Program Approval Form

For approval of new programs and deletions or modifications to an existing program.

Action Requested:
- X Create New (SCHEV approval required except for minors)
- Delete Existing
- Modify Existing (check all that apply)
- Title (SCHEV approval required except for minors)
- Concentration (Choose one): [ ] Add [ ] Delete [ ] Modify
- Degree Requirements
- Admission Standards
- Application Requirements
- Other Changes:

Type (Check one):
- B.A. [ ]
- B.S. [ ]
- Minor [ ]
- Undergraduate Certificate [ ]
- M.A. [ ]
- M.S. [ ]
- M.Ed. [ ]
- Ph.D. [ ]
- X Graduate Certificate
- Other:

College/School: College of Education and Human Development
Submitted by: Priscilla Norton and Dawn Hathaway
Effective Term: Fall 2012
Ext: 3-2015
Email: pnorton@gmu.edu

Please note: For students to be admitted to a new degree, minor, certificate or concentration, the program must be fully approved, entered into Banner, and published in the University Catalog.

Action Taken:
- X Create New (SCHEV approval required except for minors)

Admission Standards / Application Requirements:
- Integration of Online Learning in Schools (IOLS)
- Admission requirements as specified for CRIN
- Valid State Licensure, K-12
- See Attached

Degree Requirements:
- Consult University Catalog for models, attach separate document if necessary using track changes for modifications
- See Attached

Courses offered via distance:
- EDIT 760, 761, 762, 763, 764, 765, 766, 767
- TOTAL CREDITS REQUIRED: 16 credit hours

Approval Signatures

If this program may impact another unit or is in collaboration with another unit at Mason, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

For Graduate Programs Only

Graduate Council Member
Provost Office
Graduate Council Approval Date

For Registrar Office’s Use Only: Received Banner Catalog
revised 1/4/12
Integration of Online Learning in Schools (IOLS): A CRIN Concentration and Certificate Proposal

At present, GMU’s College of Education and Human Development has a 15 graduate credit hour program, The Online Academy for Teachers Graduate Certificate (TOAT) which focuses on online teaching in secondary schools. This certificate was originally crafted to support the virtual high school collaborative. With the ending of the collaborative effective January, 2012, it is now time to begin the process of closing the TOAT certificate program because of its limited and targeted focus. However, there remains the need to continue to support K-12 teachers and school divisions as they tackle online learning. This need is also fueled by the recent passage of two legislative bills. On March 23, 2012, HB578 became law, requiring the Virginia Board of Education to develop licensure criteria for teachers who teach only online courses and providing that teachers who hold a Board-issued five-year renewable license may teach online courses for which they are properly endorsed. On April 4, 2012, SB489/HB1061 became law, requiring all Virginia high school students to take at least one virtual course to graduate with a standard or advanced diploma effective for students who enter ninth grade in 2013-14. These legislative decisions clearly point to the need for CEHD to reconceptualize College offerings in support of K-12 teachers’ ability to teach and design in ways that combine online learning and classroom practice as well as to teach and design fully online instruction. The purpose of this proposal is to meet that challenge with the development of a Master’s CRIN concentration and graduate certificate specifically addressing the development of teachers’ ability to teach and design online learning opportunities.

Literature Overview

Online learning at the K-12 level grows substantially year by year. The issue is no longer whether or not online learning is or should occur, but rather how it is implemented. Watson, Murin, Vashaw, Gemin, and Rapp (2011) reported that as of late 2011, online and blended learning opportunities exist for at least some students in all 50 states plus the District of Columbia and that there are now 30 states with full-time, multi-district schools that enrolled an estimated total of 250,000 students in SY 2010-11, an annual increase of 25%. More than one-quarter (27%) of all high school students took at least one online class in 2009, and 21% of middle school students reported taking online classes in 2009 (Nagel, 2010).

