

New Undergraduate Program (Majors, Minors, Sequences) Proposal
Illinois State University - University Curriculum Committee

Program Department Biological Sciences

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Title of New Program Major in Biological Sciences Teacher Education

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Version 3

Proposed Starting Catalog Year 2014-2016

Associated Course Proposal(s):

Revise Course proposal BSC 231 titled *laboratory methods in teaching science*

1. Proposed Action

- ✓ New Major
- New Minor
- New Sequence
- More than 50% of courses in this program are Distance Education

No Is this program an Integrated Bachelors/Masters degree program?

Degree Type(s)

Bachelor of Science, Bachelor of Science in Education

2. Provide Undergraduate Catalog copy for new program.

MAJOR IN BIOLOGICAL SCIENCES TEACHER EDUCATION

The Biological Science Teacher Education major is designed to prepare students to teach secondary science.

Program Admission Requirements for New and Continuing Students:

Admission to this academic program is limited and is based on space availability and the competitiveness of the applicant pool. Factors that may be considered include, but are not limited to: courses completed, cumulative GPA, hours completed, personal interview or written statement, and samples of work completed. For additional information on minimum requirements for admission and the application and selection process, visit IllinoisState.edu/majors/ or contact the undergraduate advisor for the intended major.

Standards for Progress in the Major:

Before being admitted to the University Professional Studies program (see University-Wide Teacher Education program requirements in this *Undergraduate Catalog*), the Biological Sciences Teacher Education major must meet departmental requirements for admission. Students should see the departmental Teacher Education advisor for information. Consult the Teacher Education advisor for updated requirements.

To progress through the program in a timely manner, the teacher candidate must continuously maintain a minimum cumulative 2.50 GPA and a minimum major 2.50 GPA to remain academically eligible. In order to receive teaching licensure in the state of Illinois, majors must earn a grade of "C" or higher in all courses required for state certification.

Biological Science Teacher Education Program of Study:

- 40 hours in Biological Sciences required. A Teacher Education student must complete the option described as part of the entitlement program leading to certification: secondary 6-12.
- Required courses for major: BSC 161, 196, 197, 201, 203, 204, 219, 231, 302, and 307.
- 13 hours of electives are required, including two courses with laboratories.
- BSC 202 and Biological Sciences courses at the 100 level may not be used as electives in the major with the exceptions of BSC 161, 182, 196 and 197.
- Required science and math courses outside of Biological Sciences: CHE 140 and 141; GEO 100; PHY 105 or 108; MAT 120 or 145; ECO 138, or GEO 138, or PSY 138.
- Other required courses include: C&I 212, 214, 216; PSY 110, 215; STT 399.03 (12 hours); and one of EAF 228, 231, or 235.
- A minimum of 12 hours in Biological Sciences courses must be completed at Illinois State University.

CLINICAL EXPERIENCES IN TEACHER EDUCATION

Clinical Experiences are provided in off-campus clinical teaching centers, in local schools and in campus laboratory schools, in agencies and other approved nonschool settings. All students will show verification of having completed pre-student teaching field experiences commensurate with attaining local, state, and national standards. Students must provide their own transportation to Clinical Experience sites. The approximate number of clinical hours and type of activity associated with each course offering can be

found with the appropriate course description. The following legend relates to the type and kind of activity related to a specific course.

Clinical Experiences Legend

1. Observation
2. Tutoring one-on-one contact
3. Non-instruction assisting
4. Instructional aiding a group
5. Micro teaching
6. Simulation lab exercises
7. Work with clinic client
8. Graduate practicum
9. Professional meeting
10. Other

Major in Biological Sciences Teacher Education 03/08/2013

3. Provide a description for the proposed program.

The Biology Teacher Education Major is designed to prepare students for teaching biology and other sciences at the secondary level. Students in this program pursue a course of study composed of 40 hours of biological sciences course work (including 8 hours of biology education courses), 23 to 24 hours of supporting science and mathematics course work (depending on student course selection), 26 hours of professional education course work (including student teaching), and 27 hours of general education course work for a total of 116-117 hours.

