

# Bachelor of Science Biology/Pre-Veterinary-PrgRsv-2015-09-01

## Form Information

Bachelors in Biology Pre-Veterinary-PrgRsv-2015-09-01

Please direct any questions to curriculum-approval@iup.edu

### \*Indicates a required field

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Contact Person*	Megan Knoch	Contact Email*	mknoch@iup.edu
Proposing Department/Unit*	Biology	Contact Phone*	7-2613

### Program Revision Options (Check all that apply)

Program Revision

Course Level:\* undergraduate-level

### Rationale for Proposed Changes

#### (A) Why is the program being revised?\*

Last year the Biology Department increased the number of credits for BIOL 250 from 3 credits to 4 credits. This change to BIOL 250 resulted in the reduction of the number of controlled biology electives from 9 credits to 8 credits. We are proposing to increase the controlled electives to 9 credits and to reduce the number of free electives from 10-16 credits currently to 9-15 credits. This will allow Biology Bachelor of Science – Pre-Veterinary students to better fulfill the second program learning outcome by broadening their background in the biological sciences. The proposed change will also bring the degree requirements in the major to 60 credits, which fulfills state program requirements. In addition, we are proposing to remove and replace some of the Required Biology Courses. BIOL 310 is replacing BIOL 331 as veterinary students require more course content in the zoonotic spread of disease. All Biology/Pre-Veterinary students will still be required to complete the Biology Required Courses that include BIOL 201, BIOL 202 and BIOL 203.

#### (B) Identify the Program Student Learning Outcomes

Upon completion of the program:

- i) Apply biological principles across multiple scales of biological organization such as cell, organism, and ecosystem
- ii) Apply the principles of experimental design and the scientific method for problem solving and the process of research
- iii) Access and assess peer-reviewed literature in biology
- iv) Communicate scientific information in written and oral form
- v) Evaluate the ethical and social implications of biology.

#### (SLO). Mark any SLOs that are changing as a

#### part of the Program Revision.\*

#### (C) Implications of the change on the program, other

The proposed curriculum change requires courses with content that consistently appears on admissions tests and in curriculum for veterinary programs. Thus, these courses will improve student preparedness for professional programs. No other programs will be affected. Current students will be permitted to complete the proposed curriculum to satisfy graduation requirements.

