

# ENVIRONMENTAL DESIGN

**ECOLOGICAL DESIGN: CITIES, LANDSCAPES  
AND TRANSPORT (1585/7771)**

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*Supplementary Material  
Spring, 2014*

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**ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD  
Department of Home and Health Sciences**

**ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD**  
(Department of Home and Health Sciences)

**Course: Ecological Design: Cities, Landscape & Transport (1585/7771)**  
**Level: M.Sc./MS** **Semester: Spring, 2014**  
**Credit Hours: 4 (3+1)**

**CONTENT LIST**

This study pack includes the following items:

1. Course Book
2. Course Outlines (Units 1-9)
3. Tutor Guide
4. Student Guide
5. Assignments (1 & 2)
6. Assignment Forms
7. Schedule for Submitting the Assignment and Tutorial Meetings

**Note: If any of the above mentioned material is missing in your pack, please contact at the following address:**

**Mailing Officer**  
**Services and Operations Block**  
**Allama Iqbal Open University**  
**H-8 Islamabad**

OR

**Dr. Nomana Anjum**  
**(Programme Coordinator)**  
**Department of Home and Health Sciences**  
**Allama Iqbal Open University**  
**H-8, Islamabad**

## **Ecological Design: Cities, Landscapes and Transport (1585/7771)**

### **Reference Books**

- Sustainable Communities by Barton Hugh
- Landscape Planning: Environmental Applications by Marsh
- Environmental Problems in an Urbanizing World by Hardoy and Mitlin
- An Introduction to Landscape Design & Construction by Blake, James
- Transport Systems, Policy and Planning by Tolley/Turton
- Emerging Concept in Urban Space Design by Jeffery

### **Unit 1 Ecology of Settlements**

- 1.1 Neighborhood and Community
- 1.2 Sustainable Development
- 1.3 Environmental impacts of recent planning trends
- 1.4 Reversing Current land use and Environmental Trends

### **Unit 2 Rural Cities, Regional and Global Impacts**

- 2.1 Cities' regional impacts and rural urban interactions
- 2.2 Cities' ecological footprints
- 2.3 Cities' and the global commons
- 2.4 Impact of global warming on Third World Cities

### **Unit 3 Issues in the City Environment**

- 3.1 Environmental problems in Third World Countries.
- 3.2 Toxic/Hazardous wastes Pollution, Water, Air, and Noise
- 3.3 Hazards: Natural and Human Induced
- 3.4 Environments and Well-being
- 3.5 Environmental Costs in Third World Cities

### **Unit 4 Sustainable Development and Cities**

- 4.1 Concern for Sustainability in Cities
- 4.2 Cities and Ecological Sustainability
- 4.3 Links between Urban Policies and Sustainable Development
- 4.4 Linking global and local sustainability
- 4.5 Implementing sustainable development in cities

### **Unit 5 Addressing Environmental Problems**

- 5.1 Tackling Environmental Health Patterns
- 5.2 Improving water and sanitation
- 5.3 Better use of Natural Resources

- 5.4 Solid Waste Management
- 5.5 Tackling city-wide pollution

### **Unit 6 Landscape Planning; Environmental Applications**

- 6.1 Introduction - Roots/Problems
- 6.2 The problem: change and impact
- 6.3 Planning realms: Decision Making, technical and design
- 6.4 Environmental Impact Assessment
- 6.5 Areas of Activity in Landscape Planning
- 6.6 Methods and Techniques
- 6.7 Environmental Ordinance

### **Unit 7 Landscape Design and Construction**

- 7.1 Introduction
- 7.2 The Role of the Landscape Designer
- 7.3 Design Philosophy and Aesthetic Principles
- 7.4 Criteria for Good Design

### **Unit 8 Transport Systems, Policy and Planning**

- 8.1 Transport systems and transport geography
- 8.2 Spatial systems; International Transport, National Transport
- 8.3 Transport in Urban and Rural Areas

### **Unit 9 The Environmental Effects of Transport**

- 9.1 Inputs (Energy Consumption), Outputs (Air pollution)
- 9.2 Reducing Atmospheric Pollution from Land Transport
- 9.3 Side-effects of transport systems:
  - a) Noise and vibration
  - b) Land use and ecology
  - c) Visual intrusion
- 9.4 The Appraisal of Environmental Impacts

# STUDENT GUIDE

## Dear Student

Assalam-o- Alaikum,

We welcome you to the M.S Environmental Design Course entitled “**Ecological Design: Cities Landscapes and Transport**”. This course is the part of the first semester of your M.S. Programme.

