Resolution # 9  1990-91

TO:    President John E. Van de Watering
FROM:  The Faculty Senate  Meeting on 10/29/90
        (Date)
RE:    X  I. Formal Resolution (Act of Determination)
        II. Recommendation (Urging the fitness of)
        III. Other (Notice, Request, Report, etc.)

SUBJECT: Revisions to the Secondary Physics 7-12
        Certification BA, BS Programs proposed by the
        Department of Education and Human Development and
        the Department of Physics.

Signed ________________________________ Date Sent 10/30/90
(For the Senate)

TO:    The Faculty Senate
FROM:  President John E. Van de Watering
RE:    I. Decision and Action Taken on Formal Resolution
        a. Accepted.  Effective Date ______________________
        b. Deferred for discussion with the Faculty Senate
        on ______________________
        c. Unacceptable for the reasons contained in the
           attached explanation

II, III.
        a. Received and acknowledged
        b. Comment:

DISTRIBUTION: ________________________
               Cover page only
               See list for distribution

Distribution Date 11/5/90  Signed ________________________________
        (President of the College)
PROPOSED REVISIONS
SECONDARY PHYSICS 7-12

BA, BS

HEGIS CODE: 1902.01
PROGRAM CODE:
  03446 BA
  12091 BS

DEPT. OF EDUCATION AND HUMAN DEVELOPMENT 9/1/90
REVISIONS - SECONDARY SCIENCE 7-12

Changes in Arts & Sciences requirements:

1. All students will complete a major and a minor in the sciences. (No change except that the minor was not previously specifically required for Earth Science).

   All students will be required to complete one additional year in two other science disciplines (16 hours). Brockport students will be certified to teach general science in addition to the primary area of certification.

2. All students will be required to complete NAS 485 Laboratory Science Safety.*

   Rationale: Teachers of any sciences must be cognizant of state and national safety regulations and must also be competent in ensuring a safe environment for their students in the science classrooms and labs.

   *Exception: Chemistry majors who are required to take the appropriate chemistry safety course.

3. One year's study of a language other than English.

D. Changes in Professional Education requirements:

1. Inclusion of a foundations course designed to provide early experience in schools and historical social and philosophical foundations (EDI 320 Self, Schools and Society). This course replaces SOC 412 Schools, Learning and Society and/or EDI 412 Self, Schools and Society. 3 credit hours.

2. Development of a new laboratory methods course in each of the science disciplines.

C. Changes in Course Content (Professional Area)

Other changes will be made in course content to ensure that students are prepared to teach students from minority cultures, gifted-talented students, students with handicapping conditions and students from homes where a language other than English is spoken.

D. Comparison of Old and New Professional Sequence

<table>
<thead>
<tr>
<th>OLD</th>
<th>NEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSH 484 Adolescence</td>
<td>EDI 320 Self, School &amp; Society 1 hrs.</td>
</tr>
<tr>
<td>HLS 370 Drug Educ. for Teachers 1 hr.</td>
<td>HLS 370 Drug Educ. for Teachers 1 hr.</td>
</tr>
<tr>
<td>EDI 41X Methods of Teaching XXX 3 hrs.</td>
<td>PSH 484 Adolescence 3 hrs</td>
</tr>
<tr>
<td>EDI 440 Practicum</td>
<td>EDI 447 Methods of Teaching 3 hrs</td>
</tr>
<tr>
<td>EDI 441 Problems</td>
<td>Secondary Science</td>
</tr>
<tr>
<td>SCI 412/EDI 412 School &amp; Society 3 hrs.</td>
<td>*QM 480 Practical Chemistry Lab. 3 hrs</td>
</tr>
<tr>
<td></td>
<td>Pedagogy</td>
</tr>
<tr>
<td></td>
<td>EDI 475 Practicum 12 hrs</td>
</tr>
<tr>
<td></td>
<td>EDI 476 Seminar 3 hrs</td>
</tr>
</tbody>
</table>

*Example from Chemistry
**Currently Registered Program**

<table>
<thead>
<tr>
<th>PROGRAM CODE</th>
<th>HEGIS</th>
<th>DEGREE</th>
</tr>
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<tbody>
<tr>
<td>03446</td>
<td>1902.01</td>
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</tr>
</tbody>
</table>

**EDUCATION PROGRAM REQUIREMENTS**

Institution: SUNY, College at Brockport

Program Title: Physics "7-12"  
Degree: BA/BS

### Required Courses in Academic Discipline

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHS 201-202</td>
<td>College Physics I &amp; II</td>
<td>8</td>
</tr>
<tr>
<td>PSH 208</td>
<td>Modern Physics Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PSH 209</td>
<td>Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHS 301</td>
<td>Mathematical Models of Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHS 304</td>
<td>Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>PSH 305</td>
<td>Electricity &amp; Magnetism I</td>
<td>3</td>
</tr>
<tr>
<td>PHS 401</td>
<td>Senior Seminar</td>
<td>1</td>
</tr>
<tr>
<td>MTH 201,202,203</td>
<td>Calculus I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>MTH 455</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHS 307-308</td>
<td>Physical Measurements</td>
<td>2</td>
</tr>
<tr>
<td>Lab I, II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHS 402</td>
<td>Senior Project</td>
<td>1</td>
</tr>
</tbody>
</table>

Physics Electives 300/400 level: 6

Additional elective credits in the discipline, if required: 6

Total number of credits in academic discipline: 31

Required Co-Requisites: 12 hrs. in Math

### Required Courses in Pedagogy*

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDI 320</td>
<td>Self, Schools &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>PSH 484</td>
<td>Adolescence</td>
<td>3</td>
</tr>
<tr>
<td>HLS 370</td>
<td>Drug Education for Teachers</td>
<td>1</td>
</tr>
<tr>
<td>EDI 433</td>
<td>Methods of Teaching Secondary Science</td>
<td>3</td>
</tr>
<tr>
<td>EDI 440</td>
<td>Student Teaching Practicum</td>
<td>12</td>
</tr>
<tr>
<td>EDI 441</td>
<td>Problems of Secondary Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional elective credits in pedagogy, if required: ______

Total number of credits in pedagogy: 25
SECONDARY PHYSICS
TEACHER CERTIFICATION

The program is designed to prepare students to teach physics in New York State schools in grades 7-12. In addition to certification in physics, the student will also meet the New York State requirements for certification in the area of a minor and in general science.

