SCIENCE

Science Teacher Preparation

SCI 410 Pedagogy and Methods for Science Education I

Fundamental science teaching strategies, theories, and practices are introduced to students. Implementation of the New York State Math, Science, and Technology Standards and core science curricula is emphasized, in addition to the importance of inquiry-based learning, laboratory activities, and the integration of theory and practice, extension of scientific inquiry for diverse learners and assessment of student progress. Students plan lessons and make several presentations. Students complete an action research project based on field observations made in conjunction with SCI 449.

Prerequisites: Acceptance to a Science Teacher Preparation program; minimum g.p.a. of 2.75

Corequisite: SCI 449 Note: you must register for the same sections of SCI 410 and 449

3 credits

SCI 420 Pedagogy and Methods for Science Education II

Builds on the practical application of science pedagogy introduced in SCI 410. Advanced science teaching strategies are presented. Emphasis is placed on the integration of theory and practice, extension of scientific inquiry for diverse learners and assessment of student progress. Essential themes and critical issues in the science disciplines are explored in the context of teaching in secondary schools. Experiences in SCI 450 are incorporated into SCI 420. Note: you must register for the same sections of SCI 420 and 449.

Prerequisites: C or higher in SCI 410; minimum g.p.a. of 2.75

Corequisite: SCI 450

3 credits

SCI 447 Directed Readings in Science Education

Advanced study in science education under the supervision of a science education faculty member.

Prerequisite: Permission of the science education program

1-6 credits

SCI 449 Field Experience, Grades 7-12

Students visit science classes in secondary schools and participate in selected school-based outreach programs for a total of 50 hours during the semester. The observations made during these visits serve as the basis for the action research project that is completed in SCI 410, as well as for discussions that occur in class.

Prerequisites: Acceptance to a Science Teacher Preparation program; minimum g.p.a. of 2.75

Corequisite: SCI 410

1 credit, S/U grading

SCI 450 Field Experience, Grades 7-12

Students visit science classes in secondary schools and participate in selected school-based outreach programs for a total of 50 hours during the semester. The observations made during these visits serve as the basis for the action research project that is completed in SCI 410, as well as for discussions that occur in class.

Prerequisites: Acceptance to a Science Teacher Preparation program; minimum g.p.a. of 2.75

Corequisite: SCI 410

1 credit, S/U grading

SCI 451 Supervised Teaching-Science: Middle Level Grades 7-9

Prospective science teachers participate in full-time supervised student teaching in partnership schools, grades 7-9. Frequent consultation with the University supervisor helps the student interpret and evaluate the teaching experience. Applications must be filed in the semester preceding student teaching.

Prerequisites: C or higher in SCI 420; SSE 327 and 350; 2.75 cum gpa; completion of all graduation requirements; Dept permission.

Corequisites: SCI 451, 452, 454

Note: students must register for equivalent sections of SCI 451, 452, 454

6 credits, S/U grading

SCI 452 Supervised Teaching-Science: High School Grades 10-12

Prospective science teachers participate in full-time supervised student teaching in partnership schools, grades 10-12. Frequent consultation with the University supervisor helps the student interpret and evaluate the teaching experience. Applications must be filed in the semester preceding student teaching.

Prerequisites: SCI 451 and 454

6 credits, S/U grading

SCI 454 Science Student Teaching Seminar

Includes discussions of teaching techniques that are critical to success as a science teacher, such as classroom management and effective questioning techniques. Analysis of actual problems and issues encountered by the student in his or her student teaching experience are part of each seminar session.

Prerequisites: C or higher in SCI 420; SSE 327 and 350; 2.75 cum gpa; completion of all graduation requirements; Dept Permission.

Corequisites: SCI 451 and 452

Note: students must register for equiv sections of SCI 451, 452, 454

3 credits

SCI 475 Undergraduate Teaching Practicum I

Study of the literature, resources, and teaching strategies in science education with a supervised clinical experience in undergraduate instruction.

Prerequisites: Permission of instructor and science education program

3 credits, S/U grading

SCI 487 Applied Research

Repeatable to a maximum of 6 credits.

Prerequisite: Permission of science education program

0-6 credits

Sanskrit

SKT 111 Elementary Sanskrit I

An introduction to Sanskrit, the classical language of Hinduism and Buddhism. Includes grammar, translation, and readings from selected texts.

3 credits

SKT 112 Elementary Sanskrit II

An introduction to Sanskrit, the classical language of Hinduism and Buddhism. Includes grammar, translation, and readings from selected texts.

3 credits

SOC

Sociology

SOC 105-F Introduction to Sociology

A general introduction to the science of sociology, emphasizing sociological theory and methods. Students are taught what is unique about the way in which sociologists analyze human behavior and society. Differences between the sociological perspective and perspectives of other social sciences are emphasized. There is also a heavy emphasis on the types of methods and data that sociologists use to test the validity of their ideas.

3 credits