A42D2B Digital Studio 4:2 12.0 credits

Performativ designstudio 4:2

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for A42D2B valid from Autumn 2008

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Architecture

Specific prerequisites

Bachelor's Degree, or an equivalent level, within the field of Architecture.
Students are also expeced to have followed the Performative Design Studio.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

Performative Design: From the Coherent to the Monstrous

Introduction (common for all projects in this studio)

The Studio will actively engage the technological and affective potentials of performative design in architecture. Performance can be understood as the incorporation of contingencies or parameters (material, technical, geometric, programmatic, social and economic) that inform the design process. The generative potential of digital tools makes it possible to use parametric design as a way of evolving new information systems, new modes of fabricating, and producing building components and architecture. Contrary to a linear design approach where technological processes are applied in the interest of the optimization and resolution of a design; this studio will adopt a bi-directional approach where technological processes (in the form of parametric design and computer aided fabrication) will be incorporated as drivers of design innovation.
In order to formulate a distinction in the concept of performance that reflects its differential value in the contemporary context – both material and procedural - we will consider how technological performance coexists with affective performance, where technology is subsumed by the production of sensation. Immersed in an electronic paradigm that has vastly expanded in scope, moving beyond its capacity for representation to stage more profound forms of engagement, we will study the relationship between form, performance, and affect in contemporary architecture.
The studio aims at increasing the existing knowledge and enhancing skills within the field of performative design and to contribute to an increased comprehension of the discipline of architecture as a whole. The course sequence will establish new ways of thinking about design and fabrication, professional practice and its cultural impact. Upon completion of each project students are expected to have acquired knowledge and skills relevant to the context of the studio (competance in innovative architectural design strategies, competance in advanced digital modeling and fabrication, an awareness of contemporary architectural discourse); and to demonstrate an increased comprehension of the discipline of architecture as a whole.

Overall goals
1. The course is part of the Performative Design Studio.The generation of digital tools makes it possible to use parametric design as a way of evolving new information systems, new ways of producing building components and architecture.
2. The course/project goal is to increase the student's knowledge in this area/field and skills/knowledge in the field of architecture in general. The students will enter the project with varying degrees of knowledge/skills and will subsequently end up at different levels at the end of the course/project.
3. The individual student must show an increase in the particular skills/knowledge offered in the studio and in the field of architecture in general.

Course contents

Through the design of a medium sized building students will refine the skills developed in Studio 4:1 -techniques of parametric design and modeling in relation to digital fabrication

and the architectural and structural aspects of design. An emphasis will be placed on the transition between different architectural orders (floor slabs, interior partitions, circulation, building envelope) and creating an articulation of primary and secondary structural systems that at one extreme maintain internal coherence, and at the other approach the monstrous as individual geometric species begin to comingle with one another. Design research will be conducted into issues of structural patterning, form, and organization.

Disposition

The course is structured around weekly tutorials with students (2 times a week), a sequence of assignments or design tasks, a series of lectures, seminars and informal pinups. There will be two reviews with external invited jurors; Mid review and Final review.

Course literature

Philip Ball, The Self-Made Tapestry: Pattern Formation in Nature (2001).
Greg Lynn, Intricacy, exh. cat. Institute of Contemporary Art, University of Pennsylvania January 18 – April 6, 2003.
Farshid Moussavi and Michael Kubo, The Function of Ornament (2006).

Examination

- PRO1 - Project part 1, 9.0 credits, grading scale: P, F
- PRO2 - Project part 2, 3.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

The course consists of two parts; a fulfilled and delivered project work (9 credits) and a passed final assessment (3 credits). There is at least one intermediate assessment during the course.

Other requirements for final grade

a) Presentation requirements
Drawings:
Siteplan 1:400
Floor plans 1:200
Sections and elevations 1:200
A series of detailed sections 1:20 (optional 1:50)
Axonometrics showing how different scales correlate
Diagrams describing parametric strategies and design strategies
Models:
Site model 1:400

Model of proposal 1:200
A series of detailed models 1:20 (optional 1:50)
Images:
Images should show the performance qualities of your building complex.
To hand in at the latest one week after final review::
A CD with all the final material
Very well photographed models
A3 paper version of your presentation max 10 pages
Each semester all students must:
Have 80% attendance on all compulsory activities, including seminars and tutorials.
Attending reviews is compulsory.
If students are asked to do supplementary work after reviews to pass the course, these supplements should be handed in within a given timeframe.
Submit DESIGN task according to specifications
Submit RESEARCH task according to specifications
Participation in study trip or alternate activity

b) Examination
80% attendance. Active participation in lectures, tutorials, and seminars etc. Passed intermediate and final assessments. Compulsory attendance during the assessment reviews.
Completion: The project work shall be delivered and, if necessary, reworked within the set time limit. See general directions.
(Overall principle: Autumn term projects must be approved during the following Spring term: Spring term projects must be approved before the start of the following Autumn term. The reworked projects must be delivered at least one week before the time limit.)
The project work is to be documented in a portfolio, including drawings, analysis and models. The work process shall be legible.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.