Stony Brook University

Becoming a Physics Teacher

Three Routes to New York State Certification

Stony Brook University offers three programs registered and approved by the New York State Education Department for individuals seeking New York State certification to teach physics in secondary schools, grades 7 – 12.

The **undergraduate** route to certification requires completion of a Bachelor of Science in Physics degree with the Teacher Preparation option. (See page 2)

The **graduate** route to certification requires completion of the Master of Arts in Teaching Physics degree, as well as completion of science course requirements equivalent to the Stony Brook Bachelor of Science in Physics degree with the Teacher Preparation Option. (See page 7)

The **combined** route to certification in which students obtain both the Bachelor of Science in Physics and Master of Arts in Teaching Physics degrees in 5 years, i.e., one additional year beyond that needed for the BS alone. (See page 10)

The Stony Brook programs are aligned with the standards of the National Science Teachers Association (NSTA), National Council for Accreditation of Teacher Education (NCATE), the National Educators Association (NEA) Code of Ethics, Interstate New Teacher Assessment and Support Consortium (INTASC), and the National Board for Professional Teacher Standards (NBPTS).

For advisement on program requirements contact Physics Education Advisor, Dr. Angela Kelly, at (631) 632-9750, (Angela.Kelly@stonybrook.edu).

For advisement on education courses, Dr. Jessica Chen, Program Advisor, at (631) 632-9750 (Jessica.L.Chen@stonybrook.edu) or Dr. Keith Sheppard, Science Education Program Director at (631) 632-2989 (Keith.Sheppard@stonybrook.edu).

Undergraduate Physics Teacher Preparation Program
Degree and Certification Requirements

The undergraduate physics teacher preparation program is based on completion of a BS in Physics degree with supplemental required classes. The degree requires a strong foundation in physics and mathematics, comprising at least 65 physics, math, and related credits. Among these related credits, teacher candidates take courses in biology, chemistry, and either earth science or astronomy, which are beyond the requirements for the physics major. The current physics major requires 37 credits with the PHY designator. All students are encouraged to undertake research. Laboratory work comprises a significant portion of the degree credits and an exhibition of written expression is required. Students must pass all PHY courses with a minimum grade of C. New York State will not accept a C- or lower for teacher certification.

All applicants to the Physics Teacher Preparation Program must:

- Apply to the program during the second semester of sophomore year or first semester of junior year.
- Have taken at least 4 science lab courses.
- Contact the physics education advisor for a transcript review and to plan a course of study.
- Achieve a cumulative GPA of 3.0 and a GPA of 3.0 in science courses.
- Contact one of the science education program advisors for an interview.
- Fill out the Teacher Preparation Undergraduate Application Form (see https://www.stonybrook.edu/commcms/dtale/admissions/undergraduate.php). Attach an unofficial copy of your transcript(s) from all colleges and universities that you have attended, three letters of reference (at least two from university faculty) regarding your potential to become a teacher, and your essay. Submit all documents for approval by the Science Education Program Director.
- Declare a Teacher Preparation option by submitting the “Declaration of Major/Minor Form” with TP to the Registrar. Forms are available at the Registrar’s Office, the Undergraduate Physics advisor’s office in the Physics Building, and the Science Education Program Office in I-STEM, Life Sciences 092.
- Students should declare the major as soon as possible to be eligible for NYS Math and Science Teaching Incentive Scholarships. This declaration requires adding ED/TP to the first major on the major declaration form.

Physics Content for Teacher Preparation (almost the same as for BS in Physics)

A. Required Laboratory Courses:

PHY 131/133, 132/134 Classical Physics I, II and Laboratory (see note)
PHY 251/252 Modern Physics Lecture and Laboratory
PHY 277 Computation for Physics and Astronomy
PHY 300 Waves and Optics
PHY 335 Electronics and Instrumentation Laboratory
PHY 445 Senior Laboratory

Note: The three-semester PHY 125/126/127 sequence or the honors sequence PHY 141/142 may be substituted for PHY 131/132.

B. Required Lecture Courses:

PHY 301 Electromagnetic Theory
PHY 303 Mechanics
PHY 306 Thermodynamics, Kinetics Theory, and Statistical Mechanics
PHY 308 Quantum Physics

All PHY courses required for the major must be completed with a grade of C or higher.

At least four of these courses numbered 300 and above must be taken at Stony Brook.

The above physics requirements total at least 37 credits.