Yet, only 4% of aspiring teachers reported they are learning how to teach online classes in their instructional methods courses (Project Tomorrow & Blackboard K12, 2010), and there is a persistent percentage of teachers across all years of experience (averaging at 39%) that say they have no interest in teaching online (Project Tomorrow, 2011). This lack of interest in online teaching has resulted in a significant supply-demand problem for schools and districts. “To meet the increased demand for online learning from students and parents, and to fully realize the potential for online learning as a tool to increase student graduation rates, we must address staff capacity issues” (Project Tomorrow, 2011, p. 12).

Data from a study of 596 online K-12 teachers suggested that most current online teachers come from traditional classrooms and that face-to-face teaching is a necessary prerequisite for teaching online (Archambault & Crippen, 2009). Concluded Archambault and Crippen (2009), “It seems logical that teachers who have a solid foundation in their content and pedagogical knowledge may have an easier transition to the online classroom” (p. 383). In addition to face to face experience, it is important for teachers to have experiences as online learners both in terms of what is happening in K-12 curriculum areas and as teachers and learners in online environments (Compton, Davis, & Mackey, 2009). The International Association of K-12 Online Learning (iNACOL) (2010) emphasized the need for online learning experiences in Standard F of its national standards for quality online teaching highlighting the need for teachers to have experienced online learning from the perspective of a student. In this way, teachers are better able to develop and implement
successful strategies for online teaching, to anticipate challenges and problems in the online classroom, and to understand the perspective of the online student (p. 7). While face to face teaching experience and personal online learning experience is necessary for quality online teaching, it may not be sufficient. There is growing recognition that online teaching requires special skills and considerations. “There are aspects of online teaching that are dramatically different than conventional classrooms” (Appel, 2006, p. 1).

Recognizing the centrality of providing quality professional development for online teachers, the Southern Regional Education Board (SREB) (2009) and iNACOL (2010) adopted standards that reflect three broad areas of competence: (a) academic preparation, (b) technology knowledge, and (c) nine standards grouped as online teaching and learning methodology, management, knowledge, skills, and delivery. By defining good teaching in an online environment, these standards can be used to shape teacher professional development, recruitment, supervision, and compensation (Trotter, 2008). Yet, few online high schools report requiring online education for their teachers, and few programs exist to prepare teachers to work in online classrooms (Smith, Clark, & Blomeyer, 2005).

Instead, a majority of teacher education programs address teaching with technology in a single, isolated technology course (Hargrave & Hsu, 2000; Kay, 2006). These single courses are already stretched wide to cover a multitude of technology related topics and do little to address teaching in online environment. It is unlikely that a single technology course or even undergraduate programs as a whole can address the needs of those who teach in online environments. “This puts a huge burden on the virtual schools themselves, which must provide professional development to get teachers up to speed with the nuances of teaching in an online environment” (Archambault & Crippen, 2009, p. 383).

Online education needs excellent teachers. Teacher effectiveness may matter even more than it does in face to face contexts as complex online instructional tasks are left to the adults responsible for each student’s learning. “Teachers who nuture motivated, tenacious problem solvers while using new technologies to reach more children can become the fuel of local, state, and national economies” (Hassel & Hassel, 2011, p. 1). Yet, experts suggest that many states and national education groups are behind the curve in addressing the issue of teacher quality for the online classroom (Quillen & Davis, 2010). It is challenging in a time of economic budget tightening to get some districts to view online education as a method that does not eliminate the need for high quality instructors (Quillen, 2011).

Sample External Programs

Colleges of Education are charged with the education of America’s teachers, both those who want to enter the profession and those already in the profession who seek renewal and growth. Yet, the number of teachers qualified for online teaching “is not adequate to meet the growing demand” (Davis, 2004, n. p.). There are only a few education programs available that focus on the preparation of teachers to teach in and design for online environments. There are some professional development programs offered such as the certificate programs offered by the University of California at San Diego extension, the University of Wisconsin-Madison, and the Virtual High School consortium which supports graduate credit options offered by six universities (Endicott College in Beverly, MA, Plymouth State University in Plymouth, NH, Framingham State College in Framingham, MA, Northwest Nazarene University in Nampa, ID, Salem State College in Salem, MA, or North Dakota State University in Fargo, ND). But, such programs are not generally offered independently by Colleges of Education.

