

MOREHEAD STATE UNIVERSITY PROGRAM REVIEW

TECHNOLOGY EDUCATION: Grades 5-12 BS

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I. Conceptual Framework

A. Statement of Conceptual Framework

The Bachelor of Science in Industrial Education is intended to prepare teachers to facilitate learning. In doing so, students take courses related to design and planning; teaching, learning, and

curriculum development; instructional technology; skill development in particular areas; implementation, management, and evaluation of instruction. For Option I—Orientation/Exploration (grades 5-12) certification in technology education, students must also have the equivalency of 1,000 clock hours of industrially related work experience. Because teachers of Technology Education must facilitate learning where the solutions of practical problems are paramount and in many cases require some level of creativity, the program allows students to develop creative and higher-order thinking skills grounded in authentic scenarios. While many requirements in the field of industrial technology require students to follow certain processes and procedures, many other problems can be encountered where the solutions to these problems may require new approaches. In lieu of this paradigm, the program uses behavioral, cognitive, and constructive epistemologies to prepare teachers to engage their own students in creative, authentic, real-world experiences, and assignments.

Because technology is indeed a global phenomenon and the solution of problems in this area are seldom isolated cases, the program allows students to develop social, psychological, and managerial skills inherent in Kentucky's 14 career clusters which link postsecondary degrees, diplomas, and occupations that enhance success when working in groups. Group dynamics in problem-solving scenarios are especially important; therefore many of the classes that students take require students to work on projects in group settings.

Finally, students must continually learn in order to stay abreast of technological innovations that are occurring at a rapid rate. The program allows for opportunities in learning for life through required courses, self-interest courses, electives, and practical living.

B. Relationship to the Conceptual Framework

This program is integrated into the conceptual schema provided by the College of Education's overarching framework of the *Educator as Architect: Designing environments where students construct knowledge and develop skills* (<http://www.msucOE.org/>). The conceptual framework helps to formulate the vision of a program and clarifies how that vision is manifested in 1) the goals of the unit, 2) the foundation of knowledge, skills, and dispositions that underlie student learning, 3) and the methods and systems created to implement and assess all aspects of each program. The conceptual framework for the teacher education program in Industrial Education (IE) is expressed in section A above. The remainder of this section will show the relationship between the goals, foundations, and assessments and the conceptual framework of the IE program as it relates to the College of Education's overarching framework of the educator as architect. The following specific examples of changes for this year's NCATE Review are expressed by the College of Education.

- We have more clearly articulated how the "educator as architect" theme expresses a constructivist theory of learning and how that theory is integrated throughout the program.
- Student dispositions have been articulated and a system for monitoring and assessing these has been approved. NCATE 2000 mandates the articulation and the assessment of dispositions.
- There has been an initiative to integrate modern technologies into teacher/educator programs. Technology has been infused across the curriculum to prepare faculty and pre-professional students to effectively implement technology to improve teaching and learning and to prepare students to fulfill Kentucky Education Reform and standards.
- There has been a campus-wide initiative to incorporate best instructional practices in all courses.

Our global community is in a time of accelerating interdependence of technology and modern life. We have a corresponding desire and need to understand technology systems and how they impact individuals and society. The Department of Industrial Education and Technology (IET) has a vision to satisfy that desire and need - to be an educational leader in Technology Education committed to the lifelong learning and

professional needs of MSU constituents within its 22 county service region. The department adopts and extends the work of the College of Education through the revised conceptual framework statement:

Conceptual Framework Theme--Educators as Architects: Designing environments where students construct knowledge and develop skills.

Faculty in the Department of Industrial Education and Technology believe that students learn best when presented with environments that allow them to use their preferred styles to acquire knowledge, skills, and problem-solving abilities. In addition, faculty also believe that behaviorist, cognitivist, and constructivist epistemologies all play important roles in facilitating this multi-approach to optimizing such an environment. The focus of the department is to prepare teachers who will use multiple approaches to transfer knowledge to their students who can then function in the classroom or enter higher education with the abilities to become successful.

We engage our diverse Industrial Education and Technology department in the study of technology to cultivate and expand students' potential. Through collaborative efforts, we strive to develop teachers and professional leaders who are technically competent, innovative in problem solving, and skillful in management of personnel and facilities.

