REVIEWER-EVALUATOR ASSESSMENT INSTRUMENT
ITEA-CTTE-NCATE GUIDELINES
CURRICULUM GUIDELINES
Initial Program in Technology Education

INSTITUTION BEING EVALUATED:
Virginia Polytechnic Institute and State University (Virginia Tech)

DEGREE LEVEL(S) Undergraduate_ INITIAL UNDERGRADUATE

REVIEWER-EVALUATOR:
Name: CTTE Team Summary Review

Signature:

Date of Evaluation: 4/27/02

DIRECTIONS: indicate whether the program has **MET** or EXCELLED, - **MET WITH STIPULATION** (CONDITIONS,) – **NOT MET** the guidelines for compliance by using these three ratings.

I. OVERVIEW AND SCOPE
The overview and scope of the program are presented in clear and concise narrative and graphical form as required. This section contains the following items: (1.0 thru 10.0)

Guideline Category	**Evidence Submitted by Program**	**Evaluation & Recommendations**
(1) Mission, goals and objectives	The mission, goals and objectives were well-stated, clear and concise. Identified on p. 3.	**met**
(2) Student's courses of studies with all required courses clearly marked, including exact course and sequence taken by semester.	Discrepancies between the course checklist and the academic courses required on pp. 4, 5, and 6. (For example, EDVT2425 and EDVT2426 do not appear in on the list on pp. 4-5, but both are p. 6.)	**met/stipulations**
(3) Descriptions of field experiences, student teaching and internships (must be a technology education program). Include the amount of time and the type of supervision.	Identified on pp. 6-7.	**met**
(4) Explanation of how the program may deviate from	Identified on p. 7	**met**

the guidelines		
(5) Descriptions of where the program is located within the professional education unit and its interrelationships with other programs in the unit and the university/college.	Identified on p. 8	**met**
(6) List of faculty with primary assignments in the technology education programs. Provide rank, responsibilities, and a tenure status. (Don't send vitae.)	Clearly, a well-qualified faculty. Identified on page 9.	**met**
(7) Number of graduates from the basic program over the past three years.	Identified on p. 9	**met**
(8) Description of program funding	Funding is adequate. Identified on page 10.	**met**
(9) Description of program facilities	Identified on p. 10	**met**
(10) The state certification/ Licensure requirements for technology education.	Identified on pp. 11-12	**met**

II. Matrix/ Matrices

There are five sections to the Matrix. The form shown below is designed to provide guidance for those teams that are reviewing folios. This section contains the following items: (1.0- 5.4). See the document entitled "*The Preparation of Curriculum Folios in Technology Education"* for examples of the type of evidence that needs to be submitted.

Guideline Category	**Evidence Submitted by Program**	**Evaluation & Recommendations**
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.	The mission, goals and objectives adequately represent the field of technology education	**met**

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.	The course titles, objectives and course content identified present an organized set of concepts that should adequately prepare one to enter the field.	**met**
2.0 Possess the necessary depth and breadth in mathematics, science, and related disciplines to be able to successfully teach technology education.	Listed courses appear to be appropriate, but the reviewer could not locate specific information about mathematics and science courses in the folio. Show course descriptions.	**met/stipulations**
3.0 Master teaching and technical skills appropriate to successfully teach the study of technology.		
3.1 Posses knowledge about the development of technology; its effects on people, the environment and culture; and industry, its organization, personal systems, techniques resources and their impact on society culture.	The courses cited appear to focus primarily on technical content rather than on this criterion. Additional emphasis on the social/cultural interface with technology should be structured into the program. It is suggested that a course in technology and culture be incorporated into the curriculum.	**met/stipulations**
3.2 Apply instructional content from the following content organizers:		
3.2.1 Communication: efficient use of resources to transfer information to extend human potential.	Met through EDVT 4444 and other graphic communication courses in the program	**met**
3.2.2 Construction: efficient use of resources to build structures or construct on site structures.	Met through EDVT 3484. EDVT 4464 was also listed as evidence; however there was little evidence that this course contributed substantially to the guideline.	**met**