## Details of the Course

Unit No. 1 is the introductory unit that introduces the concept of sustainable settlements along with the importance of neighborhood. This unit will be provided to during your study period on a **CD**.

Unit No. 2 is an overview of the rural-urban interaction in a glance. Studying it will make you familiar to the regional and global impacts of the cities

Unit No.3 emphasizes the city environment and the problems related to the city environment.

Unit No. 4 discusses the importance and implementation of sustainable development in cities and deterioration in city ecology due to human activities

Unit No. 5 is a remedy to these issues and discusses the methods regarding tackling the environmental and health issues in a city

*Unit 2, 3, 4 and 5 are all covered in your textbook “Environmental Problems in an Urbanizing World”*

Unit No.6 is covered in the first chapter of your text book “**Landscape Planning: Environmental Applications**” and incorporates the methods and techniques related to landscape planning

Unit No. 7 consists further details about landscape design and construction and will be provided to during your study period on a **CD**.

Unit No. 8 and 9 deal with the planning and policy matters of transport systems and the environmental effects related to transport. These units are covered in the 5<sup>th</sup>, 6<sup>th</sup> and 10<sup>th</sup> chapter of your text book “**Transport System: Planning and Policy**”

## Lecture Sessions/Part Time Tutors

Students are allocated a part time tutor. The name and address of your tutor will be provided to you. The tutor will help and guide you in studying the books and conducting activities related to study units. You are expected to take full advantage of the tutor

knowledge and experience. These tutors are also responsible for marking your assignments.

Make all efforts to complete your written assignment according to the prescribed schedule and try your best to attend all the study sessions according to the timetable provided to you.

Schedule for tutorial meetings are arranged on fortnightly bases. The specific dates in the form of lecture sessions are being provided separately. Try to attend these meetings regularly to get proper guidance from your tutor.

### **Assignments**

The course includes two assignments, which are compulsory for successful completion of the whole course. Each assignment is of 100 marks and out of these students obtaining 50 marks will be declared pass.

**Assignment No. 1** is theory based and must reach your assigned tutor before the due date. The schedule of submitting the assignment is provided separately. The tutor will send the marked assignment back to the students within 15 days, if you do not receive the marked assignment after 15 days please contact your tutor or regional office of the Allama Iqbal Open University.

The **assignment No. 2** is research based and do not need submission to the tutor before the workshop is held. For detailed instructions related to your research based assignment please go through the detailed instructions enclosed with the assignment.

**Note:** *Do not forget to dispatch the prescribed forms along with the complete assignments.*

### **Methods of Study**

Study period of 16 weeks has been allocated for studying this course through distance learning where as 17<sup>th</sup> and 18<sup>th</sup> weeks are kept for general assessment and for final examination.

<b>S. No.</b>	<b>Units</b>	<b>Assignments</b>	<b>Study period</b>
1	1-2		4 weeks
2	3-6		4 weeks
3	7	Assignment 1	2 weeks
4	8-9		2 weeks
5	Revision	Assignment 2	4 weeks
6	Preparation for examination		2 weeks

You are expected to spend four weeks on studying first two units, this will help to improve your reading speed and get familiar with the contents of the units. The next three

units 3 to 6 will become easier for you and you will be able to study them in comparatively less time. You can spend four weeks on studying these four units, during the ninth week you can study the unit no. 7 and during the tenth week you complete your first assignment and dispatch to your tutor.

Unit 8 to 9 can be studied during 11<sup>th</sup> and 12<sup>th</sup> week respectively and you can complete your second assignment along with the revision of your book during the weeks 13-16. The last two weeks can be kept for examination and its preparation

### **Workshop**

A workshop will be arranged for three days. Schedule of the workshop and venue will be sent to the students during the study period. Workshop will cover some of the lectures of the specialist on important topics and the students will present their research work conducted for the assignment No. 2. The tutor will provide guidance for the workshop. Attendance in workshop is **compulsory** for the students.

