

# Science, Technology, Engineering, and Mathematics (STEM) Education and Professional Studies

**Web Site:** <http://www.odu.edu/stemps> (<http://www.odu.edu/stemps/>)

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The department offers undergraduate courses FOUN 301 and FOUN 302 often taken as part of bachelor's programs in teacher preparation. The department also offers an undergraduate course FOUN 101S, Learning to Learn, in the Human Behavior area of the University's General Education requirements.

At the graduate level, the department offers the Master of Science in Education degree with a concentration in Instructional Design & Technology; a Master of Library and Information Studies; and a PhD in Education with concentrations in Instructional Design & Technology, and Educational Psychology and Program Evaluation. Students can enter the Educational Psychology and Program Evaluation PhD concentration directly from their undergraduate program. Please refer to the the Graduate Catalog for information on these programs. (<http://catalog.odu.edu/graduate/>)

The following undergraduate academic programs are now administered by the Department of Educational Foundations and Leadership.

- Bachelor of Science in career and technical education with a major in marketing education
- Bachelor of Science in career and technical education with a major in technology education
- Bachelor of Science in occupational and technical studies with a major in fashion merchandising
- Bachelor of Science in occupational and technical studies with a major in industrial technology
- Bachelor of Science in occupational and technical studies with a major in training specialist
- Minor in fashion merchandising
- Minor in impact of technology
- Minor in marketing education
- Minor in training and development
- Certificate in industrial training
- Licensure/endorsement programs in marketing teacher education, technology education, and other career and technical education program areas.

## Programs

### Bachelor of Science Programs

- Career and Technical Education with a Major in Marketing Education (BS) (<http://catalog.odu.edu/undergraduate/education/stem-education-professional-studies/career-technical-education-marketing-bs/>)
- Career and Technical Education with a Major in Technology Education (BS) (<http://catalog.odu.edu/undergraduate/education/stem-education-professional-studies/career-technical-education-technology-bs/>)
- Occupational and Technical Studies with a Major in Fashion Merchandising (BS) (<http://catalog.odu.edu/undergraduate/education/stem-education-professional-studies/occupational-technical-studies-fashion-merchandising-bs/>)
- Occupational and Technical Studies with a Major in Industrial Technology (BS) (<http://catalog.odu.edu/undergraduate/education/stem-education-professional-studies/occupational-technical-studies-industrial-technology-bs/>)

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- Occupational and Technical Studies with a Major in Training Specialist (BS) (<http://catalog.odu.edu/undergraduate/education/stem-education-professional-studies/occupational-technical-studies-training-specialist-bs/>)

### Minor Programs

- Fashion Merchandising Minor (<http://catalog.odu.edu/undergraduate/education/stem-education-professional-studies/fashion-merchandising-minor/>)
- Impact of Technology Minor (<http://catalog.odu.edu/undergraduate/education/stem-education-professional-studies/impact-technology-minor/>)
- Marketing Education Minor (<http://catalog.odu.edu/undergraduate/education/stem-education-professional-studies/marketing-education-minor/>)
- Training and Development Minor (<http://catalog.odu.edu/undergraduate/education/stem-education-professional-studies/training-development-minor/>)

### Certificate Program

- Industrial Training Certificate (<http://catalog.odu.edu/undergraduate/education/stem-education-professional-studies/industrial-training-certificate/>)

## Courses

### Science, Technology, Engineering, and Mathematics Education (STEM)

#### STEM 101 Step 1 – Inquiry Approaches to Teaching STEM (1 Credit Hour)

Step 1 provides mathematics and science students with the opportunity to explore teaching in a real classroom setting. Master teachers introduce students to examples of high-quality inquiry-based lessons and model the pedagogical concepts to which they are being introduced. In Step 1, with the guidance of the master teacher, students engage in two classroom observations and prepare and teach three inquiry-based lessons in an upper elementary school classroom. A criminal background check will be required as part of this course.

