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 laboratory safety. 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 Secondary Teacher Education program; minimum g.p.a. of 2.75
Corequisite: SCI 449
Note: Students 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 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 450.

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, 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 per course. The observations made during these visits serve as the basis for discussions that occur in class and in the research component of SCI 410 and 449. Due to public school schedules, the majority of these experiences occur during morning hours.

Prerequisites to SCI 449: A pass in a Science Secondary Teacher Education program; minimum g.p.a. of 2.75
Corequisite to SCI 449: SCI 410; Note: Students must register for equivalent sections of SCI 410 and 449.
Prerequisites to SCI 450: C or higher in SCI 410; minimum g.p.a. of 2.75
Corequisite to SCI 450: SCI 420; Note: Students must register for equivalent sections of SCI 420 and 450.
1 credit per course, SU 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 (formerly SSD) 327 and 350; 2.75 cumulative g.p.a.; completion of all graduation requirements; Permission of department
Corequisites: SCI 452 and 454; Note: Students must register for equivalent sections of SCI 451, 452 and 454.
6 credits, SU 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: C or higher in SCI 420; SSE (formerly SSD) 327 and 350; 2.75 cumulative g.p.a.; completion of all graduation requirements; Permission of department
Corequisites: SCI 451 and 454; Note: Students must register for equivalent sections of SCI 451, 452 and 454.
6 credits, SU 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 (formerly SSD) 327 and 350; 2.75 cumulative g.p.a.; completion of all graduation requirements; Permission of department
Corequisites: SCI 451 and 454; Note: Students must register for equivalent sections of SCI 451, 452 and 454.
5 credits

SCI 475 Undergraduate Teaching Practicum

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, SU grading

SCI 487 Applied Research

Repeatable to a maximum of 6 credits.

Prerequisite: Permission of science education program
0-3 credits

SKT 111, 112 Elementary Sanskrit I, II

An introduction to Sanskrit, the classical language of Indian religion and philosophy, including grammar, translation, and readings from selected texts of Hinduism and Buddhism.

Prerequisite to SKT 112: SKT 111
3 credits per course

SLN Sign Language

SLN 111, 112 Elementary American Sign Language I, II

An introduction to American Sign Language, the visual-gestural language of the deaf. It incorporates nonverbal communication techniques, basic vocabulary, basic grammar principles, and basic conversational skills. This course is designed for students who have no prior knowledge of the language. A student who has acquired an equivalent proficiency may not take SLN 111 without written permission from the supervisor of the course.

Prerequisite to SLN 112: SLN 111
3 credits per course

SLN 475, 476 Undergraduate Teaching Practica I, II

Work with a faculty member as an assistant in one of the faculty member’s regularly scheduled classes. The student is required to attend all the classes, do all the regularly assigned work, and meet with the faculty member at regularly scheduled times to discuss the intellectual and pedagogical matters relating to the course. In SLN 476, students assume greater responsibility in such areas as leading discussions and analyzing results of tests that have already been graded. Students may not serve as teaching assistants in the same course twice.

Prerequisites to SLN 475: U3 or U4 standing; permission of instructor
Prerequisites to SLN 476: SLN 475; permission of instructor
3 credits per course, SU grading

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

SOC 106-F Introduction to Sociology: Honors

An enriched introduction to the sociological perspective with an emphasis on how sociologists develop and test their hypotheses about human behavior. This course requires more reading and covers more complex topics than SOC 105, providing an introduction to sociology in greater depth. May not be taken for credit in addition to SOC 105. Priority given to students in the University’s honors programs and sociology majors.

3 credits

SOC 150 Topics in Introductory Sociology

A supplementary seminar for students enrolled in SOC 105, providing a small-group setting to discuss key concepts and topics in introductory sociology.

Corequisite: SOC 105
1 credit

SOC 200 Medicine and Society

An examination of some traditional concerns of the humanities and social sciences as they occur in basic health care and its delivery. Practicing physicians or other health care professionals present clinical cases to emphasize such topics as allocation of scarce resources, issues of dying and refusing treatment, health care and its delivery.