

Eastern Michigan University
Vocational Technical Endorsement

January 8, 2008

Endorsement Program Summary

A. Philosophy, rationale, and objectives

The mission of the Eastern Michigan University vocational technical endorsement (VT) is to give candidates specific knowledge about teaching the nature, applications, uses, and consequences of technology in grade 9-12 educational settings. The faculty members engage students in using knowledge and skills to develop their technical teaching abilities, and to increase their ability to teach students to use, manage and understand technology. The vocational technical endorsement is consistent with Eastern Michigan University's College of Education goals that teacher educators produce knowledgeable professionals who are caring, reflective decision-makers in a culturally diverse and technological society.

The vocational technical endorsement consists of 6 vocational curriculum credits along with the required work experience. Candidates who hold a secondary provisional certification, complete the required 6 credits of vocational curriculum development, management of vocational programs, safety and ethical issues, and instruction in work-based learning, and have a minimum of 4,000 hours of employment experience in an approved occupational area, will qualify for a secondary grades 9-12 Vocational Technical (VT) endorsement on the Michigan Secondary Provisional teaching certificate in their qualifying occupational subject area.

Endorsement areas include:

Arts & Communications Pathway:

CIP Code	Endorsement Area
10.0202	Radio and Television Broad. Tech.
10.0301	Graphic Communications
50.0401	Visual Communications Tech.

Engineering, Manufacturing, and Industrial Technology Pathway:

CIP Code	Endorsement Area
15.0607	Plastics Engineering Technology/Tech.
15.1301	Drafting and Design Tech.
46.0000	Construction Trades
47.0101	Electrical/Electronics Equipment Installation & Repair General
47.0603	Collision Repair Technician
47.0604	Automobile Technician
48.0501	Machine Tool Operation/Mach. Shop

The goals of the vocational technical endorsement are:

Candidates for the vocational technical endorsement will produce individuals who can participate in, and adapt to a technological society. Consistent with their abilities, interests, and needs, these candidates will:

1. Acquire general skills and knowledge from areas of liberal arts, science and mathematics which will assist them in studying and solving problems in technology;

2. Develop insight, understanding and skills in the application of technological concepts and systems in a selected occupational area;
3. Develop critical thinking, problem-solving and decision-making abilities involving the application of technical resources and procedures;
4. Acquire pedagogical skills, attitudes and values to be an effective teacher of vocational education, including how to develop, manage, and evaluate those programs and their school laboratories;
5. Develop creative abilities, positive self-concepts and individual potentials through experiences in vocational education; and
6. Utilize specialized technical knowledge to teach students specific technical job skills so as to be able to enter the job market upon completion of high school.

The objectives of the vocational technical endorsement describe specific student outcomes.

Candidates for this endorsement will:

1. Plan and conduct activity-oriented laboratory instruction with 9-12 grade students that reinforce abstract concepts and concrete experiences to provide the “know-how” and “ability-to-do” required for problem solving in technical or trade areas;
2. Provide instruction for male and female students from a wide range of populations, abilities, and needs, including the exceptional learner, the disadvantaged, and those with physical, mental, or emotional handicaps, and bilingual or bicultural backgrounds;
3. Properly select and utilize various forms of educational technology, such as computers and video systems to enhance both individual and group instruction and learning;
4. Demonstrate and teach occupational and environmental safety as required in the laboratory and workplace;
5. Establish support groups for instructional programs, including advisory committees and student associations;
6. Identify program standards, utilize those standards and make appropriate program revisions;
7. Understand the role of vocational education in American education;
8. Describe the larger technological context for all students in trade and industrial areas;
9. Demonstrate in-depth occupational skills and knowledge, and work attitudes required of the specialist in a trade or industrial area;
10. Plan, organize, manage, and evaluate a program of instruction in vocational education; and
11. Plan, organize, and manage an instructional facility especially designed for learning activities in vocational education.

B. Candidates’ Sample Courses of Study

BMMT 200 Principles of Career and Technical Education (3 Credits)

BMMT 363 Curriculum for Career and Technical Education (3 Credits)

*Work Experience (4,000 hours)

*Note: Michigan Occupational Competency Assessment Center (MOCAC) may be taken for partial fulfillment of work experience requirement. Cooperative education work experience credit may also be applied toward the required work experience. Below are the requirements for cooperative education credit:

In order to receive Cooperative Education credit he or she must complete the following steps:

1. Register for a section of a Cooperative Education Class.
2. Apply to the Career Services Center
3. After CSC approval proceed with work schedule
4. Submit an evaluation form completed by student and employer
5. Submit an essay to CSC describing the work experience

Once the Career Services Center has received all completed materials, they notify the professor of record that requirements have been met. Only after the professor of record receives this acknowledgment from CSC does the professor of record award appropriate credit to the student.

The vocational technical endorsement is designed to prepare teacher candidates, holding a secondary provisional certificate, with specialized occupational skills to be effective teachers of their occupational area in 9-12th grade vocational programs. The coursework will require the 6 credits of vocational curriculum development, management of vocational programs, safety and ethical issues, and instruction in work-based learning. Qualification for the vocational technical endorsement also requires that the candidate have completed a minimum of 4,000 hours of employment experience in an occupation that represents their area of qualification for the teaching endorsement. Therefore, this endorsement is well suited to accommodate the interests, knowledge and skills of adults with experience in the work world.

