Architecture in Extreme Environments
Urban Shelter
ABAN10, 18 hec
Requires parallel participation in ABAN05
Eligible for students of year 4 to 5.

The Challenge of Rapid Urban Growth in many cities of the South is one of the largest challenges within urban development of the 21st century. Architects need to engage in urban development to design liveable environments in cities also for the urban poor.

Architecture in Extreme Environments — Urban Shelter deals with urban shelter design in an international perspective with focus on the conditions of the urban poor. A city is a living environment that is used in different ways over both time and space. Half of the world’s population now lives in cities; a billion of them are poor. The global urban population grows by 180,000 persons per day, a city the size of Uppsala every day. In Africa there are more people living in cities than in the USA and Canada together. 4000 cities have a population over 100,000. All 4000 are led by politicians with more or less vision.

Natural disasters are part of the reality for many urban inhabitants and increase in frequency and magnitude. In September 2009 Metro Manila suffered the most severe flooding in 40 years. Urban shelter design is a question of quality.

Metro Manila after typhoon Ketzana, September 27, 2009

A billion houses in the world are illegal, informal, small, crowded, unhealthy, unsafe and without services. The solution is not always new housing but gradual improvement since shelter is a path to social integration, economic development, security, education and health.

How should architects work with urban shelter design now and in the future? The studio aims to give more profound understanding of the processes of urban shelter design in countries with different cultures, climates, socio-economic conditions, architecture and built environment. Land use and population density are central issues related to the urban sprawl. The course deals with a multiplicity of factors in urban shelter related to social, environmental, economic and legal
conditions. The influence of international organizations such as the United Nations, World Bank, regional and national development organizations is considered.

The studio is divided into three phases:

1. Preparatory studies in Lund
2. Field study in Metro Manila
3. Applications and design

The preparatory studies will be carried out during week 3 – 6 and focus on preparation of field studies and on learning about the Philippines, its development and current challenges. Facts about the Philippines and different tools such as SWOT, LFA, focused group discussions and interviews are presented. Interviews to be carried out with different stakeholders are prepared. Literature review and seminars are organized.

The field study in Metro Manila will be carried out during week 7 – 10 and allows data collection and analysis of the complex reality. Visits are made to different actors in urban shelter, such as national government, municipal government, private sector and NGOs to discuss their influence on the role of the architect. There will be a close collaboration with the Non Governmental Organization TAO-Pilipinas, the national Housing Authority and the University of the Philippines (UP), School of Architecture. Architects from TAO-Pilipinas and lecturers from UP will take part in the field study and share their views on sustainable development and modern Asian architecture. Extreme examples of shelter (High Density – Low Density) are visited and studied as a basis for the design exercise.
The main task is to design a disaster resistant housing area for lower middle income groups in Quezon City, the largest city of Metro Manila. Population density, land use and affordability should be reflected in the sustainable urban design. Sketches both at neighbourhood level and house level are to be presented for potential clients in Metro Manila before returning to Lund.

The third phase of the studio focuses on application and design. Data collected during the field study is compiled and systematically analyzed. Social, economic and environmental sustainability is the basis for the design. Lectures and seminars will support the design work but the main emphasis is on tutored studio work.

Theoretical knowledge and concepts related to design of housing and human settlements are developed in the studio. Some of the sub-themes include urban sprawl, density, disaster resistant design, public space, safety and security, gender, urban segregation, energy use and passive climatization of buildings and urban space, slum-upgrading, finance for low-income housing, organized self-help housing and the role of the architect in an international perspective. Examples are presented from many cities in the developing world.
To gain knowledge and understanding

The student will:
- identify the most important factors shaping urban shelter design internationally
- assess the role of the architect in complex international situations and processes
- propose criteria for the design of shelter and neighbourhoods that promote sustainable development

To develop skills and abilities

The student will:
- describe urban shelter design from a problem-oriented perspective
- design a high-density neighbourhood based on concepts and theories in urban shelter and urban planning
- design a functional, comfortable and aesthetic building within a neighbourhood.

Lecturers
Johnny Åstrand, Arch MSA, examiner
Ivette Arroyo, Arch
Erik Johansson, PhD, Civ. Eng.
Laura Liuke, Arch MSA
Rachelle Navarro Åstrand, PhD, Arch MSA
Maria Rasmussen, Arch MSA
Maria Faith Varona, MSc., Arch

Course Information
Higher Education Credits: 18.0
Duration: January 19 — June 2, 2010
Grading scale: UG  Level: A
Language of instruction: English
Course coordinator: Johnny Astrand
E-mail: johnny.astrand@hdm.lth.se
Assessment: For a passing grade the student must attend at least 80% of the lectures, seminars, reviews and examinations. Approved presentation and submission of exercises and final project.