AG2147 Sustainable Urbanism and Green Metropolitan City Regions 7.5 credits

Sustainable Urbanism and Green Metropolitan City Regions

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

Establishment

Course syllabus for AG2147 valid from Spring 2011

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

The Built Environment

Specific prerequisites

AG2143 Sustainable Urban & Rural Development
AG2501 Human Settlements & Housing
AG2141 Urban Infrastructure
or other relevant background (permission of instructor)

For singel course students: 150 university credits (hp) including 30 university credits (hp) in Architecture, Urban and Regional Planning or Civil Engineering in the Built Environ--ment, and documented proficiency in English corresponding to English B.

Language of instruction

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

Intended learning outcomes

Sustainable Urbanism is a new framework for interdisciplinary planning and design of contemporary cities, neighborhoods and settlements. It explores sustainability and urban design in a rapidly urbanizing world by focusing on the processes that shape the form and function of the built environment in its full complexity – infrastructures, land developments, built landscapes, and facilities – that collectively make up metropolitan regions. The aim of this course is to explore the dynamics and complexity of these issues at the level of a regional city. The rationale for that lies in the fact that contemporary cities are not isolated islands but are integral part of their region and as such must be treated and analyzed on a regional scale. In this course, students will have the opportunity to understand and practice a range of skills and tools needed to address real-world problems in planning & designing our cities in times of globalization, rapid population growth, economic fluctuations, increased energy demand and global climate change. This all in effort of building better places – more livable, more equitable, more energy efficient & ecologically sound, and more prosperous for all.

After completing the course requirements students should be able to:·

- Demonstrate a general understanding of the complexities and crucial issues of urban development, green urbanism, city planning and management within the micro, meso and macro regions.
- Describe and tackle the negative aspects of climate change through rampant urban development, sprawl, energy waste, pollution, uncontrolled urbanization and migration and lack of sustainable planning & design.
- Critically analyze the synergy of transportation, economics, ecology, physical form and social aspects. Apply the theories of the regional city and sustainable urbanism to various regions, cities, neighborhoods and communities via new urban design proposals, master and spatial plans, infrastructure plans, new regional and planning tools, as well as through a plethora of different strategies and policy decisions. Gain a full understanding and hands-on knowledge of an operational regional and urban model, **The Transect** - a sustainable urbanism tool used for planning, design and classification of the elements of the human environment from rural to urban scales.

Course contents

The focus of the course is on the synergy of transportation, economics, ecology, socio-cultural aspects and physical-urban form that are crucial for creating livable cities-communities of place that will together with their hinterlands produce sustainable metropolitan-regional cities. This can be achieved only through prism of a ‘new sustainable (green) thinking and

holistic regional design' where comprehensive physical planning and sustainable urbanism are crucial. Specific emphasis is given on regionalism, social and cultural aspects, physical proximity and neighborhood cohesion, connection with the hinterlands and green approaches as well as positive aspects of network society. Course also looks into the issues of affordable housing, public transportation, land use and zoning, economics, social and environmental justice and environmentally friendly neighborhoods and buildings. The students will examine how the principles of regional city and sustainable urbanism can be applied to a very concrete urban planning task in the greater region (area) of Stockholm. The project task will concern physical, social, ecological and economic development strategies for sustainable micro and macro regional structures. More specifically it will deal with issues such as: increasing sustainability through housing density, planning for public places and urban spaces; integration of transportation, land use and technology; built up of transportation and green corridors with integrated public transport; biophilia, smart growth and new urbanism.

Course literature

Farr, Doug (2007), Sustainable Urbanism: Urban Design with Nature. John Wiley & Sons: New Jersey; Duany, A., Speck. J. and Lydon, M. (2009), The Smart Growth Manual. Mc-Graw Hill Professional: New York. Newman, Timothy Beatley, Heather Boyer (2009) Resilient Cities: Responding to Peak Oil and Climate Change. Island Press: Washington. (Student course compendium of all the important readings will be available in BILDA).

Examination

- PRO1 - Individual Project Work, 5.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN2 - Seminars, Workshops, 2.5 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.

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

Seminars and workshops, (ÖVN2; 2,5 cr) and Individual project work, (PRO1; 5 cr)

Other requirements for final grade

A 75 percent attendance of lectures, workshops and seminars is required. There are four compulsory seminars and workshops (ÖVN2; 2,5 cr) and the individual project work, (PRO1; 5,0 cr).

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.