#### STEM 102 Step 2 - Inquiry Based STEM Lesson Design (1 Credit Hour)

This course continues the exploration of inquiry-based lesson design in STEM education. In this course, students build upon and practice lesson design skills developed in Step 1 while also becoming familiar with exemplary mathematics or science curricula at the middle school level. With the guidance of the master teacher, students engage in one observation and prepare and teach three inquiry-based lessons in a middle school classroom. Students incorporate and demonstrate their content knowledge in developing the inquiry-based lessons. At the end of Step 2, students are generally ready to make a decision about whether they want to pursue a pathway to teacher licensure through the MonarchTeach program.

**Prerequisites:** a grade of C or higher in STEM 101

#### STEM 110T Technology and Your World (3 Credit Hours)

An overview of the resources and systems of technology. Emphasis is on impacts that technology has on individuals and their careers. Activities explore the evolution of technology, its major systems and their impact on individuals and their careers.

**STEM 201 Knowing and Learning in STEM Education (3 Credit Hours)**

This course is designed to expand the students' understanding of current theories of learning and conceptual development in STEM. Students will investigate theories of knowing and learning in STEM and implications for teaching secondary mathematics and science. Students will examine their own assumptions about learning as well as critically examine the needs of a diverse student population in the classroom. Students are expected to independently register for and take the Praxis I examination while enrolled in this course.

**Pre- or corequisite:** STEM 102

**STEM 202 Classroom Interactions in STEM Education (3 Credit Hours)**

This course provides students with an overview of principles for teaching middle and secondary school mathematics or science through an exploration of the role of content, pedagogy, curriculum and technology as they promote learning and impact equity. Students are introduced to ways in which curriculum and technology are used in the classroom to build interrelationships among teachers and students. Frameworks for teaching students of diverse backgrounds equitably are emphasized in the course. A field component that consists of observations and teaching in the high school classroom is included.

**Prerequisites:** grade of C or better in STEM 102

**Pre- or corequisite:** STEM 201

**STEM 221 Industrial Materials (3 Credit Hours)**

A study of materials used by industry to produce products. Emphasis is on the study of ceramics, plastics, composites, and biotechnological materials. Students learn materials identification, use and processing.

**STEM 231 Materials and Processes Technology (3 Credit Hours)**

A study of the production processes used with metallic and forest product materials. Industrial resources, their location, extraction, and processing into standard stocks are also covered. Students learn properties, uses and processing of metal and wood materials.

**STEM 241 Energy Systems: Basic Electricity (3 Credit Hours)**

A study of direct and alternating current and its use in contemporary technology. Activities include experiments and projects to supplement the theory of electricity.

**STEM 242 Technological Systems Control (3 Credit Hours)**

Students will develop an understanding of systems control technology for application to energy and power, manufacturing, processing and transportation systems. Emphasis will be placed on research and development, creativity and experimentation, and trouble shooting in designing control systems.

**STEM 251G Computer Literacy: Communication and Information (3 Credit Hours)**

A guided review of communication technology and information sources to help students discern between reliable and unreliable sources and techniques. Students develop skills in computer applications, information retrieval, filtering and analyzing data, and formatting and presenting information.

**STEM 320 Manufacturing and Construction Technology (3 Credit Hours)**

A study of production processes used in manufacturing and construction systems. Students will research and design manufactured products for mass production and constructed products for building. The social, cultural, environmental and economic impacts of manufacturing and constructed products on society are discussed.

**Prerequisites:** STEM 221, STEM 231 or permission of instructor

**STEM 321 Manufacturing Technology (3 Credit Hours)**

A study of the production processes used in manufacturing systems. Emphasis is placed upon planning, organizing and principles of manufacturing. Students research and design enterprise systems for mass production. Emphasis is on manufacturing design requirements and the social, cultural, and economic impacts of manufactured products on society and the environment.

**Prerequisites:** STEM 221, STEM 231 or permission of instructor

**STEM 330 Medical, Agricultural, and Biological Technologies (3 Credit Hours)**

A course for technology education majors that studies technological systems related to medical and food processing technologies. Students learn the basis of these technologies and complete activities that integrate the content with processes and products found in our technological world.

