


Date: February 4, 2015

From: Ruth E Beattie, 
Director of Undergraduate Studies
Department of Biology

Memo: Re changes to the BS, BA and Minor in Biology

The attached includes paperwork for changes to the BS, BA and Minor in Biology

Background

In Fall 2011, the Department of Biology implemented a new curriculum for the BS, BA and Minor in Biology. The changes proposed in this document are ones that have arisen as the "new" biology curriculum was implemented and courses have been changed/developed.

The changes can be summarized as follows:

1) **(BS and BA)**

UKCore Statistical Inferential Reasoning (SIR) requirement has changed from STA 210 to STA 296. In Fall 2011, the only SIR course available to biology majors was STA 210. STA 296 has since been developed and approved as a SIR course. Unofficially, for the past year, we have been recommending this course instead of STA 210 to biology majors. STA 296 is a methods course that is a much better fit for the Biology major.

Email from Dr Bill Rayens (Statistics) indicating this change will not be a problem.

RE: STA 296
Rayens, William S
Sent: Thursday, January 08, 2015 9:15 AM
To: Beattie, Ruth E; Stromberg, Arnold

No problems at all. Bio is one of the programs we thought would benefit from the change. Certainly we will need a couple of semesters, maybe a couple of years, to ultimately figure out the redistribution of bodies so that we get the correct number of sections of 296 and 210 offered. But we're pretty good at that so I don't anticipate any real issues.

Bill

From: Beattie, Ruth E
Sent: Thursday, January 08, 2015 9:09 AM

To: Rayens, William S; Stromberg, Arnold
Subject: STA 296

Bill,

Biology is in the process of making a few changes to our curriculum. Since Fall 2011 we have listed STA 210 as the UKCore SIR class that biology majors must take. We would like to change this to STA 296, which is a much better fit for our needs. Do you foresee any issues at your end with making this change?

REB

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2) (BS and BA)

The CHE 105 requirement can be satisfied by completion of the combination of CHE 109 and CHE 110. This is just formalizing a change that occurred two years ago when the Department of Chemistry developed the CHE 109 and CHE 110 course.

3) (BS and BA)

The BIO 155 requirement can be satisfied by completion of BIO 198 This is just formalizing a change that occurred two years ago when the BIO 198 course was formally approved. BIO 198 is a 2 credit hour enriched laboratory experience for high achieving students in the Scholars in Biology program.

4) (BS)

Currently students satisfy the physics requirement for the BS in Biology by completion of a sequence of physics courses (PHY 211 and PHY 213 or PHY 231, PHY 232, PHY 241 and PHY 242). The proposed change will provide more flexibility by permitting students to mix courses from either sequence to satisfy the requirement: **PHY 211 or PHY 231 and PHY 241 AND PHY 213 or PHY 232 and PHY 242.**

This is just formalizing a change that has been practice (through exception requests) for the past few years. Transfer students and those who change from other STEM majors have often completed PHY 231 and PHY 241 before entering

the biology major and are advised to take PHY 213 as it is a better fit for the biology major.

5) (BA)

The physics requirement for the BA in Biology is being expanded to include PHY 231 and 241. The requirement will read: PHY 211 or PHY 231 and PHY 241 or PHY 151. This is just formalizing a change that has been practice (through exception requests) for the past few years

6) (BS, BA and Minor)

The list of approved upper-level electives has been updated. Courses that are no longer offered at UK have been removed from the list. Some course titles or credit hours have been updated. 200-level BIO courses can no longer be used as upper-level electives for the BS, BA or Minor in Biology. The Department of Biology has developed a number of new upper-level elective courses and so the inclusion of the 200-level courses is not longer warranted.

7) (BS)

The upper-level laboratory requirement for the BS program has been reduced from 2 courses to one course. Before Fall 2011, the only laboratory courses that biology majors took were 2 lab courses in their freshman year and then two elective lab courses in their senior year. When the curriculum was revised in Fall 2011, resources were reallocated to increase laboratory experiences for biology majors and laboratory components were added to the 5 core courses in the curriculum and so the need for 2 additional laboratory experiences is less critical. By reducing the laboratory component to one course, students have more flexibility in their choice of electives.

8) (BA)

The upper-level laboratory requirement for the BA program has been eliminated although students still have the option to take a laboratory course as an elective.

NEW UNDERGRADUATE MINOR / CHANGE UNDERGRADUATE MINOR FORM

Please fill out Section I.

SECTION I: GENERAL INFORMATION

Program: Biology

Minor: Biology

College: A&S

Department: Biology

Bulletin PP: 133

CIP Code: 26.0101

Accrediting Agency (if applicable): N/A

⇒ Fill out Section II if you are proposing a NEW minor.

Section II: New Minor

Minor Prerequisites (list course prefix, number and title): _____

Minor Requirements (list course prefix, number and title): _____

Minor Electives (list course prefix, number and title): _____

Total Hours Required: _____

Rationale for Proposal: _____

⇒ Fill out Section III if you are CHANGING requirements for an existing minor.

Section III: Change In Minor Requirements

Current

BIO 148, BIO 152 and BIO 155

BIO 303 and BIO 304

Approved BIO or other courses at the 200+ level. Up to 3 hours of BIO 395 can be counted here.

Proposed

BIO 148, BIO 152 and BIO 155

BIO 303 and BIO 304

Approved 300+ level BIO courses or other courses from the approved list. Up to 3 hours of life science independent research coursework can be counted here.