A Google search (January 10, 2012) identified three university graduate certificate programs offering preparation for online teaching. These programs are

- **New Mexico State University**: The Graduate Certificate in Online Teaching and Learning (OTL) is for professionals in business, government, education, or other settings who want to develop their knowledge and skills in online teaching and learning. The five 3-credit course sequence provides an intense immersion in a dynamic online
environment and culminates in an online teaching practicum. The five courses may be combined with 18 credits in advanced professional course work in education to earn the Master’s of Arts in Teaching (http://extended.nmsu.edu/academics/otl/index.html).

- **The California State University, East Bay**: The 12 graduate credit hour certificate in Online Teaching and Learning (OTL) is designed for university and college faculty, K-12 teachers, corporate and military trainers, educational administrators, curriculum designers, technical support staff, and others who want to learn how to convert teaching or training materials currently delivered face-to-face into a completely online course or program. Six additional courses related to online learning may be taken to complete a Masters in Education (http://www.ce.csueastbay.edu/certificate/online_teaching/curriculum.shtml).

- **University of Central Missouri**: This graduate certificate in Online Teaching & Learning (15 hrs) is an entirely online program designed to equip teachers to keep pace with the demands of virtual schools and Web-enhanced classrooms. Qualified students who are interested in an entire 30 credit hour Master's degree in Educational Technology may apply these courses towards the degree fulfilling some of the requirements and some electives (http://www.ucmo.edu/cte/programs/edtech/gradcert.cfm).

It is noteworthy that of these three graduate certificate programs, only one is specific to K-12 teachers (UCM) while another targets a multiplicity of audiences including K-12 (NMSU), and the third program (CSUEB) does not mention K-12 practitioners among its audience. Additionally, only the program that does not identify K-12 as an audience (CSUEB) has an option that embeds the certificate program in a Master’s degree with a focus on online teaching and learning as opposed to the other two (UCM and NMSU) which permit the certificate option to be applied to a more general Master’s in Education curriculum.

**CEHD’s Capacity to Respond**

Designing online learning environments and preparing online teachers is not new to CEHD. A timeline of online learning initiatives associated with the Integration of Technology in Schools (IITS) concentration and K-12 learning includes:

- **2002**: Approval and implementation of the Integration of Technology in Schools Online Graduate Certificate focusing on entry level technology integration.

- **2005**: Initiation of Virtual High School collaborative between CEHD and three school divisions (Stafford, Frederick, and Loudoun). Resulted in design, development, and delivery of online high school courses. New courses were added each year, ending with 22 available courses.

- **2007**: Approval and implementation of the Online Academy for Teachers Graduate Certificate program focusing on online teaching in secondary schools.

- **2012**: Approval of an initiative by the Dean’s office to design, develop, and implement a new concentration and certificate program to address the preparation of K-12 educational professionals for online learning.

In addition to ongoing certificate and high school initiatives, faculty have worked during this period to integrate and study online learning experiences within the context of the K-12 educational practice. They also examined the online learning experience of high school teachers and high school students who participated in the virtual high school collaborative. A record of CEHD scholarship has resulted from these activities and informs the work of faculty as well as the literature. A sample list of publications resulting from online learning activities is included in Appendix A as representative of the CEHD’s capacity to support this proposal. It is within the context of these online learning experiences and related publications from which this proposal derives.
The proposed CRIN concentration and certificate is designed to meet the needs of K-12 educators and not diluted by attempts to serve non-K-12 audiences. Similarly, the program directly connects the certificate to the Master’s concentration. The Integration of Online Learning in Schools (IOLS) program is proposed as a new MEd – CRIN concentration affiliated with the Division of Learning Technologies. The Master’s degree will be a 30 credit hour program and the first 16 credit hours of the concentration will define the Integration of Online Learning in Schools University graduate certificate. The proposed concentration and certificate are guided by four tenets:

