

**MEMORANDUM TO:** Ogden College of Science and Engineering Curriculum Committee

Dr. Linda Brown	Dr. James Gary	Dr. Mike Carini
Dr. Martin Stone	Dr. Huanjing Wang	Dr. Doug Harper
Dr. Greg Arbuckle	Dr. Julie Ellis	Dr. Kelly Madole
Dr. Mark Revels	Dr. Warren Campbell	Dr. Steve Haggbloom
Dr. Bruce Schulte	Dr. David Keeling	Dr. Les Pesterfield
Dr. Phil Lienesch	Dr. Xingang Fan	
Dr. Stuart Burris	Dr. Bruce Kessler	
Dr. Darwin Dahl	Dr. Ngoc Nguyen	

**FROM:** Kenneth Crawford, Chair

**SUBJECT:** Agenda for Thursday, December 3, 4:00 p.m. in COHH 4123

**A. OLD BUSINESS:**

- I. Consideration of the minutes of the November 5, 2015 meeting.

**B. NEW BUSINESS:**

**Consent Items**

**Department of Biology**

- I. Proposal to Delete a Course
  - a. BIOL 204, Introduction to Clinical Laboratory Science, 1 hr.
  - b. BIOL 300, Genetics and Human Affairs, 3 hrs.
  - c. BIOL 329, Basic Pathology of Disease Process, 3 hrs.
  - d. BIOL 389, Cooperative Education in Biology II, 3 hrs.
  - e. BIOL 402, Evolutional History of Plants, 4 hrs.
  - f. BIOL 408, Invertebrate Zoology, 4 hrs.
  - g. BIOL 415, Ecological Methods, 3 hrs.
  - h. BIOL 469, Cooperative Education in Biology III, 3 hrs.
  - i. BIOL 473 Interactions on the Cave and Karst Environment, 3 hrs.
  - j. BIOL 486, Senior Environmental Seminar, 1 hr.

**Action Items**

**Department of Agriculture**

- I. Proposal to Create a New Course
  - a. AGRI 355, Biotechnology in Agriculture, 3 hrs.

**Department of Biology**

- I. Proposal to Make Multiple Revisions to a Course
  - a. BIOL 232, Principles of Wildlife Ecology and Management, 3 hrs.
  - b. BIOL 369, Cooperative Education in Biology I, 3 hrs.

- II. Proposal to Revise a Program

a. Ref. 582, Medical Technology, 88 hrs.

**C. OTHER BUSINESS**

**Ogden College Dean's Office**

I. Curriculum Committee, OCSE, Standing Rules

**MEMBERS PRESENT:**

Dr. Linda Brown  
Dr. Martin Stone  
Dr. Mark Revels  
Dr. Bruce Schulte by proxy  
Dr. Phil Lienesch  
Dr. Stuart Burris  
Dr. James Gary  
Dr. David Keeling  
Dr. Xingang Fan

Dr. Ngoc Nguyen  
Dr. Mike Carini  
Dr. Doug Harper  
Dr. Kelly Madole  
Dr. Steve Haggbloom by proxy  
Dr. Les Pesterfield by proxy  
Dr. Fred Siewers, Guest

**FROM:** Ken Crawford, Chair

**OLD BUSINESS:**

Keeling/Revels moved for approval of the minutes of the October 8, 2015 meeting. Motion approved.

**NEW BUSINESS:**

**Consent Agenda**

Keeling/Madole moved to approved consent items. Motion approved.

**Action Agenda**

**Department of Geography & Geology**

Keeling/Carini moved to bundle items A and B. Madole/Keeling moved to approve bundled proposals to make multiple revisions to a course: GEOL 308 and GEOL 460. Motion approved.

Keeling/Madole moved to approve proposal to create a new course: GEOL 415. Motion approved.

Keeling/Madole moved to approve proposal to revise a program: Ref. 676, Geology (A.B.). Motion approved.

Keeling/Stone moved to approve proposal to revise a program: Ref. 577, Geology Extended (B.S.). Motion approved.

**Department of Physics**

Keeling/Harper moved to approve proposal to create a new course: PHYS 299. Motion approved.

**Department of Psychological Sciences**

Keeling/Stone moved to approve proposal to create a new course: PSYS 380. Motion approved.

Keeling/Stone moved to approve proposal to revise a program: Ref. 440, Minor in Psychological Sciences. Motion approved.

**OTHER BUSINESS:**

OCSE Standing Rules were reviewed a third time. Additional revisions are necessary. The revisions will be revisited at the next OCSE Curriculum Committee meeting. Meeting adjourned at 4:31pm.