The 6 credits of vocational curriculum development, management of vocational programs, safety and ethical issues, and instruction in work-based learning are covered in the BMMT 200 Principles of Career and Technical Education and BMMT 363 Curriculum for Business Services and Technology, which are required in the endorsement. The BMMT 363 course includes methods of instruction, as well as assessment methods, in a vocational classroom. This course will also include content and experiences related to leadership, technology, work-based learning for students, articulation with schools, resource and equipment management, advisory committee work, and budget management. Other topics of interest will include field experiences for students through working with student groups, and the implementation of lesson plans. As a part of the course instruction, technology will be utilized to assist with student learning. These subject areas are discussed in depth from: using pedagogy and methods of delivery, understanding learning styles, and assessing students according to best practices and content standards. In addition, students participate in class activities relative to the development of behavioral objectives, standards, lesson plans, and rubrics to ensure all aspects of delivering effective instruction and assessment are included in the teacher candidate's portfolio.

The 4,000 hours of work experience requirement must be completed on either a full-time or part-time basis. That experience must be of a "recent and relevant" nature and verified by appropriate documentation. If the candidate lacks work experience toward this endorsement, the candidate may take and pass the appropriate examination through the MOCAC, which will apply the approved amount of work experience toward the endorsement. Any lacking experience not covered by the MOCAC exam will need to be completed through direct industry experience or through Cooperative work experience. The MOCAC examination may NOT count toward both work experience and semester hours.

C. Assessing Students' Work

During the field experience portion of BMMT 200 students are required to prepare a "teacher-centered activity" including lesson plan and at least one follow-up activity to assess students' learning. This "teacher-centered activity and assessment will be delivered in a vocational setting with age relevant students. Then the teacher candidates will also be required to provide feedback to the cooperative teacher and course instructor of how the assessment instrument was developed to assess the activity. In addition, students will also be required to analyze this assessment according to the various learning styles and abilities within the class.

The BMMT 363 course includes methods of instruction, as well as assessment methods, in a vocational classroom. Time will be spent ensuring teacher candidates can develop meaningful Primary Trait Analysis used to create a variety of Rubrics. These rubrics will be used to measure authentic assignments such as: journals, portfolios, projects, and papers. Teacher candidates will also develop a paper-pencil assessment within a module plan.

This course will also include field experiences for students through working with student groups and organizations, and the implementation of lesson plans. As a part of the course instruction, technology will be utilized to assist with students' learning. Teacher candidates will also be required to complete a research paper in the development and assessments of students in a school to work setting. In addition, students are required to complete a "professional development activity." This activity must be directly related to each individual's content area.

D. Field Experience

Within Eastern Michigan University's "Professional Sequence," teacher candidates are required to participate in 100 hours of "pre-student teaching". This requirement is met through some directed and non-directed experiences. Directed experiences for Business, Management, Marketing, and Technology are completed in FETE 201 and FETE 402. The College of Education is responsible for placing students in diverse schools while students are enrolled in these courses. Students are permitted to "self-place" in schools that have been approved by the university for these directed experiences. Students participate in a number of activities within the classroom to develop skills such as: learning one-on-one, teaching in a diverse society, learning in groups (cooperative learning) and assessing students using various methods.

In the "pre-student teaching" associated with BEDU 200 and BEDU 363 is within a vocational setting. Students do self-place and complete the required activities stated earlier. Teacher candidates create and deliver three different lessons: (a) inductive lesson, (b) deductive lesson, and (c) cooperative lesson. Each lesson must be delivered to an active audience and then an "assessment" must be given to evaluate the students' progress. The teacher candidate will prepare an analysis of the assessment. All analyses are shared with the Cooperating Teacher and course instructor. When possible, students will be placed in a vocational setting for student teaching.

E. Program Coursework

Note: The Application for State Approval of Teacher Preparation in Vocational Technical (VT) has been completed, and shows the required BMMT 200 Principles of Career and Technical Education (3 Credits) and the BMMT 363 Curriculum for Career and Technology Education (3 Credits) courses, which address R 390.1161 (1) (a), requiring "a program in vocational teacher education at an institution approved by the state board for the preparation of vocational teachers in the occupational areas of the endorsement."

The vocational technical endorsement is designed to prepare teacher candidates, holding a secondary provisional certificate to be effective teachers of their occupational area in 9-12th grade vocational programs. The vocational technical endorsement also requires that the candidate have completed a minimum of 4,000 hours of employment experience in an occupation that represents their area of qualification for the teaching endorsement. Therefore, this endorsement is well suited to accommodate the interests, knowledge and skills of adults with experience in the work world.

The Michigan Occupational Competency Assessment Center (MOCAC) may be taken for partial fulfillment of the work experience requirement, and will be used as chosen by the student. Cooperative education work experience credit may also be applied toward the required work experience.

Within the candidates' major are the two career and technology education required courses (6 credits hours) for vocational endorsements across all career fields. Included within these required courses (BMMT 200 and BMMT 363) are topic areas such as: vocational curriculum development, management of vocational programs, safety and ethical issues, and instruction in work-based learning. These subject areas are discussed in depth from: using pedagogy and methods of delivery, understanding learning styles, and assessing students according to best practices and content standards. In addition, students participate in class activities relative to the development of behavioral objectives, standards, lesson plans, and rubrics to ensure all aspects of delivering effective instruction and assessment are included in the teacher candidate's portfolio. This course will also include content and experiences related to leadership, technology, work-based learning for students, articulation with schools, resource and equipment management, advisory committee work, and budget management.

Syllabi

See appendix