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Action-Date: \_\_\_\_\_

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UWUCC USE Only  
Number: 01-47  
Submission Date: \_\_\_\_\_  
Action-Date: UWUCC App 4/9/02  
Senate App 5/7/02

**CURRICULUM PROPOSAL COVER SHEET**  
University-Wide Undergraduate Curriculum Committee

I. CONTACT

Contact Person Dr. Terry L. Peard Phone 357-2613  
Department Biology

II. PROPOSAL TYPE (Check All Appropriate Lines)

COURSE \_\_\_\_\_ Suggested 20 character title  
 New Course\* \_\_\_\_\_ Course Number and Full Title  
 Course Revision \_\_\_\_\_ Course Number and Full Title  
 Liberal Studies Approval+ \_\_\_\_\_  
for new or existing course \_\_\_\_\_ Course Number and Full Title  
 Course Deletion \_\_\_\_\_ Course Number and Full Title  
 Number and/or Title Change \_\_\_\_\_  
Old Number and/or Full Old Title \_\_\_\_\_  
New Number and/or Full New Title \_\_\_\_\_  
 Course of Catalog Description Change \_\_\_\_\_  
Course Number and Full Title \_\_\_\_\_

PROGRAM:  Major  Minor  Track  
 New Program\* \_\_\_\_\_ Program Name  
 Program Revision\* B.S. in Biology Education \_\_\_\_\_ Program Name  
 Program Deletion\* \_\_\_\_\_ Program Name  
 Title Change \_\_\_\_\_  
Old Program Name \_\_\_\_\_  
New Program Name \_\_\_\_\_

III. Approvals (signatures and date)

Arthur C. Hulse Nov. 5, 2001 \_\_\_\_\_  
Department Curriculum Committee  
W. B. B. 11/5/01 \_\_\_\_\_  
Department Chair  
[Signature] \_\_\_\_\_  
College Curriculum Committee  
[Signature] \_\_\_\_\_  
College Dean  
[Signature] \_\_\_\_\_  
Provost (where applicable)

+ Director of Liberal Studies (where applicable)

Joseph Domaracka  
TECC CURRICULUM COMMITTEE

APR - 3 2002

APR 18 2002

LIBERAL STUDIES

## **Secondary Biology Education Program Revision**

### **Part I. Cover Sheet**

### **Part II. Description of Curriculum Change**

1. There will be no change in the catalog description for the B.S. in Secondary Biology Education as a result of this revision.
2. Summary of change:
  - a. Table comparing old and new programs – see Appendix 1. The range of credits shown for the Liberal Studies component reflects whether the student selects MATH 110 (3 cr) or MATH 121 (4 cr) and whether they take HPED 143 (3 cr) or MLSC 101 (4 cr). In the 2000-2001 catalog, the Liberal Studies hours shown are incorrect. The L.S. hours also should have been 54-56 for the same reason. As a consequence, the total number of hours for the secondary biology certification program is 129-131.
  - b. List of associated course changes: The existing MATH 217, Probability and Statistics (3 cr), will now be required. It will be a controlled Liberal Studies Elective.
  - c. EDEX 301 (2 cr) is now a required course for secondary education majors and has been added to the Professional Education Sequence – see Appendix 1.
3. Rationale for change: There are new requirements for Pennsylvania education majors as a result of the recently passed legislation, General Standards of Chapter 354. These General Standards for Professional Educator Preparation are administered and monitored by the PA Bureau of Teacher Certification. Beginning September 1, 2001, the eligibility requirements for admission to a professional educator preparation program include “six-semester hour credits, or transfer credits, in college level mathematics”. See Appendix 2.

The PA Department of Education (PDE) requires that teacher certification programs include a course that addresses “special needs students”. This course must be in place at IUP by the next site visit (Fall 2003) by PDE. See attached e-mail letter from John Johnson.

### **Part III. Implementation**

1. There is no change for students currently in the program. New students entering the College of Education Teacher Preparation Program as secondary biology education majors will be required to take two mathematics courses: MATH 217 (Probability and Statistics, 3 cr) and either MATH 121 (Calculus I, 4 cr) or MATH 110 (Elementary Functions, 3 cr), for a total of 6-7 credits of mathematics.
2. Considering our biology education majors alone, there will be little to no impact on faculty teaching loads. However, the new 6 cr. mathematics

requirement applies to all education majors, and the impact on the mathematics department will undoubtedly require additional sections. See the attached e-mail message from Dr. Buriok, Chair, Mathematics Department.

