Section IV: Evidence for Meeting Standards

Assessment 1: Content-Based Assessment/Content Portfolio

1. **Description and Use of Assessment:**

The Technology Education Program at Rhode Island College requires all Technology Education candidates to submit a Content Portfolio by the end of the TECH 408 practicum, prior to student teaching. The State of Rhode Island requires a Praxis II test in Pedagogy (*Principles of Learning and Teaching, 7-12, 0524*), but does not require a content area assessment of its teacher candidates. The Content Portfolio assessment is one of several assessments that allow candidates to demonstrate content knowledge and application of that knowledge before entering student teaching. We strongly believe that actual samples of candidate work are some of the best evidence they can provide to display their skills.

Prior to the Technology Education Practicum in secondary education, candidates have amassed a collection of artifacts from each content class. Generally, these artifacts are contained in a course folder or notebook. We urge candidates to make electronic copies when assignments have been returned. Course work samples from Communication, Construction, Manufacturing, and Energy and Transportation are used in the Content Portfolio. Candidates present sample course work that illustrates their best work samples from each content area to be reviewed by a Rhode Island College Faculty member and two teachers who volunteer to review the portfolios. Additionally, they are asked to provide descriptions of the work and to provide a short reflection essay describing the artifacts and their relationship the STL.

In the Content Portfolio's second section, labeled Application, candidates are asked to present one of their practicum (TECH 407 or TECH 408) lesson plans. This lesson plan represents their best lesson plan presented before a class they taught at the Henry Barnard Laboratory School on the Rhode Island College campus or from a class at the public school where they had their secondary school practicum experience. They are asked to describe the lesson plan, make judgments on the success of the lesson, describe how the lesson plan implements RIPTS standards and the STL, show evidence of accommodation, and discuss the assessment used for the lesson.

Teacher candidates are allowed to proceed to student teaching if they satisfy the Content Portfolio requirements. Requirements for the Technology Education Content Portfolio require candidates to achieve an average score of 3.0 or better for each section. Candidates who have acquired three twos in any section are requested to resubmit the portfolio after meeting with the program coordinator. If other areas of concern arise, the candidate and the program coordinator will meet to determine whether some remediation will be necessary. I am happy to report that this has not been necessary thus far. Several of the candidates have used this portfolio for interview purposes; so it has value as another tool for them to use to represent themselves in the tight teaching market in New England.

2. Description of How the Assessment Aligns with ITEEA/CTTE Standards

ITEEA/CTTE Standard	Rhode Island College Technology Education Course	RIPTS
1. **The Nature of Technology.** Technology teacher education program candidates develop an understanding of the nature of technology within the context of the Designed World.	TECH 200 Introduction to Technological Systems; TECH 202 Design in Technology Education; TECH 204 Energy and Control Systems; TECH 205 Production Processes; TECH 216 Computer Aided Design; TECH 326 Communication Systems; TECH 327 Construction Systems; TECH 328 Manufacturing Systems; TECH 329 Transportation Systems	RIPTS 1: 1.1; 1.2 RIPTS 2: 2.1; 2.2; 2.3; 2.4 RIPTS 3: 3.1; 3.2; 3.3 RIPTS 5: 5.1; 5.2; 5.3; 5.4; 5.5 RIPTS 8: 8.1 – 8.5
2. **Technology and Society.** Technology teacher education program candidates develop an understanding of technology and society within the context of the Designed World.	TECH 200 Introduction to Technological Systems; TECH 202 Design in Technology Education; TECH 204 Energy and Control Systems; TECH 205 Production Processes; TECH 216 Computer Aided Design; TECH 326 Communication Systems; TECH 327 Construction Systems; TECH 328 Manufacturing Systems; TECH 329 Transportation Systems	RIPTS 1: 1.1; 1.2 RIPTS 2: 2.1; 2.2; 2.3; 2.4 RIPTS 3: 3.1; 3.2; 3.3 RIPTS 5: 5.1; 5.2; 5.3; 5.4; 5.5 RIPTS 8: 8.1 – 8.5
3. **Design.** Technology teacher education program candidates develop an understanding of design within the context of the Designed World.	TECH 200 Introduction to Technological Systems; TECH 202 Design in Technology Education; TECH 204 Energy and Control Systems; TECH 205 Production Processes; TECH 216 Computer Aided Design; TECH 326 Communication Systems; TECH 327 Construction Systems; TECH 328 Manufacturing Systems; TECH 329 Transportation Systems; ***elective class TECH 310 Historic Innovation and Invention***	RIPTS 1: 1.1; 1.2 RIPTS 2: 2.1; 2.2; 2.3; 2.4 RIPTS 3: 3.1; 3.2; 3.3 RIPTS 5: 5.1; 5.2; 5.3; 5.4; 5.5 RIPTS 8: 8.1 – 8.5
4. **Abilities for a Technological World.** Technology teacher education program candidates develop abilities for a technological world within the context of the Designed World.	TECH 200 Introduction to Technological Systems; TECH 202 Design in Technology Education; TECH 204 Energy and Control Systems; TECH 205 Production Processes; TECH 216 Computer-Aided Design; TECH 326 Communication Systems; TECH 327 Construction Systems; TECH 328 Manufacturing Systems; TECH 329 Transportation Systems	RIPTS 1: 1.1; 1.2 RIPTS 2: 2.1; 2.2; 2.3; 2.4 RIPTS 3: 3.1; 3.2; 3.3 RIPTS 5: 5.1; 5.2; 5.3; 5.4; 5.5 RIPTS 8: 8.1 – 8.5
5. **The Designed World.** Technology teacher education program candidates develop an understanding of the Designed World.	TECH 200 Introduction to Technological Systems; TECH 202 Design in Technology Education; TECH 204 Energy and Control Systems; TECH 205 Production Processes; TECH 216 Computer-Aided Design; TECH 326 Communication Systems; TECH 327 Construction Systems; TECH 328 Manufacturing Systems; TECH 329 Transportation Systems	RIPTS 1: 1.1; 1.2 RIPTS 2: 2.1; 2.2; 2.3; 2.4 RIPTS 3: 3.1; 3.2; 3.3 RIPTS 5: 5.1; 5.2; 5.3; 5.4; 5.5 RIPTS 8: 8.1 – 8.5