In addition to a common core of 6 biological sciences content courses at the 100 and 200 levels (19 hours), BTE majors also take a common series of biological sciences education courses (8 hours). Biology Teacher Education Majors fulfill the rest of their biological sciences coursework by taking at least 13 hours of biological sciences elective courses, including 2 laboratory courses.

The rest of the major coursework includes a physics course (4-5 hours), two chemistry courses (8 hours), one earth science course (4 hours), one applied statistics course (3 hours), and a mathematics course (4 hours).

In addition to the major coursework, Biology Teacher Education Majors must also complete the Professional Education Requirements for Secondary Majors, including C&I 212, PSY 215, C&I 214, C&I 216, EAF 228 or 231 or 235, and Student Teaching for a total of 26 hours.

Finally, there are 27 hours of general education coursework required that are not covered by major courses. This leads to a total of 116-117 hours, depending on student course selection. A breakdown of coursework can be seen below:

Biology Courses:

Proposed Program		
Required Course	Gen Ed?	Credit Hours
BSC Academic		
BSC 196	IC-NS	4
BSC 197		4
BSC 201		4
BSC 203		3
BSC 204		1
BSC 219		3
Electives (182 and above)		13

BSC Professional		
BSC 161		2
BSC 231		2
BSC 302		1
BSC 307		3
Total BSC		40

Support Courses:

Proposed Program		
Required Course	Gen Ed?	Credit Hours
CHE 140	IC-NS	4
CHE 141		4
PHY 105 or 108		4-5
MAT 120 or 145	IC-QR	4
PSY 138*	MC-QR	3
GEO 100		4
Total		23-24

Education Courses:

Proposed Program		
Required Course	Gen Ed?	Credit Hours
C&I 212		2
C&I 214		3
C&I 216		3
EAF 228, 231, or 235		3
PSY 215		3
STT		12
Total		26

General Education:

Proposed Program		
Required Course	Gen Ed?	Credit Hours
ENG 101	IC	3
COM 110	IC	3
UST, LH, ICL, PSY 110	MC	12
SS, H, FA	OC	9
Total		27

Summary:

Proposed Program	
BSC Course	40 hours
Supporting Courses	23-24 hours
Education Courses	26 hours
General Education Courses	27 hours
Total	116-117 hours

4. Provide a rationale of proposed program.

Biological Science Teacher Certification already exists as a sequence under the Biological Science major; however, the required plan of study is now significantly different from those of others within the major and graduates from this program leave with a skill set unique to the sequence. Therefore, since this sequence has diverged so much from the major, it now qualifies to be its own major. Biological Science Teacher Certification majors have a unique set of requirements that set them apart from all other biology majors and the major prepares them for a specific licensure and career.

5. Describe the expected effects of the proposed program on existing campus programs (if applicable).

This proposed major would replace the current Biology Teacher Certification sequence under the Biology major. This should not have any impact upon the existing BTC program as we transition from sequence to major. The only change to the program that impacts existing campus programs is in the earth science elective options. In the new BTC major, GEO 100, Earth Systems Science, is replacing GEO 102 or 202 as the earth science elective. This is being done at the recommendation of the Geography-Geology department and in response to requirements for certification by the state of Illinois.

6. Provide a sample four year plan of study demonstrating that a student could realistically complete the program requirements in a specific number of semesters.

Major in Biological Sciences Teacher Education 03/08/2013

Plan of Study for BTC Major Program

Freshman Year

First Semester	Second Semester
BSC 197 Molecular & Cellular (4) CHE 140 General Chemistry I (4) COM 110 Comm & Critical Inquiry (3) MAT 120 or MAT 145 (4)	BSC 196 Biological Diversity (4) CHE 141 General Chemistry II (4) ENG 101 Comp & Critical Inquiry (3) PSY 110 Fund of Psych (3) MC – IS

Sophomore Year

First Semester	Second Semester
BSC 201 Ecology (4) BSC 161 Intro to Teaching Science (2) MC Individuals & Civic Life (3) MC Language in Humanities (3) PSY/ECO/POL 138 Reasoning in Stats (3)	BSC 204 Biological Investigations (1) PSY 215 Educational Psychology (3) GEO 100 Earth Systems Science (4) MC US Traditions (3) BSC 219 Genetics (3)

