Educational Technology M.S. Program

TCNJ's masters program in Educational Technology prepares teachers to be leaders in the integration of computer technology into New Jersey's schools. Drawing on best practices in both education and technology studies, the program is firmly based on the School of Education's Conceptual Framework for Creating Exemplary Professionals. In particular, the theme, Excellence in Practice, specifies that the School will prepare teachers to use technology as a tool to support teaching and learning. The program also is designed to address New Jersey's Core Curriculum Content Standards, and underscores the College's commitment to excellence, service, leadership, diversity, and community.

New Jersey does not have a teaching certification or endorsement in educational technology or computer teacher, but this program addresses many of the National Educational Technology Standards for Teachers (NETS) developed by the International Society for Technology in Education (ISTE; 2008).

Graduates of the program meet the following goals:

- Demonstrate an understanding of the New Jersey Core Curriculum Content Standards in Technology and the National Educational Technology Standards for Students (NET-S).
- Understand local and global societal issues and responsibilities in an evolving digital culture, such as equity issues, and exhibit legal and ethical behavior in their professional practices, including the modeling of safe, legal, and ethical use of digital information.
- Design and implement technology-enriched learning environments that use digital tools to improve student learning, creativity, and engagement.
- Address the diverse needs of all learners by using technology to customize teaching activities, use learner-centered strategies, and provide access to curriculum and instruction for students with disabilities.
- Possesses the dispositions to communicate about technology to non-specialists and to work collaboratively with educators from a variety of disciplines.
- Continuously improve their professional practice and exhibit leadership in their classroom and school by promoting and demonstrating the effective use of digital tools and resources.

To determine if our students meet the above goals, five assessments have been incorporated into the program's core courses. Students who receive a grade of A or B on these assessments have demonstrated that they have met the programs' goals. The following chart lists the five assessments, links them to the program's goal, and identifies the course in which they are administered.

Program Goal	**Assessment**	**Course**
Demonstrate an understanding of Ed Tech standards for students: NJCCCS & NETS	Vision Project	SPED 506: Seminar in Ed Tech
Understand local and global societal issues and responsibilities including the modeling of safe, legal, and ethical use of digital information	Vision Project & Department Project	SPED 506: Seminar in Ed Tech SPED 698 or TCED 698: Department Project
Design and implement technology-enriched learning environments that use digital tools to improve student learning, creativity, and engagement.	Final Project	TCED 610: Authoring & Multimedia Technology
Address the diverse needs of all learners and provide access to curriculum and instruction for students with disabilities.	Curriculum Integration Project	SPED 521: Assistive Technology
Demonstrate the ability to communicate about technology to non-specialists and work collaboratively with other educators	Collaboration Project	EDUC 513: Collaboration, Consultation & Partnerships
Continuously improve their professional practice and exhibit leadership	Department Project & Culminating Experience	SPED 698 or TCED 698: Department Project

Assessments

1. **Vision Project**: Since good vision statements are developed collaboratively, students work in pairs or small groups to complete this assessment. Together they choose a classroom, grade level, school or district for the focus of their vision statement. They review the National Educational Technology Standards for Students, Teachers and Administrators, and explore relevant online resources related to technology integration. They then brainstorm a list of goals related to their vision of technology integration. After prioritizing these goals, they develop a list of issues/concerns that correspond to the goals. They then search for key resources on those issues/concerns and prepare an annotated list. Lastly, they pull all their research together into a concise vision statement for the program they chose, and present – in a concise, professional style – the group's vision for technology integration.