Proposal Date: 11/12/2014

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Delete a Course  
(Consent Item)**

Contact Person: Scott Grubbs, [scott.grubbs@wku.edu](mailto:scott.grubbs@wku.edu), 745-5048

**1. Identification of course:**

- 1.1 Current course prefix (subject area) and number: BIOL 204
- 1.2 Course title: Introduction to Clinical Laboratory Science

**2. Rationale for the course deletion:** The Department of Biology has not offered BIOL 204 since the fall 2003 semester and has been in suspended status since fall 2010. This course is not applicable toward a major or minor in biology and is not required for any biology-related program. We do not anticipate developing a program that will include or require this course.

**3. Effect of course deletion on programs or other departments, if known:** None. This course is not required for any academic program across the university.

**4. Proposed term for implementation:** Fall 2016

**5. Dates of prior committee approvals:**

Department of Biology

\_\_\_\_\_ April 24, 2015

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

Proposal Date: 11/12/2014

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Delete a Course  
(Consent Item)**

Contact Person: Scott Grubbs, [scott.grubbs@wku.edu](mailto:scott.grubbs@wku.edu), 745-5048

**1. Identification of course:**

- 1.1 Current course prefix (subject area) and number: BIOL 300
- 1.2 Course title: Genetics and Human Affairs

**2. Rationale for the course deletion:** The Department of Biology has not offered BIOL 300 since the fall 2002 semester and has been in suspended status since fall 2010. This course is not applicable toward a major or minor in biology and is not required for any biology-related program. We do not anticipate developing a program that will include or require this course.

**3. Effect of course deletion on programs or other departments, if known:** None. This course is not required for any academic program across the university.

**4. Proposed term for implementation:** Fall 2016

**5. Dates of prior committee approvals:**

Department of Biology

\_\_\_\_\_ April 24, 2015

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

Proposal Date: 11/12/2014

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Delete a Course  
(Consent Item)**

Contact Person: Scott Grubbs, [scott.grubbs@wku.edu](mailto:scott.grubbs@wku.edu), 745-5048

**1. Identification of course:**

- 1.1 Current course prefix (subject area) and number: BIOL 329
- 1.2 Course title: Basic Pathology of Disease Process

**2. Rationale for the course deletion:** The Department of Biology has not offered BIOL 329 since at least the 1999-2000 academic year and has been in suspended status since fall 2010. This course is not applicable toward a major or minor in biology and is not required for any biology-related program. We do not anticipate developing a program that will include or require this course.

**3. Effect of course deletion on programs or other departments, if known:** None. This course is not required for any academic program across the university.

**4. Proposed term for implementation:** Fall 2016

**5. Dates of prior committee approvals:**

Department of Biology

\_\_\_\_\_ April 24, 2015

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

Proposal Date: 11/12/2014

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Delete a Course  
(Consent Item)**

Contact Person: Scott Grubbs, [scott.grubbs@wku.edu](mailto:scott.grubbs@wku.edu), 745-5048

**1. Identification of course:**

- 1.1 Current course prefix (subject area) and number: BIOL 389
- 1.2 Course title: Cooperative Education in Biology II

**2. Rationale for the course deletion:** BIOL 369 (Cooperative Education in Biology I) was revised three years ago to allow for repeatability up to either three (36 hour Biology major, Program No. 617) or six hours (48 hour Biology major, Program No. 525). As a consequence, BIOL 389 was suspended. We are comfortable now with the deletion of BIOL 389.

**3. Effect of course deletion on programs or other departments, if known:** None. This course is not required for any academic program across the university.

**4. Proposed term for implementation:** Fall 2016

**5. Dates of prior committee approvals:**

Department of Biology

\_\_\_\_\_ April 24, 2015

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

Proposal Date: 11/12/2014

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Delete a Course  
(Consent Item)**

Contact Person: Scott Grubbs, [scott.grubbs@wku.edu](mailto:scott.grubbs@wku.edu), 745-5048

**1. Identification of course:**

- 1.1 Current course prefix (subject area) and number: BIOL 402
- 1.2 Course title: Evolutionary History of Plants

**2. Rationale for the course deletion:** The Department of Biology has not offered BIOL 402 since at least the 1999-2000 academic year and has been in suspended status since fall 2010. This course is not applicable toward a major or minor in biology and is not required for any biology-related program. We do not anticipate developing a program that will include or require this course.

**3. Effect of course deletion on programs or other departments, if known:** None. This course is not required for any academic program across the university.