C. Goals of the Department

- To prepare exemplary problem-solvers for professional leadership roles through academic and field-based experiences;

Conceptual Framework experiences:

Providing students with direct experiences; so that they can use and process information while seeking solutions

Placing students in authentic or "real" world settings so that learning has the potential to be meaningful

Encouraging faculty and public school practitioners to fulfill the role of facilitators of learning by constructing experiences in environments that stimulate students and provoke thought, action, and reflection

- To provide and support an environment conducive to research and development and the dissemination of technological knowledge and innovation;

Conceptual Framework experiences:

Monitoring the extent to which each educator preparation program fulfills its goals and commitment to preparing graduates to demonstrate performance standards, as well as the system each uses to produce positive change

Encouraging faculty and students to note and apply scientific thinking to real life problems that exist in education in order to increase instructional productivity and to produce information to disseminate to others to inform their practice

Assessing students and faculty using a variety of quantitative and qualitative measures, including authentic performance-based projects and action research

- To provide professional development and service opportunities to meet society's ever changing technological needs;

Conceptual Framework experiences:

The preparation of pre-professionals and faculty who are able to effectively integrate technology into all aspects of the educational process in order to improve communication, teaching, learning, and assessment

Encouraging faculty and students to note and apply scientific thinking to real life problems that exist in education in order to increase instructional productivity and to produce information to disseminate to others to inform their practice

We believe that the mission and goals will provide the guidance necessary for our curriculum, outreach, and growth initiatives in the department. The IET Department will continue to improve and grow in order to accomplish its primary mission of serving citizens of the University's service region through developing competent teachers and industrial technologists that are the key to economic development and effective use of resources in MSU's service region.

D. Kentucky New Teacher Standards

Central to the developmental process is mastery of the Kentucky New Teacher Standards that call on teachers to proficiently: (1) design and plan instruction; (2) create and maintain a learning climate; (3) implement and manage instruction; (4) assess and communicate learning results; (5) reflect on and evaluate teaching and learning; (6) collaborate with colleague, parents and others; (7) engage in on-going professional development; 8) possess knowledge of content; 9) Demonstrates the Implementation of Technology. (http://www.kde.state.ky.us/otec/epsb/standards/new_teach_stds.asp).

To perform these complex, interrelated functions, a range of knowledge and experiences are required. These have been grouped in the following five domains:

1. General education, providing a broad background in general and liberal arts;
2. Academic specialties, developing an in-depth understanding of one or more specialty areas including the structure of the discipline;
3. Psychological, philosophical, and social foundations, understanding of the foundations of education;
4. Pedagogical knowledge and skills; integration of the knowledge base on validated best practices in education, and utilization of this knowledge to day-to-day classroom situations; and
5. Clinical experiences, application and refinement of effective pedagogical skills in a variety of instructional settings.

E. Professional Education Core Relationship to the Conceptual Framework

The professional education core is required for all Technology Education 5-12 candidates. The content, course experiences, and external experiences are linked to the conceptual framework and its theme "Educators as Architects: Designing Environments Where Students Construct

Knowledge and Develop Skills” in several scenarios. The core courses are designed to prepare students with the knowledge, skills, and dispositions that are essential for new teachers. At every opportunity students are engaged in authentic learning experiences where problem solving, application, and practice are important goals of the program.

The use of technology to enhance learning is integrated throughout the Professional Development Core. The intent is to challenge candidates to use a variety of technological resources effectively as part of the planning, teaching, assessment, and communication aspects of teaching.

Students need to reflect upon their philosophies, knowledge, and skill to enhance their readiness to enter the field. This is in line with constructing their own knowledge—a major belief of the constructivist movement. This skill is introduced in the Professional Core, crystallized in the academic discipline, and embedded in the student teaching semester. MSU student teacher supervisors, as well as teachers from the public school, add to the candidates’ ability to identify meaningful professional activities.

Collaboration is an important component for success as a teacher. The concept of **collaboration** is introduced early in the Professional Development Core and the ability to effectively collaborate is required during the student teaching experience.

Sequence of Components in the Program

	Freshman		Sophomore		Junior		Senior	
General Education								CAPSTONE
Academic Specialties								
Foundations of Education								
Pedagogical Knowledge & Skills								
Clinical Experiences								

II. Program Experiences

Graduates of this program will demonstrate mastery of the Kentucky New Teacher Standards and meet the NCATE standards incorporated in the Standards for Career and Technical Education. Graduates of this program will need to teach orientation to and exploration of the various occupations represented by the program. Therefore, the relationship between Teacher Education Standards and Professional Courses in Industrial Education are shown below. **Matrix 2** outlines the program's continuum of skill development on each standard in relationship to the courses required in this program. **Matrix 3** outlines the relationships of the Technology Education **ITEA/CTTE** Content Standards and **Matrix 4** depicts courses that reflect the incorporation of KERA initiatives and NCATE themes to courses in the Orientation/Exploration Option.

