Teaching staff:

Markus Löchtefeld

Module 10: Art and Technology Concept Design (5 ECTS)

- Method Design and Analysis
- Concept Design and Diagrams

Coordinator:

Palle Dahlstedt

Teaching staff:

Palle Dahlstedt

Module 11: Art in Context I – Art Theory (5 ECTS)

• Theory of Art and Aesthetics Coordinator:

Line Marie Bruun Jespersen

Teaching staff:

Line Marie Bruun Jespersen

Contact:

Anne Nielsen (KOM) amn@hum.aau.dk +45 9940 9919

Markus Löchtefeld (MT) mloc@create.aau.dk +45 5162 0017

Anthony L. Brooks (MT) tb@create.aau.dk +45 2130 3015

Line Marie Bruun Jespersen (KOM) linebruun@hum.aau.dk +45 2128 0047

Palle Dahlstedt (KOM) dahlstedt@hum.aau.dk +46 7030 8820 7

Peter Skotte (MT) peters@create.aau.dk +45 9940 8791

Departments:

KOM

Department of Communication and Psychology

AD

Department of Architecture, Design and Media Technology (Architecture and Design)

MT

Department of Architecture, Design and Media Technology (Media Technology)

BYG

Department of Civil Engineering

PLAN

Department of Development and Planning

HISTORY OF ART AND TECHNOLOGY I (ART1 AND ART3) (M4, C) (ART_BA)

🕂 📮 Announcements 🖉

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+ Add an activity or resource

History of Art and Technology, 5 ECTS credits (and possibly S	STADS code)
English title: History of Art and Technology I	
5 ECTS	
Link to Study Regulation	
http://www.fak.hum.aau.dk/digitalAssets/109/109056_ba_a	art_2015_hum_aau.dk.pdf
Location	
1 st and 3rd semester, MPACT School	
Module coordinator	
Line Marie Bruun Jespersen, KOM	
Type and language	
Course Module	
Language of instruction: English	

Objectives

From the study regulations, page 13, quote:

"Module contents: 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 II 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."

From the study regulations, page 14, quote:

"Learning objectives:

During this module, students should acquire:

Basic knowledge in

· Ithe history of art and technology

·□aesthetic theories within the field of art and technology

· □central works of selected art periods and genres

Skills in

· Danalyzing works of art

□□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

• Dapplying central works from the history of art and technology as a framework for reflection and inspiration in relation to their own works."

The course content focus on three major themes: media archaeology, formal analysis of especially composition, History of sculpture, and the interplay between sculpture and technology. The course consist of a series of lectures including a number of smaller exercises, such as group discussions, small presentaitons etc. and two larger events: an excursion to Kunsten and a presentation seminar, where students will give peer-to-peer feedback. At the beginning of the course each student is assigned an art work, which will be the main topic for further research, analysis, and the main focus point in the final presentation and paper

Academic content and conjunction with other modules/semesters

A brief and general description of the academic content of the module as well as the basis and motivation for the module; i.e. a brief review of the content and foundation of the module.

The intention is to provide students with an overview of each module and to create understanding of the module in relation to the semester and the entire programme.

Scope and expected performance

5 ECTS =135 hours

Teaching hours: 10x2=20 hours

Preparation time: 8x5hours= 40 hours

Exercises: Visit to Kunsten and presentation seminar: 2x2=4 hours

Preparing manuscript: 56 hours

Preparing written paper for hand-in: 15 hours

Participants

ArT 1 and ArT 3

Prerequisites for participation

none

Module activities (course sessions etc.)

For each teaching activity (course session, workshop session etc.) the following must be indicated:

- Type of teaching (lecture, workshop, laboratory work, study trip etc.)
- The title and number of the teaching activity (in that order) and possibly a brief description of the activity (course introduction)
- Date of the activity
- Lecturer(s) and teacher
- Set and recommended readings
- Slides and other resources

If agreed by the study board, some of the above items may be omitted.

