Study Guide

Pierre Sauvageot and Lieux Publics & Cie, Cophenhagen 2011

Art & Technology

1st Semester 2013

Sculpture & Technology

ArT
Art & Technology

0. Welcome

Dear 1st semester students,

Welcome to your 1st ArT semester.

This, your first semester, will introduce to the main elements of ArT: artistic practice, technological skills and academic work. These three elements are of equal importance and will be present in all the projects made at ArT. This combination is what makes you a student of ArT.

Being a student at ArT is to approach different topics in a particular way different from other studies at the university – in a way that will become your ArT-profile.

As a student at ArT you will investigate through methods coming from artistic forms, and through practice and not only through theoretically approaches. At the same time you work within the frame of academia following the rules that characterize research and science traditions. You will, for example, produce objects and installations to investigate questions related to interventions in social contexts; or create interactive products or events inviting others to reflect and communicate. And what you produce will be things technologic informed and aesthetic formed.

Your first semester is about acquiring the foundation for working at ArT. The theme of the semester is *Sculpture & Technology* and your final assignment is to make an installation that invites people to communicate.

While introducing you to the three main elements of ArT – art, technology, and academia – the semester is also guided by four themes that will come up in discussions all through the different assignments: art/aesthetics, interpretation, construction and reflection.
Art/aesthetics, because you will relate yourself to art-projects and aesthetic debates;
interpretation, as your interventions and creations of interactivity must be placed in a context of people, places and situations;
construction, while your semester project is based on making;
reflection, placing you in the university with a critical and reflective practice.

The first semester is the start on a journey for the next three years. It is about learning what is in the curriculum of ArT, but it is also very much a personal journey you now take. It is very much about how to work – how to work as a student, how to work within the traditions of both art and academia, how to work in the way you wish to as the person you are. At ArT you do not travel alone. Though this is the beginning of a transformation of yourself it is also a place where we all work, share, and learn together.

I am looking forward to be one of your guides on this journey!

All the best,
Carsten Friberg

ArT
Art & Technology

Dear Students,

I hope you all had a wonderful summer! On behalf of all staff I wish to welcome both new and old students back to ArT and our rich programme for the fall of 2013. We are now in our 5th year of developing our curriculum and in the midst of a field of study where few paths are given, even less things can be taken for granted and nothing is written in stone. The fields of art as well as technology are dynamic, developing as well as unfolding in parallel to the overall developments in society and a world gone global. Not always knowing what's coming might be frustrating for some, but it is a perfect situation for the creative student that wants a combination of hands-on participation inside a reflective milieu. It is a situation calling for curiosity, innovative thinking and extraordinary projects. There are few, if anything not possible to do in art and the mind-blowing field of digital technologies has hardly started to develop. Think of social media. Or your smartphone. When ArT started these were just out there. Now they are a common part of our daily life. For the students that start: what will happen in the next three years? That we do not know, but what we do know is that your ArT studies will deal with these issues, preparing you for the unexpected. And for the fifth semester students with only one year left: entering your final year is a great opportunity to experiment and develop your personal take on ArT. That gives you a defining power. And it is a goal of the ArT studies to make you all active participants in the field. Do not be afraid of using the staff or questioning reality in this pursuit!

Even if ArT is an open study that unfolds as we go along, some things are still stable and relatively reliable. One thing that still grounds us is the fact that we are placed in the world inside a physical body. Hence we frame our perspectives on the world and understanding of it from within this corporal tool. And a tool it is. The American philosopher Richard Shusterman calls the body 'the tool of tools'. He is now one of our new Obel Guest Professor. Together with him you will see a strengthened focus on the body in relation to Art and Technology. After all ArT is a humanistic field of study where the human in general and your experience in particular is at our locus.

Mentioning tools, please use our common information channels on web, Moodle and Facebook. These represent important social glue in a hectic study situation.

If you have any questions, issues or challenges you would like to discuss, please do not hesitate to make contact with me. It is my duty as your studyleader to make sure we have the best studies ever.

Again, welcome to ArT. I look forward to our time together,

Ståle Stenslie

Studyleader and Obel Professor of ArT

1.	*Teachers and secretary*

	Name	E-mail
Coordinator	Carsten Friberg	friberg@hum.aau.dk
Secretary	Anne Nielsen	amn@hum.aau.dk 9940 9919
Module 1 “Sculpture & Technology”	Carsten Friberg Betty Li Meldgaard Jakob Borrits Sabra	friberg@hum.aau.dk betty@hum.aau.dk jbsa@create.aau.dk
Courses	Betty Li Meldgaard Dario Parigi Ole Verne Pihl Per Petri Hans Emil Gjerding Christian Liljedahl	betty@hum.aau.dk dp@civil.aau.dk op@create.aau.dk
Module 2 “Problem Based Learning”	Carsten Friberg	friberg@hum.aau.dk
Courses	Betty Li Meldgaard Tatiana Chemi Hans Emil Gjerding	betty@hum.aau.dk tc@learning.aau.dk
Module 3 “Physical Interface Design I”	Rasmus Krarup Madsen	rkm@create.aau.dk
Courses	Lars Knudsen Rasmus Krarup Madsen	knudsen@create.aau.dk rkm@create.aau.dk
Module 4 “History of Art & Technology I”	Line Marie Bruun Jespersen	lmbj@create.aau.dk
Courses	Line Marie Bruun Jespersen Falk Heinrich Jakob Sevel Vingbjerg, Lise Skytte Jakobsen,	rkm@create.aau.dk falk_h@hum.aau.dk

2. Module 1: Sculpture & Technology (15 ECTS)

Project period (from/to)	02.09.2013 – 20.12.2013
Work form:	Project work in groups
Date for submission and critique:	Submission: 20.12. 2013 Examination: 14.01.-17.01.2014
Secretary:	Anne Nielsen
Responsible Coordinator:	Carsten Friberg
Supervisors:	Carsten Friberg Betty Li Meldgaard Ståle Stenslie

Curriculum:

Module contents: In this module, students work with basic theories and practical methods in regard to the creation of sculptures and sculptural installations and the design of physical artefacts as an aesthetic manifestation. Using materiality as a point of departure, students work with basic principles of form, tactility, structure, composition and artistic expression. Students experiment with a variety of materials and basic technologies in connection with the design and creation of physical artefacts. Students work theoretically and experimentally with a variety of formal, static and dynamic principles, and contexts of use.
In connection with the workshops of the module, courses will be offered within the following areas:

- Materials - form, structure and composition
- Perception in Theory and Praxis I
- Artistic and Academic Methodology I (Creative Methods)
- Sketching Techniques I

Objectives:
The objective of module 1: “Sculpture and Technology” is to introduce the students to basic problem subjects and solutions in relation to the creation and construction of artefacts, products and installations of sculptural and aesthetic quality.
During this module, students should acquire
Basic **knowledge** about

- physical artefacts, sculptures and sculptural installations
- application of basic technology in connection with the production and use of artefacts
- aesthetic and artistic means of expression, interaction of form and technology and choice of materials
- methods and tools for the creation of a work from idea to completed artefact.

skills in

- identifying, formulating, and analysing an artistic problem within the theme “sculpture and technology” and developing alternative concepts for a selected problem
- describing and motivating choice of methods in connection with the production of sketches, models and prototypes of artefacts
- identifying, developing and describing artistic ideas and concepts, and the interaction between form and technology, choice of materials and aesthetic expression
- applying appropriate technologies and construction methods in connection with the production and use of artefacts

competencies in

- describing and analysing physical artefacts, sculptures and sculptural products
- producing conceptual suggestions of artefacts with artistic quality
- developing practical skills regarding aesthetics and artistic idioms
- describing the completed product in texts, diagrams, drawings, and models, and communicating this in a project report, portfolio, etc.

The module is completed with:
Examination 1
An internal combined written and oral examination in Module 1: “Sculpture and Technology”.
The examination will take the form of a conversation between the student, the examiner and another examiner on the basis of the project report or portfolio prepared by the student(s) as well as the product created by the student.
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: 25 minutes
Evaluation: Grading according to the 7-point scale.

NOTICE:

The project exam will also address other content from the project module courses.

Content 2013:

This module is the module of the semester project. It is made up of four courses (of 5 ECTS) and the project work itself with group work, exercises and supervision (of 10 ECTS).
The courses are:
Materials - form, structure and composition (2 ECTS)
Perception in Theory and Praxis I (1 ECTS)
Artistic and Academic Methodology I (Creative Methods) (1 ECTS)
Sketching Techniques I (1 ECTS)
In these courses you will meet various teachers introducing you to different fundamental components of ArT and of what leads to your semester project.
The semester also has three other moduels (Problem Based Learning, Physical Interface Design, and History of Art and Technology). They are independent modules, but you should see them all as components for you semester project.

You will also have two other courses:
Workshop Safety
Basic Soldering Course

The project of the semester will be to *make a sculpture/sculptural installation that invites to communication*.
What kind of communication, what form it takes, etc. is a decision of each group. It can have a large variety such as requiring more people to make it function, asking questions that need explicit answers and involves more participants, being incomprehensible or provocative and through that establishing a communication. Also, the form of communication can be verbal but also of other forms such as a series of actions that address another person who will respond.

The connection between the formulated problem in the report and the created artifact(s) needs to be tight and clear and demonstrate that relevant course content has been applied.
The sculpture/sculptural installation should be made from junk materials, i.e. anything from garbage to materials acquired from construction sites, waste from shops, abandoned from different activities etc. It must be materials that have been used (most likely for a very different purpose), and materials acquired in a legal way.
The sculpture/sculptural installation will be exhibited to a wider audience. It must demonstrate thoroughly carried out craftsman-like skills and have an appropriate implementation of relevant technology. This means that the sculpture/sculptural installation must combine solid materials with, for example, light and/or sound and be interactive. For the technological elements more specific information will be given in relation to the course Physical Interface Design.
Any material can be used, and any form of it – any reorganization, decomposition, breaking etc. of the material and the original form is allowed. The only restrain is for the material in use to be safe and clean i.e. without components and elements (chemicals, materials, etc.) of any danger to health.
The sculpture in itself most be portable and have a size relative to means of transportation and the passing through doors.
The artistic statement of the sculpture/sculptural installation will be worked out in the groups and the concept and problem formulation will be approved by the supervisors.

Exhibition dates will be 4-5 December.

Deliverables:

The module is concluded with the submission of a collectively written group report that documents the work performed by the student group.
The written report must demonstrate that the students have fulfilled the objectives outlined in the studyguide through the selected courses and workshops during the semester.
It should also include reflection related to the PBL-module. These do not have to be an independent section of the report but can be integrated into the report, for example in relation to a section on methods, but should be referred to explicitly. Similar with the different courses of the main module. They should form integrated parts of the report with explicit reference to the elements from the courses.
The size of the report mounts to max. 10 pages per student. A normal page contains 2400 characters, space incl.
The digital version of the report, project documentation (can be a small video documentation of the artefact or art installation at work, at the exhibition and the production process) is to be burned on a CD/DVD and must be attatched in the printed version of the report.
Each group hand in 2 printed copies of the group report to the semester secretary and upload 1 digital version
The groups must follow the directions from the studyboard given throughout the semester.

The report should explain the background of the installation and document the concept designs, work process, and technologies involved in developing the installation. The design of the final artifact must also be documented. The report should clearly locate the piece in relevant contexts such as social, historical and technological.
The report must reflect all the elements of the module (Materials - form, structure and composition, Perception in Theory and Praxis, Artistic and Academic Methodology, and Sketching Techniques) as well as also the Problem Based Learning course. It should reflect this by explicit referring to these courses where relevant.