2. **Final Project in Authoring**: This project focuses on the enhancement of five distinct lessons for a unit of study through the use of a variety of technology based tools. Students must create or use at least one technology tool to support each lesson. These could be any of the following:

    a. Web 2.0 tool or widget
    b. Novel use of a blogging or wiki software

c. *Flash* animations
d. Interactive *Flash* applications (drag and drop, user controlled characters, etc.)
e. Video elements
f. Social networking or community commenting application
g. Traditional website

Students prepare a written justification and demonstrate their products in class. Included in the documentation and presentation are discussions of the overall advantages to using the specific technology application in this lesson, the decisions students made regarding the content and design of the application, the hardware and software used to develop the application and the hardware and software students will need to use it, technical problems in developing the application and how students overcame them, and questions students might have about the application's effectiveness in typical classrooms.

3. **Curriculum Integration Project**: This assessment requires that students individualize and adapt instructional materials in a unit of study to match the needs and abilities of children with disabilities. After a unit of study in a particular grade level has been chosen, the assessment consists of four parts:

a. Making the *writing* components of the unit accessible to students with learning disabilities, cognitive disabilities, and/or physical disabilities.
b. Making the *reading* components of the unit accessible to students with learning disabilities, cognitive disabilities, and/or physical disabilities.
c. Creating *individualized* instructional materials such as worksheets and quizzes related to the unit for students with learning disabilities, cognitive disabilities, and/or physical disabilities.
d. Creating a situation-specific *communication board* for a student with autism, physical disabilities or cognitive disabilities that matches his/her language proficiency, age, and culture.

For each of these components students make decisions about appropriate software and assistive devices for children with disabilities, develop customized materials such as a topic dictionary in a word prediction program, and prepare a narrative that explains their decision-making.

All 28 students in the Educational Technology program who completed this assessment during the Fall 2005 to Spring 2008 time period demonstrated proficiency. 15 of the 28 performed at the exemplary level.

4. **Collaboration Project**: Each student in the class is placed within an in-class team that remains constant throughout the semester. This project is a Comprehensive Assessment of the Team's Functioning as represented by a reflection on the entire semester's team process. Each team is provided with a specific topic related to the course content and is required to plan and implement a 20-30 minute training to the entire class. Each student is required to keep a reflective journal that provides an historical record of team development and serves as data in the final analysis of team functioning. Using information from their reflective journals, students develop a comprehensive analysis of their team development and

functioning that is supported by evidence from the course text, lecture/discussions, and the literature. The analysis addresses the following questions:

- How did your team form, build trust and establish roles? Did any of your team roles change?
- What was the process of consensus that the team used over the course of the semester? How did this process evolve?
- Identify team attributes that inhibited and encouraged the collaborative process.
- How did your individual communication/interaction styles (verbal, non-verbal, assertive, compromiser, etc) affect your team unit?
- What quintessential collaboration experiences with your team will you be able to professionally draw upon in the future?

All 20 students in the Educational Technology program who completed this assessment during the Fall 2005 to Spring 2008 time period demonstrated proficiency. 19 of the 20 performed at the exemplary level.

5. **Department Project & Culminating Experience**: The Department Project is an opportunity for students to intensify their involvement in educational technology while exploring a topic of special interest to them. Students work independently on their projects, following a project plan they submit early in the semester. The assessment culminates in a presentation of the project at the Educational Technology Student Symposium that is scheduled at the end of each semester.

Students are encouraged to think carefully about their particular interests and to choose a project that has relevance to them in their professional work. After identifying their topic, students review the literature to read what other people have written about the topic. They gather the information from this literature review and compile it into an organized and coherent summary. The second part of the project can take several forms. Often it is a field-based component – students may interview teachers and/or students, observe technology use in classrooms, etc. For projects that lead to a product, students design and develop web sites, specialized curricula, or some other technology-based product. For the culminating experience, students prepare an engaging presentation on their project, describing its purpose, their research/product development, problems encountered and if/how they were overcome, and reflections on the experience. If digital tools were developed, they are demonstrated during the presentation.

The table below lists topics of Department Projects for the past five years and the grades students received. Since all but five students received at least a B+ on these assessments, we are confident that our students graduate with these skills.