#### programs and the Students:\*

Current Program Information		Proposed Changes	
(D) Current Program Title*		Proposed Program Title	
		<i>(if changing)</i>	
(E) Current Narrative	<b>UG Course Catalog:</b> <a href="http://www.iup.edu/registrar/catalog/">http://www.iup.edu/registrar/catalog/</a>	Proposed Narrative	
Catalog Description	<b>Grad Course Catalog:</b> <a href="http://www.iup.edu/graduatestudies/catalog/">http://www.iup.edu/graduatestudies/catalog/</a>	Catalog Description	
<b>It is acceptable to copy/paste from the current catalog entry.</b>		<i>(if changing)</i>	
(F) Current Program	Liberal Studies: (45 cr) As outlined in Liberal Studies section with the following specifications:	Proposed Program	
Requirements	<p>Mathematics: MATH 121</p> <p>Natural Science: CHEM 111-112 or CHEM 113-114</p> <p>Liberal Studies Electives: 3cr, PSYC 101, no courses with BIOL prefix</p> <p>Major: (36 cr)</p> <p>Required Core Courses: (12 cr)</p> <p>BIOL 201 Principles of Ecology and Evolution 4cr</p> <p>BIOL 202 Principles of Cell and Molecular Biology 4cr</p> <p>BIOL 203 Principles of Genetics and Development 4cr</p> <p>Required Biology Courses: (16 cr)</p> <p>BIOL 220 General Zoology 3 cr</p> <p>BIOL 242 Comparative Vertebrate Anatomy 3cr</p> <p>BIOL 250 Principles of Microbiology 4 cr</p> <p>BIOL 331 Animal Development Biology 3cr</p> <p>BIOL 352 Comparative Animal Physiology 3cr</p> <p>Controlled Biology Electives: <b>(1)</b> 8 cr</p> <p>BIOL 210, 221, 242, 271, 310, 323, 363, 364, 401, 405, 410, 460, 466, 475, 477, 481, 482, 483, 484, 491, 493, 499 or other biology major courses by permission of advisor or department chairperson.</p> <p>Ancillary Science Requirements: (23 cr)</p> <p>CHEM 231 Organic Chemistry I 4cr</p> <p>CHEM 232 Organic Chemistry II 4cr</p> <p>CHEM 351 Biochemistry 4cr</p> <p>MATH 216 Probability and Statistics for Natural Sciences 3cr or 217 Probability and Statistics</p> <p>PHYS 111 Physics I Lecture 3cr</p> <p>PHYS 121 Physics I Lab 1cr</p>	Requirements	<p>Liberal Studies: (45 cr) As outlined in Liberal Studies section with the following specifications:</p> <p>Mathematics: MATH 121</p> <p>Natural Science: CHEM 111-112 or CHEM 113-114</p> <p>Liberal Studies Electives: 3cr, PSYC 101, no courses with BIOL prefix</p> <p><b>Major: (37 cr)</b></p> <p>Required Core Courses: (12 cr)</p> <p>BIOL 201 Principles of Ecology and Evolution 4cr</p> <p>BIOL 202 Principles of Cell and Molecular Biology 4cr</p> <p>BIOL 203 Principles of Genetics and Development 4cr</p> <p><b>Required Biology Courses: (16 cr)</b></p> <p><b>BIOL 220 General Zoology 3 cr</b></p> <p><b>BIOL 242 Comparative Vertebrate Anatomy 3cr</b></p> <p><b>BIOL 250 Principles of Microbiology 4 cr</b></p> <p><b>BIOL 310 Applied Entymology and Zoonoses 3cr</b></p> <p><b>BIOL 352 Comparative Animal Physiology 3cr</b></p> <p><b>Controlled Biology Electives: (1) 9 cr</b></p>
		<i>(if changing, please highlight in RED what is being changed)</i>	

PHYS 112 Physics II Lecture 3cr

PHYS 122 Physics II Lab 1cr

Other Requirements: **(2)** Foreign Language Intermediate Level 0-6 cr, Exit survey for assessment purposes.

Free Electives: 10-16 cr

Total Degree Requirements: 120 cr

**(1)** No more than 6cr total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives. **(2)** (a) Two courses in one language, including the placement course; or (b) intermediate level. In lieu of a foreign language, students may elect to take a sequence of two courses in either computer science, exclusive of COSC 101 (COSC 110 and 210 recommended), or two courses in geography/regional planning (from the following: GEOG/RGPL 213, 314, 316, 415, 417).

BIOL 200, 210, 221, 242, 271, 323, 331, 352, 363, 364, 401, 405, 410, 460, 466, 475, 477, 481, 482, 483, 484, 491, 493, 499 or other biology major courses by permission of advisor or department chairperson

Ancillary Science Requirements: (23 cr)

CHEM 231 Organic Chemistry I 4cr

CHEM 232 Organic Chemistry II 4cr

CHEM 351 Biochemistry 4cr

MATH 216 Probability and Statistics for Natural Sciences 3cr or 217 Probability and Statistics

PHYS 111 Physics I Lecture 3cr

PHYS 121 Physics I Lab 1cr

PHYS 112 Physics II Lecture 3cr

PHYS 122 Physics II Lab 1cr

Other Requirements: **(2)** Foreign Language Intermediate Level 0-6 cr, Exit survey for assessment purposes.

Free Electives: 9-15 cr

Total Degree Requirements: 120 cr

**(1)** No more than 6cr total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives. **(2)** (a) Two courses in one language, including the placement course; or (b) intermediate level. In lieu of a foreign language, students may elect to take a sequence of two courses in either computer science, exclusive of COSC 101 (COSC 110 and 210 recommended), or two courses in geography/regional planning (from the following: GEOG/RGPL 213, 314, 316, 415, 417).

(G)  
Supporting  
Documents

*If making a major change, please attach a document with a summary of any/all changes.*

File

Modified ▲

For Deans Review

Are Resources Available/Sufficient for this Course?

Is the Proposal Congruent with the College Mission?

Has the Proposer Attempted to Resolve Potential Conflicts with Other Academic Units?

Comments: