هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

اعتماد
NCAAA

2024
TP-154

Course Report
(Bachelor)

Course Title:	Foundations of Sustainable Development
Course Code:	EVS 1014
Program:	Bachelor of Science in Environmental Science
Department:	Biology
College:	Science
Institution:	Imam Mohammad Ibn Saud Islamic University
Version:	1
Last Revision Date:	-

Table of Contents

A. General information about the course:

1. Course Identification:

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

2. Course type

A.	☐University	☐College	☒ Department	☐ Track
B.	☐ Required		☒ Elective	

3. Level/year at which this course is offered: (Not determined)

4. Course general Description:

This course provides the candidates with the concepts of sustainable development and the processes involved in conducting sustainable development. 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. 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. The course will also cover the legal and policy frameworks that govern sustainable development, 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 sustainability. 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)**:**

EVS 1110

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

None

7. Course Main Objective(s):
The objective of this course is to provide the students with a with a comprehensive understanding of the theoretical foundations, practical skills, and applications of Fundamentals of sustainable development. 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	**Outline the concepts of sustainable development, and methodologies used in environmental impact assessment.**		Two credits weekly lectures	-Quizzes -Presentations -Assignments -written exams
1.2	**Discuss global challenges and sustainable development goals (SDGs)**		Two credits weekly lectures	Quizzes -Presentations -Assignments -written exams
1.3	**Explain strategies for integrating sustainability into policy-making, planning, and decision-making processes at local, national, and international levels.**		Two credits weekly lectures	Quizzes -Presentations -Assignments -written exams
2.0	Skills			
2.1	**Analyze the interconnectedness of environmental, social, and economic systems within the context of sustainable development.**		-Two credits weekly lectures -Tutorials	-Presentations -Assignments -written exams
2.2	**Evaluate the role of various stakeholders (government, business, civil society, etc.) in promoting or hindering sustainable development practices.**		-Two credits weekly lectures -Tutorials	-Presentations -Assignments -written exams
2.3	**Evaluate the equity dimensions of sustainable development efforts.**		-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**		Group discussions	-Presentations -Reports

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	Sustainability and resilience in project planning			
3.2	**Share in the discussion of 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 Sustainable Development** Definition and principles of sustainable development Historical evolution and milestones	4
2.	**Sustainability Frameworks and Concepts** Triple bottom line approach (economic, social, environmental) Sustainable Development Goals (SDGs)	4
3.	**Interconnectedness of Systems** Interactions between environmental, social, and economic systems Feedback loops and resilience	4
4.	**Environmental Sustainability** Climate change and greenhouse gas emissions Biodiversity conservation and ecosystem services Sustainable resource management (water, energy, land)	4
5.	**Social Sustainability** Equity, justice, and human rights Community development and empowerment Social inclusion and diversity	4
6.	**Economic Sustainability** Circular economy principles Sustainable business practices Green finance and sustainable investment	2

7.	**Sustainable Development Policy and Governance** International agreements and protocols (e.g., Paris Agreement, Kyoto Protocol) National sustainability strategies and action plans Multi-level governance and stakeholder engagement	2
8	**Sustainable Development Challenges and Solutions** Poverty alleviation and social inequality Sustainable urbanization and infrastructure Food security and sustainable agriculture	2
9	**Sustainable Development in Practice** Case studies of successful sustainable development initiatives Best practices and lessons learned Tools and methodologies for sustainable development assessment and implementation	2
10	**Ethical and Cultural Dimensions of Sustainable Development** Ethical considerations in sustainable development decision-making Cultural perspectives on sustainability Indigenous knowledge and practices in sustainable development	2
11	**Future Trends and Opportunities** Emerging technologies for sustainability Green innovation and entrepreneurship Global trends shaping the future of sustainable development	2
12	**Group Projects and Practical Applications** Collaborative projects to address real-world sustainability challenges Field trips, guest lectures, or workshops with practitioners in sustainable development fields	2
Total		**30**