3. The Biology Department does not expect the new mathematics requirement to have a significant impact on the enrollment of secondary biology education majors.

Part IV. MATH 217, Probability and Statistics, is not a new course in the mathematics department.

Part V. The new mathematics requirement has been discussed with the Chair of the Mathematics Department. See the attached e-mail message from Dr. Buriok (Appendix 3). MATH 217 already is accepted as a Liberal Studies elective.

**APPENDIX I**

**Bachelor of Science in Education – Biology (\*)**  
Current catalog description (2001-02)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications:  
**Mathematics:** MATH 110 or 121 (1)  
**Natural Science:** CHEM 111-112  
**Social Science:** PSYC 101  
**Liberal Studies Electives:** PHYS 111, no courses with BIOL prefix, one course must have GEOS prefix from the Liberal Studies Natural Science, Option II, Nonlaboratory List.

**College:** 30  
**Professional Education Sequence: (2)**  
 COMM 103 Digital Instructional Technology 3 sh  
 EDSP 102 Educational Psychology 3 sh  
 EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3 sh  
 EDUC 242 Pre-student Teaching Clinical Experience I 1 sh  
 EDUC 342 Pre-student Teaching Clinical Experience II 1 sh  
 EDUC 441 Student Teaching (3) 12 sh  
 EDUC 442 School Law 1 sh  
 EDUC 451 Teaching Science in the Secondary Schools 3 sh  
 FDED 102 American Education in Theory and Practice 3 sh

**Major:** 30  
**Required Courses:**  
 BIOL 111 Principles of Biology I 4 sh  
 BIOL 112 Principles of Biology II 4 sh  
 BIOL 210 Botany 3 sh  
 BIOL 220 General Zoology 3 sh  
 BIOL 250 Principles of Microbiology 3 sh  
 BIOL 263 Genetics 3 sh  
 BIOL 480 Biology Seminar 1 sh

**Controlled Electives:**  
 Biology electives (majors courses only) 9 sh(4)

**Other Requirements:** 13  
**Chemistry Sequence**  
 CHEM 231 Organic Chemistry I 4 sh  
 CHEM 351 Biochemistry (5) 4 sh

**Physics Sequence**  
 PHYS 121 Physics I Lab. 1 sh  
 PHYS 112 Physics II Lecture 3 sh  
 PHYS 122 Physics II Lab. 1 sh

**Free Electives:** 0

**(#)Total Degree Requirements** 127

**Bachelor of Science in Education – Biology (\*)**  
New catalog description (2002-03)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications:  
**Mathematics:** MATH 110 or 121  
**Natural Science:** CHEM 111-112  
**Social Science:** PSYC 101  
**Liberal Studies Electives:** PHYS 111, MATH 217, one course with a GEOS prefix from the Liberal Studies Natural Science (Option II) Nonlaboratory List, no courses with a BIOL prefix.

**College of Education:** 32  
**Pre-Professional Education Sequence:**  
 COMM 103 Digital Instructional Technology 3 sh  
 EDSP 102 Educational Psychology 3 sh  
 FDED 102 American Education in Theory and Practice 3 sh  
**Professional Education Sequence:**  
 EDUC 242 Pre-student Teaching Clinical Experience I 1 sh  
 EDUC 342 Pre-student Teaching Clinical Experience II 1 sh  
 EDUC 441 Student Teaching (1) 12 sh  
 EDUC 442 School Law 1 sh  
 EDUC 451 Teaching Science in the Secondary Schools 3 sh  
 EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3 sh  
 EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings 2 sh

**Major: (1)** 30  
**Required Courses:**  
 BIOL 111 Principles of Biology I 4 sh  
 BIOL 112 Principles of Biology II 4 sh  
 BIOL 210 Botany 3 sh  
 BIOL 220 General Zoology 3 sh  
 BIOL 250 Principles of Microbiology 3 sh  
 BIOL 263 Genetics 3 sh  
 BIOL 480 Biology Seminar 1 sh

**Controlled Electives: (2)**  
 Biology electives (majors courses only) 9 sh

**Other Requirements:** 13  
**Chemistry Sequence**  
 CHEM 231 Organic Chemistry I 4 sh  
 CHEM 351 Biochemistry (3) 4 sh

**Physics Sequence**  
 PHYS 121 Physics I Lab. 1 sh  
 PHYS 112 Physics II Lecture 3 sh  
 PHYS 122 Physics II Lab. 1 sh

