

# **ENVIRONMENTAL DESIGN**

## **ENVIRONMENTAL PLANNING AND PRACTICE (1576)**

---

*Supplementary Material  
Spring, 2013*

---

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

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

**Course: Environmental Planning & Practice (1576) Semester: Spring, 2013**  
**Level: Post-Graduate Credit: 4(3+1)**

**CHECKLIST**

This study pack includes the following items:

1. Course Books
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

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**  
**Chairperson / Programme Coordinator**  
**Department of Home and Health Sciences**  
**Allama Iqbal Open University**  
**H-8, Islamabad**

# **COURSE OUTLINE**

## **Environmental Planning & Practice**

### **Reference Books:**

- Pakistan National conservation Strategy
- Environmental Science – A study of Interrelationships by Enger & Smith
- Environmental Science – Earth as a Living Planet by Botkin and Keller
- Environmental Geology by Merits and Menking
- Environment and Development World, Principles Policies and Management by Avijit Gupta and Mukil G. Asher.
- Energy Conservation Management by ENERCON, the national energy conservation center Environmental Education in the 21<sup>st</sup> Century – theory practice, Progress and Promise by Palmer J. A.
- Developing the Environmental Problems and Management by C. J. Barrow
- Environmental Planning – 2<sup>nd</sup> edition by Paul Selman

### **Unit 1 Introduction**

- 1.1 Introduction to Environmental Planning & Practice
- 1.2 Scope of Environmental Planning and Practice
- 1.3 Sustainable Development

### **Unit 2 Ecosphere**

- 2.1 Atmosphere
- 2.2 Hydrophere
- 2.3 Lithosphere
- 2.4 Biosphere

### **Unit 3 Current Environmental Problems in global Perspective/Global**

- 3.1 Green House effect
- 3.2 Ozone Layer Depletion
- 3.3 Acid Rain
- 3.4 Desertification

### **Unit 4 State of the Environment in Pakistan**

- 4.1 Environmental Problems of Pakistan
- 4.2 Deforestation & forest Degradation
- 4.3 Erosion of Sedimentation
- 4.4 Aquatic Pollution
- 4.5 Air Pollution

## **Unit 5 Environment & Human Settlement**

- 5.1 Human Settlements as Ecological Systems
- 5.2 Urbanization & Environment
- 5.3 Natural Disaster & Human Settlement
- 5.4 Development and Human Settlement

## **Unit 6 Legislation for Environmental Protection**

- 6.1 Introduction
- 6.2 Pakistan Regulatory Regime (Constitutional Setting)
- 6.3 Environment Ordinance, 1983
- 6.4 Specific Issues & Legislative Responses
- 6.5 Water Pollution
- 6.6 Air Pollution
- 6.7 Noise Pollution
- 6.8 Cultural Environment

## **Unit 7 Organizational & Institutional Framework for Environmental Protection & Management**

- 7.1 Introduction
- 7.2 Institutional Frame Work
- 7.3 Pakistan Environmental Protection Council (PEPC)
- 7.4 Pakistan Environmental Protection Agency (PEPA)

## **Unit 8 Energy Conservation**

- 8.1 Introduction
- 8.2 Energy Conservation
- 8.3 Energy Development & Environment
- 8.4 Saving the Non Renewable
- 8.5 Enhancing the Renewable

## **Unit 9 Environmental Education**

- 9.1 Impact & Approach
- 9.2 Review of Past Activities
- 9.3 Future Strategies
- 9.4 Public Awareness & Participation

## **STUDENT GUIDE**

Dear Student,

Assalam-o-Alaikum,

We welcome you to PGD M.S leading to Environmental Design Course entitled “Environmental Planning and Practice”. This course is the part of the first semester of your PGD leading to MS program. For introduction to the course please go through the introductory pages of the course book, here some guidelines for successful completion are given.

In order to understand the course content it is vital to know its aims and objectives properly. Let’s go through its aims and objectives first.

### **Course Objectives**

This course aims to build the basic concepts and back ground of the students regarding the environment, its components, their interaction, the issues and their remedies. Where other courses are designed to improve your skills this course would develop your basic knowledge.

### **Details of the Course**

Unit No. 1 is the introductory unit that introduces the whole course to you. Studying it will make you familiar of what you are going to study in the following units.

Unit No. 2 is an overview of relationship of life to its surrounding and their impact on each other.

Unit No. 3 emphasizes the major environmental issues that the world is facing now.

Unit 4 looks into the international issues in Pakistan and elucidates the position where Pakistan stands in this regard.

Unit No. 5 includes a detailed description of the relationship of environment and human settlements.

Unit No. 6 is related to the environmental law and its implementation in Pakistan.

Unit No. 7 consists of the details of rules and regulation formed and observed in Pakistan regarding Environment.

The engineers, architects and planners can play a vital role to conserve energy while dealing with built environment.

The Unit No. 8 includes conservation of energy in industry, agriculture and transport sectors but the main emphasis is laid on the building sector.

Unit No. 9 deals with the public awareness and participation regarding environment.

This course would therefore be a comprehensive approach to develop the basic understanding of students regarding environmental studies.

### **Part Time Tutors/Lecture Sessions**

Students are allocated a part time tutor. The name and address of your tutor will be provided to you as earlier. The tutor is to help and guide you in studying the books and conducting activities related to study units. You 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. The specific dates in the form of lecture session 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 40 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 of 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 assignment.*

### **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 of 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 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**

Workshop will be arranged for two 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 specialist on important topics. 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 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/programme coordinator. Suggestion for improvement will also be welcomed.

We wish you all the best.

**Dr. Nomana Anjum**

Chairperson / Programme Coordinator  
Allama Iqbal Open University, Islamabad

## **TUTOR GUIDE**

Dear tutor,

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

The 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 distant-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 design and environmental sustainability.

### **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 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 depress 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.

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

***You are therefore requested to mark the assignments within 15 days and return these with detailed comments within the schedule 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 another assignment which is research based and 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 and Field Visit**

A three-day's 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 be delivering lectures to the students in the main areas of the subject.
- ◆ Secondly they would be taken to the field visit the details of which will be mailed to you later.
- ◆ Thirdly the students would be presenting their research based assignment and you are required to mark the assignments after their presentation.

## **LIST OF PRACTICAL**

**Credit: 01**

- ◆ Assessment of water samples (drinking, municipal and industrial waste water) for physical and chemical analysis by using standard of American Public Health Association methods.
- ◆ To Demonstrate on Grab and Composite sampling procedures, how to select sampling sites, sampling, handling and transportation of samples (air, water soil, materials etc) to the laboratory.
- ◆ To assess the pollution load of a nearby stream/nullah (in or outside campus) for examination of Pollution Load / strength of water by using in-house facilities and expertise.
- ◆ Assessment of organic and inorganic solids in a measured quantity of water/waste water for determination of water quality.
- ◆ Assessment of Ambient Air quality of Islamabad and adjoining areas by using Air quality analyzer and its comparison with WHO standards.

### **Reference:**

APHA, (1985), "Standard method for the examination of water and waste water", Washington DS.

**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: Environmental Planning & Practice (1576)      Semester: Spring, 2013**  
**Level: Post Graduate      Total Marks: 100**  
**Credit: 4(3+1)      Pass Marks: 40**

*Note: 10 Marks for attendance & class participation*

**ASSIGNMENT No. 1**

**(Units: 1–7)**

- Q.1 a) "Environmental Planning is necessary for achieving a Sustainable Community". Comment by giving examples from the local context.  
b) Why problems related to sustainability cannot be solved without public partnership? **(12)**
- Q.2 Biodiversity is declining day by day, do you think it is important to conserve the living creatures, and does this decline reflect any harm to the human life? Explain your opinion with examples. **(12)**
- Q.3 a) Discuss the major environmental problems in Global Perspective currently. Also highlight its effects on Life?  
b) As it is said that "Development and Industrialization are the main cause of Environmental Degradation" then, what is to be Sustained, "Environment or Development". Elaborate your opinion logically. **(14)**
- Q.4 a) Discuss the three major rock types. Which are the ore deposits present in the rocks that are used as materials for construction?  
b) Describe the composition and structure of Atmosphere. **(12)**
- Q.5 Enlist and discuss major environmental problems of Pakistan. **(12)**
- Q.6 a) What are the main causes of air pollution in urban areas of Pakistan? How Air Pollution can be controlled to make a clean city environment.  
b) "Urbanization trend has eaten up most of our agricultural land". Discuss and suggest some remedial measures to conserve the precious fertile land of our country. **(14)**
- Q.7 Analyze the implementation of environmental legislation in Pakistan and discuss the problem associated with its implementation. **(12)**

- Q.8 a) What is the importance of wetlands?  
b) What are the effects of loss of top soil due to erosion? (12)

## ASSIGNMENT No. 2

(Units ....)

**Total Marks: 100**

Second assignment of this course comprises of two parts. Part one is to prepare a research report and to present it in the workshop prior to the final examination. Part two consists of practical component of this course.

### General Instructions

- ◆ This assignment is of a practical nature, you have to prepare a design proposal and present it on schedule time/date.
- ◆ The workshop component is mandatory for all the students. You cannot sit in the final examination without completing this project and presenting it in the workshop.
- ◆ This assignment requires through review of literature to develop the conceptual frame work before conducting the field research.
- ◆ Your research report should be at least 20-25 typed pages covering both theoretical and practical including the following sections;
  - a) Introduction and objectives of your study.
  - b) Methodology adopted for this study.
  - c) Review of literature.
  - d) Data analysis with statistics and graphical representation.
  - e) Conclusions and Recommendations.
  - f) Appendices and Bibliography.
- ◆ As the student is supposed to do the presentation in the workshop to the resource persons and course mates, he/she should prepare power point presentation. You are advised to consult with the course material frequently as you under take your design project. If your need any guidance, you may contact your tutor or write to the programme coordinator.
- ◆ Prepare three copies of this assignments one for yourself, one for the tutors and the third one for the department of Home and Health Sciences (AIOU) for record. Attach assignments forms with the assignment to be submitted for the checking/marking.

## **PART I (Topic for Report Writing)**

**Theme of Project Proposals:**

**Marks: 80**

Planning for Environmental sustainability is a diverse and dynamic field examining the interaction between people and their surroundings. This part of Assignment is mainly concerned with the use of natural resources and the attainment of more sustainable lifestyles whilst protecting critical natural capital.

**Note:** Select any two activities from the following and prepare their research proposals according to the general instructions given above.

### **Activity 1: Planning for Environmental Sustainability**

Visit to any Industrial Estate (nearby to your region), collect and analyze the following information:

- ◆ Location of the industrial estate.
- ◆ Type, Sources and Transportation of raw material used by the different industries.
- ◆ Nature of products produced.
- ◆ Composition of the waste released.
- ◆ Waste treatment and disposal system followed in by different industries.
- ◆ Potential for Reuse/recycling of waste material produced.
- ◆ Flaws in the Waste Disposal System.
- ◆ Suggestion and Recommendation for further improvement.

### **Activity 2: Conservation and Sustainable Development**

Critically review the National Conservation Strategy (PNCS) and provincial conservation strategy. Find out the criteria for Sustainable Development of Pakistan mentioned in each strategy. And analyze the targets achieved in the fourteen (14) core areas of PNCS (from 1992 till 2008)

### **Activity 3: Natural Disaster and Human Settlement**

Suppose you are a regional planner and you have given the assignment of preparation of disaster management plan for your region under the available resources. Prepare a comprehensive plan that contains complete information regarding the team / group you are going to select and the process to implement your disaster management plan.

## Part II (Practical Activity)

**Marks: 20**

**Note:** At least 50% of the enlisted Practicals will be performed during the workshop. Selection of the practical is to be performed during workshop depending on the availability of the resources.

- ◆ Assessment of water samples (drinking, municipal and industrial waste water) for physical and chemical analysis by using standard of American Public Health Association methods.
- ◆ Demonstration of Grip and Composite sampling procedures, how to select sampling sites, sampling handling and transportation of samples (air, water, soil, materials etc) to the laboratory.
- ◆ Assessment of the pollution load of a nearby stream/nullah (in or outside campus) for examination of Pollution Load / strength of water by using in-house facilities and expertise.
- ◆ Assessment of Ambient Air quality of Islamabad and adjoining areas by using Air quality analyzer and its comparison with WHO standards.

### **MARKING GUIDE**

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

For the theory based assignments you are requested to follow the marks division as indicated on the assignment that is ten questions, each of ten marks 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.....	40 marks
Report writing .....	20 marks
Presentation in the workshop.....	20 marks
Practicals.....	20 marks

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