**IT 657 Practicum**

The practicum experience is a culminating experience for the students in the program, and as such the experiences they participate in touch on many of the ISTE standards. The interns work with their site-supervisor to assist teachers in a variety of ways, with particular alignment to the following ISTE NETS-C standards.

1.a Contribute to the development, communication, and implementation of a shared vision for the comprehensive use of technology to support a digital-age education for all students.

1.c Advocate for policies, procedures, programs, and funding strategies to support implementation of the shared vision represented in the school and district technology plans and guidelines.

1.d Implement Strategies for initiating and sustaining technology innovations and manage the change process in schools and classrooms

2.a Coach teachers in and model design and implementation of technology-enhanced learning experiences addressing content standards and student technology standards

2.d Coach teachers in and model design and implementation of technology-enhanced learning experiences emphasizing creativity, higher-order thinking skills and processes, and mental habits of mind (e.g., critical thinking, meta-cognition, and self- regulation)

3.b Maintain and manage a variety of digital tools and resources for teacher and student use in technology-rich learning environments

3.e Troubleshoot basic software, hardware, and connectivity problems common in digital learning environments

3.f Collaborate with teachers and administrators to select and evaluate digital tools and resources that enhance teaching and learning and are compatible with the school technology infrastructure

5.b Model and facilitate safe, healthy, legal, and ethical uses of digital information and technologies

As students work with the on-staff Educational Technology Specialist (or in many cases team of specialists), they work directly with teachers in the schools to assist them in implementing technology strategies (ISTE 1.d), modeling the implementation of technology enhanced learning that focuses on the NETS-S and NETS-T standards (ISTE 2.a), and help teachers to conceive of the technology as creativity tools that promote critical thinking with their students (ISTE 2.d). As part of their day-to-day activities they help to keep the technology tools in good working order (ISTE 3.b, 3.e), as well as assist the teachers in selecting appropriate tools for new learning experiences (ISTE 3.f). Our students also work with teachers to promote Open Source and free software alternatives, as well as to explain where they can legally access materials for their class projects (ISTE 5.b).

In addition to the journal rubric, site supervisors complete a 50-hour mid-internship and 100-hour final internship evaluation. Over the past six years our 37 students have had internships at 17 different locations. In each of these instances the site supervisors have noted the value of having an intern work with them, and welcomed future students to intern with them. They speak specifically to the value of having an additional skilled helper on hand to assist with technical and instructional support tasks. The internship has proven to be a mutually beneficial relationship for our students and their supervisors.

**IT 657 Workshop**

The workshop allows students to use their instructional design skills in a real-world setting. It touches on a variety of ISTE NETS-C standards elements, including especially:

1.a Contribute to the development, communication, and implementation of a shared vision for the comprehensive use of technology to support a digital-age education for all students.

3.a Model effective classroom management and collaborative learning strategies to maximize teacher and student use of digital tools and resources and access to technology-rich learning environments.

3.c Coach teachers in and model use of online and blended learning, digital content, and collaborative learning networks to support and extend student learning as well as expand opportunities and choices for online professional development for teachers and administrators.

3.g Use digital communication and collaboration tools to communicate locally and globally with students, parents, and peers, and the larger community.

4.a Conduct needs assessments to inform the content and delivery of technology-related professional learning programs that result in a positive impact on student learning.

4.c Evaluate results of professional learning programs to determine the effectiveness of deepening teacher content knowledge, improving teacher pedagogical skills and/or increasing student learning.

5.a Model and promote strategies for achieving equitable access to digital tools and resources and technology-related best practices for all students and teachers.

5.b Model and facilitate safe, healthy, legal, and ethical uses of digital information and technologies.

5.c Model and promote diversity, cultural understanding, and global awareness by using digital-age communication and collaboration tools to interact locally and globally with students, peers, parents, and the larger community.

6.a Engage in continual learning to deepen content and pedagogical knowledge in technology integration and current and emerging technologies necessary to effectively implement the NETS-S and NETS-T.

6.c Regularly evaluate and reflect on their professional practice and dispositions to improve and strengthen their ability to effectively model and facilitate technology-enhanced learning experiences.

For this portion of their 100-hour practicum, students identify the need for the training (ISTE 4.a). This can be done via a survey of teachers, and often requires assistance from the site supervisor. After the training need has been identified, they develop the instructional materials for the teachers they will be training, with feedback given by both the site supervisor and the faculty supervisor. Once the materials have been revised, they deliver the instruction to the teachers (ISTE 3.c, 6.a). We have to this point encouraged students to integrate New York State, Common Core, NETS-T, and NETS-S standards into their materials. Starting in the Spring 2013, the alignment of their instructional materials to these standards will be specifically evaluated on the scoring rubric. For our intern, the workshop represents an opportunity to model ethical uses of technology, often as part of the teachers’ professional development (ISTE 5.b). Once the training is complete the teachers complete evaluation forms that are later compiled and reflected on by the intern for future improvement (ISTE 4.c, 6.c). Recent improvements in the quality of the workshop give us confidence that our ongoing monitoring and evaluation have paid dividends. And even with relatively lower scores from earlier data gathering periods, an overall average score of 3.15 indicates that students are meeting ISTE NETS-C standards 3, 4, 5, and 6 with their teacher-training workshop.