**4. Proposed term for implementation:** Fall 2016

**5. Dates of prior committee approvals:**

Department of Biology

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

\_\_\_\_\_ April 24, 2015  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Proposal Date: 11/12/2014

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Delete a Course  
(Consent Item)**

Contact Person: Scott Grubbs, [scott.grubbs@wku.edu](mailto:scott.grubbs@wku.edu), 745-5048

**1. Identification of course:**

- 1.1 Current course prefix (subject area) and number: BIOL 408
- 1.2 Course title: Invertebrate Zoology

**2. Rationale for the course deletion:** The Department of Biology has not offered BIOL 408 since the spring 2001 semester and has been in suspended status since fall 2010. This course is not applicable toward a major or minor in biology and is not required for any biology-related program. We do not anticipate developing a program that will include or require this course.

**3. Effect of course deletion on programs or other departments, if known:** None. This course is not required for any academic program across the university.

**4. Proposed term for implementation:** Fall 2016

**5. Dates of prior committee approvals:**

Department of Biology

\_\_\_\_\_ April 24, 2015

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

Proposal Date: 11/12/2014

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Delete a Course  
(Consent Item)**

Contact Person: Scott Grubbs, [scott.grubbs@wku.edu](mailto:scott.grubbs@wku.edu), 745-5048

**1. Identification of course:**

- 1.1 Current course prefix (subject area) and number: BIOL 415
- 1.2 Course title: Ecological Methods

**2. Rationale for the course deletion:** The Department of Biology has not offered BIOL 415 since the fall 2006 semester and has been in suspended status since fall 2010. This course is not applicable toward a major or minor in biology and is not required for any biology-related program. We do not anticipate developing a program that will include or require this course.

**3. Effect of course deletion on programs or other departments, if known:** None. This course is not required for any academic program across the university.

**4. Proposed term for implementation:** Fall 2016

**5. Dates of prior committee approvals:**

Department of Biology

\_\_\_\_\_  
April 24, 2015

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

Proposal Date: 11/12/2014

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Delete a Course  
(Consent Item)**

Contact Person: Scott Grubbs, [scott.grubbs@wku.edu](mailto:scott.grubbs@wku.edu), 745-5048

**1. Identification of course:**

1.1 Current course prefix (subject area) and number: BIOL 469

1.2 Course title: Cooperative Education in Biology III

**2. Rationale for the course deletion:** BIOL 369 (Cooperative Education in Biology I) was revised three years ago to allow for repeatability up to either three (36 hour Biology major, Program No. 617) or six hours (48 hour Biology major, Program No. 525). As a consequence, BIOL 469 was suspended. We are comfortable now with the deletion of BIOL 469.

**3. Effect of course deletion on programs or other departments, if known:** None. This course is not required for any academic program across the university.

**4. Proposed term for implementation:** Fall 2016

**5. Dates of prior committee approvals:**

Department of Biology

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

\_\_\_\_\_ April 24, 2015  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Proposal Date: 11/12/2014

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Delete a Course  
(Consent Item)**

Contact Person: Scott Grubbs, [scott.grubbs@wku.edu](mailto:scott.grubbs@wku.edu), 745-5048

**1. Identification of course:**

- 1.1 Current course prefix (subject area) and number: BIOL 473
- 1.2 Course title: Interactions on the Cave and Karst Environment

**2. Rationale for the course deletion:** The Department of Biology has not offered BIOL 473 since at least the 1999-2000 academic year and has been in suspended status since fall 2010. This course is not applicable toward a major or minor in biology and is not required for any biology-related program. We do not anticipate developing a program that will include or require this course.

**3. Effect of course deletion on programs or other departments, if known:** None. This course is not required for any academic program across the university.

**4. Proposed term for implementation:** Fall 2016

**5. Dates of prior committee approvals:**

Department of Biology

\_\_\_\_\_  
April 24, 2015

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

Proposal Date: 11/12/2014

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Delete a Course  
(Consent Item)**

Contact Person: Scott Grubbs, [scott.grubbs@wku.edu](mailto:scott.grubbs@wku.edu), 745-5048

**1. Identification of course:**

- 1.1 Current course prefix (subject area) and number: BIOL 486
- 1.2 Course title: Senior Environmental Seminar

**2. Rationale for the course deletion:** The Department of Biology has not offered BIOL 486 since at least the 1999-2000 academic year and has been in suspended status since fall 2010. This course is not applicable toward a major or minor in biology and is not required for any biology-related program. We do not anticipate developing a program that will include or require this course.

