

EDSC-SCIENCE EDUCATION

EDSC 2960 Individual Study 1-4 Credit Hours

1 to 4 hours. Prerequisite: good standing in University; fewer than 62 total hours; approval of instructor and dean. May be repeated; maximum credit four hours. Designed to provide an introduction to the study of education through a rigorous program of readings under the direction of a member of the faculty. (Irreg.)

EDSC 3233 Environmental Issues in the Community 3 Credit Hours

Prerequisite: 6 to 9 hours in the natural sciences and sophomore standing; Majors only. This course is designed for students to explore environmental problems and resulting issues in the surrounding community while actively engaging in scientific and engineering practices and applying crosscutting concepts to develop and deepen their understanding of core ideas in the sciences. (Irreg.)

EDSC 3440 Mentored Research Experience 3 Credit Hours

0 to 3 hours. Prerequisites: ENGL 1113 or equivalent, and permission of instructor. May be repeated; maximum credit 12 hours. For the inquisitive student to apply the scholarly processes of the discipline to a research or creative project under the mentorship of a faculty member. Student and instructor should complete an Undergraduate Research & Creative Projects (URCP) Mentoring Agreement and file it with the URCP office. Not for honors credit. (F, Sp, Su)

EDSC 3960 Honors Reading 1-3 Credit Hours

Prerequisite: admission to Honors Program. May be repeated; maximum credit six hours. Provides students with the opportunity to develop an appropriate body of reading materials on topics not covered in detail in routine coursework. Students will be obliged to assume the primary initiative in selecting the topic, compiling the bibliography and completing the reading, and will report their progress in weekly sessions to their instructor. Credit will be given only after an intensive oral examination. (Irreg.)

EDSC 3970 Honors Seminar 1-3 Credit Hours

Prerequisite: admission to Honors Program. May be repeated; maximum credit six hours. Covers variable subjects in education with in-depth studies of issues not covered in the standard course offerings. (Irreg.)

EDSC 3980 Honors Research 1-3 Credit Hours

Prerequisite: admission to Honors Program. May be repeated; maximum credit six hours. Provides an opportunity for honors students to work on a special project under the guidance of a professor in the student's major area of study. (Irreg.)

EDSC 3990 Independent Study 1-3 Credit Hours

1 to 3 hours. Prerequisite: one course in general area to be studied; permission of instructor and department. May be repeated; maximum credit six hours. Contracted independent study for topic not currently offered in regularly scheduled courses. (F, Sp)

EDSC 4093 Inquiry-Based Science Teaching 3 Credit Hours

Prerequisite: majors only or admission to Teacher Education program. This course is designed to introduce students to the nature of science, scientific practices, and disciplinary concepts fundamental to science education at the PK-3 grade band including the goals of PK-12 science education. The course emphasizes understanding of science disciplinary core ideas and science and engineering practices. (F, Sp)

EDSC 4193 Teaching Science in Elementary Schools 3 Credit Hours

Prerequisite: admission to Teacher Education program, EDSC 4093, EDEL 4101; corequisites: EDMA 4353, EDLT 4813, EDSS 4323, EDEL 4980. Experiences are provided, following the position that science is the quest for knowledge, and that this position is compatible with modern educational theory. (F, Sp)

EDSC 4513 Teaching Science in Secondary Schools 3 Credit Hours

(Slashlisted with EDSC 5513) Prerequisite: EIPT 3473 and majors only. This course establishes a vision of secondary science instruction that promotes deep understanding of science concepts, practices, and the nature of science. Students will examine the aims and purposes of science education, explore how students learn science, and develop their understanding of the nature of science. No student may earn credit for both 4513 and 5513. (Sp)

EDSC 4533 Advanced Methods in Science Teaching 3 Credit Hours

(Slashlisted with EDSC 5533) Prerequisite: EDSC 4513 and senior standing; corequisite: EDUC 4060. This course follows the position that science is the quest for knowledge. Experiences with advanced science content, technology, laboratory investigations, and modern educational theory are provided. This course will serve as the senior capstone. No student may earn credit for both EDSC 4533 and EDSC 5533. (Sp) V.