**Free Electives:** 0

**(#)Total Degree Requirements** 129-131

(\*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

- (1) Program revision in process – 3 additional sh of math will be required by the Pennsylvania Department of Education.
- (2) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EDEX 301(2sh).
- (3) Eligibility for student teaching and certification in secondary biology education requires a cumulative GPA of 2.75 and a grade of C or better in all biology courses. The program in secondary biology education requires a cumulative GPA of 2.75 for all majors.
- (4) No more than 6sh from Independent Study (BIOL 482), Special Topics (BIOL 481), or Internship (BIOL 493) applies to major: excess applied as free electives.
- (5) The two-semester (6sh) sequence of BIOC 301-302 can be substituted for CHEM 351 to meet the biochemistry requirement.
- (#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

(\*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

- (1) Eligibility for student teaching and certification in secondary biology education will require a grade of C or better in all biology courses.
- (2) No more than 6sh from Independent Study (BIOL 482), Special Topics (BIOL 481), or Internship (BIOL 493) applies to major: excess applied as free elective.
- (3) The two-semester (6sh) sequence of BIOC 301-302 can be substituted for CHEM 351 to meet the biochemistry requirement.
- (#) See advisory paragraph, "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

**Professional Educator Preparation Memorandum - 01**

This memorandum provides the Bureau of Teacher Certification and Preparation's clarification needed for compliance with the provisions of Chapter 354. When possible a maximum degree of flexibility has been reserved for the preparing institution.

**Admissions:**

While college catalogs are recognized as a contractual arrangement, they are subject to changes in state or federal regulations.

Acceptance or rejection of transfer credits will be governed by the accepting institution's policy, but candidates must meet the requirements set forth in Chapter 354.

The requirements of Chapter 354 will take precedence over existing Interstate Agreements. Out of State applicants must meet the same set of standards.

Matriculation requirements apply to entry into the college or university and will be determined by the institution. Entry into professional educator preparation programs is subject to the provisions of Chapter 354 as clarified below.

A. For admission into an **Initial** professional educator preparation program, the eligibility requirements are:

1. Accumulation of 48 credit hours or the full time equivalent of college level study.
2. For entering and exiting an Initial Professional Educator Preparation Program, a specific GPA is required on the above 48 credits as noted below.
  - a) Candidates for admission to an Initial professional educator preparation program after January 1, 2001 should have, and during academic year 2001/02 must have, a 2.6 GPA to enter. Both cohorts must have a 2.6 GPA to complete (exit) the program and be recommended for certification.
  - b) For academic year 2002/03 the GPA for the cohort of students beginning their Initial professional education program must be 2.8 for both entrance and exit.
  - c) For academic year 2003/04, the GPA for the cohort of students beginning their Initial professional education program must be 3.0 for both entrance and exit.

All references to a GPA of 3.0 are relative to a 4.0 scale. Students or transfer students with credits on other scales must have the equivalent GPA: for example, a 3.75 if on a 5.0 scale.

GPA is calculated on the most recent 48 credits prior to entry into an Initial professional educator program.

## APPENDIX II

3. Six semester credit hours or transfer credits in college level mathematics, and six semester credit hours or transfer credits in English Composition and English Literature.
  - a) Candidates entering an Initial preparation program in September 2001 through August 2002 who do not have the required six credits in Mathematics, or do not have the required six credits in English Composition or English Literature as part of the 48 credits for admission, must complete these credits prior to completion of the program.
  - b) Candidates entering an Initial preparation program in September 2002 and later must have these credits as part of the 48 credits for admission.
  - c) These courses must be credit courses in the relevant field, and be available to all students in the institution.
  - d) The standards of the preparation institution and state guidelines will be used to identify and develop appropriate curricula.
  
- B. For admission into an Initial professional educator preparation program at the graduate level prior to January 1, 2001, candidates may complete an initial preparation program in accordance with the completion standards of the institution in place at the time of the applicant's entry.
  
- C. For admission into an Advanced professional educator preparation program the following apply:
  - a) Candidates who were admitted into an advanced preparation program prior to September 1, 2001 but finish this program after September 1, 2001, may complete the advanced preparation program in accordance with the requirements at the time they were admitted to the program.
  - b) Candidates holding a valid Pennsylvania certificate who want to add an additional area to their existing certificate or earn an advanced certificate, may be admitted to an Advanced program without a GPA requirement, but must meet the exit GPA requirements in force at the time of their admission to the advanced program.
  - c) Candidates beginning an advanced professional educator program September 1, 2001, and after, must have an entry GPA of 3.0 (no phase in). Institutions may use their standards and procedures in calculating the 3.0 GPA needed for admission into the advanced program.
  