**3. Effect of course deletion on programs or other departments, if known:** None. This course is not required for any academic program across the university.

**4. Proposed term for implementation:** Fall 2016

**5. Dates of prior committee approvals:**

Department of Biology

\_\_\_\_\_  
April 24, 2015

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

Proposal Date: October 19, 2015

**Ogden College of Science and Engineering**  
**Department of Agriculture**  
**Proposal to Create a New Course**  
**(Action Item)**

Contact Person: Todd Willian, [todd.willian@wku.edu](mailto:todd.willian@wku.edu), 745-5969

**1. Identification of proposed course:**

- 1.1 Course prefix (subject area) and number: AGRI 355
- 1.2 Course title: Biotechnology in Agriculture
- 1.3 Abbreviated course title: Biotech in Agriculture  
(maximum of 30 characters or spaces)
- 1.4 Credit hours: 3 Variable credit: no
- 1.5 Grade type: Standard Letter Grade
- 1.6 Prerequisites: BIOL 120/121 and either AGRO 110 or ANSC 140.
- 1.7 Course description: Introduction to current biotechnologies used in agriculture including genetic modification of crop plants and animals, genetically modified foods, fermentation biotechnology, pharming and other current topics.

**2. Rationale:**

- 2.1 Reason for developing the proposed course: Biotechnology has revolutionized modern agriculture, and a course dedicated to the study of these changes is necessary to keep students current with the discipline. In fact, many agriculture graduates will enter the workforce and directly utilize these technologies. This offering supports the University mission of preparing students to be productive, engaged and socially responsible in their chosen field of study. It also supports objective one of the University's strategic plan, to foster academic excellence, which is achieved in part by offering new classes that are relevant for the 21<sup>st</sup> century.
- 2.2 Projected enrollment in the proposed course: Approximately 20-25 students per semester based upon enrollment in two previous temporary course offerings.
- 2.3 Relationship of the proposed course to courses now offered by the department: This course will significantly expand upon discussions of crop and livestock genetics held in both AGRO 110 (Plant Science) and ANSC 140 (Animal Science). AGRO 414 (Crop Improvement) focuses upon traditional crop genetics rather than molecular techniques and AGRI 494 (Contemporary Agricultural Issues) provides only a brief overview of issues related to genetically modified organisms.
- 2.4 Relationship of the proposed course to courses offered in other departments: The Department of Biology offers a variety of excellent classes in molecular biology (BIOL 319/322, BIOL 350, BIOL 450, BIOL 495) and Plant Biotechnology (BIOL 496). The proposed course differs in that it examines biotechnology as it relates directly to production agriculture, including technologies such as Roundup Ready™ crops, Bt crops, animals used for pharmaceutical production, and animal cloning for agriculture purposes.

- 2.5 Relationship of the proposed course to courses offered in other institutions: University of Kentucky offers an entire undergraduate degree in Agricultural Biotechnology. Specifically this includes Agriculture Biotechnology (ABT) 101, 301, 395 and 399. North Carolina State University offers Agricultural Biotechnology PB208.

### 3. Discussion of proposed course:

- 3.1 Schedule type: L
- 3.2 Learning Outcomes: Upon completion of this course, students will be able to:
- Describe the processes of cloning animals used in agricultural breeding stock and the problems associated with these techniques.
  - Explain in detail how crops are genetically modified and how these modifications are effective against various pests.
  - Discuss pharming of human organs and the legal implications surrounding the use of these organs
  - Draw and explain the different techniques utilized to clone animals and discuss the problems associated with each technique.
  - Critique and analyze popular press articles related to genetically modified organisms (especially those used in the food supply) for sound scientific data versus opinion and conjecture.
  - Discuss the history of Golden Rice™ and the problems with its dissemination.
  - Explain how Roundup Ready™ technology was developed and its mode of action inside the plant.
- 3.3 Content outline:
- Introduction to biotechnology
  - Genetic engineering of animals
  - Pharming and xenotransplants
  - Cloning
  - Bt and Roundup Ready™ crop technology
  - Golden Rice™ and other nutrient enhanced crops
  - Biofuels and fermentation biotechnology
  - Stem cells
  - Public opinion of GMOs in the food supply
- 3.4 Student expectations and requirements: Students will be expected to complete weekly assignments which may include reading scientific papers or popular press articles and participation in discussion boards. Two examinations will be administered and one comprehensive final exam. In addition, students will be asked to create a magazine advertisement either supporting or opposing the use of genetically modified organisms in the public food supply.
- 3.5 Tentative texts and course materials:  
Renneberg, R. *Biotechnology for Beginners*. Academic Press; 2008.  
Daugherty, E. *Biotechnology Science for the New Millennium*. Paradigm; 2012.