The report should contain (but not necessarily following each step completely or in the same order as below):

1. Introduction. What is it about and outline of what follows.
2. Motivation and context. An elaboration on the project: What questions does it answer? What is the topic for investigation? Why is it of interest beyond your own interest? What is the contribution? And what is the context (the project seen in the context of e.g. art history/theory, social theory, etc.)?
3. How will the work/investigation be done? Presentation of methods.
4. Concept: the analytical findings form the basis for the concept development (concretization of the artistic idea).
5. Analysis: an investigation of relevant theoretical, social and physical contexts, and technological possibilities and challenges.
6. Design: concrete design possibilities and solutions including an argumentation for the artistic and designerly choices made.
7. Implementation: a description of the implementation process (virtual models, the prototype, the final artefact) with emphasis on creative challenges during the implementation process.
8. Discussion of the results and methods used in form of a contextualisation
9. Conclusion: the answer to your problem formulation.
10. References. Literature and web links. An international standard must be used.
11. Appendix: additional documentation such as figures, statistics, texts, etc. that supports the main text.
12. Summary: 1-2 pages that sums up the project.

2.1	*Courses*

Perception in Theory and Praxis I	1 ECTS
Secretary:	Anne Nielsen
Responsible Coordinator:	Betty Li Meldgaard
Lecturers:	Betty Li Meldgaard
Purpose and goals:	The course will be a combination of lectures, assignment, and evaluation. **Purpose and goals:** The purpose of the course is to create an awareness of perception, materials and the relation between perception, materials, art and design. It will also involve a practical insight to the processing and transformation of materials as well as a vocabulary with which to describe both perceptual experience and the look and feel of the materiality of objects. The course has a practical aim in relation to integrating the content into the semester project and therefore relates to the semester theme. **Content:** The course will evolve around basic concepts of perception in relation to the look and feel of things. This will involve an introduction to various aspects of perception from a theoretical viewpoint and an introduction to materials and how to talk about and work with materials. An assignment - *Environmental Investigation* - will be handed out.
Assessment:	Running evaluation and assessment during and at the end of the course, through the course assignments and at the exam of the project report 'Sculpture and Technology'.

Title 1 + 2:	**Perception and materials – Introduction and lecture + assignment**
Lecturer:	Betty Li Meldgaard
Content:	Lecture, assignment and evalutation over 2 days. The functional relation between perception and materials in relation to visual end tactile perception. How does things look and feel? The lecture will provide the students with an extensive vocabulary to support choices of materials and objects for the assignment.
Assignments:	Assignment – *Environmental Investigation* – will be handed out in relation to the course.
Literature:	References will be provided in relation to the course. No reading requirements

Title 3 + 4:	**Perceptual theories**
Lecturer:	Betty Li Meldgaard
Content:	The goal of the course is to deepen the understanding of the history and science behind theories of perception. The workshop is a full day workshop with 2 lectures
Assignments:	Assignments will be given during the lecture.
Literature:	References will be provided in relation to the course. No reading requirements

Artistic and Academic Methodology I (Creative Methods)	1 ECTS
Secretary:	Anne Nielsen
Responsible Coordinator:	Carsten Friberg
Lecturers:	Christian Liljedahl Hans Emil Gjerding
Purpose and goals:	This course is about introducing to forms of creative work and reflection. It will provide the students with tools for generating ideas and developing a reflecting and documenting practice of working.
Assessment:	Running evaluation and assessment during and at the end of the course, through the lecture assignments and the project module *Sculpture & Technology*.

Title 1:	**Creative Methods I+II**
Lecturer:	Christian Liljedahl
Content:	The purpose of these two lectures is to educate the students with an hands on pratical intuitive problem solving artistic approach in collaboration with a hands-on artist that works with creative solutions and methods. His workshops are always energetic, constructive and innovative. The lecture will introduce how to work with brainstorm in praxis, how to select the immidiate ideas, judge and assess them and focus on the ones that will contribute to the initial goal be that a purpose, a message, an object.
Assignments:	Assignments will be given throughout the lecture.
Literature:	TBA

Title 2:	**Creative Methods I+II**
Lecturer:	Christian Liljedahl
Content:	See above
Assignments:	Assignments will be given throughout the lecture.
Literature:	TBA

Title 3:	**Creative and Reflective Methods I+II**
Lecturer:	Hans Emil Gjerding
Content:	Introduction to different creative methods with a reflecting component.
Assignments:	Assignments will be given throughout the lecture.
Literature:	TBA

Title 4:	**Creative and Reflective Methods I+II**
Lecturer:	Hans Emil Gjerding
Content:	Introduction to different creative methods with a reflecting component.
Assignments:	Assignments will be given throughout the lecture.
Literature:	TBA

Sketching Techniques I	1 ECTS
Secretary:	Anne Nielsen
Responsible Coordinator:	Carsten Friberg
Lecturers:	Ole Verner Pihl Per Petri
Purpose and goals:	Through various drawing and sketching exercises the course will teach how to understand and draw different artefacts. By approaching sculptural drawing, projection drawing and free sketching the students will be guided through different tools and techniques that will help in the visualization of his/her ideas in different forms. The student must bring a sketchbook of minimum A4 size and a set of pencils and pens.
Assessment:	Running evaluation through the assignments and in the final report.

Title 1:	**Drawing I**
Lecturer:	Ole Verner Pihl
Content:	Introduction to free hand sketching,the difference between the impressionistic and expressionist approach and artistic expressions using pen, pencil and paper. You need to bring a self-portrait, A4 in colour, pencil colours and crayons.
Assignments:	Assignments through sketching objects.
Literature:	Ole Pihl & Andrew Armitage *The Dialogical Imagination. A phenomenological study of: Space, meaning and identity* Aalborg University Press 2011; ch. 4, pp. 64-95 & ch. 6, pp. 126-177.