Junior Year

First Semester	Second Semester
BSC 203 Cell Biology (3) C&I 212 Issues in Secondary School (2) OC Fine Arts (3) OC Humanities (3) PHY 105 or 108 (4-5)	BSC Major Lab Elective (4) BSC Major elective (3) C&I 214 Literacy in Content Area (3) C&I 216 Instruct & Eval Methods (3) BSC 231 Lab Meth in Teach Science (2)

Senior Year

First Semester	Second Semester
BSC 307 Methods Teach Biology (3) BSC Major Lab Elective (4) BSC Major elective (2) EAF 228, 231, or 235 (3) OC Social Science (3)	BSC 302 Student Teach Seminar (1) STT 399.03 Student Teaching (12)

7. Describe the expected curricular changes required, including new courses. If proposals for new courses have also been submitted, please reference those related proposals here:

The new Biology Teacher Education major is the same as the existing Biology Teacher Education sequence except for 5 changes. First of all, BSC 231, Laboratory Methods of Teaching Biology, has increased from 1 credit hour to 2 credit hours to reflect the increased work load in that course. Second, the BTE majors will be required to take BSC 204, Biological Investigations, as part of their core curriculum. Third, BTE majors will not be required to take BSC 305 Evolution. This will become a major elective. Fourth, GEO 100, Earth Systems Science, will become the earth science elective. Finally, BTE majors will no longer be required to take organic chemistry.

8. Anticipated funding needs and source of funds.

The School of Biological Sciences has added a Science Education tenure track position which will help with enrollment growth in the major. See financial implications form for other details.

9. Yes Does this program count for teacher education?

This major will replace the existing Biology Teacher Certification sequence. That sequence is already aligned with the CTE Conceptual Framework, Realizing the Democratic Ideal, and, since the major is modeled after the sequence, this proposed major is as well.

10. No Is this an Interdisciplinary Studies program?

11. The following questions must be answered.

- Yes** Have you confirmed that Milner Library has sufficient resources for the proposed program?
- No** Are more than 124 hours required to complete a degree with this major?
- No** Beyond General Education, does the major require more than 76 semester hours?
- Yes** Beyond General Education, does the major require more than 60 semester hours?

Rationale for mandating over 60 hours in the major. Required Hours Policy

Due to the need to take professional education courses along with science and mathematics courses, the Biology Teacher Education Major requires 89 hours total. Of these 89 hours, 15 hours also count as general education credits for a net result of 74 courses exclusive to the major.

- Yes** Does this B.A., B.S., B.E.Ed. require more than 55 semester hours of major courses?
- No** Does this program stipulate specific general education courses offered in the major department/school as a part of the major requirements only if such courses serve as prerequisites for other courses required by the major?
- No** Is the proposed program intended to be longer than four years (as indicated by the plan of study)?
- Yes** Have letter(s) of concurrence from affected departments/schools been obtained?
A departments/school is affected if it has a program with significant overlap or if it teaches a required or elective course in the program.

12. Routing and action summary for New Program:

1. Biological Sciences Department Curriculum Committee Chair

<u>Martha Cook (website)</u>	<u>Martha Cook</u>	<u>8/27/2012 9:38:16 AM</u>
Signature	Print	Date

2. Biological Sciences Department Chair/School Director

<u>Craig Gatto (website)</u>	<u>Craig Gatto</u>	<u>8/27/2012 10:40:46 AM</u>
Signature	Print	Date

3. College of Arts & Science College Curriculum Committee Chair

<u>Todd Stewart (website)</u>	<u>Todd Stewart</u>	<u>10/10/2012 4:06:50 PM</u>
Signature	Print	Date

4. College of Arts & Science College Dean

<u>Sally Parry (website)</u>	<u>Sally Parry</u>	<u>10/10/2012 4:34:43 PM</u>
Signature	Print	Date

5. Council for Teacher Education Chair

<u>Perry Schoon (website)</u>	<u>Perry Schoon</u>	<u>11/12/2012 9:40:38 AM</u>
Signature	Print	Date

6. University Curriculum Committee Chair

<u>Jean Standard (website)</u>	<u>Jean Standard</u>	<u>3/1/2013 10:14:06 AM</u>
Signature	Print	Date

All new programs (majors, minors, sequences) are routed by the U.C.C. to the Academic Senate

Comments