**Prerequisites:** junior standing or permission of department

**STEM 350 Communication Technology Processes (3 Credit Hours)**

The study of communication design principles and techniques for technology education. Emphasis is placed on the skills and equipment used in design, production, and distribution of communications. Print and electronic media are explored through technical illustration, video, audio, and other specialty processes of communications.

**Prerequisites:** STEM 251G

**STEM 351 Communication Technology (3 Credit Hours)**

A study of the development and impact of communication technology. Emphasis is placed on the integration of technical skills to produce information-based products such as print and telecommunications media.

**Prerequisites:** junior standing or permission of the instructor

**STEM 360 Energy, Power, and Transportation Technologies (3 Credit Hours)**

Study of the development of energy, power, and transportation systems and the movement of energy, power, people, and cargo. Areas of concern include vehicle systems design and support systems.

**Prerequisites:** junior standing or permission of the instructor

**STEM 367 Cooperative Education (1-3 Credit Hours)**

Available for pass/fail grading only. Student participation for credit based on the academic relevance of the work experience, criteria, and evaluative procedures as formally determined by the department and the Cooperative Education program prior to the semester in which the work experience is to take place.

**Prerequisites:** approval by the department and Career Development Services, in accordance with the policy for granting credit for Cooperative Education programs

**STEM 370T Technology and Society (3 Credit Hours)**

A multidisciplinary course designed to provide insight into the fundamental, historical, and contemporary nature of technology as an area of human knowledge. Attention is given to the positive and negative aspects of technology and how they affect society. (This is a writing intensive course.)

**Prerequisites:** grade of C or better in ENGL 211C or ENGL 221C or ENGL 231C; junior standing or permission of the instructor

**STEM 382 Industrial Design (3 Credit Hours)**

Students will analyze and design products representative of today's industrial technological society. Emphasis will be placed upon design methodology, aesthetic value, and design thinking.

**Prerequisites:** junior standing

**STEM 401 Project Based Instruction in STEM Education (3 Credit Hours)**

Through a dynamic process of investigation and collaboration, students aim to master techniques for project-based investigations in STEM classrooms, and teach project-based lessons in the secondary classroom. Students work in teams to formulate questions, make predictions, design investigations, collect and analyze data, make products and share ideas. The use of assessments to improve student learning is emphasized in the course. This course includes a field component that consists of two observation days and three teaching days in a secondary classroom.

**Prerequisites:** STEM 201 and STEM 202

**STEM 402 Perspectives on STEM (3 Credit Hours)**

This course explores the historical, social, and philosophical implications of mathematics and science through investigations of significant episodes in their history. Students are brought to understand that science and mathematics are not merely body of facts, theories, and techniques but involve diverse processes by which they are continually generated and reformulated.

**Prerequisites:** Junior standing, admission to the MonarchTeach program plus 12 credit hours of science or math courses, and STEM 401

**Pre- or corequisite:** STEM 485

**STEM 433/533 Developing Instructional Strategies PreK-6: Mathematics (3 Credit Hours)**

Following a theory into practice philosophy, students explore, develop, and use instructional strategies, materials, technologies, and activities to promote children's development of attitudes, behaviors, and concepts in mathematics in grades PreK-6 in support of NCTM national instructional standards and the Virginia Standards of Learning.

**Prerequisites:** MATH 102M, MATH 302, TLED 326, and Junior standing

**STEM 434/534 Developing Instructional Strategies PreK-6: Science (3 Credit Hours)**

Following a theory into practice philosophy, students explore, develop, and use instructional strategies, materials, technologies, and activities to promote children's development of attitudes, behaviors, and concepts in science in grades PreK-6 in support of AAAS national instructional standards and the Virginia Standards of Learning.

**Prerequisites:** TLED 326 and Junior standing

**STEM 485 Apprentice Teaching (9 Credit Hours)**

Internship in school. Available for pass/fail grading only. Offers prospective teacher candidates a culminating experience that provides them with the tools needed for their first teaching jobs. Students are immersed in a local secondary school for 10 consecutive weeks and experience the expectations, processes, and rewards of teaching. As part of their Apprentice Teaching experience, candidates will be required to attend a one hour weekly seminar that will bring them together with master teachers to share experiences and to explore issues, problems, concerns, and processes related to their teaching experiences and to entering the profession of teaching.