C. Courses in Mathematics:

Equivalency for MAT courses achieved on the Mathematics Placement Examination is accepted as fulfillment of the corresponding requirements without the necessity of substituting other credits.

1. One of the following sequences:
   MAT 131, 132 Calculus I, II or MAT 141, 142 Honors Calculus I, II or MAT 125, 126, 127 Calculus A, B, C or AMS 151,161 Applied Calculus I, II
2. One of the following:
   MAT 203 Calculus III with Applications or MAT 307 Multivariable Calculus with Linear Algebra or AMS 261 Applied Calculus III
3. One of the following:
   MAT 303 Calculus IV with Applications or MAT 308 Differential Equations with Linear Algebra or AMS 361 Applied Calculus IV Differential Equations
4. One of the following:
   MAT 211 Introduction to Linear Algebra or AMS 210 Applied Linear Algebra or both MAT 307 and MAT 308

The above mathematics requirements total at least 14 credits.

Sample course sequence for a PHY major with a teacher preparation option

Fall, Freshman Year	cr		Spring, Freshman Year	cr
MAT 131: Calc. 1 SBC: QPS	4		MAT 132: Calc. 2	4
PHY 131/133: Physics 1/Lab SBC: SNW	4		PHY 132/134: Physics 2/Lab	4
SPN 111: Elementary Spanish I*	3		SPN 112: Elementary Spanish II* SBC: LANG	3
WRT 102: Writing SBC: WRT	3		HIS 104: US since 1877 SBC: SBS, USA	3
Freshman Seminar (101)	1		Freshman Seminar (102)	1
Total	15		Total	15
Fall, Sophomore Year			**Spring, Sophomore Year**	
MAT 307: Calc. 3/Lin Alg.	4		MAT 308: Calc. 4/Lin Alg.	4
PHY 251/252: Modern Physics/Lab SBC: STEM+	4		PHY 300: Waves & Optics	4
PHY 277 Programming SBC: TECH	3		PHY 335 Electronics Lab	3
CHE 131/133 Chemistry 1/Lab	5		BIO 201/204 Organisms to Ecosystems/Lab	5
Total	16		Total	16
Fall, Junior Year			**Spring, Junior Year**	
PHY 301: Elec/Mag with MAT 341 optional	3		PHY 306: thermo and statistical mechanics	3
PHY 303: Mechanics	3		PHY 308: Quantum Physics	3
CCS 101: Cinema SBC: ARTS, HUM	3		SCI 410: Methods I	3
HUR 235: Crime Punish SBC: CER, GLO, HUM	3		SCI 449: Field Experience I	1
GEO 102/112 or GEO 122 Physical Geology	4		LIN 344: Literacy Development	3
HIS 396: Topics in US History SBC: SBS+	3		SSE 350: Foundations of Education	3
			AST 248: Search for Life SBC: STAS	3
Total	19		Total	19
Fall, Senior Year			**Spring, Senior Year**	
PHY445: Senior Lab SBC: ESI, SPK	3		SCI 451 Student Teaching 7-9	6
PSY 327: Human Development	3		SCI 452 Student Teaching 10-12	6
SCI 420: Methods II SBC: CER, EXP+, SPK	3		SCI 454 Student Teaching Seminar	3
SCI 450 Field Experience II	1			
CEF 347 Special Education	3			
PHY 475: Teaching Practicum SBC: EXP+	3			
PHY 459 Write Effectively SBC: WRTD	0			
Total	16		Total	15

***Satisfaction of SBU's SBC LANG fulfills the foreign language requirement.**

D. Courses in Related Fields:

Twelve credits of acceptable physics-related courses that complement the physics major are required. All courses required for the teaching minor are included among these related courses.

Notes:

1. Students taking the PHY125, 126, 127 sequence may have to delay portions of their program, because of the prerequisite structure in physics courses. (It may be possible to recover by taking a class in summer school.)

2. Students *must* include among their electives BIO 201 *and* BIO 204, CHE 131/133 (students are encouraged to take CHE 132 and CHE 134), and either GEO 102/112 or GEO 122 or AST101/112.
3. To qualify for the General Science (7-12) certification, candidates must complete a minimum of 18 semester hours in two or more sciences other than physics. Additional elective courses in science may be needed to meet this requirement.

E. Required Courses on Professional Studies in Education (35 credits)**:**

PSY 327 Human Development in an Educational Context
SSE 350 Foundations in Education
LIN 344 Language Acquisition and Literacy Development
CEF 347 Introduction to Special Education
SCI 410 Pedagogy and Methods in Science Education I
SCI 449 Field Experience I (co-requisite SCI 410)
SCI 420 Pedagogy and Methods in Science Education II
SCI 450 Field Experience II (co-requisite SCI 420)
SCI 451 Supervised Student Teaching 7 – 9**
SCI 452 Supervised Student Teaching 10 – 12**
SCI 454 Student Teaching Seminar **

** Note: Prior to admission to student teaching, candidates will be interviewed by a committee to assess their ability to speak extemporaneously about both physics concepts and pedagogical issues. Candidates who are not successful in this interview will be counseled in order to remedy deficiencies. Upon completion of the remediation another interview will be held. In the event that a candidate is unable to satisfy the interview component, the candidate will not advance to student teaching.

Seventy-five days of student teaching are required. Dependent on the semester and public school vacation schedules, student teaching may extend beyond the university semester calendar. Student teaching is divided into two placements of approximately equal duration, one in a middle school/junior high school and the other in a high school.

F. Field Experience:

Field Experience sites for all teacher candidates are arranged through SCI 449 and SCI 450. Assignments and details are distributed in SCI 410 and SCI 420. New York State requires 100 hours of field experience in secondary schools prior to student teaching. Each teacher candidate is required to obtain 15 hours of field experience that includes a focus on understanding the needs of students with disabilities. These hours will be noted on the Field Experience Time Sheets from SCI 449, SCI 450, or a combination of both. While earning these field experience hours, teacher candidates will be encouraged to observe inclusion (integrated co-teaching) classes in their certification area and other special education classroom situations as available

G. State Tests, Mandated Seminars and Fingerprinting:

- All teacher candidates must be fingerprinted at the start of SCI 410/SCI 449.
- Prior to student teaching, candidates must complete four mandated seminars, *Training in Child Abuse Recognition, Substance Abuse Education, School Violence and Intervention,* and *Dignity for All Students* (DASA). For details and to register for the seminars on campus, see http://www.sunysb.edu/spd/career/tworkshops.html.

New York State examinations required for teacher certification are:

- Educating All Students Test (EAS)
- Content Specialty Test (CST) in physics [Note: Candidates with a scaled score below 520 on the CST, or a sub-section score of 1, should meet with their departmental faculty advisor to review the content addressed in the exam.]
  For further information about the NYSTCE testing program, visit their website at http://www.nystce.nesinc.com/.

It is recommended that candidates take the EAS upon completion of PSY 327, CEF 347 and LIN 344, and take the CST upon completion of physics courses required for the major.

H. Language Requirement:
Satisfaction of SBU's Entry Skill 3/SBC LANG requirement (at least one year (6 credits) of college level study of a foreign language) fulfills the foreign language requirement.

I. General Science Certification and Certification in an Additional Science
To qualify for the General Science (7-12) certification, candidates must complete a minimum of 18 semester hours in two or more sciences other than physics, i.e., total of at least 18 credits in two or more non-physics science courses. To qualify for certification in a second science, candidates need to complete a minimum of 18 semester hours in the second science and pass the associated CST exam.

J. Professional Portfolio:
The Professional Portfolio is presented and defended at the conclusion of student teaching. It includes many performance indicators of standards-based teaching competencies.

Master of Arts in Teaching Physics

For an admission application to the Master of Arts in Teaching degree program and details about admission requirements (https://www.stonybrook.edu/commcms/spd/graduate/matscience) or contact the School of Professional Development at (631) 632-7055.

Please note that all Masters students seeking physics teacher certification must earn the equivalent of the Stony Brook B.S. in physics degree and meet additional science competency requirements by taking the equivalents of the following courses: BIO 201/204, CHE 131/133 and either GEO102/112 or GEO 122 or AST101/112. For details, see the Physics Education Advisor.

