

# Using Technology to Enhance Content-Area Learning

GRADES K–12

How can you increase your students' engagement and deepen their understanding of content-area concepts and skills? How can you help them develop as self-directed, creative thinkers? How can you provide meaningful, authentic learning experiences to support and extend student learning? Technology can help you achieve all of these goals when integrated into your content-area instruction. In this course, you will learn how to:

- Design technology-infused projects that will motivate students and help them to meet specific curricular standards.
- Explore strategies for using technology to develop authentic learning experiences that foster your students' creativity and independence as learners.
- Examine developmentally appropriate ways of using multimedia and Internet technologies to bring concepts to life and foster interdisciplinary connections that enhance learning across the curriculum.

## COURSE TOPICS

- Technology Integration—Starting with Standards Promoting Self-Directed Learning with Technology
- Supporting Creativity with Authentic Instruction
- Enriching Learning Experiences with Technology
- Using Technology to Help Diverse Learners
- Access Content Technology and Assessment Problem-Based Learning
- Social Networking and Online Collaboration
- Digital Storytelling
- Insights that are relevant and meaningful to their teaching practice

## COURSE OUTCOMES

By the end of the course, participants will:

- Develop a personal GAME plan for learning about technology and the NETS-T standards.
- Develop a lesson that incorporates technology to support creative thinking in an authentic, content-based learning situation.
- Explore the relationships among self-directed learning, creative thinking, technology integration, and content standards.
- Investigate how technology functions as tutor, mind tool, and conversation support.
- Construct a lesson plan integrating technology to increase student engagement and enrich the learning experience.
- Analyze online resources for customizing instruction to meet the needs of diverse learners.
- Evaluate the role of technology in addressing various instructional factors as they relate to described in a learning scenario.
- Select and implement various assessment formats using technology.
- Collaborate with colleagues to develop an understanding of problem-based learning (PBL) and address concerns related to implementing PBL in the content areas.
- Create a content-area, problem-based learning activity that integrates technology to support student learning.
- Explore appropriate social networking and online collaboration tools and develop a learning activity that incorporates those tools to support content learning.
- Develop a learning activity that incorporates digital storytelling to support student content learning and analyze the impact of digital storytelling on student engagement, learning, and assessment.

## USING TECHNOLOGY TO ENHANCE CONTENT-AREA LEARNING

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### METHODS OF ASSESSMENT

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The course contains some or all of following types of learning assessments:

→ **Discussions and Dialogues**

Participants engage in discussions that stimulate professional dialogue about the content presented. These discussions require participants to make connections among key ideas and synthesize their learning through thoughtful written responses.

→ **Applications**

Application assignments require participants to personalize course content and plan how they will apply the theories, concepts, and strategies in their teaching practice.

→ **Content Review Questions or Quizzes**

Content review questions are short-answer questions that provide the opportunity for participants to demonstrate their ability to synthesize the course content in the readings and media presentations.

→ **Reflection Paper**

A reflection paper requires participants to reflect on their learning throughout the course and respond from a more global perspective.

### COURSE FORMAT AND MATERIALS

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This course is offered in an online format. Participants in the online version access the course content through an online learning management system. Teachers are required to participate in virtual discussions via a discussion board with fellow educators with whom they interact. Course texts, Web sites, and journal articles help facilitate learning and transfer theory into practice. Video programs feature interviews with nationally recognized education experts. Classroom scenes provide a view into the classrooms of master teachers who demonstrate the strategies taught in the course. The online course includes:

→ Access to online course:

- *Using Technology to Enhance Learning*

→ Video streamed to the participants' desktops, with the following shipped to the participant:

- Laureate Education, Inc. (Executive Producer). (2009). *Using technology to enhance learning*. Baltimore: Executive Producer

→ The following course textbook shipped to participants:

- Cennamo, K., Ross, J., & Ertmer, P. (2010). *Technology Integration for Meaningful Classroom Use: A Standards-Based Approach*. Belmont, CA: Wadsworth, Cengage Learning

→ Articles provided in the online classroom

#### SYSTEM REQUIREMENTS FOR ONLINE COURSE FORMAT:

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- Operating system for PC: Windows® XP, Windows Vista®, or Windows® 7
- Operating system for Mac®: OS X or higher
- Processor: 1 GHz, 32/64 bit or higher
- Memory: Minimum 512 MB of RAM; 1 GB recommended
- Browser: Microsoft Internet Explorer® 6.0 or higher; Firefox® 3.6 or higher (also for Mac®: Apple® Safari® 4 or higher)
- Internet connection: Broadband (DSL, cable modem, or similar) required
- Software: Microsoft Word®, Adobe® Flash® Player 7 or higher (free), Adobe® Acrobat® Reader® version 8 or higher (free)
- Monitor resolution: 1280 x 800 pixels or higher

**Note:** If you are using a Macintosh®, please be sure to download Mozilla® Firefox® 3.6. It's free and the download should take only a few minutes at <http://www.mozilla.com/en-US/firefox/all-older.html>.

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### EDUCATION EXPERTS

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#### **Katherine Cennamo, Ph.D.**

Dr. Katherine Cennamo has more than 20 years of experience in the design and development of instructional materials in the corporate, educational, and nonprofit sectors. For the past 12 years she has taught educational technology courses in higher education settings, first as a professor at Purdue University and since 1996 at Virginia Tech. In addition to publishing more than 20 articles, Dr. Cennamo is the lead author of *Real World Instructional Design*. She has a Ph.D. in instructional technology from the University of Texas at Austin.

#### **John Ross, Ph.D.**

Dr. John Ross, senior R&D specialist at Edvantia, is an instructional designer and multimedia developer who designs products and services to help educators better understand how technology integration enhances school improvement planning and data-based decision-making. Spearheading the 2004 launch of Edvantia's online professional development environment, Dr. Ross designed online training that went to more than 2,400 K–3 reading teachers and principals in Tennessee. He is the content expert for *Principal Connections* online, a new, expanded Web-based version of Edvantia's popular training on technology integration for K-12 leaders. In addition, Dr. Ross worked with the Council of Chief State School Officers (CCSSO) to design and develop the free Web-based *Data-Based Decision Making Tool: A Resource for Teachers*. He holds a Ph.D. in curriculum and instruction and instructional technology from Virginia Tech.

#### **Peggy Ertmer, Ph.D.**

Dr. Peggy Ertmer is professor of educational technology in the department of curriculum and instruction at Purdue University. Her scholarship focuses on the impact that student-centered instructional approaches and strategies have on learning. Dr. Ertmer earned a Ph.D. in curriculum and instruction from Purdue University, an M.A. in special education—learning disabilities from Cardinal Stritch College, and a B.A. in elementary education from the University of Denver.

#### **Vicki Davis, Teacher and IT director, Westwood Schools, Camilla, Ga.**

Vicki Davis teaches 9th–12th-grade students a variety of technology-focused topics including keyboarding, computer fundamentals, introduction to computer science, accounting, digital filmmaking, computer graphic design, and current events. She also teaches a keyboarding mini-course to fifth-grade students and advises on technology-aided curriculum for her school. In partnership with Julie Lindsay, she created the Flat Classroom Project, a global, hands-on, technology-based collaborative project for middle school and high school students.

#### **Arnie Abrams, Ph.D.**

Dr. Abrams is director of the Applied Multimedia Unit and professor of computer science at Southern Oregon University. He has more than 25 years of experience making technology accessible to teachers. He has given workshops on multimedia and digital portfolios to school districts around the world. His presentations at NECC, TCEA, FETC, CUE, and NCCE have drawn capacity crowds for several years. Dr. Abrams' highly visual presentations are known to be practical and lively.



### **ABOUT CANTER**

Canter, a subsidiary of Laureate Education, Inc., is committed to serving the educational community with graduate-level courses that blend research-based theory with practical strategies. Canter began with one groundbreaking guide on managing behavior in the classroom and, more than 35 years later, has helped more than 295,000 educators address the most critical issues in education through proven programs delivered through distance-learning.

### **FOR MORE INFORMATION**

For more information regarding Canter graduate-level courses, visit [www.Canter.net](http://www.Canter.net) or call 1-800-669-9011.

### **ABOUT PARTNERSHIP**

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Canter offers its courses in partnership with Walden University, allowing you to benefit from Canter's quality curriculum in a self-paced format, while earning graduate credit from a leading accredited university. The course curriculum is developed and designed by Canter in collaboration with national education experts, while graduate credit is granted through a partnering university that assesses student work. Credit may be applicable for certification renewal and/or salary advancement.\* Course credit may be transferable with prior approval from the university providing your advanced degree or planned program.

### **Walden University**

Walden University is accredited by The Higher Learning Commission and a member of the North Central Association, [www.ncahlc.org](http://www.ncahlc.org); 1-312-263-0456. Canter and Walden University are both subsidiaries of Laureate Education, Inc.†

\*It is a student's responsibility to check with his/her state/district and evaluate and understand any requirements related to the use of individual courses for any purpose.

†Prospective Washington state students are advised to contact the Office of the Superintendent of Public Instruction at 1-360-725-6275 or [prof.educ@k12.wa.us](mailto:prof.educ@k12.wa.us) to determine whether Walden's programs in the field of education are approved for teacher certification or endorsements in Washington State. Additionally, teachers are advised to contact their individual school district as to whether this program may qualify for salary advancement.