UNIVERSITY OF MARYLAND EASTERN SHORE

Master of Education in Career and Technology Education

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PROGRAM DESCRIPTION

The Department of Technology offers a Master of Education Degree program (M.Ed.) in Career and Technology Education (CTED). The program will refine the student's knowledge and skills to become master classroom teachers, resource teachers, teacher consultants, specialists, and administrators in Career and Technology Education. The program is also designed to prepare teachers and educational leaders to qualify for Advanced Professional Certification (APC) in Maryland.

Students are admitted to the M.Ed. program at University of Maryland Eastern Shore (UMES). Coursework is offered at UMES, the Maryland Center for Career and Technology Education Studies located at the Baltimore Museum of Industry (BMI on Key Highway), and other satellite locations. The program offers strands in **Technology Education** and **Career and Technical Education**. UMES offers the specialized content and methods courses related to Career and Technology Education. This program is designed to serve the needs of teachers in such areas as Business Education, Family and Consumer Sciences (FACS), Agriculture Education, Health Education, Work-Based Learning Coordination, Trades, and Science-Technology-Engineering-Math (STEM). The course of study may vary with the experience and qualifications that individual students bring to the program.

PROGRAM GOALS AND OBJECTIVES

The overall goal of the graduate program is to prepare individuals to become master teachers, administrators, and leaders who are committed to developing, instructing, coordinating, and directing quality programs in Career and Technology Education. The following program objectives assist in accomplishing this goal:

- Provide opportunities for teachers to gain professional knowledge and skills required for the M.Ed. degree and Advanced Professional Certification.
- Prepare individuals to build upon the content knowledge they have acquired in the baccalaureate degree by providing additional professional knowledge and content necessary for advancing careers in teaching and administration.
- Prepare teachers and leaders who are knowledgeable of research, theory and practice related to effective classroom and laboratory instructional management.
- Develop teachers and leaders who are committed, continuous learners, and contributors to the enhancement of the teaching profession.
- Prepare teachers and leaders who demonstrate sensitivity and effective interpersonal skills in working with culturally diverse populations.

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PROGRAM COMPETENCIES

Students who complete the M.Ed. program in Career and Technology Education will be expected to demonstrate successful achievement in the following:

- Knowledge of the philosophy, mission, vision, goals, and the evolution of Career and Technology Education.
- Knowledge and application of the core technologies identified in the Maryland Curricular Frameworks for Career and Technology Education.
- Application of research and inquiry for the improvement of classroom and laboratory instruction.
- Understanding of the learner's physical, cognitive, and emotional development and the implications for learning and instruction.
- Knowledge of the social contexts in which education occurs, the philosophical perspectives which influence teaching and learning, and an understanding of personal beliefs related to the role of the teacher and the learner.
- Skills and knowledge necessary to assist learners with special needs and diverse cultural backgrounds in an instructionally-integrated setting.
- Ability to organize and manage a classroom and laboratory on the basis of research, best practices, expert opinion, personal attributes, and student learning needs.
- Development of a variety of teaching/learning strategies and techniques.
- Appropriate use of a variety of approaches to assess and evaluate instructional outcomes.
- Use of technology, including computers and media, for classroom, laboratory and professional needs.
- Application of theory and best practices in classroom laboratory situations through field experiences.

ADMISSION REQUIREMENTS

Students who enter the M.Ed. program must possess an earned baccalaureate degree in a field related to Career and Technology Education. Matriculating students must meet all requirements for regular admission to the graduate program. In some cases, provisional admission will be granted.

Applicants must fulfill the following for regular admission:

- Complete the graduate school application for a degree program including a statement of purpose.
- Undergo a structured review by the graduate faculty admissions committee.
- Possess an undergraduate cumulative grade point average (GPA) of at least 3.0, or possess a prior graduate degree.
- May require a writing sample essay that focuses on current educational issues, as determined by the graduate faculty admissions committee.
- Submit official transcripts from all higher education institutions attended.
- Submit three letters of evaluation/ recommendation that address:
  1. Personal qualities, e.g. character and academic abilities, problem solving, conceptual thinking, and the writing and speaking skills needed to support a rigorous graduate program.
  2. Personal determination and commitment needed to complete the program.

Students must achieve passing scores which meet established Maryland State standards on the core battery of the PRAXIS teacher examinations.