The MAT in physics requires 15 credits in appropriate physics courses, chosen in consultation with the Physics Education Advisor, including PHY 515 and PHY 570. Since a major in physics is required for entry into the program, entering students will already have some knowledge of all areas of physics. MAT students can therefore pursue their interests in selecting specialized courses that extend their content knowledge. MAT students most frequently select from the courses listed below. In addition, there are many other graduate courses in physics from which an MAT student could also choose if they have the appropriate quantitative background. The graduate course descriptions can be viewed at the physics department website: www.physics.sunysb.edu/physics

A. Physics Courses:

Required courses:

PHY 515 Methods of Experimental Research
PHY 570 Introductory Physics Revisited for Teachers

Recommended Courses:

PHY 514 Current Research Instruments
PHY 571 Electromagnetic Theory for Teachers
PHY 573 Mechanics for Teachers
PHY 576 Thermodynamics and Statistical Mechanics for Teachers
PHY 578 Quantum Physics for Teachers
PHY 579 Special Topics for Teachers
PHY 580 Special Research Projects
PHY 582 Optics Rotation
PHY 585 Special Study
PHY 600 Practicum in Teaching

B. Required Professional Studies in Education Courses (29 credits)**:**

CEE 505 Education: Theory and Practice
CEE 565 Human Development
CEE 594 Language Acquisition and Literacy Development
CEF 547 Principles and Practices of Special Education
SCI 510 Introduction to Science Teaching (Methods of Teaching 1)
SCI 549 Science Field Experience I (co-requisite SCI 510)
SCI 520 Science Instructional Strategies & Techniques (Methods of Teaching 2)
SCI 550 Science Field Experience II (co-requisite SCI 520)
SCI 551 Supervised Student Teaching 10 – 12**
SCI 552 Supervised Student Teaching 7 – 9**
SCI 554 Student Teaching Seminar**

** **Note:** Prior to admission to student teaching, candidates will be interviewed by a committee to assess their ability to speak extemporaneously about both physics concepts and pedagogical issues. Candidates who are not successful in this interview will be counseled in order to remedy deficiencies. Upon completion of the remediation another interview will be held. In the event that a candidate is unable to satisfy the interview component, the candidate will not advance to student teaching.

Seventy-five days of student teaching are required. Dependent on the semester and public school vacation schedules, student teaching may extend beyond the university semester calendar. Student teaching is divided into two placements of approximately equal duration, one in a middle school/junior high school and the other in a high school.

C. Field Experience:

Field Experience sites for all teacher candidates are arranged through SCI 549 and SCI 550. Assignments and details are distributed in SCI 510 and SCI 520. New York State requires 100 hours of field experience in secondary schools prior to student teaching. Each teacher candidate is required to obtain 15 hours of field experience that includes a focus on understanding the needs of students with disabilities. These hours will be noted on the Field Experience Time Sheets from SCI 549, SCI 550, or a combination of both. While earning these field experience hours, teacher candidates will be encouraged to observe inclusion (integrated co-teaching) classes in their certification area and other special education classroom situations as available

D. State Tests, Mandated Seminars and Fingerprinting:

- All teacher candidates must be fingerprinted at the start of SCI 510/SCI 549.
- Prior to student teaching, candidates must complete four mandated seminars, *Training in Child Abuse Recognition, Substance Abuse Education, School Violence and Intervention,* and *Dignity for All Students* (DASA). For details and to register for the seminars on campus, see http://www.sunysb.edu/spd/career/tworkshops.html.

New York State examinations required for teacher certification are:

- Educating All Students Test (EAS)
- Content Specialty Test (CST) in physics [Note: Candidates with a scaled score below 520 on the CST, or a sub-section score of 1, should meet with their departmental faculty advisor to review the content addressed in the exam.]
  For further information about the NYSTCE testing program, visit their website at http://www.nystce.nesinc.com/.

It is recommended that candidates take the EAS upon completion of CEE 565, CEF 547 and CEE 594, and take the CST during SCI 510.

E. Language Requirement:
Satisfaction of SBU's Entry Skill 3/SBC LANG requirement (at least one year (6 credits) of college level study of a foreign language) fulfills the foreign language requirement.

F. Professional Portfolio:
The Professional Portfolio is presented and defended at the conclusion of student teaching. It includes many performance indicators of standards-based teaching competencies.

G. General Science Certification and Certification in an Additional Science
To qualify for the General Science (7-12) certification, candidates must complete a minimum of 18 semester hours in two or more sciences other than physics, i.e., total of at least 18 credits in two or more non-physics science courses. To qualify for certification in a second science, candidates need to complete a minimum of 18 semester hours in the second science and pass the associated CST exam.

H. Middle Level Extension
Candidates who wish to qualify to teach grades 5 and 6 in a middle school setting may obtain an extension to their grades 7-12 certification by completing two additional courses prior to graduation. The courses are: CEE 601 Early Adolescent Development and CEE 602 Middle Child Education-Instruction. More information about these courses can be found on the SPD website (www.stonybrook.edu/spd).