Title 2:	**Drawing II**
Lecturer:	Ole Verner Pihl
Content:	Drawing perspective.and learnin how to construct perspective points and using horizontal lines in free hand.
Assignments:	Assignments through sketching objects.
Literature:	See above

Title 3:	**Working through drawing I**
Lecturer:	Per Petri
Content:	The students will be introduced to various forms of expressing ideas through the pen. The course is about using means at hand for visualising and communicating and through exercises and demonstrations to get an idea of the drawing tool as also a tool for thinking, sharing ideas and investigating things.
Assignments:	Assignments through sketching objects
Literature:	TBA

Title 4:	**Working through drawing II**
Lecturer:	Per Petri
Content:	See above
Assignments:	Assignments through sketching objects
Literature:	TBA

Materials - form, structure and composition	2 ECTS
Secretary:	Anne Nielsen
Responsible Coordinator:	Dario Parigi
Lecturers:	Dario Parigi
Purpose and goals:	The students will be introduced to a tectonic understanding of structures and materials with the aim of providing the framework to analyse and design spatial structures with sculptural qualities. The course will provide an insight, with both theoretical and hands-on approach, on how physical principles and material properties affect, directly or not, the work of sculptors. Sculptures has almost never a purely structural intent; however sculptures need to be shaped in certain ways in order to exist as physical objects, and structural and material limitations could be understood as opportunities for the artistic expression. Fundmental concepts of force, moments and equilibrium, stability are necessary to describe the behaviour of a sculpture under its own self weight and subjected to external forces. Simple operations and intuitive graphic methods will be used throughout the course to design and verify statically and kinematically sound sculptural structures. Material properties and crafting techinques have a direct impact on the way the sculptor can work with the material and what forms can be made with it. The lectures will present the mechanical and physcal properties of wood, concrete rubber and metal, followed by practical exercises in order to experience the physical qualities of materials. The aim of is to enable students the ability to discuss and describe different aspects of choices regarding materials and their final expressive manifestation. The concepts presented during the course will be supported by several examples of realized sculptures, both contemporary and from the past. Before each lecture students will be asked to bring tools and materials in order to complete the given assignments.
Assessment:	Running evaluation and assessment during and at the end of the course, through the lecture assignments and the project module *Sculpture & Technology*.

Title 1:	**Basic Principles of Equilibrium**
Lecturer:	Dario Parigi
Content:	Introduction to the concepts of forces, moments and equilibrium through the use of simple operations and graphic force diagrams. Practical example and exercises will be provided for the application of such concepts in the context of sculpture. Lecture with exercise: students will be called to create a “mobile”, a type of kinetic sculpture that takes advantage of the principle of equilibrium.
Assignments:	Assignments will be given during the lecture.
Literature:	Daniel L. Schodek, *Structure in Sculpture* 1993, pp. 40-46.

Title 2:	**Balance and Stability - part 1**

Lecturer:	Dario Parigi
Content:	The concepts introduced in the first lecture will be applied in the determination of the stability of a structure with both single and multiple supports, either under its own self weight and when subjected to external loads. Lecture with exercise.
Assignments:	Assignments will be given during the lecture.
Literature:	Daniel L. Schodek, *Structure in Sculpture* 1993, pp. 46-85.

Title 3:	**Balance and Stability - part 2**
Lecturer:	Dario Parigi
Content:	An intuitive graphic method will be introduced for the determination of the center of mass of a three dimensional sculpture. Lecture with exercise.
Assignments:	Assignments will be given during the lecture.
Literature:	Daniel L. Schodek, *Structure in Sculpture* 1993, pp. 46-85.

Title 4:	**Balance and Movement: Kinetic Sculptures**
Lecturer:	Dario Parigi
Content:	Students will be introduced to the kinetic potential of sculpture through an overview of the constraints and mechanisms that can be combined and assembled in order to achieve an artistic expression. Lecture with exercise.
Assignments:	Assignments will be given during the lecture.
Literature:	Daniel L. Schodek, *Structure in Sculpture* 1993, pp. 86-93.

Title 5:	**Shapes and Stresses in Structural Systems**
Lecturer:	Dario Parigi
Content:	Analysis of stresses developing in elements of different structural systems: tension, compression, and bending. Lecture with exercise.
Assignments:	Assignments will be given during the lecture.
Literature:	Deplazes, A., *Constructing Architecture: Materials, Processes, Structures* 2005, pp. 113-138. Rowland J. Mainstone, *Deveopments in structural form* 1998, pp. 53-54. Daniel L. Schodek, *Structure in Sculpture* 1993, pp. 94-190.

Title 6:	**Introduction to Materials: Metal**
Lecturer:	Dario Parigi
Content:	Mechanical and physical properties, aesthetic qualities, sustainability. Crafting tools and techniques. Construction details.
Assignments:	Assignments will be given during the lecture.
Literature:	Deplazes, A., *Constructing Architecture: Materials, Processes, Structures* 2005, pp. 77-112. Rowland J. Mainstone, *Deveopments in structural form* 1998, pp. 55-57. Daniel L. Schodek, *Structure in Sculpture* 1993, pp. 242-253.

Title 7:	**Introduction to Materials: Wood**
Lecturer:	Dario Parigi
Content:	Mechanical and physical properties, aesthetic qualities, sustainability. Crafting

	tools and techniques. Construction details.
Assignments:	Assignments will be given during the lecture.
Literature:	Deplazes, A., *Constructing Architecture: Materials, Processes, Structures* 2005, pp. 56-76. Rowland J. Mainstone, *Developments in structural form* 1998, pp. 53-54. Daniel L. Schodek, *Structure in Sculpture* 1993, p. 253.

Title 8:	**Introduction to Materials: Concrete and Rubber**
Lecturer:	Dario Parigi
Content:	Mechanical and physical properties, aesthetic qualities, sustainability. Crafting tools and techniques. Construction details.
Assignments:	Assignments will be given during the lecture.
Literature:	Deplazes, A., *Constructing Architecture: Materials, Processes, Structures* 2005, pp. 56-76, Daniel L. Schodek, *Structure in Sculpture* 1993, pp. 260-265.

