MARYLAND HIGHER EDUCATION COMMISSION
ACADEMIC PROGRAM PROPOSAL

PROPOSAL FOR:

_____NEW INSTRUCTIONAL PROGRAM

___X___SUBSTANTIAL EXPANSION/MAJOR MODIFICATION

_____COOPERATIVE DEGREE PROGRAM

_____WITHIN EXISTING RESOURCES or_____REQUIRING NEW RESOURCES

(For each proposed program, attach a separate cover page. For example, two cover pages would accompany a proposal for a degree program and a certificate program.)

<u>University of Maryland, Eastern Shore</u>
Institution Submitted Proposal

_____Spring 2017_____
Projected Implementation Date

<u>Master of Education</u>
Award to be Offered

<u>Career and Technology Education</u>
Title of Proposed Program

__0839-01____
Suggested HEGIS Code

_131309_____
Suggested CIP Code

<u>Department of Technology</u>
Department of Proposed Program

<u>Dr. Derrek Dunn</u>
Name of Department Head

<u>Dr. Thomas Loveland</u>
Contact Name

<u>tloveland@umes.edu</u>
Contact E-Mail Address

<u>(410) 727-4808 X164</u>
Contact Phone Number

Juliette B. Bell 7/1/16
Signature and Date

President/Chief Executive Approval

_____NA_____
Date

Date Endorsed/Approved by Governing Board

A. Centrality to institutional mission statement and planning priorities:

1. Description of program and how it relates to institution's approved mission.

The Master's degree in Career and Technology Education from the University of Maryland Eastern Shore was approved by the Maryland Department of Education in 2002, reapproved in 2008 and is under review currently for continued approval. The degree is an advanced teaching degree for secondary level Career and Technology Education teachers in Maryland. These teachers are utilizing the M.Ed. degree to earn their Advanced Professional Certification from the Maryland State Department of Education (MSDE). In the process, they are developing advanced skills in research, leadership, and teaching pedagogy.

The rigorous 30 credit program consists of six core required courses and four electives, generally completed over a three year period. The six core classes cover advanced teaching content in the areas of standards-based instruction and methods, research, administration and leadership, and laboratory management. Potential electives include courses meeting the work-based learning endorsement requirements, courses meeting the Professional Technical Education certification pathway requirements, adult learning, assessment, and history and principles of career and technology education. Teachers in the program select the most appropriate electives to help meet their career objectives.

The program is located to serve the larger concentration of Career and Technology Education teachers in the greater Baltimore area with a smaller cohort on the main campus in Princess Anne. Most courses are hybrid, meeting every other week in the evening at UMES classrooms in the Baltimore Museum of Industry. All courses are housed in Blackboard, making them available to teachers across the state 24/7.

The program offers *"distinctive learning, discovery and engagement opportunities in technology, engineering, agriculture, business and health education."* Courses have been designed to the distinctive and authentic needs of Career and Technology Education teachers and CTE departments at the district and state level. Discovery and *applied research* as an instructional strategy occurs in the three research-based courses through the teacher's development of action research reports and their capstone research project. Through the director's involvement with national and state professional associations, CTE teachers are encouraged to apply their advanced learning through submission of articles to peer-reviewed publications and applications for teaching awards.

The UMES mission element of *"student-centeredness"* is addressed through the courses being embedded into Blackboard, an online learning system. Students can work ahead on assignments and receive preview feedback on their papers before submission dates. Face to face classes are set up in the evenings from 5PM – 8PM, allowing the teachers to come to class without having to take leave time from their school systems. The location in Baltimore allows enough time for teachers from Hagerstown, Charles County, Harford County and other surrounding counties to be able to arrive for class by 5PM. To make allowances for students in Princess Anne, classes are SKYPE'd into the Baltimore classes from the Department of Technology conference room on the main campus.

Program graduates are *highly valued* and have gone on into leadership positions in their school systems including department chairs, school principals, and district CTE supervisors. Others have been asked to present their capstone research topics in district professional development workshops. District and state education officials regularly attend the teacher's final capstone

research study defense held each year in May. These guests consistently remark about the positive value of the research being conducted by the CTE graduate students.

The program meets the mission element of *"providing individuals, including first generation college students, access to holistic learning environment that fosters multicultural diversity, academic success, and intellectual and social growth"*. Many of the graduate students are the first in their family to work towards an advanced degree. The classes reflect the ethnic diversity of Maryland and specific lessons provide opportunities for teachers to reflect on instructional strategies that foster success in all students. After discussion with advisory leaders from the Maryland State Department of Education, UMES Department of Education, district leaders and a review of literature from the field, changes were implemented in all courses to increase the rigor of the content and expectations for success. The increased rigor has made the M.Ed. in Career and Technology Education more valued by stakeholders in Maryland.

The program is committed to helping to meet the *"workforce and economic development needs of the Eastern Shore, the state, the nation, and the world"* by providing professional development coursework that reflects Maryland State Department of Education – College and Career Readiness Division priorities and new research on effective instruction and assessment in Career and Technology Education. The program serves the education and research needs of school districts and professional associations by helping public school CTE teachers obtain Advanced Professional Teaching certification (APC) on their teacher licenses, develop research capabilities that enhance the action research expected of teachers to meet teacher evaluation requirements, and become leaders in their school districts, the state and the nation.

2. How the proposed program supports institution's strategic goals.

The proposed modifications to the CTED M.Ed. degree program support the following goals from UMES 2011-2016 strategic plan:

Goal I: Develop, strengthen, and implement academic programs that are responsive to the UMES mission and are systematically reviewed for sustained quality, relevance, and excellence to meet the challenges of a highly competitive and global workforce.

- **Sub-Goal 1.2**: Expand the capacity to offer unique and/or critical undergraduate, graduate, and professional academic programs that address regional workforce needs.

