

**Curriculum Proposal Cover Sheet – form is available on-line as an interactive PDF**

LSC Use Only Proposal No:	UWUCC Use Only Proposal No: <del>12-137</del> <b>13-361</b>
LSC Action-Date:	UWUCC Action-Date: <b>AP-8/27/13</b> Senate Action Date: <b>W-9/24/13</b>

**Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee**

Contact Person(s) <b>Sandra Newell</b>	Email Address <b>sjnewell@iup.edu</b>
Proposing Department/Unit <b>Biology</b>	Phone <b>7-2352</b>

Check all appropriate lines and complete all information. Use a separate cover sheet for each course proposal and/or program proposal.

**1. Course Proposals (check all that apply)**

New Course                       Course Prefix Change                       Course Deletion  
 Course Revision                       Course Number and/or Title Change                       Catalog Description Change

Current course prefix, number and full title: \_\_\_\_\_

Proposed course prefix, number and full title, if changing: \_\_\_\_\_

**2. Liberal Studies Course Designations, as appropriate**

This course is also proposed as a Liberal Studies Course (please mark the appropriate categories below)

Learning Skills     Knowledge Area     Global and Multicultural Awareness     Writing Intensive (include W cover sheet)

Liberal Studies Elective (please mark the designation(s) that applies – must meet at least one)

Global Citizenship                       Information Literacy                       Oral Communication  
 Quantitative Reasoning                       Scientific Literacy                       Technological Literacy

**Received**

**3. Other Designations, as appropriate**

Honors College Course                       Other: (e.g. Women's Studies, Pan African)

**APR 29 2013**

**Liberal Studies**

**4. Program Proposals**

Catalog Description Change     Program Revision     Program Title Change     New Track  
 New Degree Program     New Minor Program     Liberal Studies Requirement Changes     Other

Current program name:    **Minor - Biology**                      **Revision of a Minor**

Proposed program name, if changing: \_\_\_\_\_

5. Approvals	Signature	Date
Department Curriculum Committee Chair(s)	<i>Sandra Newell</i>	30 Nov 2012
Department Chairperson(s)	<i>[Signature]</i>	Nov 30 2012
College Curriculum Committee Chair	<i>[Signature]</i>	4/24/12
College Dean	<i>[Signature]</i>	7/29/13
Director of Liberal Studies (as needed)		
Director of Honors College (as needed)		
Provost (as needed)	<i>[Signature]</i>	4/30/13
Additional signature (with title) as appropriate		
UWUCC Co-Chairs		

## Part II. Description of Curriculum Change

1. Catalog description for the revised program in the appropriate form.

<b>Minor – Biology</b>		<b>21</b>
<b>Required Courses:</b>		
BIOL 201 Principles of Ecology & Evolution		
BIOL 202 Principles of Cell & Molecular Biology		
BIOL 203 Principles of Genetics & Development	12 cr	
Additional BIOL courses at 200-level or higher (1)		9 cr

### Other Requirements:

Student must have at least a 2.0 GPA in all BIOL courses for the minor.

Student must take at least 6 cr of biology courses at IUP.

Must have permission of Biology Department chairperson.

(1) Selected from biology major's courses, not liberal studies courses, with approval of biology department chairperson

2. Summary of changes:

1. BIOL 111 Principles of Biology I and BIOL 112 Principles of Biology II have been replaced by the new core courses: BIOL 201 Principles of Ecology & Evolution, BIOL 202 Principles of Cell & Molecular Biology, and BIOL 203 Principles of Genetics & Development.

2. BIOL 103-104 General Biology I and II, formerly alternatives for BIOL 111-112, were removed.

3. All biology elective credits must now be at 200-level or above, and liberal studies courses are specifically excluded.

4. The number of total credits is increased by 1 cr. The newly specified courses are 12 cr, replacing the older courses at 8 cr. Biology electives total 9 cr, whereas they formerly were 12 cr.

Old catalog description for comparison:

<b>Minor – Biology</b>		<b>20</b>
<b>Required Courses:</b>		
BIOL 103-104 General Biology I and II <i>or</i>		
BIOL 111-112 Principles of Biology I and II		8 cr
Additional BIOL courses (1,2)		12 cr

### Other Requirements:

Student must have at least a 2.0 GPA in all BIOL courses for the minor.