3. Module 2: Problem Based Learning (5 ECTS)

Project period (from/to)	03.09.2013 – 20.12.2013
Work form:	Group and project work; lectures and assignments.
Date for submission and critique:	Submission: P0-assignment 27.09. 2013
Secretary:	Anne Nielsen
Responsible Coordinator:	Carsten Friberg
Supervisors:	Carsten Friberg Betty Li Meldgaard

Curriculum:

Credits: 5 ECTS
Module contents: This module consists of an introduction to problem-(and play) based learning and project work, including statement of problem, academic writing, information retrieval and processing, supervision and group work.
Objectives:
During this module, students should acquire:
basic **knowledge** about

- problem-based learning
- play-based learning
- choice of methods

skills in

- identifying and formulating a problem within the areas art and experience technology
- describing and validating choice of methods for solving a defined problem
- collecting and applying relevant knowledge and theories in relation to a defined problem

Competencies in

- structuring and reflecting on a problem- and/or paly-based project processes
- participating in professional co-operation to solve a defined problem

The module is arranged as a series of lectures and workshops held in parallel with the project work of the semester.
The module is completed with:

Examination 2
An internal oral examination in “Problem Based Learning”. The course is evaluated through the report and/or portfolio of the main project. It forms thus part of the examination of module 1, where inquiries into PBL methods will take place. 12

Evaluation: pass/fail.
Credits: 5 ECTS
In the event of re-examination, the examination will take the form of a conversation between the examiner, the external examiner, and the student on the basis of the project/pilot project of the semester. The duration of the examination is 20 minutes.
The examination should demonstrate that the student has fulfilled the objectives outlined above.

Content 2013:

Problem Based Learning (PBL), at ArT also sometimes called Problem and Play Based Learning (PpBL) is an introduction to basic work forms within academia in general, especially at AAU and in particular at ArT.
Academia gives an overall frame for how to to work, a set of rules to follow and practices leading towards a society of research and science. The complete study at the university is about this and PBL is the very beginning. At AAU PBL is a special approach concerning the application of academic knowledge and methods to specific problems as well as prioritising working in groups. ArT adds to this working through artistic interventions, installations, and invitations; ArT is also about working through play and a reflective practice.
During the module different components will be introduced like group work and its dynamics as well as rules and forms of documenting your work.
Apart from lectures there will also be workshops focusing on formalities in academic writing – what we can call academic skills such as structure, argumentation, references, and quotations. These are rules to learn for the academic work, and rules indispensable in your study.
A workshop will partly be based on evaluating the reports made after Parking Day to discuss the skills of report making. Partly it will contextualize the idea of working academic at ArT in relation to the global community of academic tradition and workforms

Learning is through practice and in relation to the course a report – named P0 – is produced. This will be your first report based on the making of an installation for the international event Parking Day. The report is your first exercise in documenting and reflecting on a specific work within the frame of academia, i.e. to follow the »rules of the game« called academic work (research and scientific work).
In the report you should briefly give account of: What you have chosen to do; why you made these choices; how you found material for inspiration; what context you relate yourself to; how your process went; and your critical evaluation of it.
The P0 is meant to give an idea of the elements of ArT and the form of working with the academic obligations of the study.
Each group produce a report. It should contain 5-7 pages text (following the norms in the Study Program) + pictures. It will be handed in digitally, thus it can contains links to further digital material.
This assignment is obligatory and should be seen as a (self-)evaluation of the study and how you relate yourself to it.

3.1 Courses

Problem Based Learning	2 ECTS
Secretary:	Anne Nielsen
Responsible Coordinator:	Carsten Friberg
Lecturers:	Betty Li Meldgaard Carsten Friberg Tatiana Chemi Hans Emil Gjerding
Purpose and goals:	The purpose of the PBL module is to introduce students to group work, report writing, and academic practices. The module will have different elements all meant to constitute the foundation for working academic within the frame of being problem based projects and group work. The purpose of the module is to establish an academic practice based on reflection, documentation and argumentation. Academic practice includes several skills such as the reading and using of academic texts and academic writing with its structure, form and rules for contextualization and references. A purpose is to receive the invitation of becoming participant in a global, academic society and to perform well without fraud and plagiarism.
Assessment:	Evaluation through assignments and the semester report. In the semester report an explicit reference to elements of the PBL module, possible (but not necessarily) a reference to the format of your work – your relation to academic skills, the (group-) working process and its impact on the process.

Title 1:	**Parking Day**
Lecturer:	Betty Li Meldgaard
Content:	"PARK(ing) Day is an annual, worldwide event that invites citizens everywhere to transform metered parking spots into temporary parks for the public good." Parkingday.org The event will take place on Friday the 20 September around the city of Aalborg, where groups will set up gardens on paid for parking lots. The lecture introduces to the process of choosing an area and how to approach the process.
Assignments:	Develop a concept of a park/garden for one to more parking spaces that involves the concept of a car. This can be a real-size car, a toy car, cardboard car, or even some conceptual idea of a car. The assignment does not involve technology, but may have some electronic additions like sound. The materials can be scrap, your plants at home, green carpets, cardboard flowers and windmills, branches, leafs, knitted grass, astro-turf, or something similar. The purpose is to give the citizens of Aalborg a new and positive experience of something very familiar in a new context.
Literature:	TBA

Title 2:	**Group work and its dynamics I**

Lecturer:	Tatiana Chemi

Content:	Topics:
	• Introduction to PBL
	• Non-verbal communication
	• Group dynamics
	• Tools for the positive group work
	  ○ Contract
	  ○ Feedback
	  ○ Active listening
	  ○ Appreciative dialogue
	  ○ Decision-making process
	• Individual learning style and role in groups
	• Problem finding in groups
	
	NB: this course is based on the active participation of students. It is not expected any previous reading or preparation, but the openness to hands-on experiences and acquisition of tools.