- **Sub-Goal: 1.7**: Obtain national program accreditations for eligible programs and *reaffirmation of accreditation for existing programs.*

To support Goal 1.2, the program is providing hybrid coursework with expanding content that is accessible to CTE teachers in more remote areas in Maryland. The program is the only master's degree program in career and technology education in the State of Maryland. The program is unique in the state and is working to improve the outcomes of the program to ensure its' continued relevance and success in Maryland. The program is proposing a revision of course objectives and electives to strengthen the course outcomes for graduates. This will help graduates meet the requirements of teacher certification at the APC level. Regional needs at met by the nature of the CTE program. Graduates work in varied counties and content areas across the state, e.g.; agriculture from Washington County, nursing from Howard County, technology education from Anne Arundel County, and CISCO from Baltimore City.

To support Goal 1.7, in 2015 the program submitted for reaffirmation of Program Approval with the Maryland State Department of Education. The program is linked with the Professional Education Unit (PEU) at UMES which is working on national accreditation from the Council for the Accreditation of Educator Preparation (CAEP). As the national advanced teaching standards have not been established yet, the CTE M.Ed. program is not currently applying for national accreditation. The standards indicators that are being considered by CAEP for advanced teaching are being matched though to specific assignments in the core courses with the intention of submitting for national accreditation in the near future and having data available for analysis.

Goal III: Promote and sustain a campus environment that supports a high quality of life and learning that positively impacts retention through graduation and produces knowledgeable and culturally competent citizens able to lead effectively and compete globally.

- **Sub-Goal: 3.1:** Support online course transformation and redesign.

To support the institution's Goal III, the program has converted almost all coursework over to a hybrid model based on Blackboard, the UMES learning management system. This change has made the program more accessible to a wider range of CTE teachers across Maryland. The goal has been to make the online learning environment more consistent and effective through common formatting. Responses from adjuncts and students support the new model.

Goal IV: Improve academic and administrative systems to facilitate learning, discovery and community engagement; to gain national and international eminence.

- **Sub-Goal: 4.1:** Improve structure for attracting, developing and retaining high quality and diverse students.

The administrative officer for Career and Technology Education in Baltimore belongs to and attends most state CTE director meetings, distributes timely information to district CTE Directors, and presents at district CTE teacher meetings in order to attract new students. A pronounced effort is made to attract people of diverse backgrounds. In order to develop and retain the students who are admitted, intensive advising is provided every semester to keep the students on track for graduation.

Goal V: Efficiently and effectively manage the resources of the University and aggressively pursue public and private resources to support the enterprise.

- **Sub-Goal: 5.4:** Improve teaching, research and learning facilities.

The facilities at the Baltimore Museum of Industry are protected as a historical site. Special effort is made to make the classrooms usable and flexible for technological changes. New computers that support SPSS statistical analysis software were obtained to replace outdated computers. The main computer rooms was painted and rewired after installation of the new computers in 2015, making the room more useful as an educational technology infused classroom. Graduate students from the main campus are able to SKYPE into this room which helps to collapse enrollments into more economic groupings.

B. Adequacy of curriculum design and delivery to related learning outcomes consistent with Regulation .10 of this chapter:

1. Provide a list of courses with title, semester credit hours and course descriptions, along with a description of program requirements.

The program consists of thirty credit hours, 18 in six core classes and 12 as electives. Note that the blue course titles are new proposed electives that replace 400 level electives allowed in the past.

M.Ed. Program of Study
Career and Technology Education

Core Graduate Level Required Courses *All six classes are required*

Course #	Course Title	(Credits)
CTED 600	Career and Technology Education Content, Methods and Strategies	(3)
CTED 602	Career and Technology Education Instructional Management and Organization	(3)
CTED 615	Administration and Leadership in Career and Technology Education	(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)

Total Required Credits: 18

Graduate Level Electives *(Pick twelve credits from this section)*

CTED 607	Coordination of Work Experience Programs	(3)
CTED 610	Teaching Adult and Post-Secondary Education Programs	(3)
CTED 630	Special Problems in Career and Technology Education	(3, 6)
CTED 635	Standards-Based Assessment in Career and Technology Education	(3)
CTED 651	History and Principles of Career and Technology Education	(3)
CTED 655	Contemporary Workplace Practices	(3)
CTED 665	Work-Based Learning: Instructional Management and Curriculum Development	(3)
CTED 675	Reading, Writing and Mathematics Literacy Instruction in CTE	(3)
SPED 600	Characteristics of Exceptional Individuals	(3)

Total Elective Credits: 12

TOTAL CREDITS 30

CTED M.Ed. Course Descriptions

CTED 600   Career and Technology Education Content, Methods, and Strategies (3)
This course examines the philosophy, mission, vision, goals, content standards, teaching methods, teaching strategies, and evolution of Career and Technology Education (CTE). Content standards in CTE, technological literacy and the Common Core will be used to identify what students should know and be able to do as a result of a CTE training experience. Participants will examine standards-based teaching/learning strategies including use of instructional technologies that are effective in enabling students to achieve the program goals. The nature of a CTE experience, with its performance-based instruction and assessment, will be explored with special attention given to the program's potential for supporting national STEM (science, technology, engineering and mathematics) initiatives and Maryland's Career Cluster model curriculum.

CTED 602   Career and Technology Education Instructional Management and Organization (3)
Participants in this course will develop skills and systems for organizing and managing instruction in Career and Technology Education programs. Particular attention will be given to the organization and management of facilities, students, resources and activities for safe and effective learning. Topics will include designing laboratory space, laboratory management, program and instructor effectiveness systems, adapting facilities to reflect diverse student populations, state and national safety laws, teacher liability, identifying funding resources, program advisory committees, student organizations, and the role of professional associations.

CTED 607   Coordination of Work Experience Programs (3)
A variety of work-based learning programs will be covered including the career research and development program, cooperative work experience, internships, mentorships, job shadowing, and apprenticeships. 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 Career and technical programs are covered. The needs, interests and motivation of the mature learner are analyzed. Effective strategies in secondary and post-secondary educational settings will be compared and contrasted. Course topics include physiological, psychological and sociological issues in adult education, motivation, life cycles, learning style profiles, post-secondary settings, authentic contextual and self-directed learning, counseling, guidance, and adult critical thinking.

