EASTERN ILLINOIS UNIVERSITY
COLLEGE OF SCIENCES

MEMORANDUM

To: COTE
From: Mary Anne Hanner
Acting Dean
Date: December 10, 2001
Re: Revised curriculum for teacher certification in the Sciences

Departments of Biological Sciences, Chemistry, Geology/Geography, and Physics collaborated throughout Fall Semester 2001 to revise the teacher certification curriculum to accommodate the changes mandated by ISBE. Subsequent to these changes, students pursuing a career in science education will seek a major in Science with Teacher Certification with options for specialization in Biological Sciences, Chemistry, Earth Science, or Physics.

The following group of courses comprises the core sciences courses for students seeking majors in Science with Teacher Certification:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1100, 1200G, 1300G</td>
<td>12</td>
</tr>
<tr>
<td>CHM 1310G, 1315G, 1410 and 1415 (or 1510 and 1515), 2730, 3100</td>
<td>12</td>
</tr>
<tr>
<td>ESC 1300G, 1400G, 2450G</td>
<td>11</td>
</tr>
<tr>
<td>PHY 1055G and 1056G (or 3150), 1151G and 1152G (or 1351G and 1352G), 1161 and 1162 (or 1361 and 1362)</td>
<td>12</td>
</tr>
<tr>
<td>BIO/PHS 3400</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

The Departments have reviewed the Technology Standards for All Teachers and believe that students completing the Science with Teacher Certification major with the option for specialization will have the knowledge and meet the performance standards for technology. In addition, Dr. McGaughey is revising BIO/PHS 3400 to incorporate the Language Arts Standards for All Teachers. We will be consulting with reading specialists in COEPS in revising the course. In addition, information regarding health and safety (specifically blood-borne pathogens) will be incorporated into CHM 3100.

Attached is the proposed new program.
Degree: B.S.
Major: Science with Teacher Certification*

Option: Biological Sciences Specialization
Biological Sciences 1100, 1200G, 1300G, 2200, 3100, 3200, 3510 or 3520, 3800, 4984 ........................................................................................................... 34 sem. hrs.
Chemistry 1310G, 1315G, (1410, 1415) or (1510, 1515), 2730, 3100 ................................................................................................................... 12 sem. hrs.
Physics 1055G, 1056G, 1151G\textsuperscript{1}, 1152G\textsuperscript{1}, 1161\textsuperscript{1}, 1162\textsuperscript{1} .......................................................... 12 sem. hrs.
Mathematics 2250G ........................................................................................................ 4 sem. hrs.
Biological Sciences 3400 .................................................................................................. 3 sem. hrs.
TOTAL ......................................................................................................................... 76 sem. hrs.

Option: Chemistry Specialization
Chemistry 1310G, 1315G, 1510, 1515, 2310, 2430, 2435, 2730, 3000, 3001, 3100, 3450, 3910, (3915 or 3780) ........................................................................... 28-29 sem. hrs.
Mathematics (1441G or 1440G), 2442 .............................................................................. 9-10 sem. hrs.
Biological Sciences 1100, 1200G, 1300G ........................................................................ 12 sem. hrs.
Physical Sciences 3400 .................................................................................................. 3 sem. hrs.
TOTAL ......................................................................................................................... 75-77 sem. hrs.

Option: Earth Sciences Specialization
Earth Sciences: ESC 1300G, ESC 1400G, ESC 2450G, ESC 3200, GEL 1430, GEL 2440, GEL 3405, GEL 3420, GEL 4490, plus one of the following two courses: ESC 3410 or GEL 3510.................................. 35 sem. hrs.
Biological Sciences 1100, 1200G, 1300G ....................................................................... 12 sem. hrs.
Physics 1055G, 1056G, 1151G\textsuperscript{1}, 1152G\textsuperscript{1}, 1161\textsuperscript{1}, 1162\textsuperscript{1} .......................................................... 12 sem. hrs.
Physical Sciences 3400 .................................................................................................. 3 sem. hrs.
TOTAL ......................................................................................................................... 74 sem. hrs.