MATRIX 1: RELATIONSHIP OF TEACHER EDUCATION STANDARDS TO PROFESSIONAL COURSES IN OPTION I ORIENTATION/EXPLORATION GRADES 5-

12

Industrial Education TEACHER STANDARDS	IET 388	IET 470	EDE M 330	EDS P 332	VOC 207	EDF 211	EDF 311	IET 392	IET 478
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Professional	I	K			K,I			K,S	K,S
Program Planning, Development & Management	K,I	K,I			I	I	I		K
Curriculum, Instruction, & Assessment	I	K,I	K	K		I	K,S	K,S	K,S
Student Organizations		K,I			I				S
Work-Based Learning	K,I	K			I				K
Life-Long Learning	I	K,I							K
Special Populations	K,I	K	I	I		I	I	I,K	K

Courses cover the indicated competency areas at the following levels:
 I Information, establish initial level of awareness, K Knowledge, gain intellectual control over relevant content and skill
 S Skill, transfers information to demonstrated consistent performance

IATRIX 2: Courses and New Teacher Standards for Certification in Technology Education Grades 5-12

COURSES	NEW TEACHER STANDARDS:																										
	I			II			III			IV			V			VI			VII			VIII			IX		
	I	K	S	I	K	S	I	K	S	I	K	S	I	K	S	I	K	S	I	K	S	I	K	S	I	K	S
VOC 207	T				T			T									T			T							
IET 388	T	T	T	T			T			T			T	T		T	T	T	T	T	T	T	T	T	T	T	T
IET 392	T	T	T	T			T			T			T			T			T			T	T	T	T	T	T
IET 470	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
IET 478	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
FDFM 330	T		T							T							T			T					T		
EDF 211	T		T	T	T	T	T	T	T	T	T	T	T		T		T	T	T		T						
EDF 311	T		T		T	T		T	T	T	T	T		T			T	T		T							
EDSP 332	T		T		T	T		T	T		T	T		T			T	T					T			T	

Courses cover the indicated competency areas at the following levels:
 I Information, establish initial level of awareness, K Knowledge, gain intellectual control over relevant content and skill
 S Skill, transfers information to demonstrated consistent performance

(Kentucky) New Teacher Standards

1. Designs/Plans Instruction
2. Creates and Maintains Learning Climates
3. Implements/Manages Instruction
4. Assesses and Communicates Learning Results
5. Reflects/Evaluates Teaching/Learning
6. Collaborates with Colleagues/Parents/Others

7. Engages in Professional Development
8. Knowledge of Content
9. Demonstrates Implementation of Technology

MATRIX 3: Relationship of Career/Technical (ITEA/CTTE) Teacher Education Content Standards to Courses in the Industrial Education Orientation/Exploration Program Option I Grades 5-12

International Technology Education Association/
Council on Technology Teacher Education

Program Standards	Evidence: Performance Data, Experiences, and Courses.
1.0 Develop a philosophy informed by current research findings in technology education, curriculum and instructional design, assessment, and professional development.	
1.1 Design programs based on a sound mission statement with stated goals and objectives that reflect the definition and intent of technology education.	See Vision Statement Appendix D See University catalog page 158 (2002-2003) IET 388
1.2 Use an organized set of concepts, processes and systems that are technological when designing course outlines, instructional strategies, and evaluations of student work.	IET 388, 392, 470, 478
2.0 Possess the necessary depth and breadth in mathematics, science, and related disciplines to be able to successfully teach technology education.	MATH 152
3.0 Master teaching and technical skills appropriate to successfully teach the study of technology.	
3.1 Possess knowledge about the development of technology, its effects on people, the environment and culture; and industry, its organization, personnel systems, techniques resources and products; and their impact on society and culture.	IET 120, 300
3.2 Use instructional content from the content organizers of:	
3.2.1 Communication: efficient use of resources to transfer information to extend human potential.	ENG 100, 200, CMSP 108, CIS 101, IET 499c
3.2.2 Construction: efficient use of resources to build structures or construct on site structures.	CON 101, IET 111, PHYS 201, MFT 186, 286

