

INTEGRATED ISE SCIENCE EDUCATION

Center for Integrative Studies in General Science College of Natural Science

- 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.
- 800 Problems in Science or Mathematics for Teachers**
Fall, Spring, Summer. 1 to 5 credits. A student may earn a maximum of 15 credits in all enrollments for this course. RB: Secondary certification in biological sciences, physical sciences or chemistry; secondary certification in Mathematics or Mathematics Education. R: Approval of college. SA: NSC 800, SME 800
Supervised study of problems or issues in biological science, or physical 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.
- 828 Physical Science I**
Summer. 3(2-1) RB: Elementary teacher certification, 1 year teaching experience. R: Open to graduate students in the Master of Arts for Teachers in General Science. Approval of college. SA: SME 651, SME 828
The nature of matter and energy including energy transfer, density, and conservation of mass. Properties of elements, mixtures, and compounds.
- 829 Physical Science II**
Summer. 3(2-1) RB: Elementary teacher certification, 1 year teaching experience. R: Open to graduate students in the Master of Arts for Teachers in General Science. Approval of college. SA: SME 652, SME 829
Electricity and magnetism, force and motion, heat and temperature, sound, and light.
- 832 Earth Science I**
Summer. 3(2-1) RB: Elementary teacher certification, 1 year teaching experience. R: Open to graduate students in the Master of Arts for Teachers in General Science. Approval of college. SA: SME 653, SME 832
The solar system, including the sun, planets, earth, and its moon. Weather and the water cycle.
- 833 Earth Science II**
Summer. 3 credits. RB: Elementary teacher certification, 1 year teaching experience. R: Open to graduate students in the Master of Arts for Teachers in General Science. Approval of college. SA: SME 654, SME 833
Rocks, minerals, and fossils and the physical and geological processes that form them.
- 838 Life Science I**
Summer. 3(2-1) RB: Elementary teacher certification, 1 year teaching experience. R: Open to graduate students in the Master of Arts for Teachers in General Science. Approval of college. SA: SME 655, SME 838
Structure, function, genetics, and classification of organisms, including protists, plants, animals, and decomposers.
- 839 Life Science II**
Summer. 3(2-1) RB: Elementary teacher certification, 1 year teaching experience. R: Open to graduate students in the Master of Arts for Teachers in General Science. Approval of college. SA: SME 656, SME 839
Interrelationships among and between organisms and their surroundings. Ecosystems, habitats, food chains, cycles, and pollution.
- 861 Chemistry for Teachers**
Summer. 3(2-1) RB: Secondary certification in chemistry or physics or earth science or physical science, 1 year of teaching. R: Open to graduate students in the Physical Science-Interdepartmental major. Approval of college. SA: NSC 861, SME 861
Intensive lecture and laboratory study of basic chemistry from a modern viewpoint.
- 862 Physics for Teachers**
Summer. 3(2-1) RB: Secondary certification in chemistry or physics or earth science or physical science, 1 year of teaching. SA: NSC 862, SME 862
Intensive lecture and laboratory study of basic physics from a modern viewpoint.
- 863 Earth Science for Teachers**
Summer. 3(2-1) RB: Secondary certification in chemistry or physics or earth science or physical science, 1 year of teaching. R: Open to graduate students in the Physical Science-Interdepartmental major. Approval of college. SA: NSC 863, SME 863
Intensive lecture and laboratory study of basic earth sciences from a modern viewpoint.
- 865 Technology for Teachers**
Summer. 2(1-1) RB: Secondary certification in chemistry or physics or earth science or physical science, 1 year of teaching. R: Open to graduate students in the Physical Science-Interdepartmental major. Approval of college. SA: SME 865
Utilization and application of new technologies in secondary science classrooms.
- 866 Integrated Science for Secondary Teachers**
Summer. 3(2-1) RB: Secondary certification in chemistry or physics or earth science or physical science, 1 year of teaching. R: Open to graduate students in the Physical Science-Interdepartmental major. Approval of college. SA: SME 866
Development of class activities that integrate across the sciences: physics, chemistry, earth science, and biology.
- 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
Philosophies of education. Ethnic, gender, and cultural issues. Designing a laboratory course. Problems of class size. Instructional technologies. Assessment and evaluation.
- 871 Biochemistry and Cell Biology for Teachers**
Summer of odd years. 7(4-6) RB: Undergraduate degree in the biological sciences R: Open to lifelong graduate students. Approval of department; application required. SA: SME 871
Review of basic principles in biochemistry and cell biology, and their application to current topics.
- 874 Field Ecology for Teachers**
Summer of even years. 7(4-6) RB: Undergraduate degree in the biological sciences R: Open to lifelong graduate students. Approval of department; application required. SA: SME 874
Review of basic principles of ecology and their application in a field setting.
- 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.
- 901 Frontiers in Biological Science**
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 36 credits in all enrollments for this course. RB: Secondary certification in chemistry or physics or earth science or physical science or biology, 3 years teaching experience. R: Approval of college. SA: NSC 901, SME 901
Weekend workshops with research faculty exploring background and latest findings in their area of research.
- 902 Frontiers in Physical Science**
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 40 credits in all enrollments for this course. RB: Open only to students with secondary teacher certification in chemistry or physics or earth science or physical science or biology and 3 years of teaching experience. R: Approval of college. SA: NSC 902, SME 902
Weekend workshops with research faculty exploring background and latest findings in their area of research.