SCIENCE EDUCATION (SCIED-GE)

SCIED-GE 2009 Science Experiences in The Elementary School I (2 Credits)
Typically offered Fall and Spring
Science experiences for elementary school are developed and strategies for implementation and evaluation are devised. Issues such as basic attitutdes toward science, equity in the science classroom, and learning styles will be explored. Students will develop a catalogue of resources, both in print and on-line, for expanding understanding of science content, developing science skills, integrating science into the rest of the curriculum, exploring science activities appropriate for children and assessing science teaching and learning.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

SCIED-GE 2010 Science Experiences in The Elementary School II (2 Credits)
Typically offered Fall and Spring
This course examines several models for teaching preschool and elementary science. Science experiences for elementary students are developed, and strategies for implementation and evaluation are devised.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

SCIED-GE 2021 SCI in Hist Perspective (3 Credits)
Typically offered not typically offered
What is science, whose science, whose knowledge and science for whom?.These questions are a focus as we explore forms of systematic knowledge and understandings about the world including the historic emergence of Modern Western Science (MWS) and Indigenous Knowledge Systems (IKS). How science is haunted by racism, sexism and other efforts to marginalize specific agentic elements is explored and you will be invited to engage in a knowledge production study of your choosing. This course will make you a better educator and curriculum developer.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

SCIED-GE 2039 Communicating and Teaching Science to Everyone (3 Credits)
Typically offered Fall
In communicating and teaching people the big ideas associated with knowing science, students engage with how science understands the world and the complexity of making scientific-based decisions associated with wicked present and future problems. In designing explorations, students learn ways to enact equity, inclusion, and culturally sustaining practices with the goal of ensuring that their communication and teaching brings joy and wonder. This course is for those interested in understanding science education and for prospective science teachers.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

SCIED-GE 2040 Methods II:Teaching SCI in Middle & High Schools (3 Credits)
Typically offered Spring
This course continues to build your learning as you develop a further repertoire of practices and understandings to support your growth as an innovative professional educator who uses inclusive and culturally relevant design through the use of counter narratives to develop science curricula that are technologically rich, engaging and practically and intellectually challenging for middle and high school students in grades 5-12.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

SCIED-GE 2050 Cities as Classrooms (3 Credits)
Typically offered Fall
"Students actively engage with urban environments through explorations of parks, botanic gardens, aquaria, museums, field stations, and public and private organizations to explore the complexity of the urban environment and its role in environmental education and sustainability. Topics include environmental justice and equity, indigenous ways of knowing, urban forests, ecosystem services, recycling, water quality, biodiversity, climate action, and others. Students identify linkages between formal and non-formal settings and design educational materials for all."
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

SCIED-GE 2092 Making Room for Brilliance: Creating Joyful Science Curricula (3 Credits)
Typically offered not typically offered
We learn everything in science class, from reading/writing to mathematical skills, to how to use knowledge to solve everyday and real-world problems…or at least we are supposed to! This course will help any type of educator build their ability to critique and revamp existing curricula and create curriculum from wicked problems in the world so that they can facilitate learning spaces that are productive, phenomena-based, and rooted in student interest…..and yes, find joy in science and in the world.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

SCIED-GE 2300 Independent Study (0-6 Credits)
Typically offered Fall, Spring, and Summer terms
It should be noted that independent study requires a minimum of 45 hours of work per point. Independent study cannot be applied to the established professional education sequence in teaching curricula. Each departmental program has established its own maximum credit allowance for independent study. This information may be obtained from a student?s department. Prior to registering for independent study, each student should obtain an Independent Study Approval Form from the adviser.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: Yes

SCIED-GE 2911 Student Teaching Science Education:Middle School (3 Credits)

Typically offered not typically offered

One semester supervised student teaching in a science education classroom in middle school a minimum of 180 hours within 20 days. Student teaching experiences will be used to support theoretical and practical applications of the planning and implementation of the curriculum. Participation is required in a weekly student teaching seminar which offers a practical examination of teaching problems and practices as they relate to actual classroom teaching.

Grading: Grad Steinhardt Graded

Repeatable for additional credit: No

SCIED-GE 2922 Student Teaching Science Education: High School (2-3 Credits)

Typically offered Fall and Spring

One semester supervised student teaching in a science education classroom in high school a minimum of 180 hours within 20 days. Student teaching experiences will be used to support theoretical and practical applications of the planning and implementation of the curriculum. Participation is required in a weekly student teaching seminar which offers a practical examination of teaching problems and practices as they relate to actual classroom teaching.

Grading: Grad Steinhardt Graded

Repeatable for additional credit: No

SCIED-GE 3021 Prof Sem Conceptual Foundatn of Science Ed (2 Credits)

Typically offered Fall

To redress anti-blackness in science teaching and learning, we must move beyond 'Black representation in STEM fields' as this primarily positions Black science geniuses in the past. Instead in this course we will reposition the historical and present day genius of Black scientific innovations and practices in science so that we can imagine a more affirming and humanizing future through curricular design and archival research. This course aims to humanize Black science cultural practices by centering the work of everyday people in the past, present, and future. In this course students will consider the history of science and science education, both within and beyond the confines of westernized science by engaging with research that looked to the archives to explore Black pedagogical practices. Specifically we will learn about the ways Black teachers prior to Brown vs. Board of Education, 1954 engaged in pedagogical practices that centered love, liberation, and community so that we might use this history to inspire how we might present anti-racist science teaching to all students in our classrooms. Anti-blackness in the use of science today impacts us all and limits our ability to participate in a fully democratic and just society, students will be given the opportunity to consider the misuse of science in their own communities and what they previously accepted as fact versus structural injustices. By the end of the course, students will present on their own research project or science unit storyline that meets at the intersection of Black pedagogical practices, science learning, and historical/current uses of science in our everyday lives.

Grading: Grad Steinhardt Graded

Repeatable for additional credit: No