Examination	
From the study regulations, page 15, quote:	
<i>"Form of examination: c) The examination is a 7-day assignment on a set subject. On assignment. Number of pages: the written work must not exceed 12 pag</i>	
Evaluation: pass/fail. In case of a Fail grade, an additional e the assignment.	examiner will also evaluate
Substitution: the examination may be substituted by satisfa participation in courses, i.e. 80% presence and submission during the course. Credits: 5 ECTS	
<i>The examination should demonstrate that the student has f outlined above.</i> "	fulfilled the objectives
A description of the paper assignments is available in Mooc	lle

🕂 🜆 Active participation and assignments 🖉

🕂 Topic 2 🖉

1

Lecture

Four philosophies of technology and Introduction to the course content and assignment.

Based on the text by Drengson a selection of significant examples from art history will be analyzed and discussed.

Teacher

Line Marie Bruun Jespersen

Literature

	Mandatory litt. Number of pages	Additional litt. Number of pages	Dig. upload
Technology and values. Alan R. Drengson: Four Philosophies of	11		x
Technology. p. 26-37 (Moodle)			

+ Add an activity or resource

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L. Mumford:

🕂 🛑 Literature Lecture 1 🖉

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🕂 Topic 3 🖉

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2

Media archeology: Moving images

Lecture

This lecture gives and introduction to the field of "Media Archeology" and the link between development of different types of visual media and art history. The lecture introduces to different "viewing machines" and inventions that point towards the newer media for showing moving images.

Teacher

Line Marie Bruun Jespersen

Literature

Mandatory litt. Additional litt. Dig. Number of pages Number of pages upload Werner Nekes: Media Magica. Pp. 30-39 9 х Stefan Thermerson: The Urge to Create Visions. Pp 40-47 In: Jeffrey 7 х Shaw and Peter Weibel (eds.): The Cinematic Imaginary after Film. MIT Press 2003 Marshall McLuhan: Understanding Media: The Extensions of Man x Movies, Radio, Television p. 311-329

18

🕂 Topic 4 🖉

What is sculpture – what does sculptures want?

Lecture

In this lecture we will look into how "Sculpture" has developed since antiquity: we will look at significant stylistic developments from antiquity to the 20th century, and we will discuss the defining characteristics of "sculpture", and how these defining characteristics have changed especially during the 20th and 21st century.

Teachers

Line Marie Bruun Jespersen

Literature

	MandatoryAdditional		l
	litt.	litt.	Dig.
	Number o	f Number	upload
	pages	of pages	
Alex Potts: <i>The Sculptural Imagination: Figurative, Modernist, Minimalist</i> , Yale University Press, 2000, pp. 1-23 ("Introduction: The Sculptural Imagination and the Viewing of Sculpture").	23		x
Wilhelm Worringer: Abstraction and Emphaty	?		x
WJT Mitchell – What Sculpture Wants: Placing Antony Gormley, 1995	19		
http://www.antonygormley.com/resources/essay-item/id/105			
		1	
Literature Lecture 3 🖉		Edit 🗸	

+ 📔 Gormley link 🖉

🕂 Topic 5 🖉

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4 Sculpture: materials, form, composition

Lecture + group assignments/exercises

The lecture introduces various composition principles, construction principles, materials and surface properties in sculpture through historic examples.

Teachers

Line Marie Bruun Jespersen

Literature

Mandatory litt.	Additional litt.	Dig.
Number of pages	Number of pages	upload

Arnheim, Rudolf (1974). Art and Visual Perception. A Psychology of the	71	x
Creative Eye. pages 372-443 (Moodle)		
Rudolf Arnheim (1982) The Power of the center: a study of composition in the visual arts. Introduction pages vii-xii, Chapter 1 What is a Center? Pages 1-9, chapter 2 The Strongest Center and its Rivals pages 10-41 (moodle)	31	x
Moholy-Nagy: The New Bauhaus and Space Relationships. In: Potts, Nood, Hulks: Modern Sculpture Reader pp. 159-165	7	x
Potts, Wood, Hulks: Modern Sculpture Reader		
Herbert Read: Modern Sculpture – A Concise History. Thames and Hudson World of Art		
Cheryl Akner-Koler: Three-dimensional visual analysis p. 97-165		

💠 🙋 Cheryl Akner Koler: Three dimensional visual analysis 🖉

🕂 🚞 Literature Lecture 4 🖉

🕂 Topic 6 🖉

5

Movement in art. Kinetic sculpture

Lecture

History of Sculpture. The lecture focus on Kinetic Sculpture and dynamic art.