3.2.3 Manufacturing: efficient use of resources to extract and convert raw/recycled materials into industrial and consumer goods.	Although the courses listed do cover some of the more traditional concepts of manufacturing, there is little evidence that some of the more contemporary concepts of manufacturing are being addressed in the program.	**met/stipulations**
3.2.4 Transportation: efficient use of resources to attain and maintain direct physical contact and exchange among individuals and units through the movement of material/goods and people.	Met through EDVT 3464 course objectives and learning activities.	**met**
3.3 Identify and incorporate safe and efficient use of contemporary technological tools, instruments, and machines into a program of study.	Met through objectives in EDVT 2425 and EDVT 2426, although neither of these courses included corresponding course content to support these objectives. It is suggested that the program develop course content to support these objectives or illustrate where these objectives are being met.	**met/stipulations**
3.4 Incorporate insight, knowledge, and applications of technological concepts, processes and systems into a teaching program.	Met through course objectives and course outline in EDVT 2604, 3464 and student teaching.	**met**
3.5 Use skills, creative abilities, positive self-concepts, and individual potentials in teaching technology.	Met through course objectives and course outline in EDVT 4414, 4424 and student teaching.	**met**
3.6 Apply problem-solving and creative abilities involving human and material resources, processes, and technological systems.	Met through course objectives and course outline in EDVT 2604, 2426, 3454 and 3464.	**met**
3.7 Use activity-oriented laboratory instruction that reinforces abstract concepts through concrete experiences.	Met through course objectives, course outline and course activities in EDVT 1405, 1406, 2426, 2604, 3454 and other activities.	**met**

3.8 Apply technology to the design and production of activities for student use.	Met through course objectives, course outline and course activities in EDVT 2426, 3454, 3484, 4414 and other coursework.	**met**
3.9 Develop technology education programs that advance student attitudes, knowledge, and skills regarding how technological systems function.	Although several courses were listed as evidence, the only course that truly meets this guideline is EDVT 4424 and student teaching.	**met**
3.10 Develop the ability of students to apply technological knowledge and skills, and to assess new or different past-present-future technology systems.	Syllabi contain numerous examples of applications, However, little evidence is provided concentrating on developing students' abilities to assess past, present, and future technologies. Although several courses were listed as evidence, this guideline is only marginally met through one item on the course outline in EDVT 4414 and perhaps (although not clearly identified) in the course outline for EDVT 4446. The program needs to address this objective guideline in a more concrete way within the curriculum.	**met/stipulations**
4.0 Perform the following tasks in developing, managing and evaluating a technology program in schools.		
4.1 Display a philosophy and knowledge of technology education.	Although several courses were listed as evidence, the only course that truly appears to meet this guideline is EDVT 3754.	**met**
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.	Additional focus should be placed on preparing students to conduct solid strategic program planning and evaluation activities. As reported, the current planning emphasis appears to be focused more at the course level. Evidence is needed to indicate that students are being prepared	**not met**

	to conduct strategic level program planning.	
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.	Met through course objectives, course outline and course activities in EDVT 3454, 3484, 4414, 4424 and other coursework. There was little evidence, however, to indicate that the concentrations of transportation, or bio-related technologies are being addressed. Perhaps these are addressed in 4414.	**met**
4.4 Manage an educational environment in the classroom and laboratory to advance the instructional process.	Met through course objectives, course outline and course activities in EDVT 4414, 4424 and student teaching.	**met**
4.5 Select appropriate instructional technologies to effectively teach all student populations.	Given the importance of this area, additional emphasis could appropriately be given to such items as simulation, distance education, computer modeling, PowerPoint development, the use of modules, etc. (particularly in EDVT 4414). Additional emphasis on developing student abilities in the use of contemporary instructional technologies is needed.	**met/stipulations**
4.6 Provide for laboratory management (i.e., safety, inventory, filing, maintenance, requisitioning equipment and material, budgeting).	Met through course objectives, course outline and course activities in EDVT 4414 and 4464. However, documentation of safety instruction within all courses should received additional emphasis.	**met**
4.7 Develop lesson plans, organize material, and select appropriate instructional strategies to teach in the psychomotor, affective, and cognitive domains of learning in technology.	Met through course objectives, course outline and course activities in EDVT 4414, 4424, 4434, and 4446.	**met**

