

ENVIRONMENTAL DESIGN

BUILDING EVALUATION TECHNIQUES

Supplementary Material
Spring, 2014

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

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(Department of Home and Health Sciences)**

CONTENTS

The study pack for “**Building Evaluation Techniques**” includes the following items:

1. Course Book
2. Course Outline(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 from 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/Chairperson
Allama Iqbal Open University
H-8 Islamabad**

STUDENT GUIDE

Dear student,
Assalam-o-Alaikum

We welcome you to the MS. Environmental Design Course entitled “Building Evaluation Techniques”. This course is an optional course of the first semester of your 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.

Details of the course

Unit–1 is the introductory unit that introduces you with the basic concepts of building evaluation and its importance.

Unit–2 emphasizes on planning and conducting evaluations.

Unit–3 covers several case studies that will broaden your vision regarding the significance of building evaluation

Unit–4 is related to offices, workplaces and organizational arrangement and design

Unit–5 looks into matching demand and supply regarding evaluation of buildings.

Unit–6 is related to the user participation and its importance in evaluation of buildings

Unit–7 is focused on specific techniques regarding indoor air quality and energy management

Unit–8 discusses the checklists and framework for checking buildings

Unit–9 provides you with the guidelines for developing the personalized checklists and evaluations techniques.

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 lecture sessions 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 three prescribed forms each 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 17th and 18th weeks are kept for general assessment and for final examination.

| S. No | Units | Assignments | Study period |
|-------|-----------------------------|--------------|--------------|
| 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 11th and 12th 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 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. 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
Programme Coordinator/Chairperson

TUTOR GUIDE

Dear tutor,

Students enrolled in MS. Environmental Design offered through the distance learning system belong to a number of professions and have a variety of educational background 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 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 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.

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 with in 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 and will be marked by you.

Workshop

A three-day 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.
- The students would be presenting their research-based assignment and you are required to mark the assignments after their presentation.

Regards,

Dr. Nomana Anjum
Programme Coordinator
Chairperson

BUILDING EVALUATION TECHNIQUES

Programme: Environmental Design
Credit: 4(3+1)

Level: MS.

- Unit.1 Importance of Building Evaluation**
- Unit.2 Planning and Conducting Evaluations**
- 2.1. Roles in an Evaluation Process
 - 2.2. Basic Phases and Tasks in an Evaluation
 - 2.3. Alternative Strategies in Building Evaluation
 - 2.4. Issues and Options in the Planning and Management of Building Evaluations
- Unit.3 Evaluation as Place Making: Motivations, Methods and Knowledge**
- 3.1. Evaluation as Place making - Case Studies
- Unit.4 Evaluation Practices**
- 4.1. Planning for Adaptability
 - 4.2. Building Appraisal- Measuring the Capacity of Office Building to Accommodate Change
 - 4.3. Organizational Workplace Analysis for Selecting and Designing Alternative Workplace Strategies
 - 4.4. User Satisfaction
- Unit.5 Matching Demand and Supply**
- 5.1. Physical Building Audit Procedures and Maintenance Management
 - 5.2. Functional Suitability Assessment
 - 5.3. Building Quantity Assessment
 - 5.4. Serviceability Tools and Methods: Matching Occupant Requirement and Facilities
- Unit.6 User Participation**
- 6.1. Selecting Accommodation
 - 6.2. Building Evaluation as an Accountability Measure
 - 6.3. Case Studies of Building Evaluation with user Participation
- Unit.7 Focused Evaluations**
- 7.1. Evaluation of Indoor air Quality
 - 7.2. Evaluating Energy Measurement
 - 7.3. Use of Visual Methods
 - 7.4. User's Response in Pre-Design and Post-Occupancy Research.
- Unit.8 Evaluation Resources**
- 8.1. Building Performance Checklist
 - 8.2. Framework for Checking Building
 - 8.3. Attribute and Factor Descriptions
- Unit.9 Guidelines for developing the personalized checklist & evaluation Techniques**

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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: Building Evaluation Techniques (1588/7774)
Level: MS.**

**Semester: Spring, 2014
Total Marks: 100
Pass Marks: 50**

**ASSIGNMENT No. 1
Units (1-7)**

Answer the following question.

- Q. 1 What are the merit and demerits of Building Evaluation? List method of evaluation of a five hotel building and list preliminary checks/list which will be helpful in detail evaluation? **(14)**
- Q. 2 a) What is the application of "Physical Building Audit Procedures"
b) How Occupants' Requirements can be matched to facilitate them for optimum performance? **(12)**
- Q. 3 How capacity of Office building can be measured to accommodate change? Narrate the steps involved in Building Quality Assessment. **(12)**
- Q. 4 a) How REN (Real Estates Norms) can be used as a method for evaluating office location and office building?
b) What problem would you expect if the office building you selected for evaluation is too complex? **(12)**
- Q. 5 a) What is the preliminary information collected by an audit specialist?
b) What are the precautions that must be taken care of during the audit process?
c) What are the five steps of "performance" in the development of "ESTATE CODE"? **(14)**
- Q. 6 Describe focus evaluation, methods, steps and goals along with objectives. How thermal comfort can be measured through this evaluation method? **(12)**
- Q. 7 What are the critical factors in life costing of building? What are the commonly used measures to express total life cost over a particular period. **(12)**
- Q. 8 How user response can be effectively used in research at pre-design and post occupancy stages? **(12)**

Course: Building Evaluation Techniques (1588/7774) Semester: Spring, 2014
Level: MS.

Total Marks: 100
Pass Marks: 50

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 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 (AIU) 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 (AIU).

TOPICS FOR REPORT WRITING

Select any one project from the following:

Project 1: Pick up any university complex and evaluate it with the option that building complex is selected for a future use as a hospital due to dire need in the area. What different methods and processes you will adopt with justifications and need.

- Provide background and current building features.
- Carry out the need assessment of hospital
- Use different techniques to assess need
- Prepare different checklists of assessment
- Finally conclude and give your recommendation

Project 2: How you will weigh the aesthetic, environmental and architectural value to customer/user of that facility. You can pick up a few building structure (Hotel) and follow the learnt methods which support your analysis and should provide relevant data of your analysis.

- Provide the hotel background and type of its business
- Carrying out the different methods of interviewing the customers (internal (employees etc) and externals by using questionnaire, Performas, any other methods learnt)
- Relate the aesthetic, environment and architectural with the finding
- Conclude your finding and give recommendation for the commercial business management.

Project 3: Compare the productivity with the type of structures (buildings) and elaborate the environmental data which may add into productivity of people working in it. Any two multi national companies can be picked and used as case study.

- Description of business (head quarter of multi national organization).
- Type of building facilities and nature of work being done there provide detail environmental data (internal as well as external).
- Relate the aesthetic, environment and architectural features with the findings and discuss negative and positive aspects of environmental factors.
- What you will recommend to improve productivity.

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.