Assignments:	Active participation
Literature:	Anette Kolmos, Flemming K. Fink and Lone Krogh, "The Aalborg Model-Problem-based and project-organized, in *The Aalborg PBL: Progress, Diversity and Challenges*, Aalborg University Press, pp. 9-18 Hans Kiib, ”PPBL in Architecture and Design", in *The Aalborg PBL: Progress, Diversity and Challenges*, Aalborg University Press, pp. 197-209

Title 3:	**Group work and its dynamics II**
Lecturer:	Tatiana Chemi
Content:	See above
Assignments:	Active participation
Literature:	See above

Title 4:	**Visual Notes – Alfabets and Facilitation I**
Lecturer:	Hans Emil Gjerding
Content:	An introduction to the use of visual notes as a tool for communicating within a group. Visual notes is for having a visual language for immediate sketching and explaining ideas, discussing them with a pen and develop mutual ideas.
Assignments:	Assignments will be given throughout the lecture.
Literature:	TBA

Title 5:	**Visual Notes – Alfabets and Facilitation II**
Lecturer:	Hans Emil Gjerding
Content:	See above.
Assignments:	Assignments will be given throughout the lecture.
Literature:	TBA

Title 6:	**Introduction to PBL I**
Lecturer:	Tatiana Chemi
Content:	A purpose with this lecture is to help the students improving their learning and understanding of one’s own role in the process of learning and the interaction

	between forms of teaching and work with learning. Students at the university are expected to be skilled learners, i.e. to be used to learn. The lecture offers to enhance the consciousness of the process of learning – to describe and understand what happens when one learns and how one learns. Often, learning is taken to be taught, and teaching is one among many ways of learning. **Content** Focus is on three exercises you work with individually: 1) How do I learn best (style of learning)? 2) What do I wish to learn (purpose of learning)? 3) What activities are necessary to achieve these goals (effort of stuying)? The lecture offers an introduction to PBL- method in both individual and mutual perspective of learning.
Assignments:	Assignments will be given throughout the lecture.
Literature:	Anette Kolmos, Flemming K. Fink and Lone Krogh, "The Aalborg Model-Problem-based and project-organized, in *The Aalborg PBL: Progress, Diversity and Challenges*, Aalborg University Press, pp. 9-18 Hans Kiib, ”PPBL in Architecture and Design", in *The Aalborg PBL: Progress, Diversity and Challenges*, Aalborg University Press, pp. 197-209

Title 7:	**Introduction to PBL II**
Lecturer:	Tatiana Chemi
Content:	See above.
Assignments:	Assignments will be given throughout the lecture.
Literature:	See above

Title 8:	**Project Documentation and Representation: Photoshop and Indesign**
Lecturer:	Betty Li Meldgaard
Content:	The Photoshop/InDesign course has the purpose of introducing to the use of the programs, touch on layout styles and through a hands-on approach, get the students to work with image and text composition. It will be announced on Moodle in due time, how and where to download trail-versions of the programs.
Assignments:	Active participation
Literature:	TBA

4. Module 3: Physical Interface Design (5 ECTS)

Project period (from/to)	19.09.2013 – 20.12.2013
Work form:	Individual or small groups
Date for submission and critique:	10.01.2014 (assignment given 03.01.2014
Secretary:	Anne Nielsen
Responsible Coordinator:	Rasmus Krarup Madsen

Course content from the study plan:

Objectives:
"Physical interface Design I" is a module where students learn about basic principles of electronics and how different electronic sensors and actuators can be interfaced to a microcontroller to design alternative forms of interactions between man and machines.

Courses
The following courses may be offered in this module:

- Basic Electronics
- Sensors and Actuators I

During this module students should acquire:
Basic **knowledge** in

- basic electronics: capacitors, diodes, and transistors
- sensing possibilities: binary (buttons) and continuous (analog) sensors
- related work in sensors technology and the media arts

Skills in

- applying knowledge to the development of a physical interface artefact used in conjunction with specific sensors and actuators - and demonstrate its use (application)
- analysing use of the artefact
- synthesizing knowledge in written documentation

Competencies in

- evaluating an artefact with regards to basic electronics, sensors, and actuators

The module is completed with:
Examination 3
An internal written examination in **Module 3: "Physical Interface Design I"**
Form of examination: a)
The examination is a 7-day assignment on a set subject.
Number of pages: the written part must not exceed 5 pages.
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.
Credits: 5 ECTS
The examination should demonstrate that the student has fulfilled the objectives outlined above.

Content 2013:

The module will be based on the two course Basic Electronics (BE) and Sensor and Actuators (S&A1). The BE course is going to provide a theoretical and practical basis of knowledge. The S&A1 course will focus on exploration of the use of electronics in the context of art and technology, mainly by having students create mini projects. The projects will be discussed in plenum learn from each other's projects and to exercise analysing electronic artefacts.
This module will not cover using microcontrollers, but focus on basic electronics.
The module won't offer active participation, to pass it a 7-day written assignment on a set subject, not exceeding 5 pages, must be passed, as prescribed in the study plan.

4.1	Courses

Basic Electronics	**1 ECTS**

Secretary:	Anne Nielsen
Responsible Coordinator:	Rasmus Krarup Madsen
Lecturers	Rasmus Krarup Madsen
Purpose and goals	The world of electronics is an essential gateway to the creation of many interesting projects. This course will cover some of the general concepts regarding working with electronics, with the goals of providing course participants with • Understanding of and ability to work safely with basic electronics • Ability to do basic calculations on resistor/diode circuits • Ability to design, simulate and build basic circuits The content of the course is developed for entry-level participants with little or no experience with electronics. The course will cover theoretical concepts (such as electronic units and ohms law) as well as practical concepts. Each lecture covers a set of skills which will be put into use at assignments both during and after each lecture.
Assessment	See module description

Title 1:	**Introduction to Basic Electronics**
Lecturer:	Rasmus K Madsen
Content:	Electronic units, Ohm's law, Resistors, Diodes, Switches. Measurement and Safety
Assignments:	Calculations of simple circuits
Literature:	All About Circuits http://www.allaboutcircuits.com/vol_1/index.html Vol1 - Chapter 1, 2, 3 and 4 Optional - Make: Electronics (ISBN-10: 0596153740 | ISBN-13: 978-0596153748)

Title 2:	**Plethora of Resistors**
Lecturer:	Rasmus K Madsen
Content:	Resistor networks, KVL / KCL, Breadboard and Multimeter
Assignments:	Calculate different circuits containing resistor networks, build them and measure them
Literature:	All About Circuits http://www.allaboutcircuits.com/vol_1/index.html Vol1 - Chapter 5, 6 and 7 Optional - Make: Electronics

Title 3:	**Schematics and Simulations**
Lecturer:	Rasmus K Madsen
Content:	Schematics, Spice Simulation
Assignments:	Exercises with schematics, Simulations and testing them in real life