CTED 615   Administration and Leadership in Career and Technology Education (3)
The course is designed to prepare individuals to assume instructional leadership positions in the public schools, and specifically, career and technology education programs. As a result of participation in course activities, participants will develop skill and knowledge related to: contemporary educational theories and concepts; societal forces that affect education; tasks of administrators, role requirements, administrative processes and division of responsibility; organization variables; the administrator as an individual and leader; research; professional organizations; and ethics.

CTED 630   Special Problems in Career and Technology Education (3, 6)
There are many issues facing the Career and Technology field today. This action research-based course allows the student to identify a topic, issue or problem in their classroom or school system and develop a solution or options for solving that issue or problem. The students use action research methods to review the literature, identify the problem, collect data, determine possible solutions, and make recommendations. Potential products of this course may be findings for CTE classroom student learning objectives (SLO) and teacher evaluation, curriculum materials, instructional models or position papers. The course may be repeated twice with different topics and approval of the Advisor.

CTED 635   Standards-Based Assessment in Career and Technology Education (3)
This course will focus on how assessment informs effective instruction. Students will define intended learning outcomes, select and construct assessment instruments, evaluate reliability and validity of varied instruments and understand current theory, problems, trends, and issues of assessment. Topics include the development of comprehensive assessment strategies and their interrelationships with learning objectives, selection of instructional techniques, and preparation of instructional plans.

CTED 640   Research in Career and Technology Education I (3)
Students are introduced to the three basic forms of research: historical, descriptive and action research. Emphasis is placed on incorporating action research into classroom teaching and leadership. A variety of databases will be used. The course provides a base for action research methodology. Qualitative and quantitative data treatments will be developed within the context of individual student projects and evaluation of the research literature.

CTED 650   Research in Career and Technology Education II (3)
This course reviews topics in research methodology and specific issues concerning writing research papers. Students learn how to prepare a research proposal for submission to UMES Institutional Review Board, conduct their research by collecting and analyzing data, present their findings and conclusions based on the data. Students will communicate the results of their study in the form of a capstone research study and final defense. Prerequisite: Successful completion of CTED 640.

CTED 651   History and Principles of Career and Technology Education (3)
This course is an overview of current policies and principles in career and technology education including the historical, sociological, and philosophical underpinnings. Topics include an understanding of what CTE is nationally and in Maryland, content areas and types, early history of CTE, CTE for diverse cultures, the impact of federal and Maryland legislation, administrative structures, role of career and technical education in promoting democratic ideals, and development of career and technology education philosophies.

CTED 655   Contemporary Workplace Practices (3)
This course analyses American industry in relation to current trends in globalization and future competitive trends. Organizational structures, personnel needs, production, quality, and competition in selected manufacturing and construction enterprises are covered. Leadership, human resource management, organizational performance, strategic planning, and customer satisfaction are major themes covered through site-visits and class presentations. Students learn how each business affects the local, regional and national economy, the role of education in helping American companies stay competitive, and industry expectations for the skills and education needed by interns and future employees. Students will research a career field through a survey instrument and provide a comprehensive report.

CTED 665   Work-Based Learning: Instructional Management and Curriculum Development (3)
This course helps an individual design an instructional program and curriculum materials for work-based learning based on thorough instructional analysis process. Topics include content standards, instructional analysis, student performance objectives, curriculum design, instructional resources, Universal Design for Learning, work-based learning lesson plans, and assessment. The purpose of the course is to help teachers acquire new knowledge and skills necessary to create rigorous, high-quality unit and lesson plans for CRD and WBL programs that lead to increased student achievement.

CTED 675   Reading, Writing and Mathematics Literacy Instruction in CTE (3)
This course provides an extensive understanding of the academic literacies that should be taught and modeled in Career and Technology Education classrooms. The academic literacy of reading, writing, and science, technology, engineering and mathematics (STEM) as identified in the Common Core State Standards are crucial for CTE students to develop their career and college readiness.

EDUC 610   Learning and Instructional Design (3)
This course provides 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.

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

Description of CTED Program Requirements

Students who enter the M.Ed. program must possess an earned baccalaureate degree in one of the areas of Career and Technology Education: agriculture, business education, family and consumer sciences, health occupations, technology education, trade and industrial education, or a related content area. A baccalaureate degree out of the content field, when accompanied by specific industry certification or CTE-relevant experience may be substituted. All students must be working as CTE teachers in a Maryland education setting. Matriculating students must meet all requirements for regular admission to the UMES graduate program. In some cases, provisional admission will be granted if students have a minimum grade point average of 2.75 along with other requirements.

Applicants must fulfill the following for regular admission:

1. Complete the graduate school application and related paperwork for a degree program.
2. Possess an undergraduate cumulative GPA of at least 3.0, or possess a prior graduate degree.
3. Submit a passing score(s) on Praxis I, Praxis CORE, ACT, SAT or GRE.
4. May require a writing sample essay that focuses on current educational issues, as determined by the graduate faculty Admissions Committee.
5. Submit official transcripts from all higher education institutions attended.
6. Submit three letters of evaluation/recommendation that address:
    a. 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.
    b. Personal determination and commitment needed to complete the program.
7. A resume and a statement of purpose for enrolling in the Master's degree program.
8. Provide evidence of Maryland teacher certification.

Transcripts and academic credentials of all applicants will be reviewed by the Department of Technology's Graduate Admissions Committee. In some cases, provisional admission will be granted if students have a minimum grade point average of 2.75 along with other requirements. 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. Conditionally-certified Career and Technology Education teachers taking courses in the Professional Technical Education pathway will be provisionally admitted until all four courses are completed successfully. Once evidence is received of their obtaining Standard Professional Certification, they will be converted to normal graduate status provided all other requirements are met.

