SCIENCE EDUCATION (SCIE)

SCIE 551 TEACHING SCIENCE IN EARLY CHILDHOOD (2)
Course is designed to familiarize the student with appropriate methods and materials in science for the young child. Emphasis will be on interdisciplinary approach. Prerequisite: ECED 341 (may be taken concurrently).

SCIE 570 SEQUENTIAL SCIENCE MODULES FOR THE ELEMENTARY SCHOOL TEACHER I (1-3)
Three different modules of science instruction will be offered each semester for teachers of primary and intermediate grades. The course will emphasize instructional strategies in both the process and content of the science. A student may elect to take one, two or all three modules for 1, 2 or 3 credits respectively. All students must attend the first class meeting for course orientation. Thereafter, each module will meet once a week for four weeks. Each meeting will consist of approximately four hours laboratory work. Prerequisite: Teaching experience in the elementary school.

SCIE 571 SEQUENTIAL SCIENCE MODULES FOR THE ELEMENTARY SCHOOL TEACHER II (1-3)
Three different modules of science instruction will be offered each semester for teachers of primary and intermediate grades. The course will emphasize instructional strategies in both the process and content of the science. A student may elect to take one, two or all three modules for 1, 2 or 3 credits respectively. All students must attend the first class meeting for course orientation. Thereafter, each module will meet once a week for four weeks. Each meeting will consist of approximately four hours laboratory work. Prerequisite: Teaching experience in the elementary school.

SCIE 572 SEQUENTIAL SCIENCE MODULES FOR THE ELEMENTARY SCHOOL TEACHER III (1-3)
Three different modules of science instruction will be offered each semester for teachers of primary and intermediate grades. The course will emphasize instructional strategies in both the process and content of the science. A student may elect to take one, two or all three modules for 1, 2 or 3 credits respectively. All students must attend the first class meeting for course orientation. Thereafter, each module will meet once a week for four weeks. Each meeting will consist of approximately four hours laboratory work. Prerequisite: Teaching experience in the elementary schools.

SCIE 573 SEQUENTIAL SCIENCE MODULES FOR THE ELEMENTARY SCHOOL TEACHER IV (1-3)
Three different modules of science instruction will be offered each semester for teachers of primary and intermediate grades. The course will emphasize instructional strategies in both the process and content of the science. A student may elect to take one, two or all three modules for 1, 2 or 3 credits respectively. All students must attend the first class meeting for course orientation. Thereafter, each module will meet once a week for four weeks. Each meeting will consist of approximately four hours laboratory work. Prerequisite: Teaching experience in the elementary school.

SCIE 574 SEQUENTIAL SCIENCE MODULES FOR THE ELEMENTARY SCHOOL TEACHER V (1-3)
Three different modules of science instruction will be offered each semester for teachers of primary and intermediate grades. The course will emphasize instructional strategies in both the process and content of the science. A student may elect to take one, two or all three modules for 1, 2 or 3 credits respectively. All students must attend the first class meeting for course orientation. Thereafter, each module will meet once a week for four weeks. Each meeting will consist of approximately four hours laboratory work. Prerequisite: Teaching experience in the elementary school.

SCIE 575 SEQUENTIAL SCIENCE MODULES FOR THE ELEMENTARY SCHOOL TEACHER VI (1-3)
Three different modules of science instruction will be offered each semester for teachers of primary and intermediate grades. The course will emphasize instructional strategies in both the process and content of the science. A student may elect to take one, two or all three modules for 1, 2 or 3 credits respectively. All students must attend the first class meeting for course orientation. Thereafter, each module will meet once a week for four weeks. Each meeting will consist of approximately four hours laboratory work. Prerequisite: Teaching experience in the elementary school.

SCIE 576 TEACHING SCIENCE IN THE ELEMENTARY SCHOOL (3)
Application, analysis and integration of science teaching skills in the elementary classroom. Field experience in local schools. Corequisites: BIOL 303 and PHSC 303.

SCIE 580 TEACHING SCIENCE IN THE SECONDARY SCHOOLS (3)
Selection of appropriate content, method and evaluation techniques, analysis of textbooks and resource materials for teaching science in the middle and high schools. Must be taken the semester prior to student teaching. Prerequisite: SCED 341 or ELED 363.

SCIE 650 ENGINEERING IN INTEGRATED STEM EDUCATION (3)
Students investigate the engineering design process, engineering habits of mind, and engineering fields, and consider how teachers teach and students learn about engineering and to engineer in the context of integrated STEM (Science, Technology, Engineering & Mathematics) education in grades PK-12.

SCIE 652 EARTH-SPACE & PHYSICAL SCIENCE IN INTEGRATED STEM EDUCATION (3)
Students explore physical and Earth-space science concepts, scientific practices, and ways in which teachers teach and students learn about these concepts and practices in the context of integrated STEM (Science, Technology, Engineering & Mathematics) education in grades PK-12.

SCIE 670 SPECIAL TOPICS IN SCIENCE EDUCATION (1-4)
Selected topic in science education. Prerequisite: Varies with topic.

SCIE 671 SPECIAL TOPICS IN SCIENCE EDUCATION (1-4)
Selected topic in science education. Prerequisite: Varies with topic.

SCIE 672 SPECIAL TOPICS IN SCIENCE EDUCATION (1-4)
Selected topic in science education. Prerequisite: Varies with topic.

SCIE 676 SPECIAL TOPICS IN SCIENCE EDUCATION (1-4)
Selected topic in science education. Prerequisite: Varies with topic.

SCIE 677 SPECIAL TOPICS IN SCIENCE EDUCATION (1-4)
Selected topic in science education. Prerequisite: Varies with topic.

SCIE 678 SPECIAL TOPICS IN SCIENCE EDUCATION (1-4)
Selected topic in science education. Prerequisite: Varies with topic.

SCIE 679 SPECIAL TOPICS IN SCIENCE EDUCATION (1-4)
Selected topic in science education. Prerequisite: Varies with topic.
SCIE 685 PRACTICUM IN INTEGRATED STEM EDUCATION (3)
Practices and trends in organizing, teaching, and improving programs in
PK-12 integrated STEM education.