Literature:	http://cds.linear.com/docs/en/ltspice/LTspiceGettingStartedGuide.pdf & http://denethor.wlu.ca/ltspice/

Title 4:	**From Idea to Circuit**
Lecturer:	Rasmus K Madsen
Content:	Systematic approach to designing and building circuits and Soldering
Assignments:	Design and build your own circuit
Litterature:	Optional - Make: Electronics

Sensors and actuators 1	1 ECTS
Secretary:	Anne Nielsen
Responsible Coordinator:	Rasmus Krarup Madsen
Lecturers:	Lars Knudsen
Purpose and goals:	This course aims to apply the theoretical knowledge on practical experiences. The course centres around student presentations, which form discussion based on the curriculum. Each lecture is planned to have time set aside for working on the assignment for next lecture.
Assessment:	See module description

Title 1:	**Augmenting artworks with electronics**
Lecturer:	Rasmus Krarup Madsen
Content:	Using electronics as physical interactive devices in artworks
Assignments:	Augment an object with electronic actuators and document it
Literature:	TBA

Title 2:	**Alternative power sources**
Lecturer:	Rasmus Krarup Madsen
Content:	Present and discuss augmented objects Alternative options to powering projects with an outlet
Assignments:	TBA
Literature:	

Title 3:	**Using electronics in semester projects**
Lecturer:	Rasmus Krarup Madsen
Content:	Present and discuss cordless electronic objects
Assignments:	Make a suggestion for using electronics in your semester project
Literature:	TBA

Title 4:	**Summary of module**
Lecturer:	Rasmus Krarup Madsen
Content:	Present and discuss how you could apply electronics in your semester projects, and the benefits and drawbacks of doing so Summary topics taught in the module and perspectives on the broader world of electronics and interactive physical artworks
Assignments:	
Literature:	TBA

5. Module 4: History of Art and Technology 1 (5 ECTS)

Project period (from/to)	16.09. – 20.12.2013
Work form:	Individual work in relation to course activities
Date for submission and critique:	Examination: Writing week: 20.01.2014 - 27.01.2014.
Secretary:	Anne Nielsen
Responsible Coordinator:	Line Marie Bruun Jespersen
Supervisors:	Line Marie Bruun Jespersen

Curriculum:

Module contents: The module is an introduction of the students to the history of Art & Technology with special emphasis on object, body and technology and on the theories and techniques, which have been or are currently prevailing in the areas of art experience and aesthetics. Using the teaching forms of lectures, workshops and seminars, the unit will introduce problems regarding description and analysis, including the science of formalization.
In connection with the module, courses may be offered within the following area:

- History of Art and Technology I

Objectives:
During this module, students should acquire:
Basic **knowledge** in

- the history of Art & Technology including selected art periods
- aesthetic theories within the areas of materiality, body and technology
- central works of selected art periods and genres

skills in

- analysing works of art within selected 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 and technology as a framework for reflection and inspiration in relation to their own works.

The module is completed with:

Examination 4
An internal written examination in **Module 4 "History of Art and Technology I".**
Form of examination: c)
The examination is a 7-day assignment on a set subject. One examiner evaluates the assignment.
Number of pages: the written work must not exceed 12 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
The examination should demonstrate that the student has fulfilled the objectives outlined above.

Content 2013:

The module is a series of lectures focusing on differents aspects of art history, specifically related to the field of art and technology. The themes presented in the course will serve as a base for further studies. The module have a strong emphasis on active student participation to the course will have elements of both lectures, discussions, smaller assignments and esercises. A lot of the exercises will take departure in art exhibited in Kunsten, Kong Christians Alle 5, 9000 Aalborg. Kunsten is the local art museum in Aalborg and we will make the most out of their collections and exhibitions this semester.

5.1	Courses

History of Art and Technology 1	2 ECTS
Secretary:	Anne Nielsen
Responsible Coordinator:	Assistant professor Line Marie Bruun Jespersen, AD:MT
Lecturers:	Line Marie Bruun Jespersen, Jakob Sevel Vingbjerg, Lise Skytte Jakobsen, Falk Heinrich
Purpose and goals:	See the curriculum description above
Assessment:	

Title 1:	**Introduction to the course content and to History of Art and Technology; central historic examples**
Lecturer:	Line Marie Bruun Jespersen
Content:	Introduction to the module Introduction to assignment in art history. Lecture focusing on central examples of the fruitful meetings and conflicts between art and technology from art history and history of technology.
Assignments:	Group work and discussions on central examples handed out during the lecture
Literature:	Required reading: Stephen Farthing: *Art. The whole Story*. Thames and Hudson. 2012 -or similar introduction to the history of art

Title 2:	**History of Art and Technology; central historic examples**
Lecturer:	Line Marie Bruun Jespersen
Content:	Lecture focusing on central examples of the fruitful meetings and conflicts between art and technology from art history and history of technology.
Assignments:	Group work and discussions on central examples handed out during the lecture
Literature:	Required reading: Stephen Farthing: *Art. The whole Story*. Thames and Hudson. 2012 -or similar introduction to the history of art Lars Botin: *A Hybrid Imagination*.

Title 3:	**Media Archeology and Art History**
Lecturer:	Line Marie Bruun Jespersen
Content:	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. Different “viewing machines” and inventions towards the moving image.
Assignments:	Students will present experiments based on different “Media Magica” and relate them to art history.
Literature:	Marshall McLuhan “Movies” in: *Understanding Media. The Extensions of Man*. London/New Yourk; Routlege 1964/2006, pp. 310-323. Werner Nekes: “Media Magica” & Stefan Thermerson: “The Urge to Create

	Visions". In: Jeffrey Shaw and Peter Weibel (eds.): *The Cinematic Imaginary after Film*. MIT Press 2003, pp. 30-39 & 40-47.