### 4. Resources:

- 4.1 Library resources: none required
- 4.2 Computer resources: none required

**5. Budget implications:**

- 5.1 Proposed method of staffing: Full time faculty
- 5.2 Special equipment needed: none
- 5.3 Expendable materials needed: n/a
- 5.4 Laboratory materials needed: n/a

**6. Proposed term for implementation: Spring 2017**

**7. Dates of prior committee approvals:**

Department/ Unit Agriculture

October 29, 2015

Ogden College Curriculum Committee

Professional Education Council (if applicable)

General Education Committee (if applicable)

Undergraduate Curriculum Committee

University Senate

---

---

---

---

---

---



**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Make Multiple Revisions to a Course  
(Action Item)**

Contact Person: Michael Stokes, michael.stokes@wku.edu, 745-6009

**1. Identification of course:**

- 1.1 Current course prefix (subject area) and number: BIOL 232
- 1.2 Course title: Principles of Wildlife Ecology and Management

**2. Revise course title: n/a**

- 2.1 Current course title: **n/a**
- 2.2 Proposed course title: **n/a**
- 2.3 Proposed abbreviated title **n/a**:
- 2.4 Rationale for revision of course title: **n/a**

**3. Revise course number:**

- 3.1 Current course number: BIOL 232
- 3.2 Proposed course number: BIOL 332
- 3.3 Rationale for revision of course number: Most foundational wildlife courses at schools with wildlife management degree programs are taught at the upper-division level. Examples include: Murray State: Biology 580 (Principles of Wildlife Management), Eastern Kentucky University: Bio 381 (Principles of Wildlife Management), University of Kentucky: FOR 370 (Wildlife Biology and Management), and Southern Illinois University: Zool 468 (Wildlife Principles).  
Course content will remain similar, Some topics will be explored in greater depth with commensurate higher expectations of knowledge and understanding. For example, we will explore mathematical models of population regulation in more depth. This is appropriate for a junior-level course, including matrix analyses of life table data.

**4. Revise course prerequisites/corequisites/special requirements: n/a**

- 4.1 Current prerequisites/corequisites/special requirements: **n/a**
- 4.2 Proposed prerequisites/corequisites/special requirements: **n/a**
- 4.3 Rationale for revision of course prerequisites/corequisites/special requirements: **n/a**
- 4.4 Effect on completion of major/minor sequence: **n/a**

**5. Revise course catalog listing:**

- 5.1 Current course catalog listing:  
BIOL 232. PRINCIPLES OF WILDLIFE ECOLOGY AND MANAGEMENT. (3)  
Prerequisites: BIOL 120/121 and BIOL 122/123 with grades of "C" or higher or consent of instructor. Examination of the principles of wildlife ecology and management, including population regulation, habitat management, wildlife diseases and conservation. Primarily for those interested in a career involving

wildlife.

- 5.2 Proposed course catalog listing:  
BIOL 332. PRINCIPLES OF WILDLIFE ECOLOGY AND MANAGEMENT. (3)  
Prerequisites: BIOL 120/121 and BIOL 122/123 with grades of “C” or higher or consent of instructor. Examination of the principles of wildlife ecology and management, including ecological theory, population regulation, habitat management, wildlife diseases, and conservation. Primarily for those interested in a career involving wildlife.
- 5.3 Rationale for revision of course catalog listing:  
The inclusion of “ecological theory” into the description simply reflects a topic that is currently covered in the course.

**6. Revise course credit hours: n/a**

- 6.1 Current course credit hours: **n/a**  
6.2 Proposed course credit hours: **n/a**  
6.3 Rationale for revision of course credit hours: **n/a**

**7. Revise grade type: n/a**

- 7.1 Current grade type: **n/a**  
7.2 Proposed grade type: **n/a**  
7.3 Rationale for revision of grade type: **n/a**

**8. Proposed term for implementation: Fall 2016**

**9. Dates of prior committee approvals:**

Department of Biology

9 October 2015

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Make Multiple Revisions to a Course  
(Action Item)**

Contact Person: Scott Grubbs, scott.grubbs@wku.edu, 745-5048

- 1. Identification of course:**
  - 1.1 Current course prefix (subject area) and number: BIOL 369
  - 1.2 Course title: Cooperative Education in Biology I
  
- 2. Revise course title:**
  - 2.1 Current course title: Cooperative Education in Biology I
  - 2.2 Proposed course title: Cooperative Education in Biology
  - 2.3 Proposed abbreviated title: Coop Educ/Biology
  - 2.4 Rationale for revision of course title: The Biology Department no longer has multiple options for internship- or externship like courses, rendering the “I” in the title obsolete. Removal of the “I” removes any perception that there is another course.
  
