



THE FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

Department of Physics

PHY 203 - Energy and Environment

COURSE PARTICULARS

Course Code: PHY 203

Course Title: Energy and Environment

No. of Units: 1

Course Duration: One hour of theory and two hours of discussion for 15 weeks.

Status: Compulsory

Course Email Address: phy203@gmail.com

Course Webpage: www.phy.futa.edu.ng

Prerequisite: NIL

COURSE INSTRUCTORS

Dr. (Mrs.) O.P Faromika

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COURSE DESCRIPTION

This course is designed to address the subject of energy and environment under topics such as: Energy Terminology and concept, Energy in surroundings, kinds of energy and its conversion, mechanical energy, electrical energy, wave energy, thermal energy.

Energy use, alternative energy, wind power, biomass, solar, nuclear, energy from oceans. Energy efficiency, saving energy, renewable and non renewable energy, energy conservation and energy crisis. Relationship between energy environment, the elements which gives an effect to living things, temperature, light, water, ecology and adaptation, hospitable environment, ecology and ecological equilibrium, pollution problems, mechanism about pollution as biological magnification, acid, green house effect.

COURSE OBJECTIVES

The objectives of this course are to:

introduce the students to energy terminology and concept.

make the student understand the relationship between Energy and the surroundings.

teach the students the concept alternative/ renewable and non renewable energy.

The principle of energy conservation and energy efficiency measures.

COURSE LEARNING OUTCOMES / COMPETENCIES

Upon successful completion of this course, the student will be able to:

(Knowledge based)

understand the relationship between Energy and the surroundings and the concept alternative/ renewable and non renewable energy.

(Skills)

Implement energy conservation and energy efficiency measures

GRADING SYSTEM FOR THE COURSE

This course will be graded as follows:

Class Attendance	10%
Assignments/Term paper	20%
Presentations	10%
<u>Final Examination</u>	<u>60%</u>
<u>TOTAL</u>	<u>100%</u>

GENERAL INSTRUCTIONS

Attendance: It is expected that every student will be in class for lectures and also participate in all practical exercises. Attendance records will be kept and used to determine each person's qualification to sit for the final examination. In case of illness or other unavoidable cause of absence, the student must communicate as soon as possible with any of the instructors, indicating the reason for the absence.

Academic Integrity: Violations of academic integrity, including dishonesty in assignments, examinations, or other academic performances are prohibited. You are not allowed to make copies of another person's work and submit it as your own; that is plagiarism. All cases of academic dishonesty will be reported to the University Management for appropriate sanctions in accordance with the guidelines for handling students' misconduct as spelt out in the Students' Handbook.

Assignments and Group Work: Students are expected to submit assignments as scheduled. Failure to submit an assignment as at when due will earn you zero for that assignment. Only under extenuating circumstances, for which a student has notified any of the instructors in advance, will late submission of assignments be permitted.

Presentations: Every student will be scheduled to give a presentation on assigned topic on during the two hour of discussion that will span through the duration of the course

Code of Conduct in Lecture Rooms: Students should turn off their cell phones during lectures. Students are prohibited from engaging in other activities (such as texting, watching videos, *etc.*) during lectures. Food and drinks are not permitted in the lecture rooms.

READING LIST

Legend

- 1- Available in the University Library
- 2- Available in Departmental/School Libraries
- 3- Available on the Internet.
- 4- Available as Personal Collection
- 5- Available in local bookshops.

COURSE OUTLINE

Week	Topic	Remarks
1	Introduction and Course Overview Energy Terminology and concept.	During this first class, the expectation of the students from the course will also be documented.
2	Energy in surroundings	Every student will be scheduled to give a presentation on assigned topic on during the two hour of discussion that will span through the duration of the course
3 & 4	kinds of energy and its conversion mechanical energy, electrical energy, wave energy, thermal energy. Energy use.	
5 & 6	Alternative energy, wind power, biomass, solar, nuclear, energy from oceans. renewable and non renewable energy,	
7 & 8	<ul style="list-style-type: none"> • Energy efficiency, saving energy. energy conservation and energy crisis. 	
9 & 10	<ul style="list-style-type: none"> • Relationship between energy environment, the elements which gives an effect to living things, temperature, light, water, ecology and adaptation, hospitable environment, 	

11 & 12	ecology and ecological equilibrium, pollution problems, mechanism about pollution as biological magnification.	
13 & 14	Acid rain, green house effect. <ul style="list-style-type: none">•	
15	Revision	