

10-29-1990

Secondary Physics Certification

The College at Brockport, College Senate

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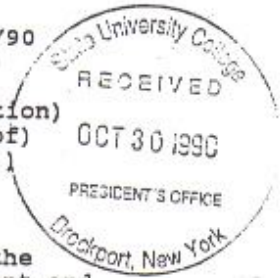
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Resolution # 9 1990-91

TO: President John E. Van de Wetering
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 Thomas J. Keller Date Sent 10/30/90
(For the Senate)

TO: The Faculty Senate
FROM: President John E. Van de Wetering
RE: I. Decision and Action Taken on Formal Resolution
a. Accepted. Effective Date Fall 91
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:

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Distribution Date 11/5/90 Signed: [Signature]
(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 486 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.

B. 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

<u>OLD</u>		<u>NEW</u>	
PSH 484 Adolescence	3 hrs.	EDI 320 Self, School & Society	3 hrs
HLS 370 Drug Educ. for Teachers	1 hr.	HLS 370 Drug Educ. for Teachers	1 hr.
EDI 43X Methods of Teaching XXX	3 hrs.	PSH 484 Adolescence	3 hrs
EDI 440 Practicum	12 hrs.	EDI 447 Methods of Teaching	3 hrs
EDI 441 Problems	3 hrs.	Secondary Science	
SOC 412/EDI 412 School & Society	3 hrs.	*CHM 480 Practical Chemistry Lab.	3 hrs
		Pedagogy	
		EDI 475 Practicum	12 hrs
		EDI 476 Seminar	3 hrs

*Example from Chemistry

Currently Registered Program

PROGRAM CODE	HEGIS	DEGREE
03446	1902.01	BA
12091	1902.01	BS

EDUCATION PROGRAM REQUIREMENTS

Institution SUNY, College at Brockport
Program Title Physics "7-12 Degree BA/BS

Required Courses in Academic Discipline

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

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

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

Credit Hours

I. General Education Requirements Variable
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	<u>6</u>
	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	<u>3</u>
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	<u>3</u>
	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 (Two semesters study in each of two additional science disciplines other than the major and minor)	16
NAS 486 Laboratory Science Safety	3
III. Pre-Professional Preparation: Foreign Language The equivalent of one year of college level study in a language other than English is required for teacher certification in New York State.	0-6 hours
IV. Professional Preparation: Education Courses	13 hours
EDI 320 Self, Schools and Society	3 hours
HLS 370 Drug Education for Teachers	1 hours
PSH 484 Adolescence	3 hours
EDI 447 Methods of Teaching Sec. Science	3 hours
EDI 467 Physics Laboratory Methods and Materials	3 hours
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 and Math	31 12
Minor in Second Science and Other Science Req.	37
Foreign Language	0-6
Education courses and practicum	28
	<hr/> 136 minimum

More if language not satisfied
More if not ready for Calculus upon entry

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.