4.8 Establish clear expectations for student conduct and develop and implement a behavior management policy program.	Met through course objectives, course outline and course activities in EDVT 4464. Although objective #6 in 4424 is cited as evidence, objective #6 does not exist on the course syllabus.	**met**
4.9 Be able to establish a technology student association within the technology education program in a public school or in a university organization, including establishing a chapter, and assisting in management and evaluation.	Although the program has an active collegiate student association (TECA), specific course content needs to be added to provide pre-service students with the knowledge and attitudes necessary to develop a secondary-level student association (i.e. TSA) after graduation.	**not met**
4.10 Promote and articulate technology education to internal and external public audiences.	Given the critical importance of preparing students to interpret and market their programs to principals, superintendents, school boards, parents and other constituencies, additional emphasis should be given to this standard.	**not met**
4.11 Be able to develop and coordinate an external advisory committee for a technology education program.	Although this was identified as one area in which the program deviates from the guidelines, the guidelines never the less specify that this standard needs to be addressed. This may be particularly important to students who choose to teach in states other than Virginia.	**not met**
4.12 Design a professional development plan for continues personal and professional growth.	Addressed in course outline and activities in EDVT 4414. Additional emphasis should be placed on this criterion through additional course activities and student experiences.	**met/stipulations**
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	Met through course objectives, course outline and course activities in EDVT 4414 and 4424.	**met**

for subsequent program revisions.		
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.	Met through course objectives, course outline and course activities in EDVT 4414, 4424 and other student teaching.	**met**
5.2 Manage technological activities in both an individual and group setting.	Met through course objectives, course outline and course activities in EDVT 3754, 4414, 4424 and student teaching.	**met**
5.3 Apply multicultural and global perspectives as they relate to the study of technology.	Met through course outline and course activities in EDVT 4424.	**met**
5.4 Apply values and ethics as they relate to content issues in the study of technology.	Additional emphasis should be placed on this criterion in both professional and technical courses. Additional emphasis should be given to preparing students to teach concepts such as tradeoffs, bio-medical/ethical factors, unintended consequences, etc. This could be included in a course like technology and culture as well as embedded in technical courses.	**met/stipulations**

Team Review___**XXX**__ Member 1_____ Member 2_____ Member _____

REVIEWER'S SUMMARY

ITEA-CTTE-NCATE
Compliance with Specialty Guidelines

Institution Submitting Program: Virginia Tech

Program: Technology Education Date of Review: 4/27/02

Program Degree Level(s): Undergraduate

Name of Reviewer _____CTTE REVIEW PANEL_____

Signature of Reviewer _____

_____X _____PROGRAM APPROVED

_____PROGRAM MET WITH STIPULATIONS/CONDITIONS (LIST)

_____PROGRAM NOT MET

I – PERCIEVED PROGRAM "STRENGTHS":

- The program contains numerous strengths including a strong, positive national reputation, a well-qualified faculty, and a clear awareness of contemporary directions in technology education.
- The strongest technical areas appear to be in the materials & processing, and communications technology areas.
- The mission, goals, and objectives of the program reflect the nature and purposes of the field.
- The course structure and degree plan reflects the goals of the Virginia certification program for technology education.
- The methods courses included in the program appear to be based on the most recent standards for the field of technology education.

II – PERCIEVED PROGRAM "WEAKNESSES":

- The technical courses appear to be focused almost exclusively on technical content (some of which is still rather traditional), rather than more broadly on areas such as preparing students to deliver that content and its key concepts to students, alignment of the content with concepts identified in the standards (particularly design and problem solving), and broader social/cultural/environmental issues.
- Additional emphasis is recommended for program marketing, ethics, global and diversity issues, strategic planning and program evaluation, and the use of contemporary and cutting edge instructional technologies.
- Coursework should contain learning experiences that prepare undergraduate students to lead secondary student associations, and serve as ambassadors for the technology education profession. While participation in TECA is positive, coursework should focus explicitly on how to develop and promote student associations.

III – GUIDELINES/ COMPETENCIES NOT MET : (LIST SPECIFIC ITEMS)

- The following guidelines were not met and must be addressed prior to the next NCATE review: #4.2, 4.9, 4.10, 4.11.

- The following guidelines were met with stipulations and should be addressed prior to the next NCATE review: #2.0, 3.1, 3.3, 3.10, 4.2, 4.5, 4.12, 5.4

IV – REVIEWER RECOMMENDATIONS REGARDING COMPLIANCE OR NONCOMPLIANCE WITH NCATE APRROVED GUIDELINES – BASIC PROGRAM IN TECHNOLOGY EDUCATION. (Has the program adequately met, with stipulations/conditions, or not met the specialty guidelines?):

Virginia Tech University is approved for re-accreditation. However, it is recommended that all items identified in section III above be addressed.