EDSC 4960 Directed Readings in Education 1-4 Credit Hours

1 to 4 hours. Prerequisite: good standing in University; permission of instructor and dean. May be repeated; maximum credit four hours. Designed for upper-division students preparing to teach who need opportunity to study a specific problem in greater depth than formal course content permits. (Irreg.)

EDSC 4970 Special Topics/Seminar 1-3 Credit Hours

1 to 3 hours. Prerequisite: senior standing or permission of instructor. May be repeated with change of content; maximum credit nine hours. Special topics or seminar course for content not currently offered in regularly scheduled courses. May include library and/or laboratory research and field projects. (Irreg.)

EDSC 4980 Practicum in Science Education 1-3 Credit Hours

1 to 3 hours. Prerequisite: nine hours of education courses. Provides field-type experience under faculty supervision and is designed to introduce the student to the practical application of theory within an environment in which professional practice takes place. (Irreg.)

EDSC 4990 Special Problems in Education 1-4 Credit Hours

1 to 4 hours. Prerequisite: permission of instructor. May be repeated with change of title and subject. Variable as to subject and credit for areas of specialty and/or interest not otherwise provided in the standard offering of courses. (Irreg.)

EDSC 5513 Teaching Science in Secondary Schools 3 Credit Hours

(Slashlisted with EDSC 4513) Prerequisite: graduate standing with 9 hours of Education coursework or departmental permission. This course establishes a vision of secondary science instruction that promotes deep understanding of science concepts, practices, and the nature of science. Students will examine the aims and purposes of science education, explore how students learn science, and develop their understanding of the nature of science. No student may earn credit for both 4513 and 5513. (Sp)

EDSC 5523 Learning Theories and Their Implications for Teaching and Scholarship 3 Credit Hours

Prerequisite: Graduate standing and departmental permission. What does it mean to learn? The course examines the question from various perspectives (constructivist, cognitive, sociocultural, behavioral, and more). Implications across contents and grade levels will be explored for each perspective, and points of influence, coherence, and divergence will be identified. Students need a total of 12 hours from the following courses: EDSP 3055, EIPT 3043, EIPT 3473, EIPT (Irreg.)

EDSC 5533 Advanced Methods in Science Teaching 3 Credit Hours

(Slashlisted with EDSC 4533) Prerequisite: EDSC 5513 and graduate standing; corequisite: EDUC 5920 or permission of instructor. This course follows the position that science is the quest for knowledge. Experiences with advanced science content, technology, laboratory investigations, and modern educational theory are provided. No student may earn credit for both EDSC 4533 and EDSC 5533. (Sp)

EDSC 5543 The Elementary School Science Curriculum 3 Credit Hours

Prerequisite: twelve hours of education, graduate standing. Elementary school science curricula are examined from a theory-based perspective which includes: the nature of science, purpose of schools, developmental learning theory, and the teaching procedure known as the learning cycle. Students trace the development of American science education from 1700 to present. (Alt. F)

EDSC 5910 Practicum in Education--Master's 1-4 Credit Hours

1 to 4 hours. Prerequisite: graduate standing, permission of instructor and dean. May be repeated; maximum credit six hours. Variable as to title and subject profession. Provides field-type experience under faculty supervision and is designed to introduce the student to the practical application of theory within an environment in which professional practice takes place. Seminar experience is to be included. (Irreg.)

EDSC 5920 Internship in Education--Master's 1-6 Credit Hours

1 to 6 hours. Prerequisite: 5910, permission of instructor. May be repeated; maximum credit six hours. Variable as to title and subject profession. Available to master's degree programs specifically requiring an internship in addition to thirty-two hours of other coursework as part of the degree. Introduces the student to the profession under the supervision of a practitioner whose credentials are equal to those of the graduate faculty. (Irreg.)

EDSC 5940 Field Studies in Education 1-4 Credit Hours

1 to 4 hours. Prerequisite: 12 hours of education. May be repeated with change of subject matter; maximum credit eight hours. Practical problems in education as defined by members of the classes. Typical topics: defining educational objectives, relating school programs to established objectives, developing teaching-learning aids, organization for participation in developing and evaluating instructional programs, using community resources for learning, improving evaluation procedure. (Irreg.)

