

LSC Use Only No:	LSC Action-Date:	UWUCC USE Only No.	UWUCC Action-Date:	Senate Action Date:
		09-35	AP-2/19/10	App-4/20/10

Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

Contact Person Holly Travis	Email Address h.j.travis@iup.edu
Proposing Department/Unit Biology	Phone 724-357-2359

Check all appropriate lines and complete information as requested. Use a separate cover sheet for each course proposal and for each 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

<i>Current Course prefix, number and full title</i>	<i>Proposed course prefix, number and full title, if changing</i>
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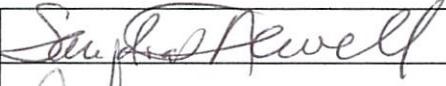

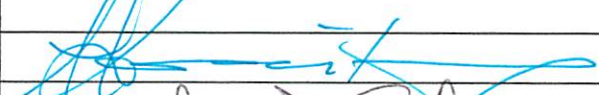
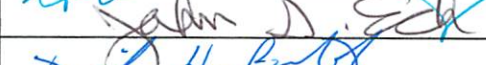
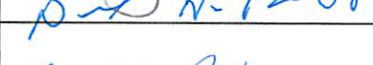

2. Additional Course Designations: check if appropriate

This course is also proposed as a Liberal Studies Course. Other: (e.g., Women's Studies, Pan-African)
 This course is also proposed as an Honors College Course.

3. Program Proposals

New Degree Program Program Title Change Program Revision
 New Minor Program New Track Other

<i>Current program name</i>	<i>Proposed program name, if changing</i>
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4. Approvals		Date
Department Curriculum Committee Chair(s)		2/27/09
Department Chair(s)		2/27/09
College Curriculum Committee Chair		03/19/09
College Dean		3/20/09
Director of Liberal Studies *		11/15/10
Director of Honors College *		
Provost *		10/23/09
Additional signatures as appropriate: (include title)	Joseph Derravalle TECC	07.06.09
	May Ann Rajath Dean-COE-ET	07.06.09
UWUCC Co-Chairs		

* where applicable

Received Received
 MAR 24 2010 OCT 15 2009
 Liberal Studies Liberal Studies

Part II. Description of Curriculum Change

1. Catalogue description: Bachelor of Science in Education–Biology (*)

The undergraduate Biology Education catalogue description on page 125 in the current Undergraduate Catalogue 2008-2009 will be changed to reflect changes in the footnoted items. Footnotes that no longer apply, due to the use of the 3-Step Process for Teacher Education, were removed and the superscript numbering was added to make it easier to find information. The list of courses and credits for the undergraduate Biology Education program must change based on the new Pennsylvania Department of Education requirements for teacher certification and on departmental efforts to strengthen preparation of biology education students in related science disciplines (Physics).

Bachelor of Science in Education–Biology *	
Liberal Studies: As outlined in Liberal Studies section	55
with the following specifications:	
Mathematics: MATH 110 or 121	
Natural Science: CHEM 111-112	
Social Science: PSYC 101	
Liberal Studies Electives: 9cr, MATH 217, PHYS 151/PHYS 161, one course with GEOS prefix from the Liberal Studies Natural Science (Option II) Nonlaboratory List; no courses with BIOL prefix	
College of Education:	31
Preprofessional Education Sequence:	
COMM 103 Digital Instructional Technology 3cr	
EDSP 102 Educational Psychology 3cr	
Professional Education Sequence:	
EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings 2cr	
EDEX 323 Instruction of English Language Learners in with Special Needs 2cr	
EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3cr	
EDUC 242 Pre-Student Teaching Clinical Experience I 1cr	
EDUC 342 Pre-Student Teaching Clinical Experience II 1cr	
EDUC 441 Student Teaching (1) 12cr	
EDUC 442 School Law 1cr	
EDUC 451 Teaching Science in the Secondary School 3cr	
Major:	29
Required Courses:	
BIOL 111 Principles of Biology I 4cr	
BIOL 112 Principles of Biology II 4cr	
BIOL 210 Botany 3cr	
BIOL 220 General Zoology 3cr	
BIOL 250 Principles of Microbiology 3cr	
BIOL 263 Genetics 3cr	
BIOL 480 Biology Seminar 1cr	
¹Controlled Electives:	
Biology electives: (major courses only) 8cr	
Other Requirements:	8
Chemistry Sequence:	
CHEM 231 Organic Chemistry I 4cr	
²CHEM 351 Biochemistry (3) 4cr	
³Total Degree Requirements:	123
* See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Educational Technology section of this catalog.	
¹ No more than 6cr from BIOL 482, 481, or 493 applies to major; excess applied as free electives.	
² The two-semester (6cr) sequence of BIOC 301-302 can be substituted for CHEM 351 to meet the biochemistry requirement.	
³ See advisory paragraph “Timely Completion of Degree Requirements” in the section on Requirements for Graduation.	