The course work provided in the requested matrix consists of our content offerings, plus the addition of TECH 310 Historic Innovation and Invention. These offerings allow us to incorporate knowledge, applications of technological concepts, processes and systems, and skills into the program. Design and problem-solving activities are consistently applied throughout the program as advocated by the use of STL.

3. Analysis of Data

	2007 – 2008 n = 2		2008 – 2009 n = 2		2009 – 2010 n = 2		Group Average
Candidate	1	2	1	2	1	2	
Content	4	3	3	3	3	3	3.16
Application	4	4	4	4	4	4	4.0
Mean	4	3.5	3.5	3.5	3.5	3.5	

1=Unsatisfactory, 2 = Emerging, 3 = Competent, 4 = Mastery

The small groups that recently completed the program have benefited enormously from their close work with the Technology Education faculty, the Henry Barnard School Technology Educator, and our cooperating teachers. The scores that the candidates have achieved are indicative of the seriousness that they attend to this product. The score of three is also an honest value for the work submitted; especially when the data for grades is reviewed and compared with those grades in Assessment #2 of this report. It can be expected that with small class sizes that candidates will receive extra attention and avoid the pitfalls of large classes. The scores are reflective of the contact that candidate have with the faculty. The Application score is also a fair assessment of the candidates' work. The teacher candidate has developed and implemented lessons at this point in TECH 406 Methods, SPED 433 Adaptive Instruction for Inclusive Ed., TECH 407 Practicum in Elementary Technology Education, TECH 408 Practicum in Secondary Technology Education, so they are well versed in creating meaningful lessons, The lesson plan submitted for review has been reviewed by the practicum instructor, reviewed by the cooperating teacher in whose class the lesson was taught, and edited accordingly. Perhaps a better appraisal of this artifact would be to submit that original document with the final lesson plan.

4. Interpretation of Data as Evidence of Standards Met

The small sample of Content Portfolio data collected over the last three years indicates that our candidates are meeting the standard of scoring 3 or better on the portfolio. This indicates that they are competent to go and teach in the public school Technology Education classroom/laboratory. Using the Content Portfolio as the culminating event for candidates as they prepare for student teaching is both a sound and fair practice. It has caused them to plan, interpret, and draw upon knowledge and theory that was experienced-based. The review of the Content Portfolio coincided with an overall review of candidates' grades, cumulative GPA, program GPA, and other program requirements, before admission to student teaching.

Before the last NCATE accreditation visit, we asked candidates to compile their best work from each class with a description of that work and how it helped them prepare for the rigors practicum lessons. Candidates seemed to adopt the adage, "more is better" and created portfolios with as many as twenty to twenty-five assignments in them. Descriptions were lacking, aside from a table of contents, and essays that tried to cover all the artifacts in the portfolio fell short of the reflection we thought to be useful in assessing mastery of content. These portfolios were both cumbersome and nearly impossible to review in an afternoon due to the number of artifacts submitted in each portfolio. In 2007, the members of the portfolio review team (a group of Technology Education teachers who volunteered to review portfolios) met to discuss suggestions

for creating a more meaningful artifact; one that would demonstrate candidates' content knowledge and abilities to apply that knowledge. The result was a streamlined Content Portfolio system that included a sample of the candidates' best work from the content areas. Additionally, we decided that the application of knowledge was as important as knowing the content. We added the Application section of the portfolio that included one lesson plan from one of the two practica. The first trial for the new portfolio was in Spring of the 2007 – 2008 academic year.

The benefits of this process were that candidates had to be more selective of the artifacts that they presented, developed more thoughtful reflections of their work, and made clearer judgments about the linkages between practice and theory. It also helped the reviewers in making better decisions about the importance of the artifacts, since the work presented were examples of the candidates best work, rather than a non-descript collection of artifacts. This portfolio provides a more holistic view of candidates' achievements, too.

The scores on the Content Portfolio also proved to be closely related with scores these candidates achieved on other artifacts in the Preparing to Teach and Exit portfolios. These scores proved to be a snap shot of performance in their pre-service experiences and can be used to validate their accomplishments in student teaching. Their success on this assessment is also a tribute to their determination to master the following content standards, as demonstrated through their Content Portfolio performance: ITEEA/CTTE 1, 2, 3, 4, 5. They have met this standard.