No	List of Topics	Contact Hours
1	**Water Quality Analysis** Conducting water quality tests for examples pH, turbidity, dissolved oxygen, and nutrient levels	2
2.	Water quality and pollutants Identifying pollutants and contaminants in water samples Assessing the impact of human activities on water quality	**2**
3.	**Soil Health Assessment** Analyzing various soil texture, pH, and various nutrient levels Conducting soil erosion experiments Assessing soil compaction and permeability	2
4.	**Environmental Sustainability: Climate change and greenhouse gases** Climate change and greenhouse gas emissions Evaluation of climate change and greenhouse gases Carbon monoxide, carbon dioxide, and other gases.	2
5.	**Environmental sustainability: Light and climate change Sustainability** Conducting various light quality measures e.g Ultraviolet A, UVA, Ultraviolet radiation B, UV-B, and Light quantum, PAR radiations. Assessing the light quality and sustainable development.	2
6.	**Sustainable agricultural practices** Setting up and maintaining organic vegetable gardens or aquaponics systems Monitoring soil moisture, nutrient levels, and plant growth	2
7.	**Sustainable agricultural practices 2** Monitoring nutrient levels, plant growth, photosynthetic efficiency, pigments contents. Experimenting with different agricultural techniques to improve sustainability	2
8	**Sustainable Development Challenges and Solutions** Poverty alleviation and social inequality Sustainable urbanization and infrastructure Food security and sustainable agriculture	2
9	**Waste Audit and Management** Sorting and quantifying different types of waste generated on campus or in the community	2

	Analyzing waste composition and identifying opportunities for waste reduction and recycling	
10	**Waste Audit and Management2** Analyzing waste composition and identifying opportunities for waste reduction and recycling Developing waste management plans and strategies	2
11	**Ecological Monitoring** Conducting biodiversity surveys in local ecosystems Identifying plant and animal species and recording population data Assessing ecosystem health and resilience indicators	2
12	**Group Projects and Practical Applications** Collaborative projects to address real-world sustainability challenges Field trips, guest lectures, or workshops with practitioners in sustainable development fields	2
Total		**30**

D. Students Assessment Activities:

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm 1	5th week	20%
2.	Midterm 2	10th week	20%
3.	Quizzes, Participation, Attendance, Presentations	During the semester	20%
4.	Final Exam	15th week	40%
Total			**100%**

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities:

1. References and Learning Resources:

Essential References	• Robertson, M. (2021). Sustainability Principles and Practice (3rd ed.). Routledge. https://doi.org/10.4324/9780429346668 • Le Blanc, D. (2017). The Sustainable Development Goals: An Ambitious Agenda for the World. New York: Springer. • Stern, N. (2007). The Economics of Climate Change: The Stern Review. Cambridge: Cambridge University Press. • Raworth, K. (2017). Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist. London: Random House Business. • Ukaga, O., & Richardson, R. I. (Eds.). (2014). Sustainable Development: Principles, Frameworks, and Case Studies. New York: Routledge.
Supportive References	• IISD's EIA Online Learning Platform: This platform provides a comprehensive overview of Environmental Impact Assessment (EIA), including its history, approaches, key steps, and case studies. It is designed for EIA trainers, policy-makers, developers, and students. The content is adapted from resources published by the 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. • 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. • United Nations Sustainable Development Goals (SDGs) website: Provides information on the 17 SDGs, progress reports, and resources. • World Bank Sustainable Development: Offers reports, data, and publications on sustainable development topics.

	• Intergovernmental Panel on Climate Change (IPCC): Provides authoritative assessments on climate change science, impacts, and adaptation. • Global Footprint Network: Offers tools and resources for measuring ecological footprint and promoting sustainability. • International Institute for Sustainable Development (IISD): Conducts research and analysis on sustainable development policies and practices. •
Electronic Materials	-
Other Learning Materials	-

2. Educational and Research Facilities and Equipment Required:

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

F. Assessment of Course Quality:

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Direct
Effectiveness of students' assessment	Program director	Direct
Quality of learning resources	Peer Reviewer	Indirect
The extent to which CLOs have been achieved	Program director	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.	**2**
DATE	**21/02/1446 H**