**Prerequisites:** Completion of all course work in the MonarchTeach professional development sequence program and BIOL 468W or CHEM 468 or OEAS 468W or PHYS 468W or SCI 468, passing scores on PRAXIS I or equivalent SAT or ACT scores as established by VA Board of Education, passing scores on the appropriate PRAXIS II content examination and the Virginia Communication and Literacy Assessment, departmental approval, minimum major and overall GPA of at least 2.75 and a criminal background check

**Corequisites:** STEM 402

**STEM 495/595 Topics (1-3 Credit Hours)**

The advanced study of selected topics designed to permit small groups of qualified students to work on subjects of mutual interest which, due to their specialized nature, may not be offered regularly. These courses will appear in the course schedule.

**Prerequisites:** permission of the instructor

**STEM Education and Professional Studies (SEPS)**

**SEPS 100 Sales Techniques (3 Credit Hours)**

This is an introductory course that emphasizes the concept of determining customer needs, wants, and desires and matching them to products and services for a long-term sales relationship.

**SEPS 102 Advertising and Promotion (3 Credit Hours)**

This is an introductory course designed to teach the fundamental product and service promotion processes of planning and producing advertising and promotion campaigns.

**SEPS 195 Topics (1 Credit Hour)**

Topics of current interest in the area of STEM Education and Professional Studies.

**SEPS 203S Dress, Culture and Society (3 Credit Hours)**

This course is an analysis of dress in cultures around the world while developing an understanding of its relationship to human beings as biological, aesthetic, and social animals. Human beings dress their bodies to communicate identity and to receive personal satisfaction. Students will discover how global fashion, age, gender, ethnicity, and income influence the fashion industry and our lives.

**SEPS 208 Retail Merchandising and Buying (3 Credit Hours)**

This course introduces students to the fundamentals of retail merchandising and explores retail buyers' skills and responsibilities including identifying customers and vendors, retail mathematics, buying plans, and merchandise control.

**SEPS 220 The Fashion Industry (3 Credit Hours)**

Course is designed for marketing education and fashion students. It covers fashion as a force which alters patterns of change and growth in the fashion industry to include designers, manufacturers, buyers, retailers, and customers. Students explore the latest trends in style and materials.

**SEPS 223A Visual Merchandising and Display (3 Credit Hours)**

This course is designed to introduce students to the best practices and effective strategies in visual merchandising. It will provide the basic framework with which prospective merchandisers plan and construct visual displays that enhance the selling of merchandise and ideas.

**SEPS 234 Survey of Dress and Costume (3 Credit Hours)**

Whether high fashion or low, glitz or grunge, from revolutionary politics to the new machine age, war and depression to growth and prosperity, fashion dress and costume goes hand-in-hand with history. This course examines the evolution of dress and costume and finds innovation at every turn.

**SEPS 295 Topics (1 Credit Hour)**

Topics of current interest in the area of STEM Education and Professional Studies.

**SEPS 297 Observation and Participation (1 Credit Hour)**

Students observe middle and/or high school classes for 30 clock hours. Assist teachers and students in practical settings. Relate principles and theories of education and specialty content to actual practice in the classrooms and schools. Attend seminars related to contemporary school practices.

**Prerequisites:** sophomore standing

**SEPS 302 Workforce Supervision (3 Credit Hours)**

Explores the skills and knowledge required of successful supervisors: leading, motivating, setting goals, delegating, budgeting, interviewing, negotiating, counseling, coaching, conducting meetings, and handling grievances.

**Prerequisites:** junior standing or permission of the instructor

**SEPS 355 Fashion Consumer Behavior (3 Credit Hours)**

This course is designed to enhance a student's understanding of what drives customers' wants and needs for fashion merchandise. Students examine the forces that affect consumer buying behavior and how they relate to the marketing of fashion.

**Prerequisites:** SEPS 208 and SEPS 220

**SEPS 367 Cooperative Education (1-3 Credit Hours)**

Student participation for credit based on the academic relevance of the work experience, criteria, and evaluative procedures as formally determined by the department and the Cooperative Education program prior to the semester in which the work experience is to take place.