2. Describe the educational objectives and intended student learning outcomes.

Objective of the Program

The Department of Technology offers a Master of Education Degree Program (M.Ed.) in Career and Technology Education (CTED). The program is intended to refine the student's knowledge and skills to become master classroom teachers, trainers, resource teachers, specialists, supervisors, 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 the University of Maryland Eastern Shore (UMES). Coursework is offered at UMES and at the Baltimore Museum of Industry (BMI). The course of study may vary with the experience, qualifications, and career development needs that individual students bring to the program.

The overall goal of the graduate program in Career and Technology Education is to prepare individuals to become master teachers, administrators, and leaders who are professional, reflective, innovative, value diversity and effective. Graduates will be proficient in developing, instructing, coordinating, and directing quality programs in Career and Technology Education. The following program objectives assist in accomplishing this goal:

1. Provide opportunities for individuals to gain professional knowledge, skills and dispositions in teaching and training.

2. Prepare individuals to build upon the content knowledge they have acquired in their related baccalaureate degree by providing additional professional knowledge and content necessary for advancing careers in teaching and administration.

3. Develop individuals who can implement Common Core State standards, national content standards, and Science-Technology-Engineering-Mathematics (STEM) standards into curriculum, training and instruction.

4. Prepare teachers and leaders who are knowledgeable of research, theory and practice related to effective curriculum development, instruction, assessment and organization and management of CTE classroom and laboratory facilities.

5. Develop teachers and leaders who are professional, committed, reflective, continuous learners, and contributors to the enhancement of the teaching and training profession.

6. Prepare teachers and leaders who demonstrate sensitivity and effective interpersonal skills in working with culturally diverse populations.

Program Outcomes

Students who complete the M.Ed. program in Career and Technology Education will be expected to demonstrate successful achievement in the philosophy, mission, vision, goals, and evolution of Career and Technology Education. They will develop the following professional learning outcomes:

1. Knowledge and application of Maryland State standards-based curriculum in Career and Technology Education areas.

2. Development of administrative and leadership skills in Career and Technology Education.

3. The ability to conduct research on important topics and issues in education and training, specifically Career and Technology Education.

4. Application of research and inquiry for the improvement of classroom and laboratory instruction.

5. Understanding of the learner's physical, cognitive, and emotional development and the implications for learning and instruction.

6. 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.

7. Skills and knowledge necessary to assist learners with special needs and diverse cultural backgrounds in an instructionally integrated setting.

8. Ability to organize and manage a classroom and laboratory on the basis of research, best practices, expert opinion, personal attributes, and student learning needs.

9. Development and application of a variety of teaching/learning strategies and techniques.

10. Appropriate use of a variety of approaches to assess and evaluate instructional outcomes.

11. Use of instructional technology, including computers and media, for classroom, laboratory and professional needs.

12. Application of theory and best practices in classroom laboratory situations through field experiences.

3. Discuss how general education requirements will be met, if applicable.
N/A

4. Identify any specialized accreditation or graduate certification requirements for this program and its students.

Accreditation

UMES' teacher education and school counseling programs are being reviewed for accreditation by the Council for the Accreditation of Educator Preparation (CAEP). The M.Ed. in Career and Technology Education is approved by the Maryland State Department of Education (MSDE). The M.Ed. in Career and Technology Education is part of the Professional Education Unit Council (PEUC) and teacher education programs at UMES. While a member of the PEUC, the only accreditation standards the CTE program are currently evaluated on are the Maryland Program Approval Accreditation requirements from the Maryland State Department of Education.

The Maryland Program Approval Accreditation requirements include seven assessment types with indicators. They can be summarized as:

#1 Content Knowledge: Comprehensive exam paper scores.
#2 Content Knowledge: Grade point average in six core required classes.
#3 Ability to Plan Instruction: Developed standards-based lesson plan in EDUC 610.
#4 Ability to Apply Learning in Clinical Settings: Reflection on clinical observation of a Career and Technology Education teacher.
#5 Effect on Student Learning: Evaluation of student learning gains from applied lesson plan.
#6 Ability to Conduct Research: Five chapter capstone research paper.
#7 Dispositions: Comparison of teacher self-reflection and faculty evaluation.

CTE teachers completing the M.Ed. program will generally be eligible for the MSDE Advanced Professional Certificate (APC). All Maryland teachers are expected to earn this certificate by the end of their tenth year of teaching. According to MSDE language for the APC in Trades and Technical content area, the 36 credit pathway to APC "aims to develop the individual into a professional teacher by building on his/her occupational skills and their Standard Professional Certificate. Courses that are included in the plan should focus on enriching the individual's professional, communicative, academic, social, technical and technology competencies."

5. *If contracting with another institution or non-collegiate organization, provide a copy of the written contract.*
   N/A.

C.   Critical and compelling regional or Statewide need as identified in the State Plan:

1. *Demonstrate demand and need for the program in terms of meeting present and future needs of the region and the State.*

The M.Ed. in Career and Technology Education meets the present and future needs of the Baltimore region and State of Maryland for three compelling reasons:
- The need for advancement and evolution of knowledge;
- Societal needs, including expanding educational opportunities and choices for minority students at institutions of higher education; and
- The need to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs.

The need for advancement and evolution of knowledge

The program works closely with the Maryland State Department of Education - Division of Career and College Readiness, Maryland Career and Technology Education Directors Association, UMES Department of Technology, Maryland Center for Career and Technology Education Studies (MCCTES), and ongoing review of national research in Science, Technology, Engineering and Mathematics (STEM) in determining curriculum revisions to the program. In addition, two types of research are conducted by graduate students in the program. In CTED 630, students develop classroom-based action research projects tied to their student learning objectives (SLO). In CTED 640/CTED 650, graduate students complete a major capstone research paper that focuses beyond their classroom to research educational issues at the district or state level.