2a. Summary of changes: Table comparing old and new programs

Current Program:		Proposed Program:	
Bachelor of Science in Education – Secondary Biology(*)		Bachelor of Science in Education – Secondary Biology(*)	
Liberal Studies as outlined in Liberal Studies section with the following specifications: Mathematics: MATH 110 or 121 Natural Sciences: CHEM 111-112 Social Science: PSYC 101 Liberal Studies Electives: 9cr, MATH 217, PHYS 151, one course with GEOS prefix (Option II) Nonlaboratory list; no courses with BIOL prefix	54	Liberal Studies as outlined in Liberal Studies section with the following specifications: Mathematics: MATH 110 or 121 Natural Sciences: CHEM 111-112 Social Science: PSYC 101 Liberal Studies Electives: 10cr, MATH 217, PHYS 151/PHYS 161, one course with GEOS prefix (Option II) Nonlaboratory list; no courses with BIOL prefix	55
College of Education: Preprofessional Education Sequence: COMM 103 Digital Instructional Technology 3cr EDSP 102 Educational Psychology 3cr Professional Education Sequence: EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings 2cr EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3cr EDUC 242 Pre-Student Teaching Clinical Experience I 1cr EDUC 342 Pre-Student Teaching Clinical Experience II 1cr EDUC 441 Student Teaching(1) 12cr EDUC 442 School Law 1cr EDUC 451 Teaching Science in the Secondary School 3cr	29	College of Education: Preprofessional Education Sequence: COMM 103 Digital Instr. Technology 3cr EDSP 102 Educational Psychology 3cr Professional Education Sequence: EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings 2cr EDEX 323 Instruction of English Language Learners with Special Needs 2cr EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3cr EDUC 242 Pre-Student Teaching Clinical Experience I 1cr EDUC 342 Pre-Student Teaching Clinical Experience II 1cr EDUC 441 Student Teaching (1) 12cr EDUC 442 School Law 1cr EDUC 451 Teaching Science in the Secondary School 3cr	31
Major: (1) Required Courses: BIOL 111 Principles of Biology I 4cr BIOL 112 Principles of Biology II 4cr BIOL 210 Botany 3cr BIOL 220 General Zoology 3cr BIOL 250 Principles of Microbiology 3cr BIOL 263 Genetics 3cr BIOL 480 Biology Seminar 1cr Controlled Electives(2) Biology electives: (major courses only) 8cr	29	Major: Required Courses: BIOL 111 Principles of Biology I 4cr BIOL 112 Principles of Biology II 4cr BIOL 210 Botany 3cr BIOL 220 General Zoology 3cr BIOL 250 Principles of Microbiology 3cr BIOL 263 Genetics 3cr BIOL 480 Biology Seminar 1cr Controlled Electives (2) Biology electives: (major courses only) 8cr	29
Other Requirements: Chemistry Sequence: CHEM 231 Organic Chem. I 4cr CHEM 351 Biochemistry(3) 4cr	8	Other Requirements: Chemistry Sequence: CHEM 231 Organic Chem. I 4cr CHEM 351 Biochemistry (3) 4cr	8
(#)Total degree requirements	120	Total degree requirements (4)	123
(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher		(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the	

<p>(1) Eligibility for student teaching and certification in secondary biology education will require a grade of C or better in all biology courses and a cumulative combined GPA of 2.75 or better in biology and education courses.</p> <p>(2) No more than 6cr from BIOL 482, 481, or 493 applies to major; excess applied as free electives.</p> <p>(3) The two-semester (6cr) sequence of BIOC 301-302 can be substituted for CHEM 351 to meet the biochemistry requirement.</p> <p>(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation</p>	<p>(1) Eligibility for student teaching and certification in secondary biology education will require a grade of C or better in all biology courses and a cumulative combined GPA of 2.75 or better in biology and education courses.</p> <p>(2) No more than 6cr from BIOL 482, 481, or 493 applies to major; excess applied as free electives.</p> <p>(3) The two-semester (6cr) sequence of BIOC 301-302 can be substituted for CHEM 351 to meet the biochemistry requirement.</p> <p>(4) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation</p>	
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2b. List of all associated course changes (new or revised courses, number, title, or description changes, and deletions):

1. Addition of EDEX 323 Instruction of English Language Learners with Special Needs
2. Addition of PHYS 161 Medical Physics lab

3. Rationale for change:

1. The addition of EDEX 323 will allow the Biology Education program to meet the new requirements instituted by the Pennsylvania Department of Education (PDE). The State System of Higher Education and PDE now permit secondary education programs to add credits beyond 120 hours in order to meet these new requirements. After meeting with College of Education and Education of Exceptional Persons faculty and administration, the addition of EDEX 323 and clarification of material covered in existing courses was determined to allow the program to meet these new requirements for 270 hours of Special Education and 90 hours of ELL. (See attached list in Part VI for classes/hours).

