

Theoretical and practical courses-Ilam University of Medical Sciences

Introduction of the course: Assessing the effects of development on the environment in the second semester of the academic year 2020-2021

School: Health

Department: Environmental Health Engineering

Course and degree: Environmental Health – Undergraduate

Day, time and place: Wednesday 10-12

Number and type of theoretical unit 2 Name of the person in charge of the course (course instructor): Ali Nikonhad

Prerequisite courses: Office address: School of Health

Phone and contact days: 09188425954

The general purpose of the course: to acquaint students with the concepts of evaluation, its stages and how to evaluate the environment of different projects.

Lesson Description: The expansion of industries and the upward growth of different economic sectors in developed countries without paying attention to environmental protection cause the destruction of natural ecosystems and the emergence of severe health effects in this country. Air pollution causes a variety of diseases such as asthma and allergies, cancer and cardiovascular disease. Ozone, which acts as a protective shield for the earth, has been severely damaged by global warming, with droughts in some areas and floods in others. All of the above factors have led scientists and officials to introduce new concepts to prevent environmental degradation. The most important efforts were manifested in a concept called sustainable development, which is one of the key tools to achieve it is the implementation of environmental impact assessment studies of construction plans and projects. These studies, by examining the details of the projects, identify and analyze their effects and then provide practical solutions to reduce the negative effects.

Students at the end of the course will be able to make an environmental assessment report related to carrying out a project using the method

Prepare various checklists, matrices, etc. and also review it.

Specific or partial objectives of the course:

1. Familiarity with the introduction, generalities, background and concept of environmental assessment
2. Familiarity with some environmental concepts as well as general familiarity with how to present a brief assessment report
3. The need for environmental assessment and its objectives

4. Familiarity with the fields of environmental analysis
5. Familiarity with the Assessment Impact Environment (EIA) process
6. Familiarity with the environmental assessment process
7. Familiarity with the fields of natural environment assessment
8. Major environmental parameters of soil and water projects
9. Familiarity with the method of environmental impact analysis in EI, (details,

Matrix)

10. Familiarity with the method of environmental impact analysis in EIA (networks, page overlays, similar models

Making)

11. Familiarity with the method of environmental impact analysis in EIA (diagram system, cost analysis methods)

Benefit, Environmental indicators, Electrical method)

12. Familiarity with Life Cycle Assessment (LCA)
13. Familiarity with the principles of management, preparation of an environmental report
14. Submitting a report assessing the environmental impact of a particular industry by students with a review of the report

Student duties (student homework during the semester):

- 1- Studying the issues raised in previous meetings
- 2- Asking possible questions about the ambiguities of the previous session
- 3- Participate in class discussion + do class assignments

The main sources of the lesson: The main sources of the lesson

1. Introduction to Environmental Impact Assessment: Dr. Seyed Mahmoud Shariat, Dr. Seyed Massoud Manavari, Environmental Protection Organization Publications, 1996
2. Environmental Impact Assessment: Dr. Massoud Monavari, Environmental Protection Organization Publications, Environmental Assessors Consulting Engineers Co., 2005
3. Collection of Laws and Regulations of Environmental Protection of Iran, Volumes 1 and 2, Compiled by: Legal Office and Parliamentary Affairs, Publications of the Environmental Protection Organization, March 2004

4. Environmental Impact Assessment, Experiences, bottlenecks and future trends (United Nations Environment Program, Environment and Economics Unit) Saeed Ferdowsi, Fereydoun Moghaddasi, Environmental Protection Agency Publications, 2005

5. Environmental Impact Assessment: R.R.BAR THWAL, 2002

6. Environmental Contaminants Assessment and Control: Daniel A. Valero, 2004

7. Environmental Risk Assessment of Genetically Modified Organisms Vol.1, A. Hi beck and D.A. Andrew, 2004

Teaching method + teaching aids used: video projector, computer and internet, educational articles, PowerPoint

Methods and time of assessment and evaluation of the student and the bar related to each evaluation:

- Lesson rules and expectations from students:

Schedule and predicted contents of each theory sessions 2 points + quiz 3 points + final exam 15 points

Session	Topic	Necessary preparation of students before the start of the class
1	1- Definition of environment 2- Definition of environmental elements 3- Laws and regulations of Iran and the world 4- Defining important words 5. Express the general structure of an environmental assessment	Timely attendance at class Asking possible questions about the lesson
2	1- Definition of concepts 2- Introducing the responsible organizations and institutions 3- 3- Methods of predicting effects 4- Methods of reducing the effects	Study the contents of the previous session lesson Timely attendance at class Asking possible questions about the ambiguities of the previous lesson
3	- Student with terms such as atmosphere, bioaccumulation, biotherapy, biosphere, biota, carbon sequestration, climate change, ecology, endangered species law, erosion, global warming, environmental impact assessment report, social, environmental consequences Familiarize yourself with environmental standards and other related terms, as well as their English equivalents	
4	1- The student should know and study the effects of a proposed construction activity. 2- The student should know the evaluation including comparing different options 3- The student should know the method of erasing and repairing the damages caused to the environment	

	4- The student should learn the methods of balancing the long-term and short-term development goals in development projects	
5	<p>1- The student knows how to resolve community dissatisfaction in a project.</p> <p>2- The student should explain the prediction of important and sustainable environmental effects.</p> <p>3- The student can explain the application and integration of environmental criteria in development planning to the authorities.</p> <p>4- The student can explain to the officials how to maintain the quality of renewable resources in order to exploit the maximum efficiency with proper maintenance of life cycles.</p>	
6	<p>1- The student should know the necessary criteria for projects that need environmental assessment</p> <p>2. The student should name the types of projects that need to be evaluated</p> <p>3- The student should know which project in which climate of Iran needs to be evaluated</p>	
7	<p>1- The student should know the effects of the project on the physical environment.</p> <p>2. The student should know the effects of the project on natural environments</p> <p>3. The student should know the effects of the project on social and cultural environments</p> <p>4 Students know the effects of the project on other development projects</p>	
8	<p>1- The student should know the screening process in the evaluation</p> <p>2- The student should know the projects that must be implemented due to national security and their exceptions have exceptions.</p> <p>3. The student is aware of projects that are likely to have specific environmental impacts or require more limited environmental analysis.</p>	
9	<p>1- The student should mention the importance of the preliminary evaluation</p> <p>2. The student can name the main issues in a preliminary evaluation report</p> <p>3. The student can describe the proposed project</p>	
10	<p>- The student is familiar with the basic steps in management and reporting</p> <p>2. The student has learned to determine the depth and scope of work</p> <p>3. The student can explain how the project affects the environment.</p>	
11	<p>1- The student should get acquainted with the basic steps in managing and preparing a report</p> <p>2. The student has learned to determine the depth and</p>	

	scope of work 3. The student can explain how the project affects the environment.	
12	1- The student should know how to identify the types of water resources in the area 2- The student should get acquainted with water pollution caused by the construction of each project 3- The student can suggest ways to prevent pollution of water resources caused by the project	
13	1. The student knows the land and climate of a project 2. The student knows the vegetation, wildlife and natural areas of a project 3. The student should know the land uses around the location and physical characteristics of the area of a project 4. The student knows the infrastructure, public services, scope of a project 5. The student knows the levels of air pollution within a project 6. The student knows the sound levels of a project	
14	1. The student knows the extent of the effects 2. The student knows the range of effects 3. The student recognizes the importance of effects 4. The student can position the effect indicators in order	
15	1. The student is familiar with the undergraduate method in environmental assessment 2. The student is familiar with the fine-grained method in environmental assessment 3. The student is familiar with the matrix method in environmental assessment 4. The student is familiar with the network method in environmental assessment 5. The student is familiar with the method of overlaying pages in environmental assessment	
16	1- The student should be acquainted with the importance of the health attachment report 2- The student can describe the attached sections of health 3- The student can identify the necessary parameters to describe the health status of the area affected by the project 4- The student can explain the difference between a brief report and a detailed health appendix	
17	Exam	Read the contents of all sessions