<u>Societal needs</u>

The program conducts site visits to district meetings of CTE teachers in order to encourage teachers to apply for admission to the program. Many of these CTE teachers are from diverse cultures and this is reflected in the ethnicity of program graduates over the past ten years. In report from the Maryland State Department of Education – Maryland's P12 Dashboard *Minority New Hires by Certification Area 2013-2014* (the latest data available), there were 177 new minority teachers hired across Maryland in the content areas of CTE and Computer Science. With the location of the program in Baltimore, the program covers a broad area with large ethnic communities. This does allow for increased educational opportunities for minority teachers at the University of Maryland Eastern Shore.

Academic Year 2013-2014

Apply | Reset ▾

Minority New Hires by Certification Area
Maryland Public Schools: 2013-2014
Date run: 5/12/2016

Certification Area		Total Number	Minority Number	Minority Percentage	Beginning New Hires Total	Beginning New Hires Minority Number	Beginning New Hires Minority Percent	Experienced New Hires Total	Experienced New Hires Minority Number	Experienced New Hires Minority Percent
Grand Total		5,512	1,677	30.4%	3,238	709	21.9%	2,274	968	42.6%
The Arts Total		352	73	20.7%	212	35	16.5%	140	38	27.1%
The Arts	Art (PreK-12)	146	33	22.6%	93	18	19.4%	53	15	28.3%
	Dance (PreK-12)	11	4	36.4%	6	2	33.3%	5	2	40.0%
	Music (PreK-12)	177	33	18.6%	103	13	12.6%	74	20	27.0%
	Theatre (7-12)	18	3	16.7%	10	2	20.0%	8	1	12.5%
Career/Technology Education (7-12) Total		162	72	44.4%	100	36	36.0%	62	36	58.1%
Career/Technology Education (7-12)	Agriculture	3	0	0.0%	2	0	0.0%	1	0	0.0%
	Business Education	23	15	65.2%	6	1	16.7%	17	14	82.4%
	Family and Consumer Sciences	29	21	72.4%	14	10	71.4%	15	11	73.3%
	Technology Education	62	19	30.6%	42	13	31.0%	20	6	30.0%
	Trades & Industry	45	17	37.8%	36	12	33.3%	9	5	55.6%
Computer Science (7-12) Total		15	9	60.0%	9	4	44.4%	6	5	83.3%
Computer Science (7-12)	Computer Science (7-12)	15	9	60.0%	9	4	44.4%	6	5	83.3%
ESOL (PreK-12) Total		65	24	36.9%	29	7	24.1%	36	17	47.2%
ESOL (PreK-12)	ESOL (PreK-12)	65	24	36.9%	29	7	24.1%	36	17	47.2%
Early Childhood (PreK-3) Total		563	154	27.4%	372	82	22.0%	191	72	37.7%
Early Childhood (PreK-3)	Early Childhood (PreK-3)	563	154	27.4%	372	82	22.0%	191	72	37.7%
Elementary Education (1-6) & Middle School Total		1,842	495	26.9%	1,152	233	20.2%	690	262	38.0%
Elementary Education (1-6) & Middle School	Elementary Education (1-6)	1,842	495	26.9%	1,152	233	20.2%	690	262	38.0%
English (7-12) Total		450	143	31.8%	261	65	24.9%	189	78	41.3%
English (7-12)	English	450	143	31.8%	261	65	24.9%	189	78	41.3%
Foreign Language (7-12)* Total		188	75	39.9%	103	38	36.9%	85	37	43.5%
Foreign Language (7-12)*	Arabic	1	1	100.0%	0	0	0.0%	1	1	100.0%
	Chinese	14	14	100.0%	11	11	100.0%	3	3	100.0%

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<u>The need to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs.</u>

As a historically black college and university (HBCU), the University of Maryland Eastern Shore is continually focused on improving educational offerings and opportunities. The M.Ed. program has been working to rewrite courses to make them more rigorous and effective in developing educational leaders and researchers in the field of career and technology education in Maryland. As the sole provider of graduate level courses in career and technology education in Maryland, the program takes its responsibility seriously to provide high quality education in this unique field.

2. Provide evidence that the perceived need is consistent with the Maryland State Plan for Postsecondary Education.

The 2013-17 Maryland State Plan for Postsecondary Education identified six goals for post-secondary institutions of higher learning to meet the needs of Maryland. The M.Ed. program in Career and Technology Education has a structure in place that responds positively to each of these goals.

Goal 1: Quality and Effectiveness

The program is a high quality and is recognized nationally in the field of Engineering and Technology Education. The program director is the Editorial Review Board Chair for the signature publication of the International Technology and Engineering Educator Association (ITEEA). He served as the Local Planning Committee Chair for the 2016 ITEEA international conference in the Washington, DC area. The director has been recognized with numerous UMES, state and national awards since his arrival in 2012. The awards reflect positively on the excellence and preeminence of the CTE M.Ed. program in Baltimore. The awards include the following:

- *Presidential Citation* in 2016 from the International Technology and Engineering Educator Association.
- *Distinguished Teacher Educator* in 2015 from the International Technology and Engineering Educator Association.
- *Silvius Wolanski Outstanding Publication* Award (2015) from the Council on Technology and Engineering Education, ITEEA. Shared with Dr. Tyler Love from UMES.
- *Distinguished Administrator of the Year* (2015) from Iota Lambda Sigma – Nu Chapter.
- *Outstanding Mentor Award* (2014) from the School of Graduate Studies, UMES.
- *Career and Technology Education Outstanding Postsecondary Distinguished Service Award of Excellence* in 2014 from the Maryland State Department of Education.

Goal 2: Access, Affordability and Completion

The tuition at the University of Maryland Eastern Shore is the lowest in the state for a university. Graduate students in the offsite program are not charged an enrollment fee, technology fees or lab fees. Maryland teachers who live out-of-state are awarded a BMI In-State Tuition Scholarship. In addition, the program alerts CTE teachers to their district policies on tuition reimbursement. The results of these measures make the M.Ed. degree within reach of families with modest incomes.