**Prerequisites:** approval by the department in accordance with the policy for granting credit for Cooperative Education programs

**SEPS 389 Education and Training of Adults (3 Credit Hours)**

An in-depth overview of education and training of adults. Attention is given to adult learning theory and strategies for facilitating the learning process. Aspects of the course will focus on helping students understand and visualize jobs and careers in adult education and training.

**Prerequisites:** junior standing or permission of the instructor

**SEPS 395 Topics in Occupational Education (1-3 Credit Hours)**

The department offers selected topics designed to permit small groups of qualified students to work on subjects of mutual interest.

**Prerequisites:** permission of the instructor

**SEPS 400/500 Instructional Systems Development (3 Credit Hours)**

Students learn how to design and develop classroom instructional materials including career and technical education and training curricula and programs for youths and adults. Skills in this area include the selection and use of materials, including media and computers and evaluation of pupil performance. Training specialist students learn to develop instructional materials using the instructional systems design process. Career and technical education students learn to plan instruction, to implement competency-based and standards-based education, and to modify and use the Virginia career and technical education curriculum guides.

**Prerequisites:** junior standing



**SEPS 401/501 Foundations of Career and Technical Education (3 Credit Hours)**

This course is designed to teach career and technical education majors to plan, develop, and administer a comprehensive program of career and technical education for high school students and adults. Students also develop an understanding of the historical and sociological foundations underlying the role, development and organization of public education in the United States.

**Prerequisites:** junior standing

**SEPS 402/502 Instructional Methods in Occupational Studies (3 Credit Hours)**

Designed to develop a student's ability to use basic instructional techniques and methods applicable to career and technical education, and adults in business, government, and industrial organizations. It involves videotaped micro-teaching demonstrations and presentations.

**Prerequisites:** SEPS 400

**SEPS 405 Directed Work Experience (4 Credit Hours)**

Student must be employed the summer prior to his/her senior year in an emphasis-related job approved by the instructor. The student work is supervised by a job supervisor and the course instructor in a cooperative effort. Must complete a job package that describes all aspects of the organization.

**Prerequisites:** junior standing

**SEPS 408/508 Advanced Classroom Issues and Practices in Career and Technical Education (3 Credit Hours)**

An overview of classroom issues and practices for prospective career and technical teachers. The course covers classroom management and safety, communication processes, reading in the content area and child abuse and neglect recognition and intervention. Students learn the legal requirements and alternative teaching strategies for serving students with special needs. Students visit schools for a 30-hour student observation. PRAXIS II and VCLA are course completion requirements.

**Prerequisites:** admission to an approved teacher education program

**SEPS 409/509 Fashion Forecasting Market Trip (3 Credit Hours)**

This is the study of planning and conducting a fashion buying trip to one of the major fashion markets in the United States like the Las Vegas Magic Trade Show. The students envision themselves as buyers in action and learn how trend forecasting and creative presentations help market fashion products and services to trade customers and consumers.

**Prerequisites:** SEPS 208

**SEPS 410/510 The Foreign Fashion Market Trip (3 Credit Hours)**

Students plan and conduct a fashion buying trip to a foreign market in Europe or Asia, and learn how to buy merchandise in the global marketplace. The course requires students to go on the trip as well as attend the pre- and post-trip classes.

**Prerequisites:** SEPS 208

**SEPS 415 Advanced Merchandising (3 Credit Hours)**

This course is designed for marketing education and fashion students. It includes advanced merchandising math concepts used in the merchandising industry. Topics include pricing and re-pricing merchandise, creating and analyzing six-month plans, maintaining inventory control, and solving problems that are typically experienced in the merchandising field.

**Prerequisites:** SEPS 208

**SEPS 420 Fashion Research (3 Credit Hours)**

This course is designed to apply diverse research methods to explore the complex dynamics in fashion. Utilizing an interdisciplinary approach, students will engage in diverse topics in fashion bridging the gap between theory and practice.