1. Standards. The program and courses inherent in the proposed CRIN concentration and certificate are guided by the International Association for K-12 Online Learning’s (iNACOL) National Standards for Quality Online Teaching. These standards are recognized nationally and internationally as useful in shaping teacher professional development, recruitment, supervision, and compensation. Although the criteria mandated by Virginia law (HB578) for licensure for those who teach only online are not yet available, it is highly probable that the outcomes of this development will closely mirror the iNACOL standards. The iNACOL standards and IOLS course alignments are summarized in Appendix B as well as referenced in the program syllabi.

2. Online. The certificate will be offered only online with the CRIN concentration offered predominantly online. Part of learning to teach online is to experience online learning as a learner and to see models of online practice that promote excellence. In addition, such a delivery system supports local, statewide, national, and international participation. Thus, the number of teachers enrolling in the programs is potentially limitless. Such programs will not only support teachers interested in online learning generally, they will support the growing number of teachers who supplement, augment, or blend classroom and online learning. Since the literature’s emphasizes the centrality of teachers’ online learning experience as influential in their ability to develop and implement successful online learning opportunities and anticipate challenges and problems in the online classroom, online courses within the CRIN concentration and certificate will be use a variety of instructional designs (e. g. web-based, synchronous, asynchronous, course management system) to model a variety of online learning possibilities.

3. Prerequisites. As well as general CEHD admissions requirements, a valid K-12 state licensure will be a prerequisite to both the certificate and the Master’s options. Since face-to-face teaching is seen as a necessary prerequisite for teaching online (Archambault & Crippen, 2009), program participants who enter one of the programs should demonstrate content and pedagogical knowledge documented by state licensure. It is possible that in the future standards established by VADOE for those teaching only online might reflect additional standards addressing content and pedagogical knowledge assumed as prerequisite for admissions. Additional standards in the future might make it necessary to revisit prerequisites in light of new standards. It is possible, perhaps even probable, standards for non-licensed candidates who desire licensure to teach only online will require additional prerequisites.

4. A Cohort Program. The journey toward professional growth and an educational response to the challenges of online learning can be a lonely one. Even when the best of practices are implemented in the design of online learning, learners can feel isolated and anonymous in the online learning environment. Based on many years of experience and research concerning the cohort IITS program, one solution to the potential feeling of isolation is to design professional development experiences organized around cohorts. Structuring study as a cohort process facilitates the formation of a group that shares a common area of inquiry and is bound by a common question. Starting at the same time and proceeding together over a period of time facilitates the development of a shared set of experiences, knowledge, readings, activities, and support systems. Thus, the cohort model will be
used for delivery of the proposed CRIN concentration and certificate. In addition to its benefits for teachers, the cohort process makes offering, managing, and advising efficient and economical. It especially facilitates the enforcement of course prerequisites. Admissions will be restricted to Fall semester only to facilitate the formation of a yearly cohort.

The curriculum for the IOLS program will include ten new courses. Eight of those courses would be completed by those in both the CRIN concentration and the certificate while 4 additional courses will be completed only by those pursuing the Master’s option. Of the four additional courses for the Master’s option, two will be newly developed while two are existing courses. The curriculum for the certificate and Master’s option is presented below:

**Certificate Program (16 credit hours) (Offered Fully Online)**

- **EDIT 760 - Online Teachers and Learners** (1 credit hour)
- **EDIT 761 - Models for K-12 Online Learning** (2 credit hours)
- **EDIT 762 - Quality K-12 Online Learning** (1 credit hour)
- **EDIT 763 - Tools for K-12 Online Learning** (2 credit hour)
- **EDIT 764 - The ART of Online Communication** (3 credit hours)
- **EDIT 765 - Facilitating K-12 Online Learning** (2 credit hours)
- **EDIT 766 - Understanding Online Presence** (2 credit hours)
- **EDIT 767 - Designing K-12 Online Learning** (3 credit hours)