Goal 3: Diversity.

As a historically black institution, UMES is responsive to the dynamics of cultural difference. The M.Ed. program includes curriculum specifically designed to assist graduate students in learning

about and responding effectively to all the people they serve. All programs at UMES treat cultural diversity as a value-added resource.

Goal 4: Innovation

Student-centered and innovative learning is the educational practices of focusing on the learner and on learning, with faculty and institutions directing attention to the most effective ways to facilitate and maximize learning for each student. The Career and Technology Education program in Baltimore utilizes innovative approaches to delivering instruction to the CTE teachers who come from across the state. All course and course sessions have been developed in Blackboard, an online learning management system. Video teleconference equipment has been installed in Room 113 to support CTE teachers who are too far away to drive to class or who meet in the Department of Technology conference room on the main campus. This makes the best use of the hybrid courses to reach CTE teachers.

Another driver of innovation is the low cost of the graduate program. Graduate students attending through Baltimore are exempt from student fees, eligible for out-of-state tuition scholarships, and pay the lowest state university tuition in Maryland. These financial policies have made the M.Ed. degree financially possible for CTE teachers who would otherwise not be able to afford the degree.

Goal 5: Economic Growth and Vitality.

The advancement of knowledge, the development and implementation of technology, and the expansion of a highly trained workforce are essential to Maryland's economic vitality. This is especially true to the education profession where highly qualified CTE teachers can make a demonstrable difference in the lives and aspirations of secondary level students. Research conducted by CTE graduate students is considered and discussed by state and district education leaders in Maryland.

Goal 6:   Data Use and Distribution

The Career and Technology Education graduate program in Baltimore is committed to data collection, analysis and distribution in order to inform decision-making. Three sets of student outcome data is collected, analyzed and distributed. The first data are indicators to meet the UMES PRIDE goals. These indicators are reported to the Professional Education Unit Committee in the form of yearly reports. The PRIDE goals are Professionalism, Reflection, Innovation, Diversity and Effectiveness. The second set of data and indicators are associated with state program approval as an advanced teaching program in Maryland. This program re-approval occurs every eight years. The last set of data tied to student outcomes is for the Council for the Accreditation of Educator Preparation – Advanced Teaching standards. While these standards are still under development and therefore not directly required at this time, the CTE program office has been linking assignments to indicators and providing data to the UMES Department of Education for their CAEP Reports.

D. Quantifiable & reliable evidence and documentation of market supply & demand in the region and State:

1. Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program.

The program has been in place since 2000 and serves the advanced certification needs of working CTE teachers in Maryland. As such, it is not a new initial teacher preparation program as listed in D-1. The teachers in the program must be working teachers in public school classrooms. The number of teachers in the program has held steady over the years at about 28 – 35 enrolled per year. The program allows CTE teachers to reach Advanced Professional Certification which helps them keep their teaching position.

The teachers earn a pay increase for attaining a Master's degree rank in their school district. Reviewing the pay scales for Prince Georges County, Montgomery County, Baltimore County, Anne Arundel County and Howard County, the average yearly pay increase at step 10 (BA/BS to M.Ed.) is $6,158. This additional pay grows at a faster pace through later district step increases and adds additional value to retirement pensions at retirement. The economic benefits to teachers who graduate with the degree are dramatic.

With the M.Ed., Career and Technology Education teachers become eligible for leadership positions in Maryland. Listings for open positions at the Maryland State Department of Education include the job title Education Program Specialist I Regional Coordinator. The required educational background is for a Master's degree in Career and Technology Education, Educational Administration/Supervision, or Public Administration. Previous graduates have moved from teaching positions into district supervisor and school principal positions.

2. Discuss and provide evidence of market surveys that clearly provide quantifiable and reliable data on the educational and training needs and the anticipated number of vacancies expected over the next 5 years.

Maryland school teachers move through different and ascending levels of certification in their teaching career. For Career and Technology Education teachers, many begin teaching as a second career after working in industry. They have a bachelor's degree in their career field but not in education. Other CTE teachers in the areas of technology education, family and consumer science, business education and agriculture education may hold a bachelor's degree in initial teacher preparation. The teachers must move from Standard Professional Certification (SPC) to Advanced Professional Certification within ten years of their hiring. The surest route to obtain APC is through obtaining a Master's degree in CTE from UMES.

According to the *Maryland Teacher Staffing Report 2014-2016*, the following CTE fields are listed as Critical Need in staffing in the 24 school systems in Maryland. These fields are Technology Education, Family and Consumer Science, Business Education, Computer Science, and Career and Technology Education. This situation has resulted in districts making conditional hires to fill positions. In 2014, 576 teachers were hired on conditional licenses. Many of these teachers are hired on an out-of-field BA/BS degree and need coursework to attain the Standard Professional Certification. The Baltimore program provides the courses needed by CTE teachers to complete these requirements at the graduate level. In the specific areas of Career and Technology Education, 177 teachers were newly hired in 2014 across the state (Maryland's P12 Dashboard *"2013-2014 Actual New Hires by Certification"*). With the requirement to attain Advanced Professional

Certification within ten years, it is highly likely that these new hires (160 – 200) every year would be potential applicants for admission to the M.Ed. CTE program.

