

UNIVERSITY OF JORDAN
School of Engineering
Department of Civil Engineering
(0901573) Environmental Impact Assessment
3 Credit Hours
First Semester 2016 – 2017



Lecturer: Dr. Ramia Ajarmeh

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Office and Office Hours: Office # 312 Civil Engineering Department

Sun, Tue, Thu 09:00 am – 10:00 am

Mon, Wed 09:30 am – 10:30 am

Time & Place:

Environmental Impact Assessment [section (1) – Sun, Tue, Thu 10:00 am – 11:00 am]: Civil 104

Course Description:

Introduction to the Environmental Impact Assessment (EIA), Jordanian regulation for EIA, introduction to the concepts, methodologies, valued environmental components and various stages of the EIA process which include: screening, scoping, baseline conditions, evaluation and impact assessment, impact management, Environmental Management Plan (EMP) and environmental monitoring program, EIA and EMP reporting, public consultation, reviewing, Environmental Auditing (EA), appeal rights and decision making.

Course Objectives:

To learn and understand principles, process, and necessary techniques for environmental impact assessment, mitigation and monitoring. Analyze impact on resources and environment as well as evaluate impact from development projects.

Pre-requisite:

0941471 Wastewater Engineering

References:

- Lectures' notes and handouts
- Case studies
- Useful relevant web links:
http://eia.unu.edu/course/index.html%3Fpage_id=173.html
<http://www.unep.ch/etb/publications/EIAMan2editionToc.php>
- Wathern P. 1995, Environmental Impact Assessment: Theory and Practice. Biddles Ltd, Guildford and King's Lynn, Great Britain, 332 pp.
- Lee, N. and C. George (editors). 2000. Environmental Assessment in Developing and Transitional Countries. John Wiley & Sons Ltd, England. 290 pp.
- United Nations. 1988. Environmental Impact Assessment: A Management Tool for Development Projects. Proceedings of the Expert Group Meeting on Environmental Impact Assessment of Development Projects Bangkok, Thailand. 155pp.

Grading:

- Midterm exam (20%);
- Team work, assignments and presentations (15%);
- Team member /individual Presentation (15%): Different projects will be assigned to the teams of students. Each team will work on the assigned project to present specific EIA components; and
- Final exam (50%).

Exams: Cheating will result in an F grade. No Makeup exams.

Attendance: Students are expected to attend **EVERY CLASS SESSION** and they are responsible for all material, announcements, schedule changes, etc., discussed in class. The university policy regarding the attendance will be strictly adhered to.

Topics

- Definition, history of environmental impact assessment and EIA regulation in Jordan.
- EIA Process, project description and Terms of Reference (TOR).
- Screening, Scoping, Public Participation.
- Valued Environmental Components (VECs), Existing Conditions, Predication and Assessment of Impacts:
 - Physical Environment (Geology, soils, minerals, Climate, Water Resources, Water Quality, Air, Noise).
 - Biological Environment (Terrestrial Ecosystems, Wetland Ecosystems, Aquatic Ecosystems, Threatened and Endangered Species)
 - Human Resources (Demographics, Economics, Land Use, Infrastructure)
 - Human Resources (Archaeological and Historic)
 - Human Resources (Public Health and Occupational Health and Safety).
- Tools for environmental impact assessment: Checklist, Network, Matrices, Overlays, Mathematical Modeling and Expert advice.
- Environmental Management Plan (EMP), Mitigation and Monitoring programs.
- EIA reporting.
- EIA reviewing.
- Environmental Auditing (EA).