Teachers

Line Marie Bruun Jespersen

Literature

52

Mandatory litt.	Additional litt.	Dig.
Number of pages	Number of pages	upload

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Jean Lipman: Calder´s Universe. Running Press. 1989. pp.252-304		х	
"Mechanized Objects" and "Mobiles"			
Sculpture from Antiquity to Present Day: P. 1057-1113, p. 1136-1148	60+12		
MIT Museum: 5000 Moving		x	
Parts: http://web.mit.edu/museum/exhibitions/5000.html			

👌 Calder´s motorized sculptures 🖉

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🕂 Topic 7 🖉

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4

Object Trouvé and ready mades

Lecture + group discussions.

Lecture on the use of the found everyday object in art. Ready mades, object trouvés and collages all utilize everyday objects for aesthetic purposes, and transport these objects from one sphere into the shere of art and subsequently into the art institution.

[Art 1 only] Bring a found object that has sculptural value/qualities for the lecture. Group discussions based on your objects.

Teacher

Line Marie Bruun Jespersen

Literature

	Mandatory litt. Number of pages	Additional litt. Number of pages	Dig. upload
MOMA, Object Trouvé: http://www.moma.org/collection/theme.php? theme_id=10135	x		
MOMA, Marcel Duchamp and the ready made: http://www.moma.org/learn/moma_learning/themes/dada/marcel- duchamp-and-the-readymade	X		

+ Add an activity or resource

🕈 Topic 8 🖉

3

Visit at Kunsten: Sculpture analysis

Both semesters will visit Kunsten but at different times. Please pay attention fo messages on Moodle!

Study Trip/Excursion

The art collection at Kunsten focus on 20th century art. The Museum collects danish modernism, abstract expressionism and concrete art. The museum has a fine representation of Cobra, Dada, Fluxus, and art from late 20th century. In recent years Kunsten have paid special attention to bodily engaging installation art and art in public space/open space, exemplified by site-specific intallations in the cental hall of the museum, at various venues outside of the museum and a series of new aquisitions for the sculpture park.

ArT1: Assignments for will be distributed at Kunsten. Each group will be assigned an artwork for further investigation and analysis. The assignments and discussions will focus on the semester theme: Sculpture and Technology.

ArT3: Assignments for will be distributed at Kunsten. Each group will be assigned an artwork for further investigation and analysis. The assignments and discussions will focus on the semester theme: Dynamic Art and Technology.

The visits at Kunsten will focus on works from the permanent collection by Olafur Eliasson, Jeppe Hein, Thilo Frank, Robert Jacobsen, Sonja Ferlov Mancoba, Niki de Saint Phalle – and others.

Kunsten (Museum for modern art in Aalborg), Kong Kristians Alle

Remember to bring your student card and a letter of enrolment from STADS



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+ Add an activity or resource

🕂 Topic 9 🖉

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8

Session 8 will take place as two separate events - one for ArT1 and one for ArT3

ArT1: Student seminar: presentations of papers and peer-to-peer feedback

Workshop/Student seminar.

Students prepare a 5-7 min. presentation for the seminar, based on their paper assignment. The presentation must include texts/theories taught in the course. Students will present to each other in smaller groups and give peer-to-peer feedback, in order to support each other in improving the assignment before hand-in. After the Seminar students can write the feedback into their written paper.

Teachers

Line Marie Bruun Jespersen

Literature

	Mandatory litt. Number of pages	Additional litt. Number of pages	Dig. upload
Anne D´Aleva: Methods and Theories of Art History. Lawrence King Publishing. 2012 Pp. 5-16, 152-165	22		
Anne D´Aleva: Methods and Theories of Art History. Lawrence King Publishing. 2012		16-151	

ArT3: Poster + model presentation

Presentation seminar + group discussions

Students present their research on the assigned artists/"-isms" in the form of:

- a poster (requirements described in attached document)
- a model (requirements described in attached document)
- a short oral presentation

📄 ArT3 Assignment requirements 🖉

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🕂 Topic 10 🖉

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MODULE 8 - DYNAMIC ART AND TECHNOLOGY (M8, P) (ART_BA)

Module 8: Dynamic Art and Technology (Teknologi og dynamiske kunst) 🧷

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Location:

ArT3

Study Board:

Art & Technology

Module coordinator:

Markus Löchtefeld

Method of work and language:

Method of working: Group and project work.