### **Final examination**

At the end of the course there will be a final examination, all the students will be expected to take this examination in the examination halls especially established for this purpose.

For any queries you can write to the course / program coordinator Suggestions for improvement will also be welcomed.

We wish you all the best.

**Dr. Nomana Anjum**

Chairperson/ Programme Coordinator

# **TUTOR GUIDE**

**Dear tutor,**

Students enrolled in M.S. Environmental Design offered through the distance learning system belong to a number of professions and have a variety of educational backgrounds and experience.

These students have very limited contact with their course mates and the part time tutors. It is therefore important to keep in mind that some of the distance-learning students have had no links with education during the past few years after completing their formal education, therefore they might lack confidence. Secondly distance-learning students are involved in studying during their spare time, probably after office hours. You are therefore requested to guide and help the students while keeping these issues in mind. Some students may need help in developing professional attitudes as well as understanding the facts about research techniques and methodology.

## **Study Center**

The main purpose of establishing the study center for distance learning students is to provide help and guidance for the difficulties faced by the students while studying at home. The study centers have been established in registered local institutions. During the lecture sessions it is required to provide guidance to the students to sort out their problems.

## **Assignments**

In the distance learning system, studying the course units has its own importance but assignments and workshops are the major source of link between tutor and the student. Therefore it is important to offer your comments through these assignments. Express your views in such a way that the student is not discouraged, hurts or feels depressed after going through your comments.

You are also expected to guide on issues like methods of solving assignments, effective methods of studying and methods to improve study habits and working hard.

Assignment No. 2 is research based and requires field survey. Advise students to discuss the assignment in the lecture sessions at various stages of research activity (at least three times before finally presenting in the workshop).

1. The stage one may be clarity on topic to develop objectives of study.
2. The stage two can be literature review and design of research tool (questionnaire etc).
3. The stage three can be data analysis and presentation style.

It is anticipated that the student will submit their assignment in time according to the prescribed schedule.



***You are therefore requested to mark the assignment No.1 within 15 days and return these with detailed comments within the scheduled dates.***

Marking Guides are provided to you. You are expected to follow the instructions and make full use of these guides while marking the assignments. The students are expected to avoid giving unnecessary details and try to be brief and comprehensive. While marking the assignments the tutor has to assess whether the students have followed the instructions provided to them or not.

### **Practical Assignment**

The students are given research based assignment (2) which would involve the student in some research activity after which they will be representing their work report in the workshop held by the end of the semester. The students are not required to submit this assignment to you before it is presented however, after the workshop the assignments will be submitted to the tutor and will be marked by you.

### **Workshop**

A three days workshop will be arranged for the students for each course in their respective study center. You will be intimated before time, as your presence in the workshop is necessary.

- During the workshop the experts will deliver the lectures to the students in the main areas of the subject.
- Also, the students will present their research-based assignment and you are required to mark the assignments after their presentation.

Regards.

**Dr. Nomana Anjum**

Chairperson/ Programme Coordinator

**ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD**  
**(Department of Home & Health Sciences)**

**WARNING**

1. **PLAGIARISM OR HIRING OF GHOST WRITER(S) FOR SOLVING THE ASSIGNMENT(S) WILL DEBAR THE STUDENT FROM AWARD OF DEGREE/CERTIFICATE, IF FOUND AT ANY STAGE.**
2. **SUBMITTING ASSIGNMENTS BORROWED OR STOLEN FROM OTHER(S) AS ONE'S OWN WILL BE PENALIZED AS DEFINED IN "AIOU PLAGIARISM POLICY".**