Program Requirements

I. General Education Requirements
   Students must meet the general education requirements in place at the time of acceptance

II. Pre Professional Preparation:

   Major in Physics - Certification in Secondary Teaching

   Physics Core Courses
   These courses must be taken by students in all specialties:
   (22 credits)

   PHS 201-202 College Physics I and II  8
   PHS 208 Modern Physics Laboratory      1
   PHS 209 Modern Physics                 3
   PHS 301 Mathematical Methods of Physics 3
   PHS 304 Mechanics I                    3
   PHS 305 Electricity & Magnetism I      3
   PHS 401 Senior Seminar                 1

   The following physics courses are required for the physics major in the Secondary Teaching Specialty:

   Physics Core Courses (above)  22
   PHS 307-308 Physical Measurements Lab I and II  2
   PHS 402 Senior Project             1
   Physics Electives from 300/400-level courses  6
   Total 31

   Required Mathematics Courses
   These courses are required for all specialties: (12 credits)
   MTH 201-202-203 (Calculus I,II,III)  9
   MTH 455 Differential Equations        3
   Total 12

   Recommended Courses
   The following courses are recommended for all specialties:
   CHM 205-206 College Chemistry I and II  8
   CSC 203-205 Fundamentals of Computer Science I and II  6
   CSC 213 Fortran                        3
   MTH 451 Advanced Calculus              2
   Total 20

   The above requirements refer to the physics major. In addition, the following requirements must be met for teacher certification:
PHYSICS TEACHER CERTIFICATION

Minor in a second science 18
Four semesters of additional science w/lab 16
(Two semesters study in each of two additional science disciplines other than the major and minor)
NAS 486 Laboratory Science Safety 3

I. Pre-Professional Preparation: Foreign Language 0-6 hours
The equivalent of one year of college level study in a language other than English is required for teacher certification in New York State.

IV. Professional Preparation: Education Courses 13 hours
   EDI 320 Self, Schools and Society 3 hours
   HLS 370 Drug Education for Teachers 1 hour
   PSH 484 Adolescence 3 hours
   EDI 447 Methods of Teaching Sec. Science 3 hours
   EDI 467 Physics Laboratory Methods 3 hours
   and Materials

V. Professional Preparation: Student Teaching and Senior Seminar: 15 hours
   EDI 475 Practicum 12 hours
   EDI 476 Seminar in Secondary Education 3 hours

Total Hour Requirements
General Education 28 or more, depending on courses chosen
Physics Major 31
and Math 12
Minor in Second Science 37
and Other Science Req.
Foreign Language 0-6
Education courses and practicum 28
136 minimum

More if language not satisfied
More if not ready for Calculus upon entry
NEW COURSE DESCRIPTIONS
SECONDARY PHYSICS

EDI 320  **Self, Schools and Society**  3 credit hours

A beginning course in secondary education designed to introduce students to the role of teaching and learning in contemporary American society. Includes historical, sociological, philosophical and psychological foundations of education.

EDI 467  **Laboratory Methods and Materials**  3 credits hours
Prerequisite or Corequisite: PSH 484, EDI 320, EDI 447

A school-based course in which students work with a classroom teacher in preparing lab and demonstration materials, assist students in the lab and evaluate the effectiveness of the materials. A minimum of three hours per week is required.
ADMISSIONS CRITERIA

and Other Program Information

Secondary Physics Certification 7-12

1. Grade Point Average (G.P.A.) - The minimum overall GPA requirement is 2.5. However, depending on the number and quality of applicants at any point in time, the actual requirement may be higher. Some qualified candidates may not be accepted in periods of high demand.

2. Credit Hour Requirements. Applications will be considered after the student has completed 24 hours of college level coursework.

3. Students must maintain an overall 2.5 G.P.A. and a 2.5 G.P.A. in the major field in order to continue in the program.

4. Effective 9/1/90 the NTE Core Battery Tests of Communication Skills and General Knowledge have replaced the Basic Skills Tests as a component of the admissions/continued eligibility requirements of all certification programs.

5. Students may be accepted to a program without NTE scores, but will not be admitted to a methods course after April 1, 1991 without successfully passing the Communication Skills and General Knowledge parts of the Core Battery.

6. Students who have completed the Brockport Basic Skills Tests are exempt from the NTE requirement for admission/continued eligibility. However, all students must successfully complete the NTE in order to receive state certification.

7. Closing dates for receipt of applications for provisional certification programs are as follows:

   March 1 for enrollment beginning in the fall or later.

   October 1 for enrollment beginning in the spring or later.

   Applications may be reviewed after the following closing dates if seats are available:

   January 2 for enrollment beginning in the spring or later.

   June 1 for enrollment beginning in the fall or later.

   For consideration, all materials must be in by the closing date. Notification will be made approximately 3 weeks after the review date.