



A42H2B Hållbar gestaltning - Studio 4:2 12,0 hp

Sustainable Design - Studio 4:2

När kurs inte längre ges har student möjlighet att examineras under ytterligare två läsår.

Fastställande

Kursplan för A42H2B gäller från och med HT09

Betygsskala

P, F

Utbildningsnivå

Avancerad nivå

Huvudområden

Arkitektur

Särskild behörighet

Kandidatexamen inom området arkitektur, eller motsvarande utbildningsnivå.

Undervisningsspråk

Undervisningsspråk anges i kurstillfällesinformationen i kurs- och programkatalogen.

Lärandemål

Generalitet/Individualitet: a) Generalitet

Vintage project

Allmänna mål

1. Projektet ingår i studion Hållbar gestaltning.

Studio Description: In order to develop new strategies for designing a sustainable society, this Studio emphasizes economy, ecology, energy and new technology in relation to architecture and urban design.

2. Projektet syftar till ökad kunskap inom detta område och till fördjupad kunskap/färdighet inom arkitekturämnet som helhet. Projektet riktar sig till studenter som kan ha kommit olika långt i denna fördjupning och som därför även efter projektets slut kommer att ligga på olika nivåer.

3. Den enskilde studenten skall efter projektet ha redovisat en individuell utveckling av sina kunskaper och färdigheter inom studioinriktningens program och inom arkitekturämnet som helhet.

Kursmål - Course goals

(svensk text finns i 2008 års kursplan)

In order to develop new strategies for designing a sustainable society, This studio emphasizes economy, ecology, energy and new technology in relation to architecture and urban design:

The environmental impact of buildings are eroding the quality of life. The built environment stands for 40% of the energy consumption and about the same amount of the CO₂ emissions in the world, and about 40% of the landfill material as a result of construction waste. Sustainability has been defined by the Brundtland report 1987 as "meeting the needs of the present generation, without compromising with the ability of future generations to meet their own needs". As architects, we must form an opinion about climate change. With the ongoing urbanization and growth of metropolitan regions in our country and around the world, issues of sustainability are stalls, in terms of technical, economical, social and ecological aspects.

The main aim of the Sustainable Design Studio; Generality/Individuality is to examine the relationship between architectural form, structure, materiality and environmental performance, and how these should evolve in response to climate change and changing programmatic requirements in urban environments. The overall goal is to find new strategies for a society characterized by long term sustainability and to acquire knowledge and insights about architecture in a lifecycle perspective; the relationship between architectural organization and the ability to change over time and how local climate affects the design. A sustainable approach to ecology will be weighed against economic and social sustainability.

This project

The project aims:

* To develop an interdisciplinary, integrated design process where all pre-requisites of the environmental

effects are raised early on in the projects work process

* To acquire knowledge and insights about architecture in a lifecycle perspective and about the relationship between architectural organization and the ability to change over time. A sustainable approach to ecology will be weighed against economic and social sustainability.

* To give the students the tools for conceptual, analytical and technical work methods as well as an increased understanding of the relationship between architecture and environmental impact.

Kursinnehåll

Task: Reuse, rebuilt and transform an existing building into new, mixed-use urban functions year 2015 and again year 2035 with low environmental impact.

During the Generality / Individuality project we will be dealing with the question how existing architecture can be transformed into a new spatial and urban context and into new functions. We will analyse the existing buildings structural pre-requisites and with new operations and additions adapt it to the demands of today and in the future. New technology and architectural ideas will be adapted to the existing in order to transform the structure into a sustainable future.

Kursupplägg

Preliminary course disposition

1. Examine. Define – What pre-requisites are important? Analyze the building and the sights structural and urban pre-requisites. How is the building's usability for new programs affected by the building's design? How does the building's design and material affect energy consumption? What changes and operations in the building can change the pre-requisites? The analyses should be visualized in diagrams; the conceptualization of the operation shall be shown in sketched models.
2. Investigate. Formulate – Formulate three goals for your design. Two scenarios and programs are tested, the years 2015 and 2035. Investigate how your conceptual idea manages to meet the changing pre-requisites with the least possible environmental impact and energy consumption. Provide sketches in plan- and section as well as 3-D studies.
3. Develop. Create – Make several alternatives. A research on how renewable energy-sources could be integrated with the facade. Provide a detailed description of a chosen technical detail of the skin.
4. Refine. Sum up – Look at your alternative sketches, and choose with judgment the one that answers the best on your goals. The two scenarios and programs are developed, the years 2015 and 2035. Present the project through sketches, models and written presentations prior to the final evaluation.
5. Submission / final evaluation. Final critics with invited guests

Kurslitteratur

Course literature: A literature list will be given out at the start of the course

Examination

- PRO1 - Projektdel 1, 9,0 hp, betygsskala: P, F
- PRO2 - Projektdel 2, 3,0 hp, betygsskala: P, F

Examinator beslutar, baserat på rekommendation från KTH:s handläggare av stöd till studenter med funktionsnedsättning, om eventuell anpassad examination för studenter med dokumenterad, varaktig funktionsnedsättning.

Examinator får medge annan examinationsform vid omexamination av enstaka studenter.

Projektet innehåller två delmoment: genomfört och inlämnat projektarbete (9hp) respektive godkänd slutkritik etc (3hp). I det första delmomentet ingår det en eller flera delinlämningar under projekttiden.

Övriga krav för slutbetyg

a) Presentationskrav

Students must:

Submit DESIGN task according to specifications

Submit RESEARCH task according to specifications

Participation in study trip or alternate activity

b) Examination

80% närvaro. Studenten ska aktivt ha deltagit i ritsalsundervisningen och vid föreläsningar och seminarier etc., samt ha godkända deluppgifter och slutpresentation. Deltagande vid kritikgenomgångar är obligatoriskt.

Kompletteringskrav: Arbetet skall utföras, och i förekommande fall kompletteras, inom given tidsram. Se generella anvisningar.

(Grundprincip: Höstterminsprojekt skall ha blivit godkänt senast vid påföljande vårtermins slut; vårterminsprojekt senast före påföljande hösttermins start. Materialet skall lämnas in minst en vecka dessförinnan.)

Projektet ska dokumenteras i en portfölj. Ritningar och samtliga analyser och modeller ska finnas med i dokumentationen. Processen ska redovisas.

Etiskt förhållningssätt

- Vid grupparbete har alla i gruppen ansvar för gruppens arbete.
- Vid examination ska varje student ärligt redovisa hjälp som erhållits och källor som använts.
- Vid muntlig examination ska varje student kunna redogöra för hela uppgiften och hela lösningen.