

Syllabus of the new courses

Course Name : Environment: Issue and Global Perspective

Number of credits : 4 ECTS

Period: Spring semester

Coordinator	Dr. Roswati binti Md Amin
Credits	4 ECTS
Lecturers	Dr. Roswati binti Md Amin / Dr. Muhammad Hafeez bin Jeofry
Level	Bachelor
Host institution	Universiti Malaysia Terengganu
Course duration	1 Semester (the classes will be scheduled in accordance with the university timetable)
New/revised	New Course

Summary

This course introduces the student with environmental science knowledge and develops the ability to understand global environmental issues. Students will be able to devise ethical and politically viable plans and strategies to address these issues while balancing the impacts on the society and economy.

Target student audiences

Bachelor of Science students majoring in Marine Science.

Prerequisites

No

Aims and objectives

The main course objective is to teach the concepts of environmental problem at the global view. Students will learn how to propose appropriate methods or strategies to solve the environmental problem such as pollution and conserve our resources.

The objectives of the course are:

- To understand the basic concepts of environmental science and major issues related to the ocean at the global level.
- To examine the relationship between human and environment including the importance of creating a better environment.
- To develop understanding on the relevant steps and solutions towards sustainable development based on environmental perspectives and ethics.

The Authentic Tasks are:

No

General learning outcomes:

By the end of the course, successful students will:

- | | |
|---------------|---|
| Knowledge | ● Explain clearly the basics of environmental science and the function of the earth in the context of human interaction with the earth. |
| Comprehensive | ● Describe the role of humans in solving the environmental issues. |

- | | |
|-------------|--|
| Application | <ul style="list-style-type: none">● Examine the current pollution issues and suggest appropriate plans to minimize the pollution. |
| Analysis | <ul style="list-style-type: none">● Identify and suggest holistic and framework solutions related to global environmental problems. |
| Synthesis | <ul style="list-style-type: none">● Suggest relevant mitigation steps toward sustainable development based on environmental perspectives and ethics. |

Overview of sessions and teaching methods

The course will make most of interactive and self-reflective methods of teaching and learning and, where possible, avoid standing lectures and presentations.

- Learning methods**
- Video presentations
 - Group work, written articles
 - Project Based Learning
 - Literature review

Course outline

Topic 1. Global Issue and Sustainability

- Introduction to sustainable development
- Global issue on environmental pollution

Topic 2. Environmental Pollution Issue

- Air pollution and climate change
- Deforestation
- Species extinction
- Soil pollution and degradation
- Overpopulation

Topic 3. Act Locally Think Globally

- The concept in the context of environment and sustainability
- Globalization in perspectives
- Local action

Topic 4. Climate Change and Global Warming

- Weather vs climate
- What is global warming
- What is climate change

Topic 5. Care Our Home (Documentary Session)

- Climate change – living on the water | DW Documentary (<https://www.youtube.com/watch?v=vy3gMVGwjuc>)
- Plastic Ocean (https://www.youtube.com/watch?v=ju_2NuK5O-E)
- Midway, a plastic island (<https://www.youtube.com/watch?v=lsJqMmuFWO4>)

Topic 6. Ocean Resources and Values

- Environmental issues related to Deep Sea Mining
- Offshore Oil and Gas Exploration Activities
- Marine Ecology and Natural Heritage
- United Nations Convention on the Law of the Sea

Topic 7. Renewable and Non-renewable Energy Resources

- Solar, Wind, Hydro, Tidal, Geothermal and Biomass resources

- Oil, Natural Gas, Coal and Nuclear resources
- Sustainable management of energy resources

Topic 8. Perspectives of human's relationship with nature

- Understanding human-nature relationship across space and time
- Animism belief in modern civilisation
- Environmental Activism
- Sustainable living

Topics 9. Politics, Socio-economic, Environment, and Sustainable Development

- Global commitment to control Climate Change
- Decoupling carbon emission and economic Gross Domestic Product (GDP)
- Carbon emission trading
- The narrative of Climate Skepticism to Environmental Policy

Topics 10. Current Issue discussion

- Cop 21 Paris agreement: A way forward
- 2020 Russia-Saudi Arabia Oil Price War
- Sea level rise: Sinking Nation
- Climate movement: Reality or Trending?

