



Course Specification

— (Postgraduate Programs) عبدالمحسن

Course Title: Sustainable development and Environmental impact assessment

Course Code: BIO-6001

Program: Master of Science in Applied Biology (Industrial and Environmental Biotechnology & sustainability)

Department: Biology عبدالمحسن

College: Science

Institution: Imam Mohammad Ibn Saud Islamic University

Version: 1

Last Revision Date: Pick Revision Date.

عبدالمحسن



عبدالمطعم بن أبي الطموزي يوفيه الله الرحمن الرحيم

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عبدالمطعم بن أبي الطموزي يوفيه الله الرحمن الرحيم





A. General information about the course:

1. Course Identification:

1. Credit hours: 2 (Lecture 2+ Lab 0)

2. Course type

A. ☐ University ☐ College ☐ Department ☒ Track

B. ☐ Required ☒ Elective

3. Level/year at which this course is offered: (Undetermined level)

4. Course general Description:

This postgraduate course provides the candidates with the concepts of sustainable development and the processes involved in conducting Environmental Impact Assessments (EIAs). It provides students with the knowledge and skills necessary to evaluate the environmental, social, and economic impacts of development projects and to recommend sustainable practices. This interdisciplinary course offers a comprehensive exploration of sustainable development principles and the practices of Environmental Impact Assessment (EIA). It aims to equip students with an understanding of how sustainable development can be achieved in the context of various development projects and how these projects can be planned and executed with minimal environmental impact. The course delves into the concept of sustainable development, examining its historical context, theoretical underpinnings, and its practical application in various sectors. Students will explore the interplay between environmental, economic, and social pillars of sustainability, and understand how these pillars are integrated in the planning and execution of development projects. A significant focus of the course is on Environmental Impact Assessment - a critical tool used worldwide to predict and manage the environmental consequences of proposed projects. Students will learn about the different stages of EIA, including screening, scoping, impact analysis, mitigation, and monitoring. The course will also cover the legal and policy frameworks that govern EIAs in different contexts, both internationally and nationally. Throughout the course, emphasis will be placed on critical thinking, ethical considerations, and the development of practical skills necessary for conducting and evaluating environmental impact assessments. Students will engage with current debates and challenges in the field, preparing them for careers in environmental planning, policy-making, consultancy, and research in both the public and private sectors.

5. Pre-requirements for this course (if any):

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6. Co-requisites for this course (if any):



7. Course Main Objective(s):

The objective of this course is to provide the students with a comprehensive understanding of the theoretical foundations, practical skills, and applications of bioinformatics in the field of molecular biology and genomics. Through a combination of lectures, hands-on exercises, and projects, students will acquire various knowledge and skills.

2. Teaching Mode: (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	-	100%
2	E-learning	-	-
3	Hybrid - Traditional classroom - E-learning	-	-
4	Distance learning	-	-

3. Contact Hours: (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	
5.	Others (specify)	
	Total	30

B. Course Learning Outcomes, Teaching Strategies, Assessment Methods



Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Understand the principles of sustainable development, methodologies used in environmental impact assessment.		Two credits weekly lectures	-Quizzes -Presentations -Assignments -written exams
1.2	Explore global challenges and sustainable development goals (SDGs)		Two credits weekly lectures	Quizzes -Presentations -Assignments -written exams
1.3	Explore types of EIAs and their scopes.		Two credits weekly lectures	Quizzes -Presentations -Assignments -written exams
2.0	Skills			
2.1	Analyze and structure the components of EIA report, and critical analysis of EIA reports.		-Two credits weekly lectures -Tutorials	-Presentations -Assignments -written exams
2.2	Apply tools for EIA reports		-Two credits weekly lectures -Tutorials	-Presentations -Assignments -written exams
2.3	Critically analysis of EIA reports.		-Two credits weekly lectures -Tutorials	-Presentations -Reports
3.0	Values, autonomy, and responsibility			
3.1	Show independence and responsibility and cooperate effectively in a team to carry out research work in Sustainability and resilience in project planning		Group discussions	-Presentations -Reports
3.2	Discuss the scientific issues and present research results via oral presentations and in written format.		Group discussions	-Presentations -Reports

C. Course Content:

No	List of Topics	Contact Hours
1.	Introduction to Sustainability Concepts and definitions of sustainability Historical development of sustainability The three pillars of sustainability: Environmental, Social, and Economic Global sustainability challenges and responses	2
2.	Principles of Sustainable Development The Sustainable Development Goals (SDGs) Principles of sustainable development Case studies of sustainable development practices	2
3.	Introduction to Environmental Impact Assessment (EIA) History and evolution of EIA Purpose and importance of EIA Overview of the EIA process Types and scopes of EIAs	3
4.	The EIA Process - Part 1 Screening and scoping in EIA Baseline environmental studies Identification of significant impacts Impact prediction and assessment Mitigation and management of impacts Environmental Management Plans (EMPs)	2
5.	Legal and Policy Frameworks International conventions and agreements National legislation and policies for EIA Compliance and enforcement in EIA	3
6.	Social Impact Assessment and Community Engagement Principles of Social Impact Assessment (SIA) Stakeholder identification and analysis Community engagement techniques	2
7.	Environmental Monitoring and Auditing Post-EIA monitoring Environmental auditing and compliance monitoring Adaptive management in EIA	2



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No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm exam-1	5 th week	20%
2.	Midterm exam-2	10 th week	20%
3.	Assignments, presentations, attendance, data search, participation	Throughout the course duration	20%
4.	Final exam	16 th week	40%

16 th week	40%
en test, oral test, oral presentation, group project, essay, etc.)	

1. References and Learning Resources:

- Hanna, K. S. (Ed.). (2022). Routledge handbook of environmental impact assessment. Routledge.



United Nations University, UNEP, and RMIT University, making it a valuable resource for both beginners and experienced professionals. You can explore this resource at IISD's EIA Online Learning Platform.

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- **UNEP's Massive Open Online Courses: The United Nations Environment Programme (UNEP)** offers a variety of online courses on critical environmental issues. These courses cover topics such as nature-based solutions for disaster and climate resilience, marine litter, and the Source-to-Sea approach. These courses are suitable for a wide range of audiences, including those without an environmental background. More information is available on UNEP's website.
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- **Alison's Principles of Environmental Impact Assessments:** This free online course covers the fundamental principles of EIA and their role in sustainable development. It includes topics like legal and regulatory frameworks, EIA methodologies, public participation, and crafting effective environmental management plans. The course also provides practical insights into EIA review, auditing, decision-making practices, and real-world case studies. You can start this course at Alison's website.
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- **FutureLearn's Environmental Impact Assessment (EIA) Course:** Hosted by The University of Adelaide, this course on FutureLearn guides learners through the EIA process and its alignment with community engagement. It's a skill-oriented course designed for environmental professionals and those seeking to advance their knowledge and career. The syllabus covers the history and principles of impact assessment, different forms of assessments, and practical case studies. You can enroll in this course at FutureLearn's website.
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Electronic Materials

Other Learning Materials

2. Educational and Research Facilities and Equipment Required:

Items	Resources
facilities	Classroom





Items	Resources
(Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	
Technology equipment (Projector, smart board, software)	Projector, smart board
Other equipment (Depending on the nature of the specialty)	

F. Assessment of Course Quality:

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect
Effectiveness of students assessment	Faculty	Direct
Quality of learning resources	Faculty	Direct
The extent to which CLOs have been achieved	Faculty	Direct
Other		

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval Data:

COUNCIL /COMMITTEE	BIOLOGY DEPARTMENT COUNCIL
REFERENCE NO.	23
DATE	23/8/1445

