

UNIVERSITY WIDE UNDERGRADUATE CURRICULUM COMMITTEE

Resolution: Undergraduate Curriculum

II. Proposed New Courses

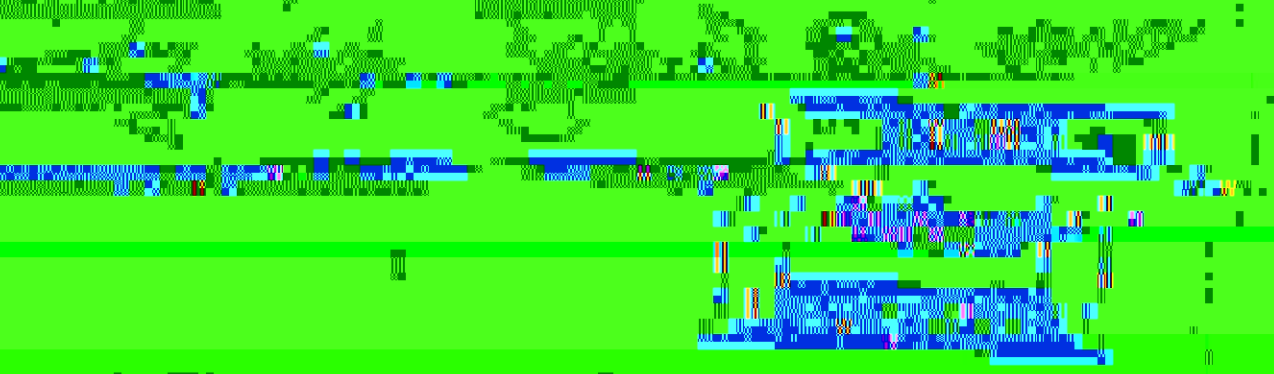
- 1. ENR 100 - Engineering Ethics - 3 units
- 2. ENR 101 - Engineering Law - 3 units
- 3. ENR 102 - Engineering Economics - 3 units
- 4. ENR 103 - Engineering History - 3 units
- 5. ENR 104 - Engineering Communication - 3 units
- 6. ENR 105 - Engineering Safety - 3 units
- 7. ENR 106 - Engineering Quality - 3 units
- 8. ENR 107 - Engineering Project Management - 3 units
- 9. ENR 108 - Engineering Professionalism - 3 units
- 10. ENR 109 - Engineering Sustainability - 3 units
- 11. ENR 110 - Engineering Innovation - 3 units

III. Proposed New Courses

- 1. ENR 111 - Engineering Ethics - 3 units
- 2. ENR 112 - Engineering Law - 3 units
- 3. ENR 113 - Engineering Economics - 3 units
- 4. ENR 114 - Engineering History - 3 units
- 5. ENR 115 - Engineering Communication - 3 units
- 6. ENR 116 - Engineering Safety - 3 units
- 7. ENR 117 - Engineering Quality - 3 units
- 8. ENR 118 - Engineering Project Management - 3 units
- 9. ENR 119 - Engineering Professionalism - 3 units
- 10. ENR 120 - Engineering Sustainability - 3 units
- 11. ENR 121 - Engineering Innovation - 3 units

Approved by the University Wide Undergraduate Curriculum Committee on 7/20/13

Approved by the Board of Regents on 7/20/13



Syllabus of Record

I. Catalog Descriptions

BIOL 323 Introduction to Toxicology and Risk Assessment

3 credits

3 lecture hours

0 laboratory hours

(3c-0l-3sh)

Prerequisites: BIOL 104 or 112, CHEM 102 or 112; or permission

Study of uptake, distribution, metabolism, and excretion of environmental chemicals; mechanisms of toxicity and their effects on organisms and ecosystems. Knowledge of

II. Course Objectives

Students will be able to

1. Identify and apply principles of toxicology as they relate to exposure, absorption, distribution, metabolism and excretion of environmental chemicals.
2. Understand the major classes of environmental chemicals and their toxic properties.
3. Comprehend the basic principles of risk assessment as they relate to data collection and evaluation, exposure assessment, toxicity assessment, and risk characterization.
4. Use the primary literature and appropriate web sites to write a toxicological profile for an

1. Hepatotoxicity
 2. Nephrotoxicity
 3. Pulmonary Toxicity
 4. Neurotoxicity
 5. Reproductive Toxicity
 6. Teratogenesis
 7. Immunotoxicity
 8. Cardiovascular Toxicity
- D. Toxic Agents (5 lectures)
1. Pesticides
 2. Metals and Metalloids
 3. Radioactive Materials
 4. Solvents and Vapors
 5. Natural Toxins
- E. Risk Assessment (7 lectures)
1. Hazard Identification
 2. Environmental Fate
 3. Exposure Assessment
 4. Dose-Response Assessment

6. Risk Perception
7. Risk Communication & Management

IV. Evaluation Methods

The final grade for the course will be determined as follows:

- | | |
|-----|---|
| 75% | Tests. Two examinations during the semester and one during the final examination period; consisting of fill-in-the blank, short answer and long essay. |
| 20% | A Toxicological profile that will be based on Agency for Toxic Substances and Disease Registry (Centers for Disease Control) guidelines will be graded on the basis of content, format, quality of references, and English and grammar. |
| 5% | Take home assignments. Take home problem solving assignments will periodically be |

90 – 100 %	A
80 – 89 %	B
70 – 79 %	C
60 – 69 %	D
< 60 %	F

V. Attendance Policy

Although there is no formal attendance policy for this class, students are expected to attend class and

participate in discussion to enhance their learning.