Actual New Hires by Certification Area
Maryland Public Schools: 2013-2014
Date run: 5/12/2015

Certification Area		Total New Hires	Beginning New Hires Total	Beginning New Hires- Maryland Prepared	Beginning New Hires - Out of State	Experienced New Hires Total	Experienced New Hires - Maryland	Experienced New Hires - Outside Maryland
Total New Hires		5,512	3,238	989	2,249	2,274	1,229	1,045
The Arts Total		352	212	56	156	140	71	69
The Arts	Art (PreK-12)	146	93	28	65	53	25	28
	Dance (PreK-12)	11	6	1	5	5	3	2
	Music (PreK-12)	177	103	26	77	74	38	36
	Theatre (7-12)	18	10	1	9	8	5	3
Career/Technology Education (7-12) Total		162	100	13	87	62	37	25
Career/Technology Education (7-12)	Agriculture	3	2	0	2	1	1	0
	Business Education	23	6	3	3	17	7	10
	Family and Consumer Sciences	29	14	4	10	15	7	8
	Technology Education	62	42	3	39	20	13	7
	Trades & Industry	45	36	3	33	9	9	0
Computer Science (7-12) Total		15	9	0	9	6	4	2
Computer Science (7-12)	Computer Science (7-12)	15	9	0	9	6	4	2
ESOL (PreK-12) Total		65	29	6	23	36	18	18
ESOL (PreK-12)	ESOL (PreK-12)	65	29	6	23	36	18	18
Early Childhood (PreK-3) Total		563	372	162	210	191	117	74
Early Childhood (PreK-3)	Early Childhood (PreK-3)	563	372	162	210	191	117	74
Elementary Education (1-6) & Middle School Total		1,842	1,352	436	716	690	404	286
Elementary Education (1-6) & Middle School	Elementary Education (1-6)	1,842	1,152	436	716	690	404	286
English (7-12) Total		450	261	50	211	189	106	83
English (7-12)	English	450	261	50	211	189	106	83
Foreign Language (7-12)*** Total		188	103	26	77	85	44	41
Foreign Language (7-12)***	Arabic	1	0	0	0	1	0	1
	Chinese	14	11	3	8	3	3	0

⇧ ⇩ ⬇ ⬆ Rows 1 - 25

3. Data showing the current and projected supply of prospective graduates.

Year	Number of Grad Students	Graduates
2013 - 2014	35	8
2014 - 2015	36	8
2015 - 2016	29	5
2016 - 2017	27	10
2017 - 2018	35	6

E. Reasonableness of program duplication:

The University of Maryland Eastern Shore is the only university in the entire USM system that offers a master's degree in Career and Technology Education. Due to this fact, this is no duplication of programs.

F.   Relevance to Historically Black Institutions (HBIs)

The mission of UMES and the Department of Technology is to provide opportunities for first generation college students, many individuals who might not otherwise have a chance to earn a Master's degree in Career and Technology Education. The placement of the program in the Department of Technology at UMES and location in Baltimore enhances that mission.

G.   If proposing a distance education program, please provide evidence of the Principles of Good Practice (as outlined in COMAR 13B.02.03.22C).

Fifty-three percent of coursework in the program is in a face setting off-campus from the main UMES campus in Princess Anne. Based on the definition of distance education in COMAR Regulations 13B.02.03.02 (6), the program is not considered distance learning.

H.   Adequacy of faculty resources (as outlined in COMAR 13B.02.03.11).
There are one full-time and three adjunct faculty members who are qualified to teach Master level courses in the Career and Technology Education program:

Dr. Thomas Loveland holds a Ph.D. in Curriculum and Instruction – Vocational Education from the University of South Florida. Dr. Loveland is a Professor in the Department of Technology with regular membership level in the UMES Graduate Council. He directs the M.Ed. CTE program in Baltimore and teaches specific incoming and terminal courses in the program: Core classes: CTED 600, CTED 602, CTED 640 and CTED 650, and two electives: CTED 610 and CTED 630. Dr. Loveland has been published in peer reviewed publications, presents regularly at international conferences and has won numerous awards in the field of Technology Education and administration of CTE.

Robert Gray holds a MS in Industrial Education from University of Maryland College Park. Mr. Gray is an adjunct instructor in the program who has helped develop numerous courses and teaches CTED 615, EDUC 610 and numerous electives. He is a special member of the UMES Graduate Council. His background includes being an administrator of Technology Education in Prince Georges County, a specialist in the Maryland State Department of Education, and Director of the Maryland Center for Career and Technology Education Studies in Baltimore.

Harry Shealey holds a MS in Industrial Education from University of Maryland College Park. He adjunct teaches CTED 600, CTED 602 and CTED 615 for the main campus cohort classes. He is a special member of the UMES Graduate Council. Mr. Shealey has an extensive background which includes being the district supervisor for technology education in Baltimore County Schools and was the Director of the Maryland Center for Career and Technology Education Studies in Baltimore from 2006-2013.

Dorothy Brown holds a MS degree from Johns Hopkins University and an Administrative I certificate from the MSDE. Ms. Brown adjunct teaches CTED 607 and other work-based learning electives. She is a special member of the UMES Graduate Council. Ms. Brown was a Teacher Specialist Administrator and the district work-based learning coordinator for Anne Arundel County Schools. In addition, she did course developmental work for the CTE program in 2012 and 2013.

I.   Adequacy of library resources (as outlined in COMAR 13B.02.03.12).

The University assures that institutional library resources meet the new program needs. The Frederick Douglas Library currently houses over 178,500 volumes of books and 755 periodicals. Students and faculty can take advantage of the entire University of Maryland System's library holdings through Intercampus Requests. Electronic databases are available through the university itself and off-campus. It is expected that library resources will continue to meet all needs of the existing and future CTE M.Ed. program.

The new graduate students are encouraged to apply for a UMES Library card which provides them online access to research resources from the UMES library and resource checkout privileges at any UM library in the state. The library cards are sent to the Baltimore Museum of Industry (BMI) office from UMES and then distributed to graduate students. In 2015 -2016, over 120 library cards were distributed to non-degree certification and graduate students at BMI.

J.   Adequacy of physical facilities, infrastructure and instructional equipment (as outlined in COMAR 13B.02.03.13)

The institutional facilities and equipment meet the CTE M.Ed. program needs. The program office and classrooms are housed in the Baltimore Museum of Industry (BMI) historic administrative building on the Inner Harbor in Baltimore, Maryland. Office space includes room for the program director and an administrative assistant as well as a separate storage room for archival files and office supplies. There are four classrooms and one technology lab on campus, each with an instructor computer and LCD projection system:
- Fireplace Room holds approximately thirty and includes a whole group instruction areas and computer lab.
- Basement Technology Lab includes production tools and equipment to support lab and safety content.
- Room 113: Small computer lab with whole group instruction for research classes. Supports classes at ten or less.
- Cole Room: conference rooms supports about ten students maximum.
- Liberty Room: Largest room can hold 40 students.