EDSC 5960 Directed Readings 1-4 Credit Hours

1 to 4 hours. Prerequisite: 12 hours of education, approval of instructor, adviser and dean. May be repeated; maximum undergraduate credit eight hours; maximum graduate credit four hours. (Irreg.)

EDSC 5970 Special Topics/Seminar 1-3 Credit Hours

1 to 3 hours. Prerequisite: graduate standing or permission of instructor. May be repeated; maximum credit nine hours. Special topics or seminar course for content not currently offered in regularly scheduled courses. May include library and/or laboratory research and field projects. (Irreg.)

EDSC 5980 Research for Master's Thesis 2-9 Credit Hours

Variable enrollment, two to nine hours; maximum credit applicable toward degree, four hours. (F, Sp, Su)

EDSC 5990 Independent Study 1-4 Credit Hours

1 to 4 hours. Prerequisite: graduate standing or permission by instructor. May be repeated with change of subject matter; maximum credit six hours. Contracted independent study for a topic not currently offered in regularly scheduled courses. Independent study may include library and/or laboratory research and field projects. (Irreg.)

EDSC 6333 Research Paradigms For Scientific Investigations 3 Credit Hours

Prerequisite: graduate standing. Current research paradigms in science education will be constructed through readings, discussions and presentations. In the context of these research paradigms, research designs and research methods will also be explored. A thorough review of the literature will include the use of professional journals, theses, and dissertations and be used to develop a sound understanding of the different approaches to research. (Irreg.)

EDSC 6910 Practicum in Education--Doctoral 1-6 Credit Hours

1 to 6 hours. Prerequisite: admission to doctoral program, permission of instructor. May be repeated; maximum credit six hours. Variable as to title and subject profession. An advanced practicum for post-master's level students only. The object is to provide professional experience under faculty supervision in fields requiring a high degree of professional skill. Seminar experience is to be included. (Irreg.)

EDSC 6920 Internship in Education--Doctoral 2-6 Credit Hours

1 to 6 hours. Prerequisite: written permission of the instructor. May be repeated; maximum credit 12 hours. Variable as to title and subject profession. An advanced internship for post-master's level students only. The object of the internship is to cultivate within the student a high degree of proficiency and professional independence. Field supervision is by a practitioner whose credentials are equal to those of the graduate faculty. (Irreg.)

EDSC 6930 Intensive Studies in Education 1-6 Credit Hours

1 to 6 hours. Prerequisite: 12 hours of education and permission of instructor. Repeatable with change of title and subject. Opportunity offered for professional educators and others interested in education, cooperatively, to seek solutions to educational problems. Organized groups work in curriculum, guidance, instruction, administration and supervision. Competent leadership and expert consultant service provided. (Irreg.)

EDSC 6960 Directed Readings 1-3 Credit Hours

1 to 3 hours. Prerequisite: graduate standing or permission of instructor. May be repeated; maximum credit six hours. Directed readings and/or literature review under the direction of a faculty member. (Irreg.)

EDSC 6970 Post-Master's Seminar 2-4 Credit Hours

2 to 4 hours. Prerequisite: master's degree, 24 hours of education, permission of instructor. May be repeated with change of subject matter; maximum credit twelve hours. Enrollment limited to students who hold the master's degree. (F, Sp, Su)

EDSC 6980 Research for Doctoral Dissertation 2-16 Credit Hours

2 to 16 hours. Prerequisite: Graduate standing and permission of instructor; may be repeated. Directed research culminating in the completion of the doctoral dissertation. Maximum of 15 hours credit for the Ed.D. and 30 hours for the Ph.D. (F, Sp, Su)

EDSC 6990 Individual Study in Education 1-4 Credit Hours

1 to 4 hours. Prerequisite: 12 hours of education, graduate standing and permission of the instructor. May be repeated with change of subject matter; maximum credit eight hours. For advanced graduate students who need to study some problem or area not adequately covered in the organized courses, under the direction of a staff member in whose area of specialization the problem lies. (Irreg.)