**Courses for Master’s Degree (Additional 14 credit hours)**

Offered Fully Online

- **EDIT 768 – K12 Online Design I** (1 credit hour)
- **EDIT 769 – K12 Online Design II** (1 credit hour)

Offered Onsite during Face to Face Summer Practicums

- **EDIT 791 – Project Development Practicum** (6 credit hrs)*
- **EDIT 792 – Project Development Practicum** (6 credit hrs)*

*Existing Courses

**Course Descriptions for Proposed New Courses**

**EDIT 760 - Online Teachers and Learners** (1 credit hour): Examines the attributes of teachers and K-12 learners with emphasis on attitudes, behaviors, and adaptations required by online teachers and learners. Corequisite: EDIT 761

**EDIT 761 - Models for K-12 Online Learning** (2 credit hours) – Identifies, explores, and evaluates a range of educational models for K-12 online learning. Corequisite: EDIT 760

**EDIT 762 - Quality K-12 Online Learning** (1 credit hour) – Examines and evaluates quality indicators for the design of online learning pointing to the six major areas for consideration: instructor-learner, learner-learner, learner-content, learner-interface, learner-instructional strategies, and social presence. Prerequisite: EDIT 761 and Co-requisite: EDIT 763

**EDIT 763 - Tools for K-12 Online Learning** (2 credit hours): Examines tools that structure and support online learning with particular emphasis on the unique affordances of each tool including tools for
producing, delivering, and supporting online learning. Prerequisite: EDIT 761 and Corequisite: EDIT 762

EDIT 764 – The ART of Online Communication (3 credit hours): Examines strategies to assess, respond to, and target online communication and develops expertise in questioning and listening, supporting self-regulation, and clarifying conceptual understanding using a series of case studies and role playing activities. Prerequisite or Corequisite: EDIT 763

EDIT 765 - Facilitating K-12 Online Learning (2 credit hours) – Develops expertise in facilitating and moderating online learning to include synchronous and asynchronous environments, community building strategies, questioning strategies, prompting reflection, and facilitating conceptual understanding. Prerequisite: EDIT 764 and Corequisite: EDIT 766

EDIT 766 - Understanding Online Presence (2 credit hours): Examines impacts of distance on teachers and learners and develops strategies to establish teacher presence, to establish and express self, to promote learner-learner connections, and to compensate for the separation of teacher-learner and learner-learner. Prerequisite: EDIT 764 and Corequisite: EDIT 765

EDIT 767 - Designing K-12 Online Learning (3 credit hours): Develops frameworks for designing and structuring online learning opportunities and emphasizes course content and learning outcomes, selection of appropriate online models, and organization of online lessons and courses, online learning tools, and assessment and evaluation strategies. Prerequisite: EDIT 766

EDIT 768 – K12 Online Design I (1 credit hour): Focuses on the creation of online learning activities, materials, and resources appropriate for K-12 learners and culminates in comprehensive design documents ready for the production phase. Prerequisite: EDIT 764 Corequisite: EDIT 791

EDIT 769 – K12 Online Design II (1 credit hour): Focuses on the creation of online courses appropriate for K-12 learners and culminates in comprehensive design documents that detail goals, assessments, learning tools, and detailed scripts or documents ready for the production phase. Prerequisite: EDIT 767 and Corequisite: EDIT 792

EDIT 791 – Project Development Practicum (6 credit hours): Designed for students in the Division of Learning Technologies programs to facilitate the application of design and production processes to the solution of learning challenges with particular emphasis on the design and development phase of the design process. Prerequisite: Permission of Instructor