Approved List: Note: BIO 208, BIO 209 and BIO 210 CANNOT be used to satisfy the upper-level elective requirement for the Minor in Biology

Anthropology

ANT 332 (3) Human Evolution

Chemistry

CHE 226 (3-5) Analytical Chemistry

CHE 233 (1) Organic Chemistry Laboratory II

CHE 440G (4) Physical Chemistry

CHE 441G (2) Physical Chemistry Lab

CHE 442G (3) Physical Chemistry

CHE 446G (3) Physical Chemistry for Engineers

CHE 532 (2) Spectrometric ID of Organic Compounds

CHE 533 (2) Qualitative Organic Analysis Lab

NEW UNDERGRADUATE MINOR / CHANGE UNDERGRADUATE MINOR FORM

CHE 550 (3) Biological Chemistry I
CHE 552 (3) Biological Chemistry II
CHE 558 (3) Hormone Receptors and Cell Signals
CHE 565 (3) Environmental Chemistry

Geology

EES 401G (3) Invertebrate Paleontology and Evolution

Arts and Sciences

A&S 300 (Acceptable as upper-level credit ONLY when offered by the Dept of Biology)

A&S 500 (Acceptable as upper-level credit ONLY when offered by the Dept of Biology)

Psychology

PSY 456 (4) Behavioral Neuroscience

PSY 459 (3) Drugs and Behavior

PSY 552 (4) Evolutionary Psychology

PSY 565 (3) Advanced Topics In Neuroscience

Statistics (Biology usually accepts only one of the following for each student)

STA 570 (4) Basic Statistical Analysis

STA 580 (2) Biostatistics I

Other STA courses may be accepted at the discretion of your advisor, and this may depend upon the area of biology in which you choose to specialize.

College of Agriculture, Food and Environment

ABT 460 (3) Introduction to Molecular Genetics (Cross listed as AGR/ASC/ENT 460)

ASC 364 (4) Reproductive Physiology of Animals

ASC 378 (4) Animal Nutrition

ENT 310 (3) Insect Pests of Field Crops

ENT 320 (3) Horticultural Entomology

ENT 402 (3) Forest Entomology (cross listed as FOR 402)

ENT 460 (3) Intro to Molecular Genetics (cross listed as ABT/ASC/FOR 360)

ENT 561 (3) Insects Affecting Human and Animal Health

ENT 564 (4) Insect Taxonomy

ENT 568 (3) Insect Behavior

FOR 340 (4) Forest Ecology

FOR 375 (1) Taxonomy of Forest Vegetation

FOR 402 (3) Forest Entomology

FSC 530 (5) Food Microbiology

NRE 320 (3) Natural Resource and Environmental Analysis

NRE 420G (4) Taxonomy of Vascular Plants

NRE 450G (3) Biogeochemistry

NRC 455G (3) Wetland Delineation

PLS 320 (4) Woody Horticultural Plants

PLS 330 (2) Herbaceous Horticultural Plants I

PLS 332 (2) Herbaceous Horticultural Plants II

PLS 366 (4) Fundamentals of Soil Science

PLS 450G (3) Biogeochemistry

PLS 502 (3) Ecology of Economic Plants

PLS 566 (3) Soil Microbiology

PLS 567 (1) Methods in Soil Microbiology (Lab)

PPA 400G (3) Principles of Plant Pathology

College of Medicine

NEW UNDERGRADUATE MINOR / CHANGE UNDERGRADUATE MINOR FORM

ANA 511 (5) Intro To Human Anatomy
ANA 512 (4) Microscopy and Ultrastructure
ANA 516 (3) Anatomy of the Nervous System
Some other anatomy courses at the 500-level are acceptable, but they are usually restricted to professional students.

BCH 401G (3) Fundamentals of Biochemistry
MI 494G (3) Immunobiology (same as BIO 494G)
MI 595 (2) Immunobiology Laboratory
MI 598 (3) Clinical Microbiology (same as PAT 598)
PGY 412G (4) Principles of Human Physiology Acceptable as an elective for upper level biology credit but DOES NOT substitute for BIO 350 or BIO430G)
PGY 560 (1) Pathophysiology
PGY 590 (4) Cellular and Molecular Physiology
TOX 509 (3) Biochemical and Environmental Toxicology
Unacceptable courses often mistakenly thought to be acceptable:

Other courses may be accepted at the discretion of the Director of Undergraduate Studies in the Department of Biology

Current Total Hours: 21

Proposed Total Hours: 21

Rationale for Proposal: The list of approved upper-level electives has been updated. Courses that are no longer offered at UK have been removed from the list. Some course titles or credit hours have been updated. 200-level BIO courses can no longer be used as upper-level electives for the BS, BA or Minor in Biology. The Department of Biology has developed a number of new upper-level elective courses and so the inclusion of the 200-level courses is not longer warranted.

Will this program be printed in the Bulletin?

Yes No

NEW UNDERGRADUATE MINOR / CHANGE UNDERGRADUATE MINOR FORM

Signature Routing Log

General Information:



Proposal Name: Biology Minor

Proposal Contact Person Name: Ruth E Beattie Phone: 257-7647 Email: rebeat1@uky.edu

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
Department of Biology		Dr. Vincent Cassone / 257-6766 / vincent.cassone@uky.edu	
EPC/ A&S	3/3/15	Anna Bosch / 7-1504 / anna.bosch@uky.edu	
		/ /	
		/ /	
		/ /	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision ¹
Undergraduate Council	3/31/15	Joanie Ett-Mims	
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

¹ Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.