- 3. Revise course number: n/a**
  - 3.1 Current course number: n/a
  - 3.2 Proposed course number: n/a
  - 3.3 Rationale for revision of course number: n/a
  
- 4. Revise course prerequisites/corequisites/special requirements: n/a**
  - 4.1 Current prerequisites/corequisites/special requirements: n/a
  - 4.2 Proposed prerequisites/corequisites/special requirements: n/a
  - 4.3 Rationale for revision of course prerequisites/corequisites/special requirements: n/a
  - 4.4 Effect on completion of major/minor sequence: n/a
  
- 5. Revise course catalog listing:**
  - 5.1 Current course catalog listing: Practical out-of-classroom experience in a supervised work or research environment with a cooperating business, industry, government agency or laboratory, emphasizing application of knowledge and skills in specific areas of biology.
  - 5.2 Proposed course catalog listing: Practical experience in a supervised, professional work environment in an instructional classroom, business, industry, government agency or laboratory setting.
  - 5.3 Rationale for revision of course catalog listing: A research component is being moved as one option for a new-created BIOL course for the start of the fall 2016 semester. A change of course description was also necessary to make clear that this course is also an option for student pursuing teaching experience in freshman-level laboratory courses offered by the Biology Department.

6. **Revise course credit hours: n/a**  
6.1 Current course credit hours: n/a  
6.2 Proposed course credit hours: n/a  
6.3 Rationale for revision of course credit hours: n/a

7. **Revise grade type: n/a**  
7.1 Current grade type: n/a  
7.2 Proposed grade type: n/a  
7.3 Rationale for revision of grade type: n/a

8. **Proposed term for implementation:** Fall 2016

9. **Dates of prior committee approvals:**

Department of Biology

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

9 October 2015

---

---

---

---

**Ogden College of Science and Engineering  
Department of Biology  
Proposal to Revise A Program  
(Action Item)**

Contact Person: Kerrie McDaniel, [Kerrie.mcdaniel@wku.edu](mailto:Kerrie.mcdaniel@wku.edu), 270-745-6845

**1. Identification of program:**

- 1.1 Current program reference number: 582
- 1.2 Current program title: Medical Technology
- 1.3 Credit hours: 88

**2. Identification of the proposed program changes:**

- Program title change from “Medical Technology” to “Medical Laboratory Science”
- Reduction of credit hour requirement from 88 to 83
- Addition of BIOL 327/337 (Genetics) as an alternative to BIOL 319/322 (Introduction to Molecular and Cell Biology)
- Addition of CHEM 340/341 (Organic Chemistry I) as alternative to CHEM 314 (Introductory Organic Chemistry)
- Addition of BIOL 446/CHEM 446 (Biochemistry I)
- Deletion of CHEM 330 (Quantitative Analysis)
- Deletion of CS 146 (Introduction to Programming)

**3. Detailed program description:**

Existing Program	Revised Program
<p>Name of Program: <del>Medical Technology</del> Degree Requirements (<del>88 hours</del>) This program prepares students for a career in Medical Laboratory Science (MLS) where they will provide patient care in the areas of hematology, immunohematology (blood banking), chemistry, microbiology, urinalysis and body fluids. This profession is in high demand and requires well-trained, highly educated scientists. Coursework for this program requires a minimum of <del>88</del> hours (36 of which are completed at an affiliated school of medical technology/medical laboratory science and transferred back to the Department of Biology) and leads to a B.S. degree in Medical Technology. No minor is needed. A student must meet all the Colonnade Requirements for the bachelor’s degree at</p>	<p>Name of Program: <b>Medical Laboratory Science</b> Degree Requirements (<b>83 hours</b>) This program prepares students for a career in Medical Laboratory Science (MLS) where they will provide patient care in the areas of hematology, immunohematology (blood banking), chemistry, microbiology, urinalysis and body fluids. This profession is in high demand and requires well-trained, highly educated scientists. Coursework for this program requires a minimum of <b>83</b> hours (36 of which are completed at an affiliated school of medical laboratory science/medical technology and transferred back to the Department of Biology) and leads to a B.S. degree in Medical Laboratory Science. No minor is needed. A student must meet all the</p>

Western Kentucky University before admission to the school of medical technology. Upon satisfactory completion of the course requirements in ~~medical technology~~, the Bachelor of Science degree will be awarded by Western Kentucky University. Graduates of the ~~medical technology~~ program are eligible to take the national credentialing examinations for medical technologists which results in membership in the American Society of Clinical Pathologists (A.S.C.P). The program is affiliated with the following schools of medical technology: Bellarmine University, Louisville, KY, Owensboro Regional Health Hospital, Owensboro, KY, Vanderbilt Medical Center, Nashville, TN, St. Elizabeth Medical Center, Covington, KY.