EDIT 792 - Project Development Practicum (6 credit hours): Designed for students in the Division of Learning Technologies programs to facilitate the application of design and production processes to the solution of learning challenges with particular emphasis on the implementation and evaluation phase of the design process. Prerequisite: Permission of Instructor

**Proposed Course Schedule**

Capitalizing on the cohort structure of the program, courses would be offered using the schedule below. Certificate and Master’s students would follow the same schedule working together online. A few exceptions differentiate the course schedules of the two groups. Since the bulk of the additional hours for the Master’s option are completed during summer face to face design practicums, it is necessary for the Master’s candidates to take the EDIT 764 - The ART of Online Teaching one semester earlier than the certificate candidates. The differences in the two programs are highlighted in yellow.
References


Appendices
Appendix A
Faculty Research and Publications Related to Online Learning

Dissertation

Patent Application

Website Developed and Published
Norton, P. *The Online Academy for Teachers*. An online 15 graduate hour certificate program comprised of nine courses developed during the 2004 – 2005 academic year and approved by the University Graduate Council in Fall, 2005. Accessible at http://toat.gmu.edu/

Norton, P. *The Online Academy*. A Virtual High School. A Frederick County Public Schools, Loudoun County Public Schools, Stafford County Public Schools, and George Mason University Collaborative. Accessible at http://toa.gmu.edu/


