Course Outline

Introduction

Urban form relates to how we design and build our cities and towns - the arrangement of residential, commercial, and industrial areas, density of housing, the amount of open space, and the shape of the transportation networks. Currently most of Gaza Strip people live in urban areas and that percentage is expected to increase over the next 20 years. People are attracted to urban areas because they provide significant social and economic benefits and efficiencies, in particular increased employment opportunities and greater social and cultural opportunities. However, they also generate negative consequences: large energy and material requirements, concentration of waste and pollutants, issues of health and safety, or cultural division associated with unequal distribution of wealth. As our urban areas continue to grow in both extent and magnitude, we need a better understanding of the potential consequences - both positive and negative - of different urban forms. A better understanding will help us (re)design our cities and towns to deliver better performance that both sustains and enhances our environments and our quality of life.

Climate change is one of the main challenges facing the world at this century. Experience has shown that significant saving in buildings and urban environment can be achieved through energy efficient design, therefore sustainable architectural and urban design will play an important role in mitigating emission and environmental protection. The meaning of sustainable development is to maximize the net gains from economic development while preserving the quality of natural resources and the services it provides. The needs of modern society must be met without sacrificing the ability of future generations to satisfy their own needs. Sustainable development thus has three aspects: ecological sustainability, economic sustainability and social sustainability. The design also investigates the importance of green spaces and wildlife as biodiversity in cities is thought to be important for human well-being, provision of ecosystem services, and developing a sense of place and belonging. Additionally, the design promotes mixed-use urban neighborhoods and the most efficient use of all energy and material resources.

Sustainable design celebrates and creates the ability of communities and wider urban systems to minimize their impact on the environment, in an effort to create places that endure. Taking into consideration the fact that Gaza Strip is a highly populated area with limited resources, the key issues in sustainable development should include the protection of the natural environment and the improvement of the quality of life on all fronts. The most important task ahead for local authorities is therefore to achieve sustainable and balanced ecological, economic and social development. The Sustainable design promotes the redirection of new urban growth away from ecologically sensitive areas, agricultural lands and open space, and towards previously developed areas to reinforce urban vitality and to optimize existing urban infrastructure.
1. Aims and Objectives

1.1 Aims:

- The aim of this course is to provide knowledge, skills and values in sustainable urban design.
- The goal is to provide students with humanistic perspectives, professional qualifications and design capabilities, which will contribute to the processes of urban change, nationally and internationally.
- This Course will provide an opportunity for students to develop an understanding of the core concepts involved in urban design.
- Then it will also allow enrolled students to apply sustainable urban design concepts in a practical field work project to accompany the lecture and discussion sessions.
- Some field trips to innovative projects in urban design and place making will provide some hands-on experience of the principles discussed in the classroom sessions.

1.2 Objectives:

The Course will look into such issues as:

- Increasing sustainability through density.
- Integrating transportation and land use.
- Creating sustainable neighborhoods, including housing, car-free areas, walkable neighborhoods, and universal accessibility.
- The health and environmental benefits of linking humans to nature, including walk-to-open spaces, neighborhood stormwater systems and waste treatment, and food production.
- High performance urban structure and district energy systems.
- The features and the simulation capabilities of the software used in sustainable applications.

Knowledge and Understanding:

To satisfy the requirement of the Course in Sustainable Urban Design the student must:

- demonstrate knowledge and understanding of the role of urban design in the long-term development of a sustainable society,
- demonstrate both a wide knowledge and understanding of methods of sustainable urban design planning and design, and considerable in-depth insights into international research and development in urban design and urban development, and
- demonstrate in-depth knowledge of methods used in the planning and design processes of sustainable urban structures.
Skills and Abilities:

- demonstrate an ability to integrate critically and systematically knowledge acquired of urban design and long-term sustainability,
- demonstrate an ability to give a clear account of and discuss findings orally, in writing and in visual presentations, with various degrees of difficulty,
- demonstrate an ability to plan and design urban structures at several strategic levels, and
- demonstrate the kind of skills required to participate in research and development in the field of sustainable urban planning and design.

2. Approach:

- demonstrate an ability to make decisions in the field of sustainable urban planning and design with due consideration for the relevant scientific, social and environmental aspects,
- demonstrate an awareness of the decisive influence urban planning design has on the living environment of human beings and be aware of the ethical aspects of research and development with regard to the urban environment, and
- demonstrate an ability to identify needs of additional knowledge and to be able to take responsibility for the further development of required research studies.

2.1 Collaborative Project Work

Students are trained to design high-quality urban structures for new neighborhoods, for decaying urban districts, as well as improved structures for the local landscape. The focus is both on new developments and on modifications that can be made to existing developments.

2.2 An Independent Report

To satisfy the requirements of the Course in Sustainable Urban Design, the student must have completed an independent report. The assignment is to be in a relevant field of study.

3. Course Activities

- Lectures, Seminars, Site visits, Studio Workshops, Collaborative Project Work, and Discussions with Supervisor.

4. Assessment of the course

To pass a course students must satisfactorily complete the assessment requirements prescribed for the course.

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<thead>
<tr>
<th>Assessment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Final Exam</td>
<td>40%</td>
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<tr>
<td>An Independent Report</td>
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<tr>
<td>Urban Design Project</td>
<td>40%</td>
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<tr>
<td>Participation &amp; Activity</td>
<td>10%</td>
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