Course Requirements at Western Kentucky University include:

- BIOL 120/121: Biological Concepts: Cells, Metabolism and Genetics
- BIOL 122/123: Biological Concepts: Evolution, Diversity and Ecology
- BIOL 224/225: Animal Biology and Diversity
- BIOL 226/227: Microbial Biology and Diversity
- BIOL 319/322: Introduction to Molecular and Cell Biology
- BIOL 328: Immunology
- CHEM 120/121: College Chemistry I
- CHEM 222/223: College Chemistry II
- CHEM 314 Introductory Organic Chemistry
- ~~CHEM 330 Quantitative Analysis~~
- ~~CS 146 Introduction to Programming~~
- MATH 118 or MATH 116 and 117: College Algebra and Trigonometry

Colonnade Requirements for the bachelor's degree at Western Kentucky University before admission to the school of medical technology. Upon satisfactory completion of the course requirements in **medical laboratory science**, the Bachelor of Science degree will be awarded by Western Kentucky University. Graduates of the **medical laboratory science** program are eligible to take the national credentialing examinations for medical technologists which results in membership in the American Society of Clinical Pathologists (A.S.C.P). The program is affiliated with the following schools of medical technology: Bellarmine University, Louisville, KY, Owensboro Regional Health Hospital, Owensboro, KY, Vanderbilt Medical Center, Nashville, TN, St. Elizabeth Medical Center, Covington, KY.

Course Requirements at Western Kentucky University include:

- BIOL 120/121: Biological Concepts Cells, Metabolism and Genetics
- BIO 122/123: Biological Concepts Evolution, Diversity and Ecology
- BIOL 224/225: Animal Biology and Diversity
- BIOL 226/227: Microbial Biology and Diversity
- BIOL 319/322: Introduction to Molecular and Cell Biology **or BIOL 327/337 Genetics**
- BIOL 328: Immunology
- CHEM 120/121: College Chemistry I
- CHEM 222/223: College Chemistry II
- CHEM 314: Introductory Organic Chemistry **or CHEM 340/CHEM 341: Organic Chemistry I**
- **BIOL 446/CHEM 446: Biochemistry I**
- MATH 118 or MATH 116 and 117: College Algebra and Trigonometry

**4. Rationale for the proposed program change:**

On-going discussions with affiliated programs of Medical Technology necessitate curricular changes and a name change to modernize the program and better serve our students.

- Name Change: American Society for Clinical Pathology prefers “Medical Laboratory Science”. Dropping the “Technology” from the degree title reduces the misconception that this is a 2-year degree. This should help with recruiting.
- Addition of BIOL 327/337 (Genetics) as a choice with BIOL 319/322 (Introduction to Molecular and Cell Biology) aligns with other biology courses and prerequisites. Both of these courses cover basic genetics but from different perspectives. Either perspective provides the foundation necessary to progress through the study of medical laboratory science.
- Addition of CHEM 340/341 (Organic Chemistry I) as an alternative to CHEM 314 (Introductory Organic Chemistry). Both courses cover introduction to families of carbon compounds, introduction to organic reactions, mechanisms, conformations and stereochemistry which provides adequate preparation in organic chemistry for this program. This addition also increases the availability/flexibility for course scheduling.
- Addition of CHEM 446/BIOL 446 (Biochemistry) was requested by the affiliated schools of medical laboratory science/medical technology. A deeper understanding of structure/function relationships between biological macromolecules and their role in metabolic pathways is essential to interpreting laboratory data in the modern hospital. Biochemistry provides the necessary background in biological chemistry.
- CHEM 330 (Quantitative Analysis) is not necessary to the medical laboratory science program as there is greater need for medical laboratory professionals to understand basic biochemistry rather than how to quantitatively analyze substances in the lab. Less emphasis is placed on gravimetric, volumetric and electrochemical theory and methodology in the modern clinical laboratory with a move to automation. The addition of CHEM 446/BIOL 446 in place of CHEM 330 fulfills the needs of this program.
- CS 146 (Introduction to Programming) is not necessary for this program. Understanding and designing Visual Basic applications is not crucial to Medical Laboratory Scientists.