Book Chapters


**Peer Reviewed Journal Articles**


**Peer Reviewed Conference Papers**


Appendix B  
Standards and Courses Alignment

<table>
<thead>
<tr>
<th>The National Standards for Quality Online Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Standard A - The online teacher knows the primary concepts and structures of effective online instruction and is able to create learning experiences to enable student success.</strong></td>
</tr>
<tr>
<td>A.1 The online teacher knows and understands the current best for online teaching and learning and their practices and strategies implementation in online education.</td>
</tr>
<tr>
<td>A.2 The online teacher knows and understands the role of online learning in preparing students for the global community they live in, both now and in the future.</td>
</tr>
<tr>
<td>A.3 The online teacher knows and understands the instructional delivery continuum (e.g., fully online to blended to face-to-face).</td>
</tr>
<tr>
<td>A.4 The online teacher knows and understands the need for continuing to update academic knowledge, pedagogy, and skills.</td>
</tr>
<tr>
<td>A.5 The online teacher knows and understands the subject area and age group they are teaching.</td>
</tr>
<tr>
<td>A.6 The online teacher knows and understands the professional responsibility to contribute to the effectiveness, vitality, and self renewal of the teaching profession, as well as to their online school and community.</td>
</tr>
<tr>
<td><strong>Standard B - The online teacher understands and is able to use a range of technologies, both existing and emerging, that effectively support student learning and engagement in the online environment.</strong></td>
</tr>
<tr>
<td>B.1 The online teacher knows and understands the use of an array of grade-appropriate online tools for communication, productivity, collaboration, analysis, presentation, research, and content delivery.</td>
</tr>
<tr>
<td>B.2 The online teacher knows and understands the use of emerging technologies in a variety of mediums for teaching and learning, based on student need.</td>
</tr>
<tr>
<td>B.3 The online teacher knows and understands the importance of interaction in an online course and the role of varied communication tools in supporting interaction.</td>
</tr>
<tr>
<td>B.4 The online teacher knows and understands basic troubleshooting skills and the responsibility to address basic technical issues online students may have.</td>
</tr>
<tr>
<td>B.5 The online teacher knows and understands the need to continuously update their knowledge and skills for using the evolving technology tools that support online learning.</td>
</tr>
<tr>
<td>Standard C - The online teacher plans, designs, and incorporates strategies to encourage active learning, application, interaction, participation, and collaboration in the online environment.</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>C.1 The online teacher knows and understands the techniques and applications of online instructional strategies, based on current research and practice (e.g., discussion, student-directed learning, collaborative learning, lecture, project-based learning, forum, small group work).</td>
</tr>
<tr>
<td>C.2 The online teacher knows and understands the process for facilitating, monitoring, and establishing expectations for appropriate interaction among students.</td>
</tr>
<tr>
<td>C.3 The online teacher knows and understands the techniques for developing a community among the participants.</td>
</tr>
<tr>
<td>C.4 The online teacher knows and understands the process for facilitating and monitoring online instruction groups that are goal oriented, focused, project-based, and inquiry-oriented to promote learning through group interaction.</td>
</tr>
<tr>
<td>C.5 The online teacher knows and understands techniques to adjust communications to diverse perspectives.</td>
</tr>
<tr>
<td>C.6 The online teacher knows and understands differentiated instruction based on students’ learning styles.</td>
</tr>
<tr>
<td>C.7 The online teacher knows and understands techniques to create an environment that will engage, welcome, and reach each individual learner.</td>
</tr>
<tr>
<td>C.8 The online teacher knows and understands the participation in an online course from a student-centered approach.</td>
</tr>
<tr>
<td>C.9 The online teacher knows and understands the need to establish and maintain ongoing and frequent teacher-student interaction, student-student interaction, teacher-parent interaction, and teacher-mentor interaction.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard D - The online teacher promotes student success through clear expectations, prompt responses, and regular feedback.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.1 The online teacher knows and understands techniques to maintain strong and regular communication with students, using a variety of tools.</td>
</tr>
<tr>
<td>D.2 The online teacher knows and understands techniques for using appropriate communications in support of student engagement through prompt and regular feedback, and setting and communicating high expectations.</td>
</tr>
<tr>
<td>D.3 The online teacher knows and understands the need to create and explain objectives, concepts, and learning outcomes in a clearly written, concise format and to explain the course organization to students.</td>
</tr>
<tr>
<td>D.4 The online teacher knows and understands the need to define the terms of class interaction for both teacher and students.</td>
</tr>
<tr>
<td>D.5 The online teacher knows and understands the need to define the assessment criteria for the course.</td>
</tr>
<tr>
<td>D.6 The online teacher knows and understands the need to provide clear expectations for teacher response time to student queries.</td>
</tr>
</tbody>
</table>
D.7 The online teacher knows and understands the need to establish criteria for appropriate online behavior for both teacher and students. | x | x |
D.8 The online teacher knows and understands the need for timely, constructive, personalized feedback to students about assignments and questions. | x | x |
D.9 The online teacher knows and understands a variety of methods and tools to reach and engage students who are struggling. | x | x | x |
D.10 The online teacher knows and understands the process for aligning teacher and student expectations for the course, in general. | x | x | x |

**Standard E - The online teacher models, guides, and encourages legal, ethical, and safe behavior related to technology use.**

E.1 The online teacher knows and understands the responsibilities of digital citizenship and techniques to facilitate student investigations of the legal and ethical issues related to technology and society. | x |
E.2 The online teacher knows and understands how the use of technology may lead to instances of academic dishonesty. | x |
E.3 The online teacher knows and understands resources and techniques for implementing Acceptable Use Policies (AUP). | x |
E.4 The online teacher knows and understands techniques for recognizing and addressing the inappropriate use of electronically accessed data or information. | x |
E.5 The online teacher knows and understands privacy standards about other students and their posting and performance that are outlined in FERPA or other similar guidelines. | x |

**Standard F - The online teacher is cognizant of the diversity of student academic needs and incorporates accommodations into the online environment.**

