BAKER UNIVERSITY
1858

Baker University Continuing Education Syllabus

Course Name: **Intel® Teach Thinking with Technology Course for Participant Teachers**
Course Number: EDT 7867
Dates:
Time:
Location:
Credit Hours: 3 Graduate Credit Hours (32 Contact Hours + 5-10 additional hours of project work)
Instructor **Phone:**
Title: **Email:**

Course Description:

Intel® Teach Program is a worldwide effort to help both experienced teachers and Pre-Service teachers integrate technology into instruction to develop students' higher-level thinking skills and enhance learning. Participating teachers receive extensive instruction and resources to promote effective technology use in the classroom.

Teachers learn from other teachers how, when, and where to incorporate technology tools and resources into their lesson plans. In addition, they experience new approaches to create assessment tools and align lessons with educational learning goals and standards. The program incorporates use of the Internet, free online tools, and student projects as vehicles to powerful learning.

The Thinking With Technology Course helps teachers learn how to integrate technology into their curriculum through unique online thinking tools that enable students to visually represent their understanding of complex and interconnected issues.

The Visual Ranking Tool enables students to identify and refine ranking criteria for al ist and then debate differences, reach consensus, and organize ideas. The Seeing Reason Tool, an interactive tool to create cause-and effect maps, helps students investigate relationships in complex systems. The Showing Evidence Tool, a scaffold for constructing well-reasoned arguments, requires students to support cases with quality evidence.

Course Objectives:

The Goal: Participants leave the course with a standards-based unit plan, support materials, and implementation strategies to improve and assess students' higher-order thinking with the use of free online tools.

In the Intel® Teach Thinking with Technology Course, participants:

- Examine a framework for thinking skills and identify those that are most relevant to curricular goals
- Learn instructional strategies for addressing and assessing thinking skills using technology
- Support deeper understanding of core content
- Use online tools for visual representation of student thinking
- Create an instructional plan using online projects that are aligned to standards and support project-based learning and authentic inquiry

Teachers leave this workshop prepared to effectively implement a ready-to-use project that engages students and helps them to communicate their understanding of complex concepts.

Textbook/Materials:

Intel provides a comprehensive manual, CD Rom and web site resources free of charge:
 Online Resources: Visual Ranking Tool (www.intel.com/education/visualranking)
                          Seeing Reason Tool (www.intel.com/education/seeingreason)
                          Showing Evidence Tool (www.intel.com/education/showingevidence)
                          Assessing Projects application (www.intel.com/education/assessingprojects)
                          Intel Education Help Guide (www.intel.com/education/tools -select Help Guide)

Batey, A., Pollard, J., Shott, S., and Yost, J. (2005). Intel Teach : Teaching Thinking with Technology. Intel Corporation.
        Hillsboro: OR.

Content Outline:

Module 1 | Targeting Thinking in the Classroom
Technology best supports and enhances learning when it is used to engage students in
higher-order thinking. Teachers review different models of thinking in order to apply key
ideas in their classrooms, and they look at how different thinking skills are employed in
various classroom scenarios. They also reflect on their classrooms and build on
knowledge of what affects and supports deeper levels of thinking.
- Activity 1 - Introducing Yourself
- Activity 2 - Introducing the Thinking Tools
- Activity 3 - Applying Models of Thinking
- Activity 4   Creating Your Own "Habits of Learning Taxonomy"
- Activity 5 - Reviewing the Unit Plan Template
- Activity 6 - Supporting Thinking

Module 2 | Designing Standards-Based Projects
Teachers explore how projects can be used in the classroom and the type of planning
that is required. They also discuss and evaluate the benefits of technology integration
and how online thinking tools can support deeper levels of thinking. One way of
engaging students in higher-order thinking is through the use of open-ended questions.
- Activity 1 - Identifying Standards and Learning Objectives
- Activity 2 - Exploring Project Design
- Activity 3 - Considering a Project Idea for Your Unit
- Activity 4 - Sharing Project Ideas for Your Unit
- Activity 5 - Supporting Deeper Thinking

Module 3 | Creating Curriculum-Framing Questions to Support Thinking Skills
Projects can help students explore Curriculum-Framing Questions in a meaningful way.
They provide an authentic and real-world context for connecting learning activities and
incorporating higher-order thinking around big ideas. Teachers discuss the general types
of questions used in instruction, practice with and create Curriculum-Framing Questions
for their own classrooms, and reflect on how these questions can stimulate deeper levels
of thinking.
- Activity 1 - Ranking Questions
- Activity 2 - Asking Questions in the Classroom
- Activity 3 - Developing Curriculum-Framing Questions
- Activity 4 - Supporting Higher-Order Thinking Skills with Curriculum-Framing
  Questions
- Activity 5 - Writing Your Own Curriculum-Framing Questions
- Activity 6 - Sharing Your Curriculum-Framing Questions
- Activity 7 - Supporting Deeper Thinking

Module 4 | Planning Student-Centered Assessment
In projects, assessment plays an important role before, during, and after instruction.

Teachers examine a variety of assessment methods and scenarios, create a draft Assessment Plan for their unit, explore the strengths of the Visual Ranking Tool, and begin thinking about how Visual Ranking can be integrated into their classroom projects and unit plans.

- Activity 1 - Exploring an Assessment Plan
- Activity 2 - Using the Showing Evidence Tool to Analyze Assessment Plan Ideas
- Activity 3 - Drafting an Outline for Your Unit's Assessment Plan

Module 5 | Using the Visual Ranking Tool to Target Thinking Skills
Teachers discuss how online thinking tools can support deeper levels of thinking, explore additional uses of the Visual Ranking Tool, discuss and view project ideas,

- Activity 1 - Looking at Visual Ranking in Action
- Activity 2: Viewing Project Ideas
  Activity 3 Thinking About Your Unit

Module 6 | Considering the Visual Ranking Tool for Your Unit
Teachers will try out a project idea that incorporates the Visual Ranking Tool, create, share, and reflect on a practice ranking, They try out ideas for targeting higher-order thinking skills through the use of Visual Ranking by creating a practice list to rank and obtaining feedback from others.

- Activity 1 - Clarifying Project Ideas for Using Visual Ranking
- Activity 2: Planning Your Project
  Activity 3 Setting Up a visual Ranking Project
- Activity 3 - Trying OUt Your Visual Ranking Idea
  Activity 4 - