Technology and Learning: Weaving Standards, Technology and Lifelong Skills into Content Areas

Communication, Collaboration, Creativity, Innovation, Inquiry and Problem Solving are the Transferable Skills identified by the Vermont Agency of Education. Districts will be focusing on these as they develop Proficiency Based Graduation Requirements. These skills are woven throughout Common Core Standards, NGSS (Science Standards), the ISTE Technology Standards for Students, as well as other content standards. In this course we will focus on how to align content-based graduation proficiencies with the transferable skills to create curriculum around all content areas. This course is appropriate for all grade levels as these skills are part of all curriculum content. These skills can serve as benchmarks for assessing student proficiency.

During this course, our focus will be on the use technology to help all students attain national and Vermont standards and skills. Using technology tools, apps and resources that are inexpensive or freely available, educators will learn how to bring student learning to a higher level. Using the SAMR model of technology integration, resources will be examined and shared that focus on creating with technology rather than substituting with technology. Since most local schools have adopted Chromebooks, we will spend time researching apps and extensions that can be used on any device that can use a Chrome browser, including many Google Apps for Education Programs and Add-ons. To help build familiarity with the tools students are using, and to make learning more available to participants, participants will receive a Chromebook as part of this course.

Exploration of Universal Design for Learning and the use of assistive technology to meet the needs of all students will be an integral part of this course. Each participant will be expected to design a project that incorporates transferable skills, technology, assessments, and indicates understanding of higher level uses of technology to help students achieve standards.

Instructors and Class Times:

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Office Hours:	Instructors will be available by e-mail and phone.
Classroom Location:	**CVEDC i-Classroom, Colchester, VT** ***Class sessions*:** Wednesdays – 3/23, 3/30, 4/6, 4/13, 4/27, 5/4 and 5/11 Saturday – 5/7 Online hours - 7 hours

Course Objectives:

Participants will be able to demonstrate skills in planning for the integration of technology into the classroom using the Vermont Agency of Education Transferable Skills with the creation of lesson and unit plans that support their district curricula and plan for the implementation of technology tools, such as a Chromebook.

To obtain this objective, participants will:

a) compare and contrast appropriate content standards, ISTE Student-Technology Standards, and the Vermont AOE transferable skills identifying how technology supports these standards and skills

b) participate in both online and face-to-face discussions.

c) recognize, evaluate, and recommend technology resources and tools that support content curriculum and can be used with all students through Universal Design for Learning and Assistive Technology resources.

d) identify, critique, and recommend sample projects that support specific curriculum and be able to determine where those tools lie in the SAMR(Substitution, Augmentation, Modification or Redefinition) Model of Technology Integration

e) design a lesson plan or project that incorporates a Chromebook or set of chromebooks into the classroom, using the Education Quality Standards Transferable Skills: Using Differentiated Instruction, NGSS, Common Core Standards, or content specific curriculum.

f) incorporate Common Core standards into the planning and projects completed throughout the class as well as examine the resources that are available through the use of technology.

g) identify and design assessments to be used in the lesson plan or project.

h) focus on use of Google Chrome, Extensions and Apps on the Chromebook.

i) invite AOE personnel to share their work around the Transferable Skills and share their ideas for implementation.

Vermont AOE - Transferable Skills			**ISTE Standards**	
1.Clear and Effective Communication	Demonstrate organized and purposeful communication. Use evidence and logic appropriately in communication. Integrate information gathered from active speaking and listening. Adjust communication based on the audience, context, and purpose. Demonstrate effective, expressive, and receptive communication, including oral, written, multi-media, and performance. Use technology to further enhance and disseminate communication. Collaborate effectively and respectfully.		**2. Communication and Collaboration**	Collaboration and Communication Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media b. Communicate information and ideas effectively to multiple audiences using a variety of media and formats c. Develop cultural understanding and global awareness by engaging with learners of other cultures d. Contribute to project teams to produce original works or solve problems
2.Self-Direction	Identify, manage, and assess new opportunities related to learning goals. Integrate knowledge from a variety of sources to set goals and make informed	Cross over with critical thinking, problem solving and decision making	**1. Creativity and Innovation**	Creativity and Innovation Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology a. Apply existing knowledge to generate new ideas, products, or processes b. Create original works as