Student must take at least 6 cr of biology courses at IUP.

Must have permission of Biology Department chairperson.

- (1) With approval of department chairperson.
- (2) At least 8 of the 12 required additional BIOL cr must come from 200-level or higher courses.

### 3. Rationale for change

1. BIOL 111 and 112 are to be deleted with the change in the biology core curriculum. These courses are being replaced by BIOL 201, 202, and 203 in the biology curriculum
2. BIOL 103 General Biology I has been revised to be BIOL 103 Life on Earth, including removal of about half of the content of the old course and focusing on ecology and evolution. BIOL 104 General Biology II has been revised to be BIOL 104 Human Biology: How the Human Body Works, with removal of about half of the content of the old course and refocusing on human physiology. These courses are designed specifically for non-biology majors, with reduced content and increased application to daily life. They are intended to better prepare students to understand issues and concepts relevant to modern life. They no longer parallel the major's courses and do not provide adequate preparation for more advanced work in biology.
3. There are no 100-level major's courses other than BIOL 111-112, and these courses are being deleted as they are replaced by the new core curriculum. Liberal studies courses are insufficiently rigorous for a biology minor.
4. Most biology courses are 3 cr, so the additional courses were listed as a multiple of 3 cr.

### **Part III. Implementation.**

1. How will the proposed revision affect students already in the existing program?

Students currently pursuing a minor will continue under the guidelines of the catalog in effect when they began their program.

2. Are faculty resources adequate?

Faculty resources are adequate and will not change with this revision.

3. Are other resources adequate?

Other resources are adequate and will not change with this revision.

4. Do you expect an increase or decrease in the number of students as a result of these revisions?

We do not expect this revision to have an impact on the number of students selecting a minor in biology.

### **Part IV. Periodic Assessment**

1. Describe the evaluation plan.

The Biology Department conducts a review of all programs every five years. Criteria include both quantitative and qualitative evaluation of the programs. In addition, every year the outgoing seniors will be surveyed, using the required exit survey, for feedback about the nature of their experiences in the various programs within the department. The biology minor is included in this review process.

**Part V. Course Proposals**

No courses are being added, revised or deleted as a result of this program revision.

**Part VI. Letters of Support or Acknowledgment**

No specific departments are affected by this revision.



Indiana University of Pennsylvania

## Memorandum

To: Dr. Sandra J. Newell  
Biology Department

From: Dr. William W. Oblitey *WWO*  
Computer Science Department

Date: February 13, 2013

RE: Support of Biology BS Revision

The Computer Science Department fully supports the change in your proposal for the BS degree in Biology. We are aware that it means more of your students will have to take our COSC 110 and COSC 210 courses, and we will make room in these courses for your students.

**Sandra Newell**

---

**From:** <talwar@iup.edu>  
**To:** "Sandra Newell" <sjnewell@iup.edu>  
**Cc:** "Devki N Talwar" <Devki.Talwar@iup.edu>  
**Sent:** Friday 22 February 2013 7:25 AM  
**Subject:** Re: curriculum proposals

Hello Sandra,  
I support the core curriculum revision in Biology.

Best regards

Devki Talwar

**From:** Sandra Newell  
**Sent:** Wednesday 13 February 2013 11:46 AM  
**To:** talwar@iup.edu  
**Subject:** Fw: curriculum proposals

no problem

Sandra J. Newell, Ph.D.  
Department of Biology  
Indiana University of Pennsylvania  
975 Oakland Avenue  
Indiana, PA 15705  
724-357-2352

— Original Message —

**From:** Sandra Newell  
**To:** talwar@iup.edu  
**Sent:** Wednesday 13 February 2013 11:34 AM  
**Subject:** curriculum proposals

Hi,  
Attached are the files for the core curriculum revision in biology. I am sharing them with you, although we expect no impact on Physics. The only change in the curriculum that relates to Physics is that PHYS is now listed as a required science rather than being listed as a Liberal Studies elective. I hope that you can support this change with a letter that effect.  
Sandy

Sandra J. Newell, Ph.D.  
Department of Biology  
Indiana University of Pennsylvania  
975 Oakland Avenue  
Indiana, PA 15705  
724-357-2352

**Sandra Newell**

---

**From:** "Alex Heckert" <aheckert@iup.edu>  
**To:** "Sandra Newell" <sjnewell@iup.edu>  
**Sent:** Thursday 14 February 2013 3:07 PM  
**Subject:** Re: curriculum proposal

Sandy,  
Sociology fully supports your proposed revision of the B.S. Biology/Pre-Medical Track, with its addition of SOC 151 as a required social science.

