

# ENVIRONMENTAL DESIGN

**RESEARCH METHODOLOGY (1578)**

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*Supplementary Material  
Spring, 2014*

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

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**(Department of Home and Health Sciences)**

**Course: Research Methodology (1578)**  
**Level: Post-Graduate**

**Semester: Spring, 2014**  
**Credit: 4 (3+1)**

**CHECKLIST**

**The study pack contains:**

1. Course Book
2. Course Outline (Units1-9)
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.**

## STUDENT GUIDE

Dear Student,

Assalam-o-Alaikum

We welcome you to the PGD leading to MS Environmental Design Course entitled “Research Methodology”. This course is the part of the (1st) 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 contents, 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 background of the students regarding research and techniques to conduct a valid and purposeful research. Where other courses are designed to improve your skills related to the environmental studies this course would develop your basic knowledge about research methods and techniques.

### **Part Time Tutors**

Students are allocated a part time tutor. The name and address of your tutor will be communicated through post office to you concerned AIOU Regional Office. 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 time table provided to you.

Schedule for lecture sessions are arranged on fortnightly bases. The specific dates in the form of tutorial schedule 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 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 for 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 does 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>Units</b>	<b>Assignments</b>	<b>Study Period</b>
1 – 2		4 weeks
3 – 6		4 weeks
7	Assignment 1	2 weeks
8 – 9		2 weeks
Revision	Assignment 2	4 weeks
Preparation for examination		2 weeks

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

### **Practical Workshop**

Practical 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 in 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

Department of Home and Health Sciences  
Allama Iqbal Open University, Islamabad

## TUTOR GUIDE

Dear Tutor,

Students enrolled in PGD Leading to MS 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 (AIOU Regional Campus Karachi, Main Campus Islamabad, AIOU Regional Campus Lahore). 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 hurt 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.

**Assignment two 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).**

It is anticipated that the student will submit their assignments 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 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 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**

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 be delivering lectures to the students in the main areas of the subject.
- Also, the students would be presenting their research based assignment and you are required to mark the assignments after their presentation.

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## **COURSE OUTLINE**

**Course: Research Methodology (1578)**

**Credit: 4 (3+1)**

**Programme: Environmental Design**

**Level: Post Graduate**

**Reference book:** *Research methodology- by Ranjit Kumar 1999.*

### **Unit-1 Introduction to Research**

- 1.1 Application of research
- 1.2 Definition of research
- 1.3 Characteristics of research
- 1.4 Types of research
- 1.5 Paradigms of research
- 1.6 The Research Process (an eight step model)

### **Unit-2 Reviewing the Literature**

- 2.1 Reasons for reviewing the literature
- 2.2 Procedure for reviewing the literature
- 2.3 Writing up the literature reviewed

**Unit-3 Formulating a Research Problem**

- 3.1 The research problem
- 3.2 Sources of research problem
- 3.3 Steps in formulation of a research problem
- 3.4 The formulation of objectives

**Unit-4 Identifying Variables and Constructing Hypothesis**

- 4.1 The definition of a variable
- 4.2 Types of variable
- 4.3 Types of measurement scale
- 4.4 The functions of a hypothesis
- 4.5 The characteristics of a hypothesis
- 4.6 Types of a hypothesis

**Unit-5 The Research Design**

- 5.1 Definition of a research design
- 5.2 Function of a research design

**Unit-6 Selecting a Model of Data collection**

- 6.1 Collecting data using primary sources
- 6.2 Collecting data using secondary sources
- 6.3 Selecting the research tool

**Unit-7 Establishing the validity and reliability and Collection of Sample Size**

- 7.1 Concepts of validity
- 7.2 Types of validity
- 7.3 The concept of reliability
- 7.4 Principles of Sampling
- 7.5 Aims in Selecting the Sample
- 7.6 Types of Sampling

**Unit-8 Data Collection, Processing and Presentation**

- 8.1 Ethical Considerations Concerning Research
- 8.2 Editing and Coding the Data
- 8.3 Analyzing and displaying the data
- 8.4 Role of Computer in Research

**Unit-9 Writing a Research Report**

- 9.1 Research writing in general
- 9.2 Referencing
- 9.3 Writing a bibliography
- 9.4 Developing an outline
- 9.5 Writing about a variable

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**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: **Research Methodology (1578)**  
Level: **M.Sc**

Semester: **Spring, 2014**  
Total Marks: **100**  
Total Marks: **40**

**ASSIGNMENT No. 1**  
(Unit: 1-7)

*Note: Answer the following questions. All questions carry equal marks.*

- Q.1 Differentiate between qualitative and quantitative research? Highlight the applications of research in different fields of study. (20)
- Q.2 Discuss the importance of formulating a research problem? Write statement of problem for "A study of alternative energy sources to minimize energy crises". (10)
- Q.3 What is the purpose of formulating research questions or hypothesis in research? Propose types of hypothesis for the following research study. "A study of alternative energy sources to minimize energy crises". (10)
- Q.4 Differentiate between theoretical and conceptual framework of research? Explain with examples.
- Q.5 What are the motives of "**Literature Review**" before undertaking a research activity? Also discuss the rules for writing up the literature reviewed. (15)
- Q.6 Discuss different types of sampling techniques? What is the difference between random sample and systematic random sample? (15)
- Q.7 What is the significance of validity and reliability for generalizing the results of field research? (15)
- Q.8 What are the different styles of coding? Explain two popular styles of writing the References with examples. (15)



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## **ASSIGNMENT No.2**

### **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
  - b) Identifying Problem
  - c) Objectives of the Study
  - d) Hypothesis to be Tested
  - e) The Study Design
  - f) The Setting
  - g) Sampling Protocol
  - h) Analysis of Data
  - i) The Structure of Report
  - j) Problems and Limitations
  - k) Work Schedule
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. You are supposed to do a presentation in the workshop to the resource person and course mates; you should prepare a power point presentation for illustration.
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).

## TOPICS FOR REPORT WRITING

### Topic 1:

Design an appropriate **Research Tool** for a comparative study on the Hospital Waste Management (one from government sector and other from private sector). The questionnaire must contain all the possible information by carefully selecting all the variables to get the reliable results.

### Topic 2:

Note: Formulate **hypothesis** and identify all the possible **variables**. And discuss acceptance or rejection of hypothesis in the light of the results.

Select and study any three buildings constructed in your city in government sector within the last ten years (which may be an educational institute, an office etc.). Find out how user-friendly they are and the amenities provided to their working staff.

### Topic 3:

Conduct an interview taking a sample size of at least 50 people to find out their views regarding the road network in your city, the problems faced by the people and the improvements they suggest to overcome these problems. Write a research report after analyzing the data you have collected.

## MARKING GUIDE

It is anticipated that the tutors 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.