Five-Year BS/MAT Physics Teacher Preparation Program Degree and Certification Requirements

The BS/MAT physics teacher preparation program is based on completion of a combined BS in Physics and Master of Arts in Teaching in Physics. It is possible to complete both degrees in 5 years (instead of 5 ½ years) because of credit sharing between the programs. This program requires a combination of the courses that satisfy the requirements of both programs. See both the BS teacher preparation program (p. 2) and the MAT program (p.7). Students in the BS/MAT program, with the consent of the physics education advisor, satisfy some of their requirements for the BS by taking appropriate graduate courses, each of which contains the content of a required undergraduate course plus additional requirements.

All applicants to the BS/MAT Physics Teacher Preparation Program must:

- Have taken at least 4 science lab courses.
- Contact the physics education advisor for a transcript review and to plan a course of study.
- Achieve a cumulative GPA of 3.00 and a GPA of 3.00 in science courses.
- Apply for the combined program by the end of the junior year.
- Complete the BS/MAT application that is found on the School of Professional Development web site (https://www.stonybrook.edu/commcms/spd/graduate/ba_mat.php).
  - SPD Student Application/Information Sheet
  - Three (3) letters of recommendation
  - Official transcript from each college or university attended
  - Application Essay
  - Any additional items required by the School of Professional Development
- Submit application prior to SPD deadline (see the SPD website for details: www.stonybrook.edu/spd)

  Upon entry to the program, candidates must declare a Teacher Preparation option along with their Undergraduate major by submitting the "Declaration of Major/Minor Form with TP" through their SOLAR account.

Number of semesters of full-time study required for program completion at the undergraduate and graduate levels.

Students should apply to the combined BS/MAT program during their fifth or sixth semester of study. The first six semesters of the program are full time study at the undergraduate level. Semesters seven and eight will include a mix of undergraduate and graduate courses. Semesters nine and ten will consist mostly of graduate courses. Candidates will generally advance to Graduate status during their eighth semester.

Note: The two degrees are conferred only when the entire combined degree program has been completed. Both degrees are conferred together unless the student elects to exit the combined degree program and receive only a BS in Physics.

Five Year BS/MAT Program – Sample Course Sequence

Sample Course sequence for a PHY major in the BS/MAT program

Fall, Freshman Year	cr	gc	Spring, Freshman Year	cr	gc
MAT131: Calc. 1 SBC: QPS	4		MAT132: Calc. 2	4	
PHY 131/133: Physics 1/Lab SBC: SNW	4		PHY 132/134: Physics 2/Lab	4	
SPN 111: Elementary Spanish I*	3		SPN 112: Elementary Spanish II* SBC: LANG	3	
WRT 102: Writing SBC: WRT	3		HIS 113:US History since 1877 SBC: SBS, USA	3	
Freshman Seminar (101)	1		Freshman Seminar (102)	1	
Total	15		Total	15	
Fall, Sophomore Year			**Spring, Sophomore Year**		
MAT 307: Calc 3/Lin Alg	4		MAT 308: Calc 4/Lin Alg	4	
PHY 251/252: Modern/Lab SBC: STEM+	4		PHY 300: Waves & Optics	4	
PHY 277 Programming SBC: TECH	3		PHY 335 Electronics Lab	3	
CCS 101: Cinema SBC: ARTS, HUM	3		PHY 287: Research EXP+	3	
Elective	3		Elective	3	
Total	17		Total	17	
Fall, Junior Year			**Spring, Junior Year**		
PHY 301: Elec/Mag	3		PHY 306: thermo and statistical mechanics	3	
MAT 341: Applied Real Analysis	3		GEO 102/112 or GEO 122: The Earth/Lab	4	
CHE 131/133 Chemistry 1/Lab	5		BIO 201/204 Organisms to Ecosystems/Lab	5	
HUR 235: Crime Punish SBC: CER, GLO, HUM	3		AST 248: Search for Life SBC: STAS	3	
Elective	3				
Total	17		Total	15	
Fall, Senior Year			**Spring, Senior Year**		
PHY 573: Mechanics for Teachers		3	PHY 578: Quantum Physics for Teachers		3
PHY 475: Teaching Practicum SBC: EXP+	3		PHY 570: Introductory Physics Revisited		3
PHY 487: Research SBC: EXP+	3		SSE 350: Foundations of Education	3	
HIS 396: Topics in US History SBC: SBS+	3		SCI 510: Methods I		3
Elective	3		SCI 549: Field Experience I		1
			LIN 344: Literacy Development	3	
Total	12	3	Total	6	10
Fall, Graduate Year			**Spring, Graduate year**		
PHY 515: Advanced Lab		3	SCI 551 Student Teaching 7-9		3
PHY 458: Speak Effectively SBC: SPK	0		SCI 552 Student Teaching 10-12		3
PHY 600: Teaching Practicum		3	SCI 554 Student Teaching Seminar		3
CEE 565: Human Development		3			
SCI 520: Methods II		3			
SCI 550: Field Experience II		1			
CEF 547: Special Education		3			
PHY 459 Write Effectively SBC: WRTD	0				
Total	0	16	Total	0	9