**Prerequisites:** SEPS 208 and SEPS 220

**SEPS 422 Fashion Product Development (3 Credit Hours)**

Students work step-by-step through the preproduction processes of apparel product development: planning, forecasting, fabricating, developing silhouettes and specifications, pricing, and sourcing. The course demonstrates how these processes must be coordinated to get the right product to retail when consumers want it and at a price they are willing to pay.

**Prerequisites:** SEPS 208 and SEPS 220

**SEPS 424/524 Fashion, Textiles, and Construction Analysis (3 Credit Hours)**

This course explores information related to new technological advances in the textile/apparel industry and determines consumer preferences and concepts of fashion product quality. It includes the development of standards for judging qualities of merchandise. Fabrics are examined to determine the value they provide to the apparel and accessories customer.

**Prerequisites:** junior standing or permission of the instructor

**SEPS 427 Fashion Marketing (3 Credit Hours)**

This course explains key concepts of fashion marketing and illustrates how they are applied within the fashion industry. Using examples and case studies, students will examine how marketers develop and apply strategies that meet consumer needs for fashion products.

**Prerequisites:** SEPS 208 and SEPS 220

**SEPS 431/531 Web-Based Organization for Fashion (3 Credit Hours)**

This course provides the basic communications foundations needed to conceive, plan, develop, implement, and maintain a Web-based organization for fashion. Upon completion, students will understand what is required to plan, launch and maintain a successful online venture, limited only by the willingness of the student to explore these technological advances.

**Prerequisites:** STEM 251G

**SEPS 435/535 International Retailing (3 Credit Hours)**

This course examines globalization and the development of an integrated global economy. Primary emphasis is placed on the strategies for successful global business expansion for retailers in international markets.

**Prerequisites:** SEPS 220 or SEPS 208

**SEPS 440/540 Fashion Global Sourcing/Supply Chain Management (3 Credit Hours)**

This course examines the role of global sourcing in the strategic positioning of retailers in the global economy. Emphasis is placed on economic, political, logistical, and ethical factors affecting world trade and global sourcing decisions.

**Prerequisites:** SEPS 220 or SEPS 208

**SEPS 450/550 Assessment, Evaluation and Improvement (3 Credit Hours)**

This course prepares training and educational professionals to plan for and conduct assessments to use in planning instructional programs, evaluate individual learning, monitor student progress, measure program effectiveness and efficiency, and evaluate the return on investments of training courses and programs.

**Prerequisites:** junior standing

**SEPS 456 E-Commerce and Social Media in Fashion (3 Credit Hours)**

This course is designed to understand the expanding fields of e-commerce and social media. It will focus on examining features available in social media and the web/mobile technologies and their ability to improve fashion marketing strategies.

**Prerequisites:** SEPS 208 and SEPS 220

**SEPS 480 Senior Project: Merchandise Retailing (3 Credit Hours)**

A senior capstone course in which fashion and business knowledge and skills are applied to plan and implement a merchandise retailing business. Students must submit a professional quality written report and present results to a panel of consultants. Course to be taken final semester before graduation.

**SEPS 481 Occupational Career Transition (3 Credit Hours)**

To provide the senior-level student majoring in occupational and technical studies with the skills and techniques necessary to bridge the gap from college to career. Focus is on the generation of a professional portfolio and experiential learning that will transfer into today's job market. This course should be taken in the final semester before graduation.

**Prerequisites:** Senior standing

**SEPS 484/584 Student Teaching Mentored (6-12 Credit Hours)**

Classroom placement in school systems for students to apply content and methodologies. The student is mentored by a school mentor and university faculty. This course is for newly hired teachers on provisional contracts.

**Prerequisites:** completion of the approved teacher education program in the major area, departmental approval, and permission of the director of teacher education services; passing scores on PRAXIS I or State Board of Education-approved SAT or ACT scores and passing scores on the appropriate PRAXIS II content examination required

**SEPS 485 Student Teaching (12 Credit Hours)**

Five days per week, full semester. Available for pass/fail grading only.

