

SCHOOL OF PHARMACY & HEALTH SCIENCES

SEMESTER:	FALL 2020
COURSE:	ENV 3500 REGIONAL ENVIRONMENT
LECTURER :	G.K. Nyambati
TIME/DAYS:	MON/WED 1.20 – 3.00 P.M.
VENUE:	
CREDIT:	3
CONTACTS:	gnyambati@usiu.ac.ke

1. COURSE DESCRIPTION (AS IN THE CATALOGUE)

Environmental setting, history of land use and land use changes, concepts and policy issues associated with renewable and non-renewable natural resource management, pollution, environmental protection and regulation.

2. LINK TO UNIVERSITY MISSION OUTCOMES AND PROGRAM LEARNING OUTCOMES:

1. Higher Order Thinking
 - a. Collect, analyze and evaluate energy data/information to formulate valid conclusions
 - b. Demonstrate the ability to reason critically and creatively in an interdisciplinary context
2. Literacy
 - a. Apply basic scientific, quantitative and technological skills in managing diverse energy resources and increasing energy needs.
3. Preparedness for career
 - a. Apply intellectual knowledge to practical tasks

3. COURSE LEARNING OUTCOMES

1. To show an understanding of the living and non-living environment and their processes including species, communities, ecosystems, and biosphere
2. To display an understanding of the different human activities e.g. Mining, Agriculture and Manufacturing and their effects on the ecosystems.
3. To exhibit knowledge in historical factors that have driven land use changes around the globe

4. To exhibit familiarity on different regional environmental degradation and pollution issues.
5. To show knowledge on policies and regulations and institutions arrangements for environmental protection

4. CONTENT & CLASS SCHEDULE:

WEEK	TOPIC	ACTIVITY AND LEARNING OUTCOME	READING
WEEK 1	<ul style="list-style-type: none"> • Living and non-living environment • Energy flow in the ecosystem, trophic levels, recycling of nutrient, biogeochemical cycles 	(Outcome 1) Individual assignment 1 on biogeochemical cycles	Miller and Scott chapter 2 pgs 43-60
WEEK 2	<ul style="list-style-type: none"> • Species, population • Communities and ecosystems • Types of ecosystems 	(Outcome 1) Lecture and class discussions	Miller and Scott chapter 2 pg 44-45
WEEK 3	<ul style="list-style-type: none"> • Mining, Agriculture and Manufacturing • Land degradation, fertilizer, agrochemicals, industrial chemicals 	(Outcome 2) Lecture and class discussions	Miller and Scott chapter 10 pg 218-238 and Chapter 12 pg 297
WEEK 4	<ul style="list-style-type: none"> • Urbanization, Service industry and Transport • Gaseous, liquid and solid waste, loss of habitat and species 	(Outcome 2) Lecture and class discussions Video clip	Miller and Scott chapter 6
WEEK 5	<ul style="list-style-type: none"> • Factors causing land use changes • Human population • Affluence and poverty • Zoning in land use 	(Outcome 3) Lecture and class discussions QUIZ ONE	Miller and Scott chapter 1 pg 14
WEEK 6	<ul style="list-style-type: none"> • Positive and negative impacts of land use changes • Comparative Cases of the State of Land use 	(Outcome 3) Lecture and class discussions INDIVIDUAL ASS	Miller and Scott chapter 7
WEEK 7	<ul style="list-style-type: none"> • Renewable and non-renewable natural resources 	(Outcome 3) Group Assignment 1 MIDSEM EXAM	Miller and Scott chapter 12 pg 9
WEEK 8	<ul style="list-style-type: none"> • Natural resources management concepts and policies at national, regional and global scales 	(Outcome 4) Lecture and class discussions Video clip	Miller and Scott chapter 17
WEEK 9	Environmental degradation and LAND POLLUTION <ul style="list-style-type: none"> • Loss of forest cover, Land degradation, soil erosion and siltation • Solid waste disposal and soil degradation 	(Outcome 4) Lecture and class discussions	Miller and Scott chapter 16

WEEK 10	Environmental degradation and AIR pollution <ul style="list-style-type: none"> • Sources, types of GASEOUS WASTE AND AIR pollution, global warming, ozone depletion, acid rain, pollution smogs. 	(Outcome 4) Lecture and class discussions Video clip	Miller and Scott chapter 15
WEEK 11	Environmental degradation and WATER pollution <ul style="list-style-type: none"> • Sources, types of water pollutants and water pollution 	(Outcome 4) Lecture and Class discussions QUIZ TWO	Miller and Scott chapter 11
WEEK 12	Environmental protection policies and regulation <ul style="list-style-type: none"> • Wildlife Acts [Kenya KWS] • Environmental management and coordination Acts 	(Outcome 5) Class discussions and Presentations	Miller and Scott chapter 17
WEEK 13	Environmental protection policies and regulation <ul style="list-style-type: none"> • International policies and regulations • RAMSAR convention • Convention on Biological Diversity (CBD) • Convention on Migratory Species (CMS) CBD	(Outcome 5) Class discussions and Presentations	Miller and Scott chapter 17
WEEK 14	EXAMINATION	END TERM EXAM	

5. TEACHING METHODS

- Lectures, power point presentations and class discussions:
- Assignment criteria:
- Research and presentation on specific topics

6. COURSE TEXT & OTHER READINGS

Miller, G.T. Jnr and Spoolman S.E. (2009). Living in the Environment, 16th Edition. Wadsworth Publishing Company.

Miller, G.T. (Jnr) (2005) Living in the Environment, 14th Edition. Wadsworth Publishing Co.

7. OTHER READING MATERIALS

Nebel, B.J.& Wright, R.T. (1996) Environmental Science- The Way the World works, 5th Edition. *Prentice Hall*.

Marsh W.M. & Grossa Jnr. J.M. (1996) Environmental Geography: Science, Land use and Earth Systems. *John Wiley and Sons*.

Deshmukh, I. (1986) Ecology and Tropical Biology. *Blackwell Scientific Publications*.

Otiende, J. E. et. al, (1991) An Introduction to Environmental Education. *Nairobi University Press*.

Elson, D. (1987) Atmospheric Pollution: Causes, Effects and Control Policies *Blackwell Scientific Publications*.

Dix, H.M, (1981) Environmental Pollution: Atmosphere, land, Water and Noise. London: John Willey.

8. COURSE EVALUATION)

Attendance and Participation	10%
Quizzes	20 %
Individual Assignment/ Group Assignment	20%
Mid Semester Exam.	20%
Final examination	30%
TOTAL	100%

9. KEY INSTITUTIONAL ACADEMIC POLICIES

Students should note the following are key policies as outlined in the University Catalogue and Students Handbook

1. Plagiarism: any passing off of another's ideas, words, or work as one's own is prohibited, leads to discontinuation.

2. Class Attendance: Students are expected to attend all classes. Upon being absent from **seven** classes in a 3-unit course, the instructor will give a student an “**F**” grade for that course.

10. USIU GRADING

A 90 – 100	C 70 – 73
A- 87 – 89	C- 67 - 69
B+ 84 – 86	D+ 64 - 66
B 80 - 83	D 62 - 63
B- 77 - 79	D- 60 – 61
C+ 74 - 76	F 0 - 59