Transcripts and academic credentials of all applicants will be reviewed by the graduate admissions committee. Individuals who lack appropriate coursework will be expected to complete the identified course content requirements prior to their enrollment in the capstone research portion of the program.

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APPLICATION DEADLINES

In general, application deadlines for admissions are as follows:

Fall Semester	July 1
Spring Semester	December 1
Summer Sessions	April 1

Applications will be accepted and reviewed at any time throughout the year.

PROGRAM OF STUDY

The M.Ed. program combines Career and Technology Education content with professional education theory and practice. Graduate level scholarship and research-based content will be presented throughout the program. The essential elements of teaching, the core technologies, and Technology Education teaching/learning strategies approved by the Maryland State Department of Education will guide instructional decision making.

RETENTION AND EXIT REQUIREMENTS

Students enrolled in the M.Ed. program complete a state-approved program of study that includes at least 30 semester hours of graduate credit with a cumulative "B" (3.0) or higher grade point average. Six (6) credits are required in a capstone research experience. Of the remaining 24 credits, six (6) will be required in Career and Technology Education and six (6) will be required in professional education. Twelve (12) elective credits will be selected with approval of the graduate advisor based on the student's previous educational experience and career goals. Overall, eighteen (18) credits will be required at the 600 level or higher and a maximum of twelve (12) credits can be competed at the 400 level in designated courses. Students will take a written comprehensive examination and complete an action research seminar paper within the last six credits of their program.

A maximum of six (6) graduate credits will be accepted for transfer into the program from non-USM institutions, provided these credits are directly related to the program and meet the criteria for transfer of credit. No more than six (6) credit hours of "C" grades will be acceptable in the program. Students who have completed 24 credits of coursework and have passed the comprehensive examination will be advanced to Master's Candidacy.

Students must complete the program within three calendar years of advancement to Master's Candidacy, but no later than their five-year admission period. Full-time candidates in the Career and Technology Education M.Ed. program will be expected to complete the program in one academic year including one summer. Part-time students, who attend uninterrupted, will be expected to complete the program in three years.

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The following represents the typical program of study for students pursuing the M.Ed. in the Technology Education or Occupational Education strand.

Typical M.Ed. Program of Study
Technology Education Strand

Course #	Core Required Courses	Credits
CTED 600	Technology Education Content, Methods and Strategies	(3)
CTED 602	Technology Education Instructional Management and Organization	(3)
CTED 615	Administration and Leadership	(3)
EDUC 610	Learning and Instructional Design	(3)
CTED 640	Research in Career and Technology Education I	(3)
CTED 650	Research in Career and Technology Education II	(3)
		18
	Possible Electives	
EDTE 482	Core Technologies I	(3)
EDTE 483	Core Technologies II	(3)
EDTE 484	Information Systems	(3)
CTED 630	Special Problems in Career and Technology Education	(3)
		12
	TOTAL	**30**

Selection of elective courses is based on previous education experience and requires the approval of the graduate advisor.

Additional electives include:

EDTE 437	Student Performance Assessment	(3)
EDTE 440	Integrating Math and Science in Career and Technology Education	(3)
EDTE 450	Mentoring: Expectations and Responsibilities	(3)
EDTE 499	Research and Experimentation in Technology Education	(3)
SPED 600	Characteristics of Exceptional Individuals	(3)
EDCI 402	Fundamentals of Reading Instruction	(3)
EDCI 425D	Curriculum and Instruction in Technology Education	(3)
EDUC 612	Advanced Educational Psychology	(3)
EDUC 620	Advanced Human Growth and Development	(3)
CTED 610	Teaching Adult and Post-Secondary Education Programs	(3)

Typical M.Ed. Program of Study
Career and Technical Strand

Course #	Core Required Courses	Credits
CTED 601	Career and Technical Ed Content, Methods and Strategies	(3)
CTED 603	Career and Technical Ed Instructional Management and Organization	(3)
CTED 615	Administration and Leadership	(3)
EDUC 610	Learning and Instructional Design	(3)
CTED 640	Research in Career and Technology Education I	(3)
CTED 650	Research in Career and Technology Education II	(3)
		18
	Possible Electives	
EDTE 445	American Industry and Global Competition	(3)
EDTE 467	Instructional Analysis and Curriculum Development	(3)
CTED 607	Coordination of Work Experience	(3)
CTED 630	Special Problems in Career and Technology Education	(3)
		12
	TOTAL	**30**

Selection of elective courses is based on previous education experience and requires the approval of the graduate advisor.