Option: Physics Specialization
Physics 1351G, 1352G, 1361, 1362, 1371, 1372, 3150, 3500, 4000, 4470................. 22 sem. hrs.
Biological Sciences 1100, 1200G, 1300G, ........................................................................ 12 sem. hrs.
Chemistry 1310G, 1315G, 1510, 1515, 2730, 3100 .......................................................... 12 sem. hrs.
Mathematics (1441G or 1440G), 2442, 2443 .................................................................. 13-14 sem. hrs.
Physical Sciences 3400 ................................................................................................. 3 sem. hrs.
TOTAL ......................................................................................................................... 73-74 sem. hrs.

(Major GPA based on Chemistry, Biological Sciences, Physics, and Earth Sciences courses taken at Eastern Illinois University.)
* For education course work required for this major, see Teacher Certification Programs.
\textsuperscript{1} Check prerequisites; additional math classes may be required.

Date approved by the Biological Sciences, Chemistry, Geology-Geography, and Physics Departments: 10/17/01(CHM); 9/27/01(G/G);
Date approved by the College of Sciences Curriculum Committee: 10/11/01(BIO); 11/5/01 (PHY)
Date approved by the Council on Teacher Education: 12/7/01
Effective date: Fall 2002
Revision of Teacher Certification Options  
(Science with Biological Sciences Specialization)

Please list the required semester hours for each sub-category, and then subtract any “double counted” hours. Finally, list the total semester hours needed for graduation.

**Major requirements:**
Total Major Hours..........................................................76

**General Education requirements:**
General Education Hours....................................................40
**Minus** Courses that are “double counted” for the major and general education .................................................................10
   Scientific Awareness – 7 sem. hrs.
   Mathematics – 3 sem. hrs.
Total General Education Hours.............................................30

**Professional Education Requirements:**
Professional Education Hours.............................................37
**Minus** Professional Education courses included in the Major.........3
   BIO 3400 – Methods of Teaching Biological Sciences in High School
Total Professional Education Requirements..........................34

Total hours needed for graduation.............140
Revision of Teacher Certification Options  
(Science with Chemistry Specialization)

Please list the required semester hours for each sub-category, and then subtract any “double counted” hours. Finally, list the total semester hours needed for graduation.

**Major requirements:**

Total Major Hours.............................................................77

**General Education requirements:**

General Education Hours.........................................................40

*Minus* Courses that are “double counted” for the major and general education ......................................................... 10

- Scientific Awareness – 7 sem. hrs.
- Mathematics – 3 sem. hrs.

Total General Education Hours.................................................30

**Professional Education Requirements:**

Professional Education Hours..................................................37

*Minus* Professional Education courses included in the Major........ 3

- PHS 3400 – Methods of Teaching Physical Sciences

Total Professional Education Requirements.............................. 34

Total hours needed for graduation.................. 141
Revision of Teacher Certification Options
(Science with Earth Sciences Specialization)

Please list the required semester hours for each sub-category, and then subtract any “double counted” hours. Finally, list the total semester hours needed for graduation.

**Major requirements:**
Total Major Hours.................................................................74

**General Education requirements:**
General Education Hours........................................................40

**Minus** Courses that are "double counted" for the major and
general education ................................................................. 7

Scientific Awareness – 7 sem. hrs.

Total General Education Hours...........................................33

**Professional Education Requirements:**
Professional Education Hours...............................................37

**Minus** Professional Education courses included in the Major........ 3

PHS 3400 – Methods of Teaching Physical Sciences

Total Professional Education Requirements............................ 34

**Total hours needed for graduation...........141**
Revision of Teacher Certification Options
(Science with Physics Specialization)

Please list the required semester hours for each sub-category, and then subtract any “double counted” hours. Finally, list the total semester hours needed for graduation.

**Major requirements:**
Total Major Hours...........................................................................74

**General Education requirements:**
General Education Hours..................................................................40
**Minus** Courses that are “double counted” for the major and
general education ............................................................................ 10
  Scientific Awareness – 7 sem. hrs.
  Mathematics – 3 sem. hrs.
Total General Education Hours.......................................................30

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Professional Education Hours.........................................................37
**Minus** Professional Education courses included in the Major........ 3
  PHS 3400 – Methods of Teaching Physical Sciences
Total Professional Education Requirements................................. 34

Total hours needed for graduation..........................141