Title 4:	**Sculpture**
Lecturer:	Lise Skytte Jakobsen, Post.Doc AU
Content:	What is a sculpture? Taking departure in Lise Skytte Jakobsens own research in sculpture, she will lecture on topics such as: -What is a sculpture? And how does looking at sculptures and analyzing them differs from our interaction with others objects in our everyday life? The lecture offers a brief overview of the history of sculpture and how we can analyze them, by addressing different themes, such as 'sculpture and colour', 'the organizing prinziples of sculpture' and 'sculpture and photography'.
Assignments:	The lecture will include an assignment in sculpture analysis. Each student must in advance take a photography of a threedimensional work of art and bring one or more printed versions of the image to the lecture. Find out: who is the artist, what is the title, what is the material, when was it made? Feel free to use an absolutely 'expanded' notion of the concept of sculpture when you make your choice (objects, installation art, monuments, church art, street art ect.)
Literature:	Alex Potts: *The Sculptural Imagination: Figurative, Modernist, Minimalist*, Yale University Press, 2000, pp. 1-23 ("Introduction: The Sculptural Imagination and the Viewing of Sculpture"). - Gives a good introduction to some of the basic elements in the history of sculpture theory. Might be a bit hard to read, but try to make google image search on the artists he mentions to get an overall idea of the art works he examines and notice how the difference between sculpture as a medium and painting a as medium has traditionally been described. Michael Fried: "Art and Objecthood" (1967), in *Art and Objecthood: Essays and Reviews*, Chicago and London, 1998. - Also a seminal text in the history of art (and theater). With his critical view on Minimalist sculpture from the 1960s Michael Fried actually succeds in describing the importance of the beholder (and the movement of the beholder's body, not the least) when analyzing modern art. And this point is relevant for many kinds of aesthetic experience and for art from older periods of time, also. Roxana Marcoci (ed.): *The Original Copy: Photography of Sculpture, 1839 to Today*, The Museum of Modern Art, New York, 2010. - Fine, new exhibition catalogue examining the relation between photography and sculpture. A lot of images and some nice essays. Roberta Panzanelli (ed.): *The Color of Life: Polychromy in Sculpture from Antiquity to the Present*, The J. Paul Getty Museum and The Getty Research Institute, Los Angeles, 2008.

	- One of several new books/exhibition catalogues on how to understand the color of sculpture. Fine images and good introductions. Jon Wood, David Hulks & Alex Potts (ed.): *Modern Sculpture Reader*, Henry Moore Institute, 2007. - A collection of major texts that have defined sculpture's radically changing status and function since the end of the nineteenth century (including Rosalind Krauss, "Sculpture in The Expanded Field"). All texts with introductions. Alex Potts has written an introduction discussing the relevance of sculpture as a medium in contemporary art.

Title 5:	**Sculpture and other objects in the world of art**
Lecturer:	Line Marie Bruun Jespersen
Content:	Form, composition, materiality The lecture discusses the relationship between form and structure and is primarily based on the ideas Christopher Alexander and Michal Baxandall, who represents different views on the importance of form and structure and the importance and impact on thinking and knowledge production on a general level.
Assignments:	Student presentations on the texts by Alexander and Baxandall.
Literature:	*Herbert Read: Billedhuggerkunsten.* Alexander, C.: *Notes on the Synthesis of Form*. Cambridge (Mass.); Harvard University Press 1964, pp.15-54. Baxandall, M.: *Patterns of Intention. On the Historical Explanation of Pictures*. Yale University Press, 1985, pp.12-40. http://www.louisiana.dk/dk/Menu/Undervisning/Undervisningsmaterialer/Konstruktivisme_Louisiana.pd Arnheim, Rudolf. *Art and Visual Perception. A Psychology of the Creative Eye*. 1974, pp. 372-443 (Moodle) Rudolf Arnheim *The Power of the center: a study of composition in the visual arts*. 1982, ”Introduction”, pp. vii-xii, Chapter 1: “What is a Center?”, pp. 1-9, chapter 2: “The Strongest Center and its Rivals pages”, pp. 10-41 (moodle)

Title 6:	**Kunsten**
Lecturer:	Jakob Vengbjerg Sevel, m.A. Curator at Kunsten
Content:	This lecture will introduce you to Kunsten: -it´s modernist architecture as context for art exhibitions and the museum library. -Kunsten as art institution: obligations and strategies -The collection at Kunsten. Jakob Vengberg Sevel will introduce you to selected works from the collection, relevant for the course theme.
Assignments:	After the lecture you will have time to explore the architecture and the exhibitions at Kunsten and the library further. Detailed assignments will be distributed in lecture 1
Literature:	www.kunsten.dk Katalog over museets samling fra A-Å. 2012 (English summary) Erik Veistrup samling på KUNSTEN. 2012 (English summary) Kunsten - Historien om Museet. 2012 (English summary)

Title 7:	**Performance Art**
Lecturer:	Falk Heinrich, associate professor
Content:	The lecture gives and introduction to various aspects of the widespread field of Performance Art including som of its antecedents and its objectives. The lecture´s focal point is the performer´s body as subject, object and media of performance art. Lastly, the theoretical notion of performativity and its importance for postmodernist and poststructuralist theory will be explained and dicussed.
Assignments:	*none*
Literature:	Jones, Amelia. “Presence” in Absentia: Exeriencing Performance as Documentation” In: *Art Journal*, 1997, Vol. 56, Nr.4 Fischer-Lichte, E. *Transformative Power of Performance: A New Aesthetics*. New York: Routledge 2008, (chap. 1).

Title 8:	**Student Seminar – Sharing knowledge**
Lecturer:	Line Marie Bruun Jespersen
Content:	In this final session we will make a seminar-like environment, by forming smaller groups where the students present as short analysis of and art work, using knowledge and skills developed thorugh the course. Pier-to-Pier feedback and group discussions on the results. The last part of the lecture will contain a collective conclusion/summing up on the course content and evaluation of the course.
Assignments:	Choose a work of art you have had direct acces to during the semester. Make an analysis where you use methods and theories from the course. Prepare a presentation in the form of an elaborate manuscript (1500 words) and find relevant illustrations. After the seminar you will have the possibilitiy to incorporate the feedback from your piers before hand-in.
Literature:	See all the above.

6	*Guest Lectures*

Title 1:	07.11.2013
Lecturer:	Tim Marshall, Parsons, NY
Content:	