English

Module contents:

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 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.

Courses:

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

- · Artistic and Academic Methodology III (Affective Design)
- · 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, artefacts, 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 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
- 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 artefacts and installations

Competencies in

- · describing and analyzing 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.

The module is completed with:

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.

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.

Video Submission:

On top of your Report you are required to submit a video that captures the experience of the artefact that you created in the Group Project. First of all the video should give an overview of the artefact resembles visiting the exhibition. For example if your artefact is to be worn by a visitor it should give a first person view of somebody wearing it. Secondly, you should add meaningful comments and interview excerpts of the audience that experienced the exhibition. The video is meant to give the external censor a real insight into how your artwork looked in the exhibition.

🛨 📮 Announcements 🖉	Edit 🗸 🚨
🕨 🏣 Link Collection 🖉	Edit 🗸 🚨
	+ Add an activity or resource
🗜 Important Documents 🖉	Edit
🕆 值 Introduction Slides ArT3 - Wearability 🧷	Edit 🗸
🔟 Sabine Seymour - Functional Aesthetics 🧪	Edit -
🗜 🔟 HCI Conference Overview 🧷	Edit -
	+ Add an activity or resource
🕨 Project Groups 🖉	Edit
	+ Add an activity or resour
Representatives for Semester Exhibition 🖉	Edit
PR and Planning:	
Space Allocation Group: Coordination of Spaces:	
Lab Responsibility:	
	+ Add an activity or resour
	Edit
🕨 Examination 🧷	Euli

Week 3: 22.-26.1.2018

🕂 Semester Group Meetings 🖉	Edit •
XX.9.2016 Semester group meeting 1, Monday, 12:00-13:00	
XX.11.2016 Semester group meeting 2, Monday 12:00-13:00	
XX.12.2016 Semester group meeting 3, Monday 13.30-14.30	
🕀 🚾 Meeting Notes Template 🧷	Edit -
	+ Add an activity or resource
XX.12.2016 Semester group meeting 3, Monday 13.30-14.30	Edit -

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DIGITAL REPRESENTATION II (RAPID PROTOTYPING) (M8, C) (ART_BA)

Digital Representation II

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.

📮 Announcements

Introduction to prototyping and rapid prototyping based on digital designs

Lecture/Workshop

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.

2D representations / Tools

Lecture/Workshop

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.

3D representations / Tools

Lecture/Workshop

Lecturer: Peter Skotte

How to rapidly make physical representations of digital 3D material. What is possible and what are the limits? Demonstration of methods available generally and at AAU.

Hands-On Workshop

Lecture/Workshop

Lecturer: Peter Skotte

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

Textile Cutting

Lecture/Workshop

Lecturer: Peter Skotte

Digital fabrication methods for designing and cutting textiles. Demonstration of new methods available at AAU

Topic 6			
Topic 7			
Topic 8			
Topic 9			

ARTISTIC AND ACADEMIC METHODOLOGY III (AFFECTIVE DESIGN) (M8, C) (ART_BA)

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.

Literature

	Pri. lit.	Sec. lit. no	Dig.
	no of p.	of p.	upload
Picard, R. W. (1997) Affective Computing, pp. 21 – 25. MIT Press			yes
Blandford, A., Furniss, D., & Makri, S. (2016). Qualitative HCI research: Going behind the scenes. <i>Synthesis Lectures on Human-Centered Informatics</i> , <i>9</i> (1), 1-115.	115		yes
Höök, K. (2012). Affective computing. <i>The Encyclopedia of Human-Computer Interaction /</i> [ed] Soegaard, Mads and Dam, Rikke Friis, Aarhus, Denmark: The Interaction Design Foundation , 2012			yes

📄 Announcements

Lecture 1: Introduction to Affective Computing

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.

Lecture 2+3: Questionnaire and Interview Design and Analysis

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.

Lecture 4+5+6: Video Analysis

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.

PROGRAMMING II (M8, C) (ART_BA)

Programming II

🛑 Announcements

General Information

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.