Additional electives include:

EDTE 437	Student Performance Assessment	(3)
EDTE 450	Mentoring: Expectations and Responsibilities	(3)
EDTE 486	Instructional Media Development	(3)
SPED 600	Characteristics of Exceptional Individuals	(3)
EDCI 402	Fundamentals of Reading Instruction	(3)
EDUC 612	Advanced Educational Psychology	(3)
EDUC 620	Advanced Human Growth and Development	(3)
CTED 610	Teaching Adult and Post-Secondary Education Programs	(3)

COURSE DESCRIPTIONS

CTED 600 Technology Education Content, Methods and Strategies (3)
This course examines the philosophy, mission, vision, goals, and evolution of Technology Education. The Maryland Curricular Framework for Technology Education, teaching and learning strategies, performance-based instruction, and student assessment are also covered. Integrating core academic knowledge and skills, and the professional roles and responsibilities of Technology Education teachers within the total school community at the secondary level are discussed.

CTED 601 Career and Technical Ed Content, Methods and Strategies (3)
This course examines the philosophy, mission, vision, goals, and evolution of Occupational Education. Teaching and learning strategies, performance-based instruction, assessment, blended instruction, work-based learning, school-to-careers, and equity issues will be covered.

CTED 602 Technology Education Instructional Management and Organization (3)
This course covers planning, implementing, evaluating, and marketing Technology Education programs. Particular attention will be given to the organization and management of a safe laboratory environment and the use of the laboratory to support and enhance instruction. The safe and effective use of tools, equipment, and materials will be covered, as well as a review of the Technology Education teacher's responsibilities regarding student safety and laboratory maintenance. Teacher and school system liability will be covered.

CTED 603 Career and Technical Ed Instructional Management and Organization (3)
This course covers planning, implementing, evaluating, and marketing Career and Technical Ed programs. Particular attention will be given to the organization and management of a safe work environment and the use of this environment to support and enhance instruction. The safe and effective use of tools, equipment, and materials will be covered, as well as a review of the Occupational Education teacher's responsibilities regarding student safety and laboratory maintenance. Teacher and school system liability will be covered.

CTED 607 Coordination of Work Experience Programs (3)
A variety of work-based learning programs will be covered including cooperation work experience, internships, mentorships, job shadowing, and apprenticeship. Mission, trends and current practices in these programs will be discussed. Methods and techniques of coordination in comprehensive and part-time programs at the secondary and adult levels are covered.

CTED 610 Teaching in Adult and Post-Secondary Education Programs (3)
Methods and techniques for teaching adult learners in secondary and in post-secondary occupational and technical programs are covered. The needs, interests, and motivation of the mature learner are analyzed. Secondary and post-secondary educational settings will be compared.

CTED 615 Administration and Leadership (3)
This course covers the theories and concepts of educational administration and leadership in Career and Technology Education. Societal forces that affect educational administration, tasks of administration, role requirements, administrative processes, division of responsibility, organizational variables, the administrator as an individual and leader, and professional organizations and ethics are discussed.

CTED 630 Special Problems in Career and Technology Education (3)
Master's and APC students who desire to pursue a special research problem or project under the direction of their advisor may register for this course.

CTED 640 Research in Career and Technology Education I (3)
Introduces students to the three basic forms of research: historical, descriptive and experimental. Emphasis is placed on incorporating research into classroom teaching. ERIC and other databases will be used in research. Provides a technological base for the development of web-based learning, CDs, portfolios, and a research methodology base for subsequent courses. Qualitative and quantitative data treatments will be developed within the context of individual student projects and the evaluation of the research literature.

COURSE DESCRIPTIONS

CTED 650 Research in Career and Technology Education II (3)
Students will complete and present their portfolios, action research projects, and seminar papers. Educational technology, especially as it applies to teaching in the schools, will be integrated into the participants' project work.
Prerequisite: Successful completion of CTED 640.

EDUC 610 Learning and Instructional Design (3)
Advanced skill development in the area of individualized programming, including adaptation and modification of curriculum, instructional design, program development, and evaluation. Learning theory and its application in the classroom are emphasized.

