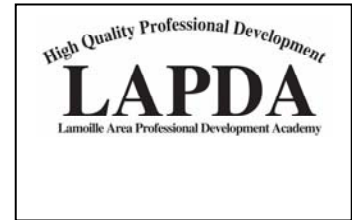


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Course Prefix/Title:

Transforming Science Instruction with Interactive Whiteboard Systems

Prefix will be assigned, please provide title, please provide prefix if previously assigned

Instructor:

Name: Carol Herron

Title:

Contact Address: 23224 NE 156th PL

Phone: 425-788-7275 Ext. 107

Email: sandra@cecreditonline.org

Class Location: Online www.cecreditonline.org

Carolyn A Herron, Ed.D *adb*, is a former teacher and administrator who is now an educational consultant. For over 45 years Ms. Herron has been working with teachers, administrators, and school districts in the areas of adult education, instruction, and program development. She has been a motivational speaker and lecturer, workshop leader, and writer. She has been responsible for the curriculum, instruction, program development, and teacher training for over 100 parent educators.

- B.A. *cum laude*, Religion/Sociology, Dillard University, New Orleans, LA
- M.Ed Education, Harvard University, Cambridge, MA
- Ed.D *abd* Developmental Studies, University of California, Los Angeles

Johnny Hamilton developed the core training videos used in this course and is the Director of Training and a founding partner of 2it Education Solutions. He is a SMART Master Certified trainer (Windows/Mac Notebook v.10) who has been training teachers to use digital whiteboard systems for over six years. Previously, as Technology Director at an independent school, he developed their technology curriculum and infrastructure into a state of the art program. He is also a California credentialed teacher and has taught since 1996.

- B.A. *cum laude*, Psychology, University of the Pacific, Stockton, CA

Dates/Times:

Asynchronous open enrollment, participants have 105 days to complete each online course from the time they start the first lesson.

Credits:

3 graduate credits

Seminar Abstract:

This course will introduce you to the transformative possibilities that interactive whiteboard systems can have on your science curriculum. An interactive whiteboard system is comprised of many separate components from many companies, but when integrated into a whole system, it becomes a powerful instructional tool in the hands of a trained teacher. The first section of this course will provide a brief

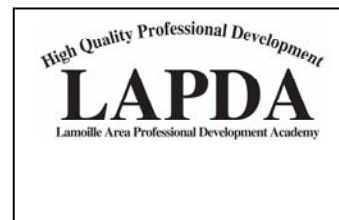
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overview of different digital whiteboard systems and current research of their effectiveness in the classroom. The next section will build a strong foundation of skills necessary to successfully control the hardware and software used. These skills include basic operations, manipulating graphics and objects, overlay tools, and integrating peripheral products. The last section will show you how to integrate these skills into several science lessons which then you will apply this knowledge to create a lesson of your own. This course features over 45 videos comprising over five hours of core video-based training, allowing you to see a credentialed teacher/ certified trainer actually using an interactive whiteboard system. The skills and their integration into science instruction covered in this course are designed to be transferable to any hardware or software platform.

Please Note:

Although having access to any brand of digital whiteboard is not required, it will greatly enhance your learning experience. Most of the software applications referenced are available as free downloadable trials and are compatible with Windows and Mac operating systems.

Most lessons in this course demonstrate hardware and software features through the use of core and auxiliary videos. Core videos, which are embedded in the web page, have been created and professionally produced specifically for this course and feature a digital whiteboard system from SMART Technologies. Auxiliary videos, which can be accessed via web links, have been produced by others and feature different digital whiteboard systems

Topics:

Description:

Content Outline/Topics

Lesson 1: Building Background on Integrated Digital Whiteboard Systems

- A. Components of Integrated Digital Whiteboard Systems
- B. Comparison of Digital Whiteboard System Major Brands
- C. Research on Student Achievement and Interactive whiteboard systems
- D. Current Trends in Educational Technology
- E. Reflective Journal/ Forum Exercise
- F. Glossary of Terms & Resources
- G. Quiz