VI. Required textbooks and supplemental reading

A. Textbook (1000) B. Supplemental Reading (1000) C. C. C. C.

Course Analysis Questionnaire

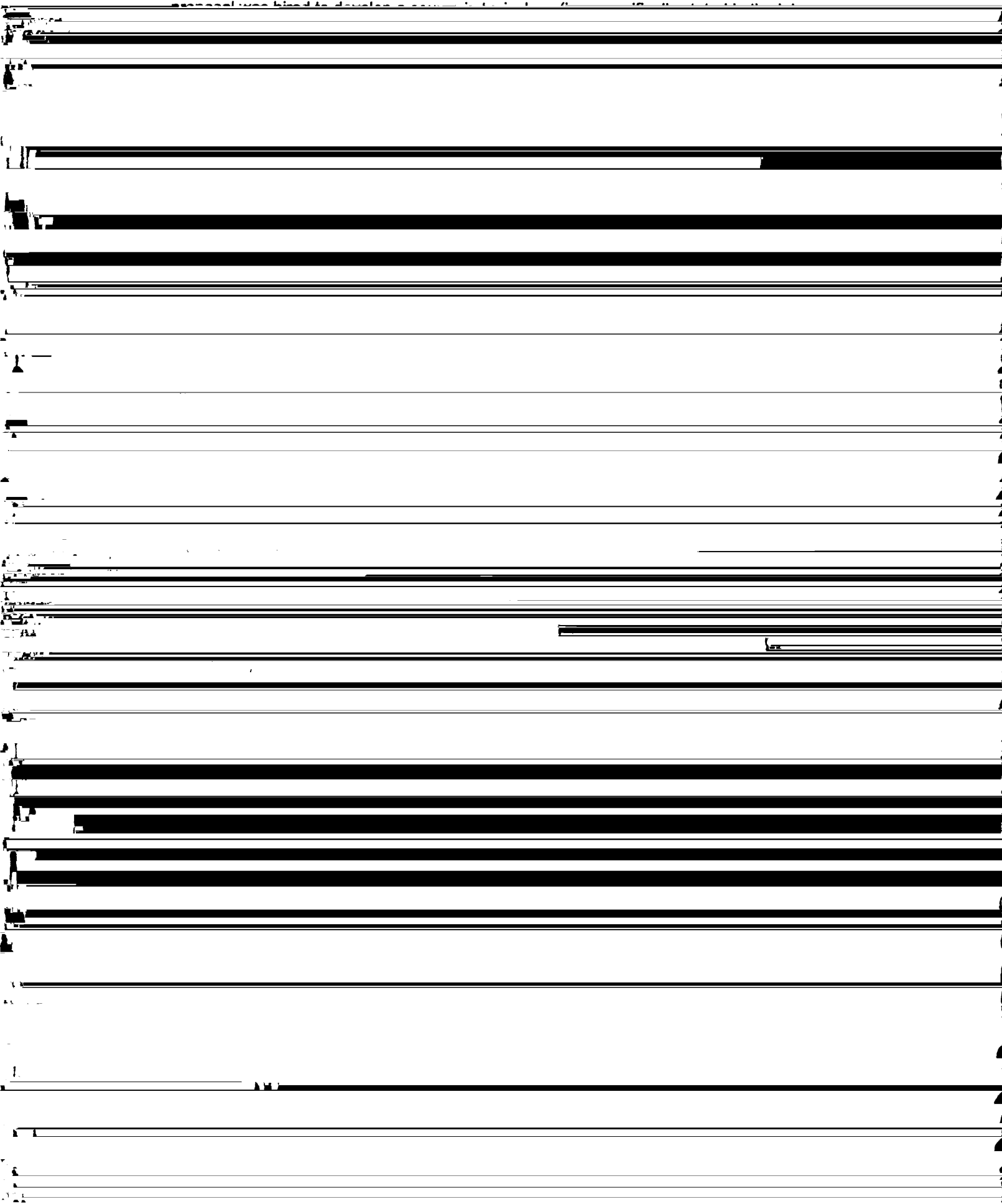
Section A: Details of the Course

- A2 This course will need to be added as a controlled elective for environmental health majors in the catalog.
- A3 This course has been offered on a trial basis three times as BIOL 481 Special Topics.
- A4 This course is not a dual-level offering.
- A5 This course may not be taken for variable credit.
- A6 Schools offering an undergraduate toxicology course include:

Eastern Kentucky University (FHS 440 Environmental & Industrial Toxicology)

Section C: Implementation

C1 Faculty resources are adequate to teach this course. The Contact Person for this course



Thomas Simmons

From: Lon Ferguson

Dear Tom,
I hope you are well.

course during their Sept. 10th

meeting. The Curriculum Committee reviewed the

Identification of Health Hazards in

the area of **Soil, Water and Risk Assessment**. However,

the course content is not aligned with the current standards. The course content is not aligned with the current standards. The course content is not aligned with the current standards.

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Best,
Lon Ferguson

Dr. Lon H. Ferguson, CSS
Christopher Reifel Segel

10/1/2014

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