Program Standards	Evidence: Performance Data, Experiences, and Courses.
3.2.3 Manufacturing: efficient use of resources to extract and convert raw/recycled materials into industrial and consumer goods.	MFT 186, 286, CON 111, IET 111
3.2.4 Transportation: efficiently using resources to obtain time and to attain and maintain direct physical contact and exchange among individuals and societal units through the movement of material/goods and people.	IET 120, 160
3.3 Identify and incorporate safe and efficient use of contemporary technological tools, instruments, and machines into a program of study.	IET 422, 496, 470
3.4 Incorporate insight, knowledge, and applications of technological concepts, processes and systems into a teaching program.	IET 120, 300, 496, 470
3.5 Use skills, creative abilities, positive self-concepts, and individual potentials in teaching technology.	IET 470, 478
3.6 Apply problem-solving and creative abilities involving human and material resources, processes, and technological systems.	IET 120, 499c, 478
3.7 Use activity-oriented laboratory instruction that reinforces abstract concepts through concrete experiences.	Of the 26 courses listed in the catalog for this program, all but 3 or 4 of the technology courses require lab.
3.8 Apply technology to the design and production of activities for student use.	IET 392, 388, 470, 478
3.9 Develop technology education programs that advance student attitudes, knowledge, and skills regarding how technological systems function.	IET 120, 300
3.10 Develop the ability of the students to apply technological knowledge and skills, and to assess new or different past-present-future technology systems.	Technical courses in the dept, including IET 120, 300, 499c
4.0 Perform the following tasks in developing, managing, and evaluating a technology program in schools.	
4.1 Display a philosophy and understanding of technology education.	VOC 207, IET 388, 478, 470

Program Standards	Evidence: Performance Data, Experiences, and Courses.
4.2 Develop a strategic program plan that includes a mission statement, rationale for change, goals and objectives, action steps, as well as a program evaluation strategy.	IET 388
4.3 Select content based on the goals and objectives appropriate to the content organizers (construction, manufacturing, communication, bio-related, transportation, or other organizers) of technology.	IET 388
4.4 Structure an educational environment in the classroom and laboratory to advance the instructional process.	IET 470, 478, 496
4.5 Select appropriate instructional technologies to effectively teach all student populations.	IET 392, 470, 478
4.6 Provide for laboratory management (i.e., safety, inventory, filing, requisitioning equipment and materials, maintenance, budgeting).	IET 422, 496
4.7 Develop lesson plans, organize material, and select appropriate instructional strategies to effectively teach in the psychomotor, affective, and cognitive domains of learning.	IET 470, 478
4.8 Establish clear expectations for student conduct and develop and implement a behavior management policy program.	IET 470, 478
4.9 Be able to establish a technology student association within the technology education program, in a public school or in a university, to include organization, establishing a chapter, assisting in its management and evaluation.	The Industrial Education & Technical Department (IET) has helped establish the Eastern Ky. Tech. Educ. Assoc. (EKTEA) and is affiliated with the Kentucky Applied Technology Education Assoc. (KATEA). The dept. also supports the Tech, Student Assoc. (TSA) by holding a regional review each year.
4.10 Promote and articulate technology education to internal and external public audiences.	EKTEA, TSA, IET Advisory Board
4.11 Be able to develop and coordinate an external advisory committee for a Technology Education program.	The dept. has established an advisory board and has a representative from the state dept. AND has placed a listserv online for communication improvement at ietadvisoryboard@moreheadstate.edu
4.12 Design a professional development plan for continued personal and professional growth.	The dept. has used a PDP for years.

Program Standards	Evidence: Performance Data, Experiences, and Courses.
4.13 Use standards to evaluate and revise a technology education program. Identify standards for the program, establish a process for using the standards, and utilize findings for subsequent program revisions.	International Technical Education Association (ITEA)/Council on Technology Teacher Education (CTTE) standards, National Association of Industrial Technology (NAIT) standards, Kentucky New Teacher Standards
5.0 Develop attitudes, knowledge, and skills needed for success as a teacher in technology education.	
5.1 Possess knowledge to organize classroom and laboratory experiences for the study of technology.	IET 496, 470, 478
5.2 Manage technological activities in both an individual and group setting.	Many of the courses within the dept. use both group and individual activities to accomplish intended outcomes
5.3 Apply multicultural and global perspectives as they relate to the study of technology.	IET 120, 300
5.4 Apply values and ethics as they relate to content issues in the study of technology.	IET 300

Clinical And Field Experiences

Field experiences are designed to provide candidates with opportunities to develop knowledge, skills, and dispositions in real life settings to help them become effective professionals in education. From the epistemology of a constructivist paradigm, what better experiences could a student have that uses a practical, real-life setting? During these experiences, candidates may observe, analyze, and practice a variety of planning/teaching/learning techniques, as well as locate and use essential professional resources: 1) Learner Goals and Academic Expectations; 2) Appropriate Programs of Studies; and 3) Core Content for Assessment. Most courses have students reflect upon these experiences as part of their regular course requirements.