Lesson 2: Learn & Practice Skills- Basic Operations

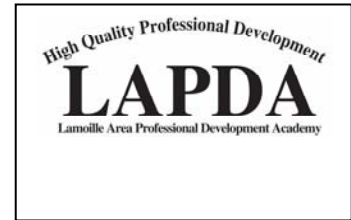
- A. Attaching Links
- B. Pages, Undo, & Paste
- C. Page Management
- D. Pen Tools
- E. Recording Sound
- F. Screen Capture
- G. Table
- H. Basic Operations – Quiz

Lesson 3: Learn & Practice Skills- Graphics

- A. Gallery : Search Content Types
- B. Gallery : Themes
- C. Manipulation: Aligning Objects
- D. Manipulation: Attach Link & Sound



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- E. Manipulation: Drag & Drop
- F. Manipulation: Lock, Group
- G. Manipulation: Move, Rotate, Size
- H. Manipulation: Selecting Multiple Objects
- I. Properties: Fill Effects
- J. Properties: Line And Text Styles
- K. Properties: Page Recording
- L. Graphics – Quiz

Lesson 4: Learn & Practice Skills- Overlay Tools

- A. Use & Modify Ink Layer
- B. Magnifier and Print Screen
- C. Pointer & Screen Shade
- D. Recorder
- E. Spotlight
- F. Virtual Keyboard
- G. Reflective Journal/ Forum Exercise

Lesson 5: Learn & Practice Skills- Peripheral Products

- A. 3D Mouse
- B. Document Camera- Hardware Overview
- C. Document Camera- Native Software
- D. Google Earth: Overview
- E. Google Earth: Layers
- F. Google Earth: Save a Location
- G. Google SketchUp: Overview
- H. Online Interactives: Flash/ Java
- I. Streaming Videos
- J. Video Conference: Overview
- K. Wireless Slate (SMART Airliner)
- L. Peripheral Products – Quiz

Lesson 6: Learn & Practice Skills- General Activities

- A. Graphic Organizers in Various Programs
- B. Process Recording in Various Programs
- C. Selection of Picture Elements
- D. Table Creation in Various Programs
- E. Reflective Journal/ Forum Exercise

Lesson 7: Curricular Integration- Astronomy

- A. Lesson Description and Guided Practice
- B. Modifications/ Extensions
- C. Reflective Journal/ Forum Exercise

Lesson 8: Curricular Integration- Microscope Comparison

- A. Lesson Description and Guided Practice
- B. Modifications/ Extensions
- C. Reflective Journal/ Forum Exercise

Lesson 9: Curricular Integration- Virtual Bodies

- A. Lesson Description and Guided Practice

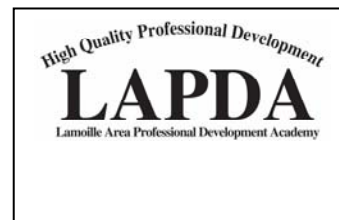
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- B. Modifications/ Extensions
- C. Reflective Journal/ Forum Exercise

Lesson 10: Curricular Integration- Weather Reports

- A. Lesson Description and Guided Practice
- B. Modifications/ Extensions
- C. Reflective Journal/ Forum Exercise

Lesson 11: Curricular Integration- Create and Implement Your Own Lesson

- A. Create and Teach a Lesson
- B. Reflective Journal/ Forum Exercise

Post Survey

Course Evaluation

Final Exam

The final exam is in two parts. There will be an exam that assesses all course content. This will include questions based on a video of a classroom lesson in which skills covered in this course are utilized. Each participant will also engage in a teaching experience that incorporates skills covered in this course, reflect on that experience, and report the results to the forum. The combination of the two will determine the passing grade.

Learning Outcomes & Competencies

**deliverables in parentheses, grading criteria below.*

+seminar aligned with UNIVERSITY OUTCOME (Union will assign “university outcome”)

Participants will:

- Identify components of an interactive whiteboard system
- Discuss current research in instructional technology as it applies to your classroom
- Understand how to use specific skills including basic operations, manipulating graphics and objects, overlay tools, and integrating peripheral products
- Practice using software used in an interactive whiteboard system
- Identify how skills covered in this course can enhance and transform many science lessons
- Apply skills learned in this course to develop your own science lesson
- Discuss challenges and successes in using interactive whiteboard systems in your classroom

Standards (Optional for syllabus)