The BMI office has phone line and high-speed Internet which supports broadband uses like SKYPE and YouTube videos. The office has its' own printer/scanner/copier and has free use of the high speed printer/scanner/copier in the BMI administrative offices upstairs. There is free parking for over 100 vehicles and access to public transportation in Baltimore. The location is just off I-95, making driving access easy for students.

K.   Adequacy of financial resources with documentation (as outlined in COMAR 13B.02.03.14)

Current departmental resources are more than adequate to support the continuation of the M.Ed. CTE degree program in Baltimore. The program application to MHEC is for "substantial modification of curriculum", not financial costs. For every new 600 level course being requested, there will be closing of the same number of courses, leading to a neutral impact on adjunct and room rental costs.

TABLE 1: RESOURCES

Resources Categories	(Year 1)	(Year 2)	(Year 3)	(Year 4)	(Year 5)
1. Reallocated Funds[1]	0	0	0	0	0
2. Tuition/Fee Revenue[2]	82,580	165,160	247,740	330,320	412,900
a. Annual Full-time Revenue of New Students					
Number of Full-time Students	10	20	30	40	50
Annual Tuition Rate	$8,258	$8,258	$8,258	$8,258	$8,258
Subtotal Tuition	$82,580	$165,160	$247,740	$330,320	$412,900
Annual Fees					
Subtotal Fees	$0	$0	$0	$0	$0
Total Full-time Revenue of New Students	$82,580	$165,160	$247,740	$330,320	$412,900
b. Annual Part-time Revenue					
Number of Part-Time Students	0	0	0	0	0
Credit Hour Tuition Rate					
Annual Fees Per Credit Hour					
Annual Credit Hours Per Student					
Subtotal Tuition	$0	$0	$0	$0	$0
Subtotal Fees	$0	$0	$0	$0	$0
Total Part Time Revenue	$0	$0	$0	$0	$0
3. Grants, Contracts & Other Sources[3]	$0	$0	$0	$0	$0
4. Other Sources	$0	$0	$0	$0	$0
TOTAL (Add 1 - 4)	$82,580	$165,160	$247,740	$330,320	$412,900

TABLE 2: EXPENDITURES

1. Total Faculty Expenses	$6,118	$6,118	$6,118	$6,118	$6,118
(b + c below)					
a. #FTE	0.3	0.3	0.3	0.3	0.3
b. Total Salary	4,600	4,600	4,600	4,600	4,600
c. Total Benefits	1,518	1,518	1,518	1,518	1,518
2. Total Administrative Staff Expenses	0	0	0	0	0
(b + c below)					
a. #FTE	0.0	0.0	0.0	0.0	0.0
b. Total Salary	0	0	0	0	0
c. Total Benefits	0	0	0	0	0
3. Total Support Staff Expenses	0	0	0	0	0
(b + c below)					
a. #FTE	0.0	0.0	0.0	0.0	0.0
b. Total Salary	0	0	0	0	0
c. Total Benefits	0	0	0	0	0
4. Equipment	0	0	0	0	0
5. Library	0	500	500	500	500
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses	0	0	0	0	0
TOTAL (1-7)	$6,118	$6,618	$6,618	$6,618	$6,618

L. Adequacy of provisions for evaluation of program (as outlined in COMAR 13B.02.03.15).

The program has rigorous methods of evaluating program courses, faculty, and student learning outcomes. Here is a summary of these evaluation instruments.

Course Evaluation

Students in all classes are encouraged to fill out the online Student Survey of Instruction located in their MyUMES account. The survey has numerous questions pertaining to the course: understanding of goals and instruction, adequacy of resources, and ability to meet needs for certification.

The program director works with the adjuncts to closely monitor any updating of their session instructions, resources and assignments to make sure they are in alignment with state MSDE goals and current research in the field. Class grades are reviewed to determine if the courses need further review and scrutiny. These processes, taken together, ensure that the courses are relevant to the needs of current and future Maryland CTE classroom teachers.

Faculty Evaluation

For the full-time professor who coordinates and teaches many core M.Ed. courses, the faculty evaluation is an ongoing process with set goals, review of the goals and outcomes, student surveys of instruction results, and observation by the Department of Technology chair. The process culminates in an annual detailed discussion between the professor and the department chair.

For the adjunct professors, information is collected from the student surveys of instruction. The mean scores for the classes taught are included on the Adjunct Faculty Semester Evaluation Document. The program coordinator further evaluates the adjuncts on their ability to:
1. Effectively present the appropriate content in the course,
2. Respond in a timely manner to requests for information,
3. Meet assigned class regularly and attend meetings and training sessions, and
4. Integrate technology in class instruction.

Student Learning Outcome Evaluation

In section B-4, the Maryland Program Approval Accreditation indicators were described. Three years of data results are documented for every indicator listed. Student learning outcomes in the program are thoroughly evaluated through this accreditation-driven process.

M. Consistency with the State's minority student achievement goals (as outlined in COMAR 13B.02.03.05 and in the State Plan for Postsecondary Education)

As stated above in the UMES Mission statement, a M.Ed. in Career and Technology Education will expand the UMES mission and institutional identity. The program does expand educational opportunities and choices for minority students by offering a unique degree program in a field where having a rich diversity of cultures in educational leadership positions is important to society

as a whole. As a Historically Black College University (HBCU), these goals are embedded throughout all University of Maryland Eastern Shore's initiatives.

N.   Relationship to low productivity programs identified by the Commission:

None of the programs offered by the Department of Technology at UMES are considered low productivity programs. There is no need for fiscal redistribution to support the program.