Literature

	Pri. lit.	Sec. lit. no	Dig.
	no of p.	of p.	upload
Programming Interactivity: A Designer's Guide to Processing, Arduino, and Openframeworks. " O'Reilly Media, Inc.", 2009.	30		yes
Reas, Casey, and Ben Fry. Processing: a programming handbook for visual designers and artists. Vol. 6812. Mit Press, 2007.			yes
"Objects" - Daniel Shiffman 2008 https://processing.org/tutorials/objects/			yes
Olsson, T., Gaetano, D., Odhner, J., & Wiklund, S. (2008). Open Softwear: Fashionable prototyping and wearable computing using the Arduino.	104		yes
Lecture Notes			yes

🔼 Lecture Notes - Programming I

Lecture Notes - Programming II

Lecutre 1: Programming Basics Recap

Review of basic programming constructs: variables, functions, arrays, loops, and control structures. Introduction to structures.

🔼 Homework aka Re-exam

Lecture 2+3: Object Oriented Programming

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



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

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.

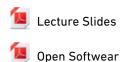
DrawingTest

Drawing with Array Lists

Lecture 6+7: Introduction to Sound

Lecture 8: Wearable Technologies

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.



MODULE 9 - PROGRAMMING INTERACTIVE SYSTEMS (M9, P) (ART_BA)

Module 9: Programming Interactive Systems (Programmering af interactive systemer)

Location: ArT3 Study Board: Art & Technology Module coordinator: Markus Löchtefeld Method of work and language: Individual or small groups. English

Module contents:

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.

Courses:

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

· Programming III

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.

The module is completed with:

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).

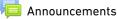
Number of pages: the written part must not exceed 5 pages.

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

In the evaluation of the examination performance, the grade 12 will only be awarded to students who demonstrate that they have fulfilled



Examination

Assessment:

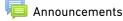
Assessment for the course is stipulated through its containing module. The examination is an oral, 12-point scale examination with an internal censor based on a student-chosen programming project. Students are free to choose the content of the program, but it must satisfy the following technical requirements: real-time sound and graphics outputs and at least two interactive inputs. During the examination, students are expected to explain in detail the source code of their program, any of the topics covered in lectures, and any of the fundamental programming topics covered in previous courses.

Hand-in date: TBD

Exam dates: TBD (List with groups and according times to follow)

PROGRAMMING III (M9, C) (ART_BA)

Programming III



🔋 News forum

General Information

See the Modules description for Exam details!

Literature

	Pri. lit.	Sec. lit.	Dig.
	no of p.	no of p.	upload
MacKenzie, I. Scott. <i>Human-computer interaction: An</i> empirical research perspective. Newnes, 2012.			yes
Reas, Casey, and Ben Fry. Processing: a programming handbook for visual designers and artists. Vol. 6812. Mit Press, 2007.	30		yes

📕 Lecture Notes Programming III

Lecture 1: Communication Protocols

Lecture

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

Markus Löchtefeld

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.

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

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

Lecture and Workshop

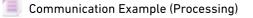
Workshop on sending data serially from a computer to an Arduino to control something physical as well as sending data serially from an Arduino to a computer. Using a sensor to control a graphical object.

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Lecture notes.



Communication Example (Arduino)



MultiDataProcessing

MultiDataArduino

Lecture 4+5: Shape Generation Workshop

Lecture and Workshop

Shape generation techniques for (artistic) 2D representation and visualization.

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Lecture notes.

Recursion Tree

Lecture 6: Timing & Drawing in Classes

🚽 Timing Example

MovingLine Example

Lecutre 7: Basic User Interface Design

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.



Lecture 8: Creating an Audiovisual Instrument

Workshop

Combining the presented topics in graphics, sound, and user input to create a real-time audiovisual instrument.

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MODULE 10 - ART AND TECHNOLOGY CONCEPT DESIGN (M10, P) (ART_BA)

📮 Announcements

Module 10 Art and Technology Concept Design

This page contains the study regulations for this module. The more detailed course description is to be found at the Concept Design course page. Only one course page is used, because the two courses (Concept and Method) are merged and given as one series of 8 lectures.

Credits: 5 ECTS

Method of working: Individual work in relation to course activities

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 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.

Courses

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 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.

CONCEPT DESIGN AND DIAGRAMS (M10, C) (ART_BA)

General

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.

菖 Announcements

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.

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.

Lecture 3: Designing and Developing Concepts: Creative Strategies

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

Lecture 4: Conceptual Mapping and Mindmapping

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

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.

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.

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?

Lecture 8: Presentations

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