2. The addition of the lab component (PHYS 161) for the PHYS 151 Medical Physics course will give the Biology Education students the opportunity to work with laboratory equipment and procedures that will better prepare them for the variety of topics they may be teaching in secondary schools. Because the Biology Education certificate allows students to teach a variety of classes, including courses such as Science 8 or Applied Science, which may include physical science and/or other disciplines, the addition of the Physics lab component will allow them to be better equipped for these opportunities. As noted above, secondary science education programs are now able to add hours beyond the 120, giving us the opportunity to improve the quality of preparation our students receive.

Part III. Implementation. Provide answers to the following questions:

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

Students currently in the program will not be affected by the changes. These changes will be implemented for students entering the program in Fall 2009.

2. Are faculty resources adequate? If you are not requesting or have not been authorized to hire additional faculty, demonstrate how this course will fit into the schedule(s) of current faculty.

Faculty resources are adequate. Letters of support from the appropriate departments for these course additions are attached.

3. Are other resources adequate? (Space, equipment, supplies, travel funds)

There are no additional requirements for resources at this time.

4. Do you expect an increase or decrease in the number of students as a result of these revisions? If so, how will the department adjust?

While our goal is always to increase the enrollment in the Biology Education program, we do not expect these particular changes to have any effect on the number of students in the program.

Part IV. Periodic Assessment

Departments are responsible for an on-going review of curriculum. Include information about the department's plan for program evaluation:

1. Describe the evaluation plan. Include evaluation criteria. Specify how student input will be incorporated into the evaluation process.

The Secondary Science Education programs (Biology, Chemistry, Earth and Space Science, and Physics) are all evaluated through the National Council for the Accreditation of Teacher Education (NCATE) and the National Science teachers Association (NSTA). Criteria are identified in the document entitled *Standards for Science teacher Preparation (2003)*. These can be found online at

<http://www.ncate.org/ProgramStandards/NSTA/NSTAstandards.doc>.

Student input is collected through the electronic portfolio and teacher work sample submitted at the end of the student teaching experience, and through discussions with candidates at the final Professional Day meeting each semester.

2. Specify the frequency of the evaluations.

The program is evaluated every three years by PDE and every five years by NCATE. The secondary science education programs submitted a new NCATE accreditation application in fall 2008 and are awaiting program approval. We are currently approved by PDE.

3. Identify the evaluating entity.

See # 2 above.

Part V. Course Proposals

Course proposals for any new courses added, revised, or deleted as a result of this program revision. A course analysis questionnaire and syllabus must be included for each course.

Both items added to the program are existing courses.

Part VI. Letters of Support or Acknowledgement

Sign-off letters from interested or affected departments including a letter from the Liberal Studies Committee if appropriate. (See page 3 for guidelines.)

1. Letter from the Physics Department

From: Stanley Sobolewski <sobolews@iup.edu>

Subject: Re: Syllabus, too

Date: Tue, 06 Jan 2009 09:26:16 -0500

To: Holly Travis <h.j.travis@iup.edu>

Cc: Devki N Talwar <talwar@iup.edu>



Holly,

The physics department would be more than delighted to have the Biology Education majors add the Medical Physics lab (PHYS 161) to their program. As the instructor of the class, and as the Physics Education coordinator, I endorse this change.

Stan Sobolewski.

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Stanley J. Sobolewski Ph.D.
Associate Professor of Physics
Coordinator of Physics Education

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Mail Stop:
Department of Physics
56 Weyandt Hall
975 Oakland Ave.
Indiana Pennsylvania, 15705-1087

Department Phone: (724) 357-2370

Office Phone: (724) 357-4590

2. Letter from the Special Education Department

From: "Joseph W. Domaracki ,Ph.D." <jwdomara@iup.edu>

Subject: Letter of Support

Date: Thu, 08 Jan 2009 10:02:08 -0500

To: "Travis, Holly Jill" <H.J.Travis@iup.edu>



Holly,

I am writing in support of the Biology Education Program's proposal to include EDEX 323 Instruction of English Language Learners with Special Needs as a required course in the teacher certification program. By including this course in your curriculum you add significant special education and English Language Learning content into your program. The faculty in the Department of Special Education and Clinical Services looks forward to working with your students on the addition of this new and exciting course in your program.

Joe

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Joseph W. Domaracki, Ph.D.
Professor
Chairperson

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