***Satisfaction of SBU's SBC LANG fulfills the foreign language requirement.**

The above listing of courses provides a suggested sequence for coursework. There is a degree of flexibility in the order of courses, but any deviation from the above without permission of physics teacher preparation advisor may lead to a delay in completion of the program.

A student wishing to complete this 5-year combined program is strongly encouraged to consult with the physics teacher preparation advisor for individualized guidance in course selection.

Additional Requirements

Student Teaching:
Prior to admission to student teaching, candidates will be interviewed by a committee to assess their ability to speak extemporaneously about both physics concepts and pedagogical issues. Candidates who are not successful in this interview will be counseled in order to remedy deficiencies. Upon completion of the remediation another interview will be held. In the event that a candidate is unable to satisfy the interview component, the candidate will not advance to student teaching.

Seventy-five days of student teaching are required. Depending on the semester and public school vacation schedules, student teaching may extend beyond the university semester calendar. Student teaching is divided into two placements of approximately equal duration, one in a middle school/junior high school and the other in a high school.

Field Experience:
Field Experience sites for all teacher candidates are arranged through SCI 449/549 and SCI 450/550. Assignments and details are distributed in SCI 410/510 and SCI 420/520. New York State requires 100 hours of field experience in secondary schools prior to student teaching. Each teacher candidate is required to obtain 15 hours of field experience that includes a focus on understanding the needs of students with disabilities. These hours will be noted on the Field Experience Time Sheets from SCI 449/549, SCI 450/550, or a combination of both. While earning these field experience hours, teacher candidates will be encouraged to observe inclusion (integrated co-teaching) classes in their certification area and other special education classroom situations as available

State Tests, Mandated Seminars and Fingerprinting:
- All teacher candidates must be fingerprinted at the start of SCI 410/510.
- Prior to student teaching, candidates must complete four mandated seminars, *Training in Child Abuse Recognition, Substance Abuse Education, School Violence and Intervention,* and *Dignity for All Students* (DASA). For details and to register for the seminars on campus, see http://www.sunysb.edu/spd/career/tworkshops.html.

New York State examinations required for teacher certification are:
- Educating All Students Test (EAS)
- Content Specialty Test (CST) in physics [Note: Candidates with a scaled score below 520 on the CST, or a sub-section score of 1, should meet with their departmental faculty advisor to review the content addressed in the exam.]

For further information about the NYSTCE testing program, visit their website at http://www.nystce.nesinc.com/.

It is recommended that candidates take the EAS upon completion of PSY 327/CEE 565, CEF 347/547 and LIN 344/ CEE 594, and take the CST upon completion of the undergraduate physics major.

Language Requirement:
Satisfaction of SBU's Entry Skill 3/SBC LANG requirement (at least one year (6 credits) of college level study of a foreign language) fulfills the foreign language requirement.

Professional Portfolio:
The Professional Portfolio is presented and defended at the conclusion of student teaching. It includes many performance indicators of standards-based teaching competencies.

General Science Certification and Certification in an Additional Science
To qualify for the General Science (7-12) certification, candidates must complete a minimum of 18 semester hours in two or more sciences other than physics, i.e., total of at least 18 credits in two or more non-physics science courses. To qualify for certification in a second science, candidates need to complete a minimum of 18 semester hours in the second science and pass the associated CST exam.

Middle Level Extension:
Candidates who wish to qualify to teach grades 5 and 6 in a middle school setting may obtain an extension to their grades 7-12 certification by completing two additional courses prior to graduation. The courses are: CEE 601 Early Adolescent Development and CEE 602 Middle Child Education-Instruction. More information about these courses can be found on the SPD website (www.stonybrook.edu/spd).