INTEGRATED SCIENCE EDUCATION

ISE—Integrated Science Education

Center for Integrative Studies in General Science
College of Natural Science

120 Seminar in Integrated Science for Elementary Schools
Spring. 1(1-1) Interdepartmental with Teacher Education. Administered by Integrated Science Education. P: (BS 161 or BS 162 or BS 181H or BS 182H or LB 144 or LB 145) or (CEM 141 or PHY 231 or PSL 250 or GLG 201 or GEO 203) R: Open to students in the College of Education or in the Education major or in the Special Education major or approval of college. SA: SME 120
Exploration of major connecting themes in life sciences, earth science, and physical science as evidenced in the K-8 science curriculum and college science courses.

301 Science for Elementary Schools
Fall, Spring. 3(2-2) RB: Completion of an ISB and ISB laboratory or ISP and ISP laboratory course. Completion of the majority of complementary studies coursework in science and math. R: Open to seniors in the elementary teacher certification program (admitted). SA: NSC 301, SME 301
Topics in earth science, life science, and physical science explored through discussion, demonstrations, readings, presentations, and field trips.

320 Integrated Science for Elementary Schools
Spring. 3(2-2) Interdepartmental with Teacher Education. Administered by Integrated Science Education. P: (ISE 120 and (BS 161 or BS 162 or BS 181H or BS 182H or LB 144 or LB 145 or PSL 250 or ZOL 355) and (PHY 231 or PHY 231C or CEM 141 or LB 171) and (GLG 201 or GEO 203 or AST 207) R: Open to students in the Integrated Science Elementary Teaching Major. SA: SME 320 Not open to students with credit in ISE 301.
Analysis of the concepts integrating science across life sciences, earth sciences, and physical sciences. Applications to the K-8 science curriculum.

420 Integrated Science Research
Fall, Spring. 3(2-2) Interdepartmental with Teacher Education. Administered by Integrated Science Education. R: Open to seniors in the General Science Secondary Teaching Major and open to seniors in the Integrated Science Elementary Teaching Major. SA: SME 420
Research design and data analysis of individual research projects relevant to the K-12 science curriculum, integrating topics in life, earth, and physical science.

490 Special Problems
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department. SA: SME 490
Faculty directed individualized study of an interdisciplinary problem.

600 Special Problems for K-8 Teachers
Fall, Spring, Summer. 1 to 5 credits. A student may earn a maximum of 10 credits in all enrollments for this course. RB: Elementary teacher certification, 3 years teaching experience. R: Approval of college. SA: NSC 600, SME 600
Supervised study of problems or issues in biological sciences, physical sciences, earth sciences or mathematical sciences.

820 College Student Cognition in Science
Spring. 3(3-0) RB: At least 3 undergraduate courses in science SA: SME 820
Introduction to research methodologies and findings relevant to college student cognition in science disciplines. Material from education, psychology, cognitive sciences, and the science disciplines will be used to reveal college student cognitive processes as they relate to science fields.

870 Teaching College Science
Spring. 2 credits. RB: One year of graduate study in a biological or physical science. R: Approval of college. SA: NSC 870, SME 870

889 Research for Inservice Teachers
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 10 credits in all enrollments for this course. RB: Open only to inservice K-12 teachers with baccalaureate degrees. R: Approval of college. SA: NSC 889, SME 889
Research in faculty laboratories. Oral and written presentations.

899 Master’s Thesis Research
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open to master’s students in the College of Natural Science. Approval of college. SA: NSC 899, SME 899
Master’s thesis research.