**Course: Ecological Design: Cities, Landscape & Transport (1585/7771)**

**Level: M.Sc./MS**

**Semester: Spring, 2014**

**Total Marks: 100**

**Pass Marks: 50**

*Note: 10 marks for attendance & class participation.*

**ASSIGNMENT No. 1**

**Units (1-7)**

- Q. 1 a) Explain the four most emphasizing problems of Neighborhood Environment  
b) Why are the current trends in planning settlements instable? Identify the environmental consequences of these trends. Suggest some measures to rectify these unsustainable planning trends. **(14)**
- Q. 2 a) What do you understand by the term "Ecological Footprint" of the cities?  
b) Elaborate "Rural Urban Interaction" for establishing a sustainable region. **(12)**
- Q. 3 a) Elaborate four most important resource consumption indicators in recent planning trends.  
b) Discuss the important reasons of urbanization trends in Pakistan. **(12)**
- Q. 4 a) Discuss major causes of water pollution and water scarcity in Pakistan and recommend suitable suggestions for it.  
b) "Noise pollution is becoming a big hazard in urban areas of Pakistan". What problems do the occupants of the cities have to face in this context and how can we reduce this pollution to make the environment healthy? **(14)**
- Q. 5 a) What is to be sustained, "Environment or Development". Elaborate your opinion logically by keeping in mind the context of Pakistan.  
b) How can we implement Sustainable Development in cities? **(12)**

- Q. 6 a) What considerations should be kept in mind in the planning of solid waste disposal system of an area?  
 b) Improved Water and Sanitation conditions will automatically improve the health patterns of the dwellers of an area; elaborate your answer, how?(12)
- Q. 7 What are the main areas of activity in landscape planning? How these areas contribute towards environmental up-gradation? (12)
- Q. 8 Evaluate landscape planning of a community park in your area by determining the compositional design principles of landscaping e.g. (balance, unity, line plane, point) etc. (12)

## **ASSIGNMENT No. 2**

**Total Marks: 100**

**Pass Marks: 50**

### **INSTRUCTIONS:**

1. This assignment is of practical nature, you have to prepare a research report and present it in the workshop prior to the final examination (you do not need to send this to your tutor before the workshop).
2. The workshop component is mandatory for all the students. You cannot sit in the final examination without compiling this report and presenting it in the workshop.
3. This assignment requires thorough review of literature to develop the conceptual framework before conducting the field research, which also needs to be incorporated in the report systematically.
4. You can select any of the given topics for field research; the field visits should preferably be based closed to your home address.
5. Your research report should be at least 20-25 typed pages covering both theoretical and practical components.
6. Include the following sections in your report:
  - a. Introduction and objectives of the study
  - b. Methodology for field research
  - c. Review of literature
  - d. Data Analysis with statistics and graphical representations
  - e. Conclusions / suggestions
  - f. Appendices and bibliography
7. Prepare three copies of this assignment, one for yourself, one for the tutor and the third one for the Department of Home and Health Sciences (AIOU) for record. Attach three assignment forms with this assignment as for assignment one.
8. As the student is suppose to do a presentation in the workshop to the resource person and course mates, they should prepare transparencies or other illustrative material for effective presentation.
9. You are advised to consult source material frequently. if you need any guidance you may contact your tutor or write to the Department of Home and Health Sciences (AIOU).

**Please select any of these topics for research and report writing:**

- Q.1 Prepare a detail report on urbanization trend in Pakistan and highlight environmental issues because of this trend. Compare two native cities as a case study and quote your figures and all other relevant data with the help of reliable references.
- Q.2 Search out at least five cases of water pollution or water scarcity of national importance during last ten years in Pakistan. In addition discuss the roles played by Government and NGOs for those particular issues and propose suitable solutions to handle these issues in the coming future.
- Q.3 Select an unplanned community, highlight all related environmental issues after initial site visits and then confirm these issues by circulating a creative questionnaire. In addition recommend suitable suggestions to improve environmental conditions in that community.
- Q.4 Compare the landscape planning of two different cities in all respects (methods, techniques, suitability, environment, economy etc) with the help of photographs. Discuss their relevant merits and demerits and propose most suitable suggestions to improve landscape vision through out the country.

**MARKING GUIDE**

It is anticipated that the tutor will mark the assignments carefully and follow the similar marking standard for all the students.

For the theory based assignments you are requested to follow the marks division as indicated on the assignment that is eight questions, making a total of hundred. The questions that are further divided into parts a, b etc. accompany a further division of marks as well.

For the research based assignment the allocation of marks is indicated as under:

Research activity .....	50 marks
Report writing .....	25 marks
Presentation in the workshop .....	25 marks

You are expected to stick to the guidelines provided to maintain the standardization and uniformity.