

NATURAL SCIENCES (ISCI)

ISCI 5500 - Integrated Earth Science (3 Credits)

The course focuses on the integration of inquiry, problem solving, content knowledge and pedagogical knowledge and skills to provide advanced candidates with multiple opportunities to develop, practice and apply these skills in the classroom. The course supports the exploration of basic concepts and processes in the earth sciences to develop deeper content knowledge for grades K - 8 teachers. Content knowledge development is strongly supported with grade appropriate laboratory activities. The content areas include astronomy, geology and meteorology. Strategies of teaching earth science in grades K – 8 are integrated throughout the course. The content development is closely aligned to the current state and national standards (Georgia Performance Standards and Next Generation Science Standards) and integrates the literacy standards of the CCGPS (Common Core GPS Literacy Standards). Candidates must earn a minimum grade of B to receive credit for this course in the program of study. Offered: As Needed.

Lecture hours: 3

ISCI 5501 - Integrated Found of Phys Scien (3 Credits)

Integrated Foundations of Physical Science is the study of basic principles in relation to teaching science and their relation to the teaching of science in the elementary school. This course provides the foundations of Physical Science in the study of basic principles of physical science and their relation to the teaching of science in the elementary schools. The course focuses on the integration of inquiry, problem solving, content knowledge and pedagogical knowledge and skills to provide advanced candidates with multiple opportunities to develop, practice and apply these skills in the classroom. The course supports the exploration of basic concepts and processes in the physical sciences to develop deeper content knowledge for elementary teachers. Content knowledge development is strongly supported with grade appropriate laboratory activities. The course focuses on the knowledge and application of scientific processes and major concepts required for teaching physical science in the elementary classrooms, including matter and energy (motion, gravity, work, and forces). Laboratory activities are included that support appropriate grade level instruction. The content development is closely aligned to the current state and national standards (Georgia Performance Standards and Next Generation Science Standards) and integrates the literacy standards of the CCGPS (Common Core GPS Literacy Standards). Candidates must earn a minimum grade of B to receive credit for this course in the program of study. Offered: As Needed.

Lecture hours: 3

ISCI 5515 - Selected Topics in Biology (3 Credits)

The course focuses on the integration of inquiry, problem solving, content knowledge and pedagogical knowledge and skills to provide advanced candidates with multiple opportunities to develop, practice and apply these skills in the classroom. The course supports the exploration of basic concepts and processes in the life sciences to develop deeper content knowledge for grades K - 8 teachers. Content knowledge development is strongly supported with grade appropriate laboratory activities. The content topics include cells, cellular processes, macromolecules, genetics, classification, adaptations, and ecosystems. Strategies for teaching life science will be integrated throughout the course. The content development is closely aligned to the current state and national standards (Georgia Performance Standards and Next Generation Science Standards) and integrates the literacy standards of the CCGPS (Common Core GPS Literacy Standards). Candidates must earn a minimum grade of B to receive credit for this course in the program of study. Offered: As Needed.

Lecture hours: 3

ISCI 5530 - Integrated Physical Science I (3 Credits)

The course focuses on the integration of inquiry, problem solving, content knowledge and pedagogical knowledge and skills to provide advanced candidates with multiple opportunities to develop, practice and apply these skills in the classroom. The course supports the exploration of basic concepts and processes in the physical sciences to develop deeper content knowledge for grades 4 - 8 teachers. Content knowledge development is strongly supported with grade appropriate laboratory activities. The course focuses on the knowledge and application of scientific processes and major concepts required for teaching physical science in the grades 4 – 8 classrooms, including matter and energy (motion, gravity, work, and forces). Laboratory activities are included that support appropriate grade level instruction. The content development is closely aligned to the current state and national standards (Georgia Performance Standards and Next Generation Science Standards) and integrates the literacy standards of the CCGPS (Common Core GPS Literacy Standards). Candidates must earn a minimum grade of B to receive credit for this course in the program of study. Offered: As Needed.

Lecture hours: 3

Other hours: 3

ISCI 5531 - Integrated Physical Science II (3 Credits)

The course focuses on the integration of inquiry, problem solving, content knowledge and pedagogical knowledge and skills to provide advanced candidates with multiple opportunities to develop, practice and apply these skills in the classroom. The course supports the exploration of basic concepts and processes in the physical sciences to develop deeper content knowledge for grades 4 - 8 teachers. Content knowledge development is strongly supported with grade appropriate laboratory activities. The course focuses on the knowledge and application of scientific processes and major concepts required for teaching physical science in the grades 4 – 8 classrooms, including waves, heat, light, sound, electricity and magnetism. Laboratory activities are included that support instruction, grades 4 – 8. The content development is closely aligned to the current state and national standards (Georgia Performance Standards and Next Generation Science Standards) and integrates the literacy standards of the CCGPS (Common Core GPS Literacy Standards). Candidates must earn a minimum grade of B to receive credit for this course in the program of study. Offered: As Needed.

Lecture hours: 3

ISCI 5564 - Integrated Science Concepts (3 Credits)

The course will focus on the integration and application of project-based and problem-based science that allows the educators to build a community around working together on topics of mutual interest. It will demonstrate how to use the collective strength of communities and the public to identify research questions, collect and analyze data, interpret results, make new discoveries, and develop technologies and applications – all to understand and solve environmental problems, i.e., Citizen Science. Offered: As Needed.

Lecture hours: 3