The student's professional semester is the culminating field experience. A department faculty member works closely with a cooperating teacher in a public school to ensure that each candidate is progressing at an acceptable level. Observations, dialogue, and portfolio artifacts are used to evaluate student performance.

FIELD AND CLINICAL EXPERIENCES

Level	Courses	Hours Required	Expected Outcomes	Hour Breakdown
I	CTE (VOC) 207	16	General Observation Participation	12 4
I	EDF 211	16	Diversity Exceptionality	4 12

I	EDF 311	16	Support Roles Management, Grading, etc. Individual Tutoring	12 4
				Total 48
II	EDEM 330	15	Observation Participation	10 5
II	EDSP 332	10	Observations Exceptionality One-on-one	5 5
				Total 25
III	IET 392	20	Observations Teaching	8 12
III	IET 388	20	Observations Planning	12 8
III	IET 496	20	Observations Planning	12 8
				Total 60
IV	IET 470	10	Observations	10
				Total 16

III. A. NCATE THEMES AND KERA INITIATIVES

MATRIX 4: Relationship of Kentucky Education Reform Act (KERA) Initiatives and National Council for the Accreditation of Teacher Education (NCATE) Themes to Courses in the Industrial Education Orientation/Exploration Program Technology Education Grades 5-12 Option I

	IET 388	IET 470	EDEM 330	EDSP 332	VOC 207	EDF 211	EDF 311	IET 392	IET 478
KERA Initiatives	1,2	1,3		1	1,2	1	1	1	1,2,3
NCATE Themes	1,2,3 4,5,6 7	1,2,3 4,5,6, 7	1,2,3	1,2,3, 4	1,2,3	1,2,3	1,2,3	1,2,3 4	1,2,3 4,5,6 7

NCATE Themes

1. Conceptual Framework
2. Diversity
3. Intellectual Vitality
4. Technology
5. Professional Community
6. Performance Assessment
7. Evaluation

KERA Initiatives

1. Learner Goals
2. Program of Studies, P-12
3. Core Content for Assessment/CATS

III. B. PROFESSIONAL EDUCATION COURSE LINKS TO NCATE THEMES

Courses	Conceptual Framework	Diversity	Intellectual Vitality	Technology	Professional Community	Evaluation	Performance Assessment
EDF 211	I	D	I	I	I	I	I
EDF 311	D	D	D	D	D	D	D
EDSP 332	D	D	I	I	D	I	D
EDEM 330	D	D	S	D	I	D	D

IV. Assessment

Assessment is an integral part of the Industrial Education program. Each semester the members of the department assess students, faculty, and the program to help determine: 1) student competencies to become effective teachers; 2) faculty effectiveness as architects in this effort; 3) whether feedback is necessary to develop professional needs; and 4) feedback needed for program refinement. The Annual Unit Plan and Assessment Report has three major sections—I. Annual Planning Report for Academic Year 2001-2002; II. Review of the Unit Plan; and III. Annual Assessment Record. Section III can be viewed in its entirety in Appendix A. This section of this report contains highlights from student and program assessment respectively and shows how assessment is linked to the theme “Educators as Architects”.

A. Candidate Assessment.

This program continually assesses both the knowledge base in the field of Industrial Education and the New Teacher Performance Standards. This program ties practical experience in diverse settings to a strong knowledge base in Industrial Technology. Most of the courses beyond the general education requirements include a field/clinical experience that enables the instructors to use varied assessment techniques in addition to the traditional classroom procedures.

The chart of on-going assessment indicates the varied methods used to implement authentic assessment with students in the Industrial Education program. In addition, students in Option I must take the Praxis exam and the graduate exit exam administered by the department.