Student #	Date	Project Title	Grade
1	May-08	Designing a Web-based Activity to Teach Children with Autism to Recognize Facial Expressions	A
2	May-08	Motivating 4th Grade Special Education Students to Write Using Digital Sotrybooks	A-
3	May-08	Exploring *Second Life* to Teach High School Mathematics	B-
4	May-08	Creating an e-Learning Environment for an Algebra 2 Class	A
5	May-08	Enhancing the 6th Grade Social Studies Curriculum with Wiki Technology	B-
6	May-08	Teaching Speech Recognition as a Computer Access Method to a Teenager with Cerebral Palsy	A
7	Dec-07	Exploring the World of Podcasting	A
8	Dec-07	Redesigning ClassroomChatter.com, an Educational Blogging Site	A
9	Dec-07	Case Study of Teacher Training in Authoring	A
10	Dec-07	A Plan: Developing District-Wide Competence for Using Technology to Differentiate Instruction	A
11	Aug-07	Using the Perl Language to Facilitate the Valentines Project in a 5th Grade	A+
12	May-07	Teachers' Manuals for Integrating Technology in the Second Grade Curriculum	A+
13	May-07	Evaluating Online Chatting as a Method for Test Review in AP Math	A
14	May-07	The Research Design and Prototyping Lab	B
15	Dec-06	Using Online Message Boards for Communicating with Parents of Children with Autism	B-
16	Dec-06	Design of Professional Development Workshops for Teachers	A
17	Aug-06	Digital Storytelling to Motivate Special Education Students to Write	A
18	May-06	Designing a Web-based Help Desk for the Hillsborough School District	A
19	May-06	The Role of Blogs in Education	A
20	May-06	Everyday Math Instruction and Technology: Helping Students with Learning Disabilities	A
21	May-06	Training Special Education Teachers to Use the Orchard Software Package	B+
22	May-06	Online Resources for Video Production in Schools	A
23	May-06	Web Site Accessibility for Early Readers: Designing a Website to Meet the Developmental Needs of Young Children	A

24	May-06	The creation of a website to increase communication with parents, and to better meet the academic needs of students in a 6th grade classroom	A
25	May-06	Transforming Resource Sharing: Using Electronic Filing Cabinets	A
26	May-06	My Ocean Website: "Diving into Web-Based Learning"	B+
27	May-06	Visual, Performing, and Technical Arts Department Implementation Plan	A
28	May-06	Incorporating *Unitedstreaming* into the Science Curriculum: Supporting Teachers	A+
29	Dec-05	Regional High School Teacher's Union website design	C
30	Dec-05	Technology Resources for Elementary Special Education	A
31	Dec-05	Web Pages for "Smarties" Web Page Design: Professional Development for Elementary School Teachers	A
32	Dec-05	Designing Social Stories for Students with Autism Using *PowerPoint*	A-
33	May-05	Gender Issues in Technology Education	A
34	May-05	Authoring Web Applications in Flash to Personalize Skills Practice for Students of Mathematics	A
35	May-05	*Kidspiration*: An Infusion of Technology and Graphic Organizers	A
36	May-05	Using Technology to Enhance Service Learning	A+
37	Dec-04	Wake Up Wildcats (with Student #38)	A
38	Dec-04	Wake Up Wildcats (with Student #37)	A
39	Dec-04	Creating a *Kurzweil 3000* Test Taking Manual	A
40	Aug-04	Web Resources & Software Tutorials for Elementary Teachers	A
41	Aug-04	Staff Development for Technology Beginners	A
42	May-04	Implementing Inquiry-Based Science with Technology in an Inclusive Elementary Education	A
43	May-04	Fostering Collaboration Among Math Teachers Using Technology (with Student #44)	A
44	May-04	Fostering Collaboration Among Math Teachers Using Technology (with Student #43)	A
45	May-04	Assistive Technology Evaluations	B+
46	Dec-03	Designing a Website on Transition from High School for Students with Disabilities	A
47	Dec-03	Web Enhanced Instruction for Teaching Spanish	A