

SCI

Science Teacher Preparation

SCI 510: Introduction to Science Teaching

This course introduces the pre-service teacher to the requisite skills, culture, and demands of the profession. The pre-service teacher learns to design curriculum, write lesson plans, orchestrate classroom activity, probe student thinking and assess student progress within the context of a pedagogy that promotes an inquiry approach to learning. This course requires one-half day per week of clinical practice with follow-up seminar in the campus Discover Lab, out-of-class meetings with classmates, and periodic visits to local public schools.

3 credits, Letter graded (A, A-, B+, etc.)

SCI 520: Science Instructional Strategies and Techniques

In this course, the pre-service teacher builds on the pedagogical foundations set in SCI 510 and prepares for student teaching in the following semester. Greater leadership in Discover Lab programs and teaching assignments in local public schools is expected. Greater emphasis is placed on the integration of theory and practice, extension of scientific inquiry for diverse learners and assessment of student progress within the context of teaching. This course demands an inquiry into the nature of science and the nature of knowing. It requires one-half day per week of clinical practice with follow-up seminars, out-of-class meetings with classmates, and micro-teaching assignments in selected public schools. Prerequisite: SCI 510; entrance interview with the Science Education Committee; 3.0 cumulative graduate GPA; matriculation in degree (MAT, MS, Ph.D or MA/LS) program; permission Science Education program 631.632.7075 Remark:

3 credits, Letter graded (A, A-, B+, etc.)

SCI 530: Applied Research in Educational Settings

This course offers the pre-service teacher the opportunity to conduct a place of original research that will inform future practice. With guidance from the PEP faculty and/or affiliated departmental faculty, pre-service teachers will formulate a question, design a protocol, collect data and analyze within research traditions appropriate to the question.

3 credits, Letter graded (A, A-, B+, etc.)

SCI 540: Clinical Experience and Action Research

Within this course, students will engage in weekly clinical practice experiences in campus

teaching labs, outreach programs or regional schools. In addition, students will design, implement, and present an action research project. This course is intended to be taken as a two-semester co-requisite of SCI 510 and SCI 520.

3 credits, Letter graded (A, A-, B+, etc.)

SCI 549: Science Field Experience I

This course requires teacher candidates to complete 50 hours of supervised field experience at various sites and with diverse learners, including: high needs schools, students with disabilities or special needs, English language learners, and diverse age groups. The field experience will involve: observing instruction by sponsoring teacher and other teachers using a structured observation protocol, assisting sponsoring teacher with class activities, tutoring students, planning curriculum and negotiating curriculum with students, assessing student knowledge, and preparing written assignments for the methods courses on the basis of the above activities.

1 credit, S/U grading

SCI 550: Science Field Experience II

This course requires teacher candidates to complete 50 hours of supervised field experience at various sites and with diverse learners, including: high needs schools, students with disabilities or special needs, English language learners, and diverse age groups. The field experience will involve: observing instruction by sponsoring teacher and other teachers using a structured observation protocol, assisting sponsoring teacher with class activities, tutoring students, planning curriculum and negotiating curriculum with students, assessing student knowledge, and preparing written assignments for the methods courses on the basis of the above activities. Prerequisite: Matriculation in Science Education Program, SCI 549, SCI 510

1 credit, S/U grading

SCI 551: Supervised Student Teaching High School Grades 10-12: Science

Prospective science teachers will participate in a supervised student teaching experience in selected Long Island secondary schools, grades 10-12. The student teacher reports to the school to which he/she is assigned each full school day. Frequent consultation with the supervising teacher helps the student interpret and evaluate the teaching experience. Applications must be filed in the semester preceding student teaching.

3 credits, S/U grading

SCI 552: Supervised Student Teaching Middle School Grades 7-9: Science

Prospective science teachers will participate in a supervised student teaching experience in selected Long Island secondary schools, grades 7-9. The student teacher reports to the school to which he/she is assigned each full school day. Frequent consultation with the supervising teacher helps the student interpret and evaluate the teaching experience. Applications must be filed in the semester preceding student teaching. Prerequisite: SCI 510, 520, 541, 542 CEE 505 and CEE 565; matriculation in degree (MAT, MS, Ph.D or MA/LS) program, 3.0 cumulative GPA; submission of portfolio and interview with and permission of Science Education Committee 631.632.7075

3 credits, S/U grading

SCI 554: Supervised Teaching of Science Seminar

This seminar, which will focus on problems encountered by student teachers and public school teachers at the secondary level, will include study and analysis of science teaching issues, including classroom management, school culture, and social issues affecting the schools and student performance. Prerequisite: SCI 510, 520, 541, 542, CEE 505 and CEE 565; submission of portfolio and interview with and permission of Science Education Committee 631.632.7059; matriculation in degree (MAT, MS, Ph.D or MA/LS) program; completion of any content area deficiencies

3 credits, Letter graded (A, A-, B+, etc.)