Even though most courses have field/clinical experiences, the culminating events will occur in two courses: Seminar and Student Teaching Practicum. Both of these courses will provide major components of the portfolio. The combination of classroom and field experience provides a valuable opportunity to conduct authentic assessment of the student's mastery of program objectives. Specifically, as they progress through the program, students are required to develop a set of interrelated portfolios that will culminate in the New Teacher Portfolio developed during student teaching. As part of their course work, students will produce the following portfolios documenting their developing mastery of the New Teacher Standards:

1. Professional Portfolio Development
2. Curriculum and Instructional Design
3. Teacher Education Program Portfolio
4. Preservice Teacher Portfolio

5. Digital Portfolio as Evidence of Effective Integration of Technology

An additional assessment operating on a “trial” basis at this time is the assessment of a student's disposition for a career in teaching. Disposition, as used in this context, includes the attitudes and values that may cause a teacher candidate to act in a certain way. Recently the Teacher Education Council approved a process for encouraging and continuously assessing eight specific dispositions: 1) passionate about learning; 2) enthusiastic about teaching; 3) committed to teaching responsibilities; 4) self-reflective; 5) hard working; 6) resourceful problem solvers; 7) sensitive to individual differences; and 8) able to establish rapport.

Students must also complete certain requirements as they progress through their professional career. The following table depicts those milestones through these points of transition.

UNDERGRADUATE TEACHER EDUCATION CANDIDATE TRANSITION POINTS

Transition Point	Assessment Data	Decision Maker(s)	Outcome
1) Admission to TEP	<ul style="list-style-type: none"> • ACT, PPST, or GRE Score(s) • Writing Sample Score • Recommendation Forms Initial Dispositions • Overall GPA (2.5) • Successful completion ENG 100, 200, PSY 154, CMAP 1018, EDF 207, and EDF 211 • Department Interview Results 	<ul style="list-style-type: none"> • Teacher Education Council 	<ul style="list-style-type: none"> • Department/Program Committee recommends students for admission to Program. • Director of Educational Service Unit compiles lists from each program and presents whole list to Teacher Education Council • Teacher Education Council approves or does not approve recommendation made and students informed in writing of admission recommendation
2) Prior to Student Teaching	<ul style="list-style-type: none"> • GPA (2.5), in all areas • Completion of Required Coursework • Completion of required PRAXIS Exam(s) 	<ul style="list-style-type: none"> • Director of Educational Services Unit (DESU) 	<ul style="list-style-type: none"> • Eligible or not eligible for Enrollment in Student Teaching and Placement in Public School (Candidates informed in writing, by DESU. When ineligible, deficiencies described in writing)
3) Student Teaching Evaluation	<ul style="list-style-type: none"> • KTIP or Other Observation Feedback • Portfolio documents which address each New Teacher Standard 	<ul style="list-style-type: none"> • MSU Supervisor • Cooperating Teacher 	<ul style="list-style-type: none"> • Successful completion of Student Teaching and Capstone
4) Program Completion	<ul style="list-style-type: none"> • Fulfilled all program requirements Transcript • Fulfilled all certification eligibility requirements 	<ul style="list-style-type: none"> • Office of the Registrar • Certification Officer (ESU) tracks and recommends to state • State 	<ul style="list-style-type: none"> • Eligible for graduation, diploma, informed in writing if ineligible for graduation. • Notified, in writing, (at last meeting of 499c classes) of any deficiencies that need to be handled to be recommended for certification. • Letter of eligibility stating certification area(s)

B. Program Assessment.

Program quality is monitored annually through a university-designed system that uses Nichol's Five Column Method of Program Evaluation. The Industrial Education assessment plan: 1) identifies explicit links with the university's vision, mission, and goals; 2) states explicit links to program goals; 3) articulates assessment measures and criteria for acceptable levels of performance; 4) includes actual performance data used to determine if

performance fulfills the stated criteria; and 5) addresses needs and methods for change, where appropriate, to improve performance.

In an effort to insure quality teachers in the area of Technology Education, it is essential to obtain feedback from the students, professors, and professionals in the field. The focus on students as part of program assessment is consistent with the constructivist paradigm. Through involving students in real learning scenarios and following up with interviews, observations, reflections, and questionnaires, members can decide what work most accurately reflects program success. Data used to document student performance is included in the annual report. This report is submitted to the Dean of the college and the Provost of the University.

In addition, all cooperating teachers with student teachers assigned to them will be asked to complete the evaluation instrument found in Appendix B. This mechanism allows faculty to quickly identify areas of program weakness. **Program assessment procedures include:**

Exit examinations

Survey of graduating seniors

Randomly administered survey of alumni.