**Prerequisites:** completion of the approved teacher education program in the major area, departmental approval, passing scores on PRAXIS I or State Board of Education-approved SAT or ACT scores, passing scores on the appropriate PRAXIS II content examination, and permission of the director of teacher education services

**SEPS 486/586 Middle School Student Teaching for Technical Education (6 Credit Hours)**

Classroom placement for student teaching in a middle school technology laboratory. Students apply content and methodology under the supervision of a cooperating teacher and university faculty member. Available for pass/fail grading only.

**Prerequisites:** SEPS 408, SPED 313, TLED 408 and SEPS 450; or SEPS 508, SEPS 596, STEM 730, SEPS 788, TLED 608, READ 680 for graduate students; passing scores on PRAXIS I or State Board of Education-approved SAT or ACT scores and passing scores on the appropriate PRAXIS II content examination are required

**SEPS 495/595 Topics in Occupational Education (1-3 Credit Hours)**

The department offers selected topics designed to permit small groups of qualified students to work in subjects of mutual interest which, due to their specialized nature, may not be offered regularly.

**Prerequisites:** permission of the instructor

**SEPS 496/596 Topics in Career and Technical Education (1-3 Credit Hours)**

The department offers selected topics designed to permit small groups of qualified students to work in subjects of mutual interest which, due to their specialized nature, may not be offered regularly.

**Prerequisites:** permission of the instructor

**SEPS 497/597 Independent Study in Occupational Education (1-6 Credit Hours)**

Independent study.

**Prerequisites:** permission of the instructor

**SEPS 498 Independent Study in Occupational Education (1-6 Credit Hours)**

Independent study.

**Prerequisites:** permission of the instructor

**Educational Leadership and Services****ELS 496/596 Topics in Education (1-3 Credit Hours)**

The College of Education offers selected topics designed to permit small groups of qualified students to work on subjects of mutual interest which, due to their specialized nature, may not be offered regularly.

**Prerequisites:** permission of the instructor

**ELS 497/597 Topics in Education (1-3 Credit Hours)**

The College of Education offers selected topics designed to permit small groups of qualified students to work on subjects of mutual interest which, due to their specialized nature, may not be offered regularly.

**Prerequisites:** permission of the instructor

**ELS 498/598 Topics in Education (1-3 Credit Hours)**

The College of Education offers selected topics designed to permit small groups of qualified students to work on subjects of mutual interest which, due to their specialized nature, may not be offered regularly.

**Prerequisites:** permission of the instructor

**Foundations of Education****FOUN 101S Learning to Learn (3 Credit Hours)**

Learning is essential to human development and is a primary goal of formal schooling. Further, the nature of work is ever changing and the need to adapt to changing environments by learning new skills in new domains is essential for future success. In this educational psychology course, students will focus on the theoretical and empirical study of the science of learning. Students will gain insights into learning processes and achieve a deeper understanding of their own learning, including how to enhance their learning in various contexts.

**FOUN 301 Learning and Development (3 Credit Hours)**

This course focuses on educational psychology theory and research related to student learning and development. There will be an emphasis on how to incorporate research based principles in designing instruction, motivating students, and promoting a positive classroom climate based on how students learn and develop.

**Prerequisites:** ENGL 110C

**FOUN 302 Assessment of Learning (3 Credit Hours)**

This course focuses on exploring and implementing ethical assessment principles in a K-12 setting in order to ensure equity amongst a diverse population of students. Students will discuss and develop assessments for formative and summative purposes. They will analyze and interpret assessment data to measure and promote student success. State assessment programs will be discussed including social justice implications. The purpose of this course is to prepare future educators to analyze instructional situations, identify instructional targets, and determine appropriate assessment tools to monitor and support student learning.

**Prerequisites:** FOUN 301

**Library Science****LIBS 110G Information Literacy for the Digital Age (3 Credit Hours)**

Students require a comprehensive understanding of information literacy so they can become effective users of ideas and information and guide others in activities of knowledge use and creation. This course will provide an introduction to the process and methods of retrieving information using digital literacies. Students will learn to identify an information need, then locate, evaluate, and use appropriate resources while embedding the dispositions of academic integrity and ethical use. Topics include use of collaborative tools for development of information, including social media. The content focuses on implementing effective digital information literacy strategies situated in various content areas with the intent that these strategies can be incorporated into future professional and instructional practices.