Literature

Compulsory

1. Tyler MG, Scott, S (2017) Environmental Science : Sustaining Your World. National Geographic School Pub.
2. Paul EH (2010) Environmental and Economic Sustainability. CRC Press.
3. Tyler MG (2004) Sustaining the Earth : An Integrated Approach. Thomson Brooks/Cole.
4. Roy MKG (2011) Sustainable Development : Environment, Energy and Water Resources. Ane Books Pvt. Ltd. for CRC Press Taylor & Francis Group.
5. Robert NS (2019) Economics of the Environment : Selected Readings. Cheltenham, U.K.: Edward Elgar Publishing.
6. Tyler MG, Scott, S (2018) Living in the Environment. Boston, MA: Cengage Learning.

Recommended

1. Arms, K. 1994. Environmental science (2nd Edition). Saunders College Pub., Forth Worth.
2. Chiras, D. D. 2006. Environmental science (7th Edition). Sudbury, Mass.
3. Miller, G. T. & Spoolman, S. E. 2016. Environmental science (15th Edition). Pacific Grove, CA.
4. Tyler, M. G. 2001. Environmental science: Working with the earth (8th Edition). Brooks/Cole Pub., Pacific Grove, Calif.
5. Wright, R. T. 2008. Environmental science: Towards a sustainable future (10th Edition). Pearson, Upper Sadle River, New Jersey.

Course workload

The table below summarizes course workload distribution:

Activities	Learning outcomes	Assessment	Estimated workload (hours)
In-class activities (40 hours)			
Lectures	Understand the concept of sustainability and issues related to the environment and humans.	Class participation	28

Tutorial	Understand various pollution types and how we can minimize the effect on the environment.	Class participation and preparedness for discussions	4
In-class assignments	Understand the type of hazards that degrade our environment and how we can minimize the impact.	Class participation and preparedness for assignments	1
Discussion of preparation for presentation	Familiarity with and ability to critically and creatively discuss concepts and points from literature.	Class participation, creative and active contribution to discussion	2
Presentation	Ability to discuss the solid waste management that commonly practices and what pollution that gives significance to our environment.	Quality of group and individual presentations	2
Examination	Measure students' knowledge and understanding at the end of a course or a program.	Individual assessment	3
Independent work (80 hours)			
Group work: - Contribution to the group case-study projects - Contribution to the preparation and delivery of presentation	Familiarity with and ability to critically and creatively discuss concepts and points from literature.	Quality of group assignments and individual presentations	4
Assignment	Understand the type of hazards that degrade our environment and how we can minimize the impact.	Quality of group assignments and individual presentations	20
Presentation	Ability to discuss the solid waste management that commonly practices and what pollution that gives significance to our environment.	Quality of group assignments and individual presentations	6
E-learning modul			36
Examination	Measure students' knowledge and understanding at the end of a course or a program.	Individual assessment	14
Total			120

Grading

The students' performance will be based on the following:

Assessment

- Progress assessment (40%):
 - Presentation (20%):
 1. Solid waste management (10%),
 2. Type and effect of pollution (10%)
 - Report (20%):
 1. Current global issue essay (5%),
 2. Type of hazards that impact our environment and human (5%),
 3. Care Our Home – Report what will be learned from the documentary (10%)



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- Final assessment (60%):
 - Mid-term Test (20%): Conducted at week 7, before mid-term break.
 - Final examination (40%): Conducted at end of semester accordance with the university exam timetable

Evaluation

A (> 80%)
A- (75 - 80%)
B+ (70 - 75%)
B (65 - 70%)
B- (60 - 65%)
C+ (55 - 60%)
C (50 - 55%)
C- (45 - 50%)
D (40 - 45%)
F (< 40%)