**5. Proposed term for implementation and special provisions (if applicable): Fall 2016**

**6. Dates of prior committee approvals:**

Department of Biology	_____ September 25, 2015
Ogden College Curriculum Committee	_____
Undergraduate Curriculum Committee	_____
University Senate	_____



## CURRICULUM COMMITTEE, OCSE, STANDING RULES

### I. Purpose and Functions

- A. To review recommendations concerning undergraduate college and university curricula which are relevant to the Ogden College of Science and Engineering and to the welfare and best interests of the University, its students, and its faculty.
- B. To render decisive action on matters of undergraduate curriculum and academic policy that affect only the College of Science and Engineering.
- C. To submit for consideration to the University Curriculum Committee all approved recommendations which do not qualify for final action under the conditions of Item B.
- D. To initiate, create or otherwise instigate thought, ideas, and action which will promote the best possible continuing improvement of all phases of science, mathematics, and technology at Western Kentucky University.

### II. Membership

- A. The committee membership shall consist of one elected faculty representative from each Department/Academic Unit. Faculty representatives shall be elected for two years. The Departments of Biology, Computer Science, Architectural & Manufacturing Sciences, Mathematics, and Physics & Astronomy shall elect members in even-numbered years, and the Departments of Agriculture, Chemistry, Engineering, Geography & Geology, Psychological Sciences and SkyTeach, in odd-numbered years. The faculty representatives shall be elected in the spring semester to take office at the beginning of the following fall semester. Newly elected faculty should attend the last meeting of the spring semester. Other faculty may be invited by any member of the Committee to attend meetings as associate contributors without voting privileges. The Dean or their designate may attend in an advisory capacity and will be considered ex officio members of the committee.
- B. The Chairperson of the Committee shall be elected by the membership from the Ogden Curriculum Committee membership or the committee may elect the Dean/ Associate Dean to serve as Chairperson. The election shall occur at the last meeting in the spring and the Chairperson Elect will assume the position at the first meeting in the fall. The chairperson may designate an Acting Chair in his or her absence.
- C. An absent member may designate an alternate from the same Department to attend a meeting or give their proxy to another member. A member of the Ogden



Curriculum Committee cannot hold more than one proxy. The chairperson should be notified by email if a proxy has been given.

### III. Meetings

- A. All meetings will be called by the Committee Chairperson. The Curriculum Committee shall meet once a month during the academic year unless changed by a vote of the Committee. The date, time, and place of the meetings are to be determined by the Committee Chairperson.
- B. A quorum will consist of a simple majority of all voting members and a proxy will count toward the determination of a quorum.
- C. A legal vote will consist of a simple majority of the quorum.
- D. Requests for items to be included on the agenda will be submitted electronically to the Dean's Office no later than ten days before the meeting.
- E. The meeting agenda will be posted electronically on the Ogden College Curriculum Committee web site at least four days in advance of the meeting.

### IV. Procedural Rules and Regulations

Guidelines for procedures in all Committee activities will be established and reviewed periodically to insure the maximum effectiveness and efficiency of the Curriculum Committee.

- A. The privilege of speaking to the Committee will be acknowledged by the Chair. Special circumstances which involve matters that may be expedited by open discussion without addressing the Chair will be recognized and declared by the Chair of the Committee.
- B.
  - 1. All recommendations will be presented and outlined in the agenda.
  - 2. Any action originating in the OCSE Curriculum Committee shall be given a first and second reading before final action is taken on the proposal or recognition.
  - 3. Recommendations involving amendments to these Standing Rules shall be automatically tabled until the following meeting. Consideration for immediate action can be made only by unanimous consent.
  - 4. All proposals will be considered for final action at the first reading, unless the Chair or a majority of the members present request a second reading.

- C. If any emergency arises which required immediate action of the Committee, the Chairperson (or Acting Chair) will use the best possible means of obtaining a majority vote by the members.
- D. Subcommittees may be appointed for special investigations by the Chairperson. Subcommittees may include faculty members who are not members of the Curriculum Committee.
- E. A uniform style of presentation will be adhered to concerning all proposals. The Ogden College Curriculum Committee will adopt the templates and format of proposals utilized by the University Curriculum Committee.

Approved April, 1972  
OCSE Curriculum Committee

Revised October, 1981  
OCSE Curriculum Committee

Revised October, 1984  
OCSE Curriculum Committee

Revised December, 2015  
OCSE Curriculum Committee