- D. All certification areas will require testing as test designs are completed. Currently assessments are under development for Education Specialists, Supervisors and Administrators.
  
- E. Candidates for Emergency Permits do not have to meet the GPA requirements except for those whose permit is issued with an educational obligation or who are under the provisions of Act 97.
  
- F. Ten percent of the total number of students, in initial and combined programs of the previous year, may be admitted during the current year under the alternative admissions option. The distribution of students, admitted under this rule, is as determined by the institution. At the extremes, all could be admitted into initial programs or all admitted into advanced programs.

**Program Design:**

A program should be designed so that a student may complete it within four calendar years after initial enrollment in the institution. Therefore, the institution should structure its program so that this can be done. It is acknowledged that many students (part time, etc.) may choose a longer period of study.

Scheduling, student loads, class size, etc. are determined by the institution.

Course content and rigor of an Initial professional educator preparation program should be equivalent to that of degree courses and programs offered by the institution. The determination of which courses in a degree program are germane to the Initial professional educator preparation program is to be made by the institution.

An Initial or Advanced professional educator preparation program that is not associated with an academic major in an institution designed for a specific area of study leading to the professional educator certificate must be designed in such a manner to fully cover the content areas of the certificate as described in the Professional Education Program Approval Guidelines.

A program of study to provide for dual certification is determined by the institution.



To: Dr. Terry Peard

From: Gerald Buriok, Chairman  
Mathematics Department *GMB*

Date: February 5, 2001

Subject: Mathematics Requirement for Education Majors

Thank you for informing me the Biology Department is considering requiring biology education majors to take MATH217 Probability and Statistics. The faculty of the Mathematics Department believe this is an appropriate choice and support your curriculum revision. We understand that new requirements (Chapter 354) from the PA Department of Education make such a revision necessary and we wish to cooperate with your department to ensure that students can fulfill these requirements.

Your estimate of the number of biology education majors we will need to serve in MATH217 indicates there will not be a big impact on our annual enrollment in this course. However, when we take into account the fact that several other departments are also planning to add MATH217 as a requirement for their education majors, it is clear we will need to increase the number of sections we offer annually.

**Dr. Terry Peard**

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**From:** "John Johnson" <jrjohnsn@iup.edu>  
**To:** "Dr. Terry Peard" <tpoard@iup.edu>  
**Cc:** "John R. Johnson" <jrjohnsn@grove.iup.edu>  
**Sent:** Monday, April 01, 2002 4:51 PM  
**Subject:** EDEX 301 Requirement (2)

Dr. Peard:

I am writing in response to the question raised about the documented need for the EDEX 301 course for all Education Majors from Mary Sadler.

This has been a requirement from the Pennsylvania Department of Education for over 10 years. We have been working for that period of time to try to get all IUP teacher Certification Programs in Compliance. Initially, PDE was accepting student passage of a Special Education Competency Test in lieu of an actual transcribed course. With the passage of more recent Federal and State Legislation, including IDEA 97 regarding education for special needs populations, we were informed that a course for education majors on this topic and the accompanying teaching strategies, would be the only way this program approval requirement could be satisfied.

As we both know, you and I and John Butzow have been working on a solution to this dilemma for many years and our joint efforts have been thwarted from a variety of competing "camps" as the requirement of an additional course further exacerbates the already "hefty" program of study for your majors and for others as well.

This is to document that in the interim, you have been advising Science Education majors of the need to take this course to meet state certification requirements, even though it has not been, up to this point, on the IUP Senate approved program of study.

We have been told by Theona Waxbom., IUP Technical Assistant from PDE that any of our teacher education programs that do not have a "special needs students" course requirement in place by the next site visit ( Fall 2003) will not be approved and no more applications for certification will be accepted by PDE for Teacher Certification.

I hope this helps establish the need for including such a course in the Science Education programs of study.

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John R. Johnson, Associate Dean, Teacher Education  
Certification Officer, College of Education, IUP  
104 Stouffer Hall  
Indiana University of Pennsylvania  
Indiana PA 15705  
Ph: 724-357-2485 Fax: 724-357-5595 E-mail: jrjohnsn@iup.edu