**IT 614 Technology Integration Plan**

In 614: Technology in Education our Educational Technology Specialist candidates are able explore a variety of technology tools, and through the final project organize them into a unified system that supports teaching and learning in a K-12 setting. This project places an emphasis on determining appropriate funding sources that provide for equitable technology access to a wide variety of students with varying abilities, backgrounds, and learner characteristics, as well as packaging the information together into a high impact presentation for the board of education. The technology integration plan addresses ISTE Standards 1, 2, 3, 4, & 5. Below are the specific standard elements that the scoring rubric criteria align with:

(ISTE 1.a, 2.f, 4.b, 5.a) - Rubric Criteria #1 - Shared Vision and Best Practices

(ISTE 1.c) - Rubric Criteria #2 - Collaborative Learning Strategies & Global Impact

(ISTE 3.d, 5.a) - Rubric Criteria #3 - Equitable Access & Adaptive Technology

(ISTE 2.c, 3.a, 3.g, 5.c) - Rubric Criteria #4 - Advocacy & Funding Strategies

(ISTE 1.c, 2.b, 5.a) - Rubric Criteria #5 - Presentation to Board of Education

Overall this assessment addresses ISTE Standard 1: Visionary Leadership, ISTE Standard 2: Teaching, Learning, & Assessments, ISTE Standard 3: Digital Age Learning & Assessments, ISTE Standard 4: Professional Development and Program Evaluation, and ISTE Standard 5: Digital Citizenship. The process of developing the technology integration plan starts with consultation with a practicing teacher to establish an appropriate scope and vision for the project (1.a, 2.f, 4.b, 5.a). Effective collaborative learning strategies are then identified (1.c), with special consideration given to learners with varying abilities, backgrounds, and learner characteristics (3.d, 5.a). By requiring students to consider funding strategies (2.c, 3.a, 3.g, 5.c), they are able to advocate for equitable access to the technologies they propose to use. Finally, the high impact presentation to the Board of Education provides necessity for creating a high impact, research-based presentation (1.c, 2.b, 5.a)

**IT 659 - Portfolio**

This assessment was originally designed to align the students’ experiences in our program to the five AECT Standards. The most recent version of the IT 659 portfolio now aligns with the six ISTE NETS-C standards, yet at the time of this submission we have no data from completers for the new standards-based portfolios. We do, however, have six years of data for the previous version of the portfolio. In order to align the portfolio with the ISTE NETS-C Standards, we created a crosswalk between the five AECT Standards and the six ISTE Standards. We first attempted to create a crosswalk at the element (subarea) level, but found this to be beyond our ability to perform, and difficult to interpret. We were, however, able to map the major standard areas. As can be seen below, the major areas covered by the AECT standards (and therefore by our portfolios), would be ISTE NETS-C Standards 2, 3, and 4.

The AECT standards addressed in this assessment, with a section for each standard, include:

AECT 1 – Design

AECT 2 – Development

AECT 3 – Utilization

AECT 4 – Management

AECT 5 – Evaluation

Using the AECT-ISTE NETS-C crosswalk mentioned in 2.b above, the 3 major ISTE Standards addressed are:

ISTE NETS-C Standard 2: Teaching, Learning, & Assessments Standards

ISTE NETS-C Standard 3: Digital Age Learning Environments

ISTE NETS-C Standard 4: Professional Development & Program Evaluation

The portfolio itself includes artifacts from each of the courses, and they are used as reflection anchors for the students. We have in recent years placed a heavy emphasis on producing portfolio quality projects throughout the program, and as such the quality of the portfolios has improved over time to a relatively high level, as indicated by the scores in the table in the previous section. By crosswalking the standards, we feel comfortable in stating that our students are meeting the ISTE NET-C Standards 2, 3, and 4 through their portfolios. In the future, the reflective essays will be on each of six ISTE Standards.

**651 – Instructional Design Project**

This assessment covers ISTE NETS-C Standards 2, 3, 4, and 5. The evaluation rubric for this semester-long group-based class project is divided into three major sections: 1) Narrative; 2) Plans; and 3) Critique. Specific ISTE NETS-C standard elements that are met through the evaluation rubric are listed below:

Narrative (evaluates a series of documents that support and explain the need for and outline of the project)

Needs Assessment [2,c, 4.a]

Rationale [2.c]

Learner Analysis [2.d, 2.e, 2.f, 4.a]

Description of Setting [4.a]

Goal Analysis [2.f, 4.a]

Objectives [2.f, 4.b]

Assessment [2.b, 4.b, 4.c]

Collaborative Learning Strategies [2.b, 2.f, 3.a, 4.b]

Meaningful Learning & Global Impact [2.c, 3.g, 5.c]
Diversity and Cultural Understanding [2.b, 5.c]

Adaptive and Assistive Technology [3.d]

Resource Identification [2.e, 4.a, 4.b]

Plans (evaluates instructional lesson and unit plans)

Objectives [2.e, 2.f, 4.b]

Skills/Concepts [2.e, 2.f, 4.b]

Delivery Strategies [2.d, 2.e, 2.f, 4.b]

Resource Identification [4.b]

Assessment [2.b, 4.b]

Support Materials [2.e, 2.f, 4.b]

Critique (an individual review of peer projects)
[2.b, 2.d, 2.e, 2.f, 4.a, 4.b, 4.c]

Overall this assessment addresses ISTE Standard 2: Teaching, Learning, & Assessments, ISTE Standard 3: Digital Age Learning & Assessments, ISTE Standard 4: Professional Development and Program Evaluation, and ISTE Standard 5: Digital Citizenship. In addition to working through the complete instructional design process (2.b, 2.d, 2.e, 2.f, 3.a, 4.a, 4.b, 4.c) they now must give explicit consideration to students in needs of augmented access to instruction (3.d), how they will ensure meaningful learning with a global audience (2.c) as well as addressing learners with varying levels of ability and cultural backgrounds (2.b, 5.c).