EDUC 612 Advanced Educational Psychology (3)
Applications of psychology to learning processes and theories are examined. Topics covered include individual differences, measurement, motivation, emotions, intelligence, attitudes, problem solving, thinking, and communicating in educational settings.

EDUC 620 Advanced Human Growth and Development (3)
This course is an advanced study of human growth and development using a life-span approach. Current research and theories in the areas of cognitive processes, learning abilities, and social and psychological processes will be examined.

SPED 600 Characteristics of Exceptional Individuals (3)
This course is an overview of the major types of exceptional abilities and their impact on the teaching/learning process. The legal mandates that relate to the field of special education are covered.

EDCI 402 Fundamentals of Reading Instruction (3)
This course teaches the fundamentals of reading instruction including current theories and methods of reading instruction. The course also presents an overview of reading programs K-12 and considers the integration of reading into the student's areas of specialization at the middle and secondary school levels. The course emphasizes the identification of requisite reading skills, the assessment of reading skill levels (instructional and independent), the development of strategies and materials for reading mastery, and the remediation of reading difficulties.

EDTE 437 Student Performance Assessment (3)
This course examines how to identify and utilize appropriate student performance criteria to measure student achievement in the cognitive, psychomotor and affective domains. A variety of assessment instruments will be evaluated and developed to document student mastery of instructional objectives.

EDTE 445 American Industry and Global Competition (3)
This course is an analysis of American industry in relation to current and future competitive trends. Personnel organizations, personnel needs, production, quality, and competition in selected manufacturing and construction enterprises are covered.

EDTE 450 Mentoring: Expectations and Responsibilities (3)
This course is an introduction to mentoring, and covers selecting mentors, mentor/teacher responsibilities, teacher observation, problems of beginning teachers, mentoring techniques, assessment, and portfolio development. This course is designed to prepare experienced teachers that are interested in becoming mentors or helping teachers in the secondary school.

EDTE 482 Core Technologies I (3)
Core technologies are the building blocks of all technology systems. Mechanical and structural technologies are examined with regard to common components, simple controls, basic system design, safety, and applications. An overview of materials technology will include an examination of ferrous and non-ferrous materials, common industrial forms, and the primary and secondary processing of industrial materials. The course includes an introduction to biotechnology with instructional units devoted to genetics, environmental biotechnology, and the future of biotechnology. Topical investigations and modular activity packages are utilized to enhance understanding of the core technologies.

EDTE 483 Core Technologies II (3)
Core technologies are the building blocks of all technology systems. Electrical, electronic, optical, fluid, and thermal technologies are examined with regard to common components, simple controls, basic system design, safety, and applications. The context for the study of these core technologies is the design and development of technology systems to solve practical problems. Communication skills are developed through the documentation of the design and development process. Topical investigations and modular activity packages are utilized to enhance understanding of the core technologies.

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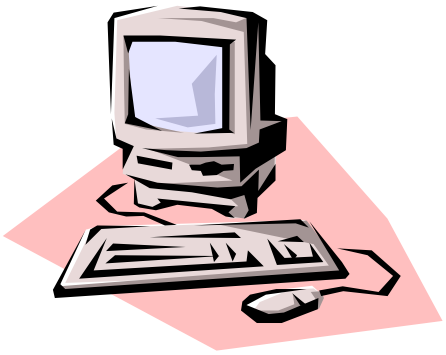
EDTE 484 Information Systems (3)
This course provides students with knowledge and skills related to communication systems, application of computers, computer controlled robots and machines, imaging, publishing, audio systems, video systems, and telecommunications. Students learn how to integrate instruction on information systems into the teaching/learning strategies used in Technology Education. These strategies include: ingenuity challenges, topical investigations, product generation, modular activity packages, research and experimentation, and engineering design and development.

EDTE 485 Safety Programs in Education and Occupational Settings (3)
This course examines exemplary safety practices through discussions, group demonstrations, and development of written safety programs for Occupational Education facilities. Industrial safety programs will be studied through organized plant visits.

EDTE 486 Instructional Media Development (3)
Students will develop instructional materials in this course. The course covers commercially available sources and applications, and teacher-developed materials including web pages, bulletin boards, transparencies, computer-generated materials, power point presentations, and the use of instructional technology devices and equipment.



We're on the web! www.umes.edu

For further information on this program, please contact:

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Graduate application is available from, and completed application should be sent to:

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