	decisions. Apply knowledge in familiar and new contexts. Demonstrate initiative and responsibility for learning. Demonstrate flexibility, including the ability to learn, unlearn, and relearn. Analyze the accuracy, bias, and usefulness of information. Collaborate as needed to advance learning. Persevere in challenging situations. Use technology and digital media strategically and capably.			a means of personal or group expression c. Use models and simulations to explore complex systems and issues d. Identify trends and forecast possibilities
3.Creative and Practical Problem Solving	Observe and evaluate situations in order to define problems. Frame questions, make predictions, and design data collection and analysis strategies. Identify patterns, trends, and relationships that apply to solutions. Analyze, evaluate, and synthesize evidence, arguments, claims, and beliefs. Generate a variety of solutions, use evidence to build a	Cross over with Creativity and Innovation	**4. Critical thinking, problem solving, and decision making**	Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. a. Identify and define authentic problems and significant questions for investigation b. Plan and manage activities to develop a solution or complete a project c. Collect and analyze data to identify solutions and/or make informed decisions d. Use multiple processes and diverse perspectives to explore alternative solutions

	case for best responses, critically evaluate the effectiveness of responses, and repeat the process to generate alternate solutions. Identify opportunities for innovation and collaboration. Use a range of tools, including technology, to solve problems. Persist in solving challenging problems and learn from failure.			
4.Responsible and Involved Citizenship	Participate in and contribute to the enhancement of community life. Take responsibility for personal decisions and actions. Demonstrate ethical behavior and the moral courage to sustain it. Respect diversity and differing points of view. Demonstrate a commitment to personal and community health and wellness. Practice responsible digital citizenship.		**5. Digital Citizenship**	Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. a. Advocate and practice safe, legal, and responsible use of information and technology b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity c. Demonstrate personal responsibility for lifelong learning d. Exhibit leadership for digital citizenship
5.Informed and Integrative Thinking	Apply knowledge from various disciplines and		**3. Research and information fluency**	Students apply digital tools to gather, evaluate, and use information.

	contexts to real life situations. Analyze, evaluate, and synthesize information from multiple sources to build on knowledge. Apply systems thinking to understand the interaction and influence of related parts on each other, and on outcomes. Use evidence and reasoning to justify claims. Develop and use models to explain phenomena. Use technology to support and enhance the critical thinking process.			a. Plan strategies to guide inquiry b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks d. Process data and report results

Required Readings and Materials:

1. **UDL Now!: A Teacher's Monday Morning Guide to Implementing the Common Core Standards Using Universal Design for Learning - Kindle edition**

2. NETS for Students Curriculum Planning Tool: A NETS Project. Eugene, Or.: International Society for Technology in Education, 2012. Print. - Kindle edition

3. Web Resources:
    1. 20 Google Tools for Teachers
    2. Universal Design for Learning Fact Sheet

4. WATI Chapter 3 – Assistive Technology for Communication
http://www.wati.org/content/supports/free/pdf/Ch3-Communication.pdf

5. Assistive technology for kids with LD: An overview
http://www.greatschools.org/special-education/assistive-technology/702-assistive-

technology-for-kids-with-learning-disabilities-an-overview.gs?page=all

Vermont AOE Transferable Skills and Proficiency Based Graduation Requirements:

1. Education Quality Standards
2. Sample Proficiency Based Graduation Requirements by Content Area
3. Transferable Skills

Assignments:

Assignment	Due Date
Discussion and analysis of online reading and resources	Each Day of Class
Presentation of Chromebook App/Extension	Second or Third Day of Class
Posting Online Resources	During Face-to-Face and between classes
In-class discussion and participation	Each Day of Class
Final Project	Final Day of Class

Course Requirements:

Discussion and analysis of online reading and resources (15%)

Presentations (15%)

Quality and appropriateness of posted online resources (15%)

In-class discussion and participation (15%)

Quality and appropriateness of final project (40%)

Course Hours: 41.0 Hours

Online work prior to class meeting: Surveys, reading, forum discussions with classmates and instructors	Minimum of 7 hours
Face to face sessions:	34.0 hours