Thanks  
Alex Heckert  
Chair  
Sociology

— Original Message —

**From:** Sandra Newell  
**To:** Alex.Heckert@iup.edu  
**Sent:** Wednesday, February 13, 2013 11:12 AM  
**Subject:** curriculum proposal

Hi,  
Attached is a proposed revision of the B.S. Biology/Pre-Medical Track. We plan to add SOC 151 as a required social science for the students in this track so that they are better prepared for Medical School. We hope that you can support this curriculum change with a letter.  
Sandy

Sandra J. Newell, Ph.D.  
Department of Biology  
Indiana University of Pennsylvania  
975 Oakland Avenue  
Indiana, PA 15705  
724-357-2352



Indiana University of Pennsylvania

*Geoscience Department, 111 Walsh Hall, 302 E. Walk, Indiana, Pennsylvania 15705-1066  
Phone 724.357.2379, Fax 724.357.6208, web [www.iup.edu/geoscience](http://www.iup.edu/geoscience)*

March 28, 2013

From: Steven A. Hovan, Department Chairperson

To: Dr. Sandra Newell

Re: proposed changes to Biology courses and programs

Dr. Newell,

The department faculty have had the opportunity to review the proposed changes in Biology courses and programs as they relate to the Geoscience Department and we are happy to support them. The new geoscience courses offered as controlled electives we think will give students valuable options to tailor curriculum to their interests. We also noted and support the change to your introductory biology sequence and will make the necessary adjustments to our programs to reflect the new course numbers.

On behalf of the Geoscience faculty, we wish you success in your curricular revisions!

Sincerely,

A handwritten signature in black ink, appearing to read 'S.A. Hovan'.

Dr. Steve Hovan  
Chair, Department of Geoscience



March 28, 2013

**From:** Steven A. Hovan, Department Chairperson

**To:** Holly Travis

**Re:** proposed changes to BSED Biology


Holly,

The department has carefully reviewed the proposed changes to the BSED Biology program as they relate to the Geoscience Department and we are happy to support them. In particular, we feel that science education majors will definitely benefit from the change that now requires GEOS201 (Foundations of Geology). This course is designed to cover a broad range of topics that will most certainly benefit Biology-Education majors. We generally offer this course every semester so fitting it into the Education majors tight schedule will be much more easily accomplished.

As mentioned previously, we will do our best to accommodate the anticipated increase of a few students per semester by reserving a few seats for the Bio-Educ majors in each section.

On behalf of the Geoscience faculty, we wish you success in your newly revised program!

Sincerely,



**Dr. Steve Hovan**  
Chair, Department of Geoscience



Indiana University of Pennsylvania

[www.iup.edu](http://www.iup.edu)

Department of Mathematics  
Straight Hall, Room 233  
210 South Tenth Street  
Indiana, Pennsylvania 15705-1048

P 724-357-2608  
F 724-357-7908  
[www.iup.edu/math](http://www.iup.edu/math)

To: University Wide Curriculum Committee

From: Francisco Alarcón

Chair

A handwritten signature in black ink, appearing to read 'Francisco Alarcón', enclosed within a hand-drawn oval.

Re.: BSED Curriculum Change

Date: Feb. 15<sup>th</sup>, 2013

Members of the UWCC,

The Mathematics Department supports the change in Mathematics requirements for the B.S. Ed. in Biology. Specifically, previously, students were required to take MATH 110 or MATH 121, and MATH 217. The new program identifies the required courses as MATH 110 and MATH 217, but MATH 121 is identified as an acceptable substitute for MATH 110 if a student wishes to take that option.