F.1 The online teacher knows and understands legal mandates stipulated by the Americans with Disabilities Act (ADA), the Individuals with Disabilities Education Act (IDEA), the Assistive Technology Act, and Section 508 or other similar guidelines/requirements for accessibility. | x |
F.2 The online teacher knows and understands that students have varied talents and skills and make appropriate accommodations designed to include all students. | x | x |
F.3 The online teacher knows and understands appropriate tools and technologies to make accommodations to meet student needs. | x |
F.4 The online teacher knows and understands how adaptive/assistive technologies are used to help people who have disabilities gain access to information that might otherwise be inaccessible. | x | x |
F.5 The online teacher knows and understands options to expand student thinking, address styles of learning, and provide avenues for enrichment or intervention. | x |
F.6 The online teacher knows and understands the process for connecting with local support personnel to verify student’s IEP requirements or 504 accommodations needed for student success. | x |
<table>
<thead>
<tr>
<th>Standard G - The online teacher demonstrates competencies in creating and implementing assessments in online learning environments in ways that ensure validity and reliability of the instruments and procedures.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>G.1</strong> The online teacher knows and understands adequate and appropriate assessment instruments to measure online learning that reflect sufficient content validity (i.e., that adequately cover the content they are designed to measure), reliability, and consistency over time.</td>
</tr>
<tr>
<td><strong>G.2</strong> The online teacher knows and understands the implementation of online assessment measures and materials in ways that ensure instrument validity and reliability.</td>
</tr>
<tr>
<td><strong>G.3</strong> The online teacher knows and understands multiple strategies for ensuring the security of online student assessments, academic integrity, and assessment data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard H - The online teacher develops and delivers assessments, projects, and assignments that meet standards-based learning goals and assesses learning progress by measuring student achievement of the learning goals.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H.1</strong> The online teacher knows and understands the reach of authentic assessments (i.e., the opportunity to demonstrate understanding of acquired knowledge and skills, as opposed to testing isolated skills or retained facts) are part of the evaluation process.</td>
</tr>
<tr>
<td><strong>H.2</strong> The online teacher knows and understands the process of continuous evaluation of students to include formative and summative assessments and student feedback, including polls and surveys that reflect student learning progress throughout the course.</td>
</tr>
<tr>
<td><strong>H.3</strong> The online teacher knows and understands the relationships between the assignments, assessments, and standards-based learning goals.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard I - The online teacher demonstrates competency in using data from assessments and other data sources to modify content and to guide student learning.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I.1</strong> The online teacher knows and understands techniques to plan individualized instruction incorporating student data.</td>
</tr>
<tr>
<td><strong>I.2</strong> The online teacher knows and understands how data is used to modify the content, instruction, and assessment to meet student needs.</td>
</tr>
<tr>
<td><strong>I.3</strong> The online teacher knows and understands how instruction is based on assessment data.</td>
</tr>
<tr>
<td><strong>I.4</strong> The online teacher knows and understands the importance of self-reflection or assessment of teaching effectiveness.</td>
</tr>
<tr>
<td><strong>I.5</strong> The online teacher knows and understands varied assessment strategies that address levels of ability through a variety of alternative interventions.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>1.6</td>
</tr>
<tr>
<td>1.7</td>
</tr>
<tr>
<td>1.8</td>
</tr>
<tr>
<td>1.9</td>
</tr>
<tr>
<td>1.10</td>
</tr>
<tr>
<td>1.11</td>
</tr>
<tr>
<td>1.12</td>
</tr>
</tbody>
</table>

**Standard J** - The online teacher interacts in a professional, effective manner with colleagues, parents, and other members of the community to support students' success.

| J.1 | The online teacher knows and understands the need for professional activity and collaboration beyond school (e.g., professional learning communities) to update academic skills and knowledge and collaborate with other educators. |
| J.2 | The online teacher knows and understands the need to coordinate learning experiences with other adults involved in providing support to the student (e.g., parents, local school contacts, mentors) to support student learning. |

**Standard K** - The online teacher arranges media and content to help students and teachers transfer knowledge most effectively in the online environment.

| K.1 | The online teacher knows and understands critical digital literacies and 21st century skills. | x | x | x | x | x | x | x | x | x |
| K.2 | The online teacher knows and understands appropriate use of technologies to enhance learning. | x | x | x | x | x | x | x | x | x |