This course meets the following VSBPE Standards for Staff Development

Context Standard

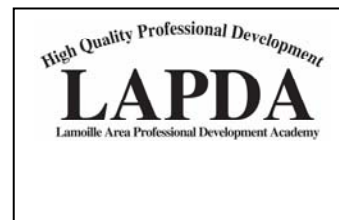
- Organizes adults into learning communities whose goals are aligned with those of the school and district. (Learning Communities)
- Requires skillful school and district leaders who guide continuous instructional improvement. (Leadership)

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- Requires resources to support adult learning and collaboration. (Resources)

Process Standards

- Uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement. (Data-Driven)
- Uses multiple sources of information to guide improvement and demonstrate its impact. (Evaluation)
- Prepares educators to apply research to decision making. (Research-Based)
- Uses learning strategies appropriate to the intended goal. (Design)
- Applies knowledge about human learning and change. (Learning)
- Provides educators with the knowledge and skills to collaborate. (Collaboration)

Content Standards

Staff development that improves the learning of all students:

- Prepares educators to understand and appreciate all students, create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement. (Equity)
- Deepens educators' content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepares them to use various types of classroom assessments appropriately. (Quality Teaching)
- Provides educators with knowledge and skills to involve families and other stakeholders appropriately. (Family Involvement)
- Helps educators and other school staff meet the present and future needs of students who learn in different ways and who come from diverse cultural, linguistic, and socioeconomic backgrounds (Diversity)

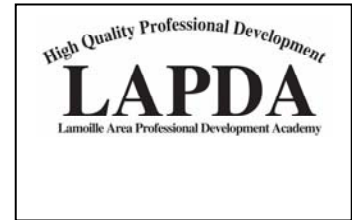
Evaluation:

In order to complete homework and other assignments, students must have access to a computer and the internet. Broadband or DSL access is highly recommended, but not required. All participants will be required to complete:

- Content presented for participants to read online—the formal instruction
- Video clips of lessons, coaching, feedback sessions
- Specific and varied learning activities to practice skills and strategies
- Analyses of lessons by video and script
- Specific practice with data collection and feedback processes
- Online forum for participants to post answers to questions, lesson analysis, responses to feedback sessions and receive specific feedback against identified standards
- Application settings to be completed in workplace settings and summarized in forum for specific feedback
- Activities, quizzes, and feedback with each course module so skills are practiced



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At high enough levels of understanding so that they can be applied throughout the course

Grading Rubric	
Grade	Grading Criteria
	<p>Completion of all online assignments, reflective journal assignments, postings to online forum, response to practice done in own setting and passing the final exam.</p> <p>Every Forum Exercise must be approved by the participant's facilitator and checked off on the participant's outline before the participant can complete the post survey, course evaluation, final exam, and submit for credit. This creates a forced mastery, if you will, that ensures each participant has mastered all of the concepts prior to receiving credit. Our facilitators work with participants on a one-to-one basis to ensure that every participant has a firm grasp of each lesson.</p> <p>Students are required to meet a mastery equivalent to a B grade to be allowed to apply for academic credit.</p>
A	Completion of all assignments, reflective journal assignments, postings to online forum, response to practice done in own setting and passing the final exam with a score of 90%.
B	Completion of all online assignments, reflective journal assignments, postings to online forum, response to practice done in own setting and passing the final exam with a score of 80%.
C	
D	
F	

Final Deadline for all work

15 weeks from the date they start their first lesson.

Readings & Resources:

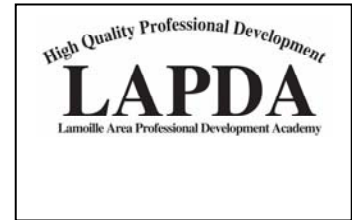
- **Texts:**
- **Additional Resources:**

Most lessons in this course are enhanced by professionally produced training videos that show a certified trainer using a digital whiteboard system. The training videos not only provide an in depth focus of each hardware and software skill, but also how those skills are integrated into the curriculum. These lessons also include guided practice, extension activities, and links to auxiliary videos of other digital whiteboard systems and resources for additional information. Participants have repeated opportunities to apply the skills learned in this course in their own classrooms through implementation assignments.

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Participants will have perpetual access to course content including all the videos. They will be able to come back and revisit the videos, links and any other materials which will provide an extended learning experience even beyond the requirements of this course.

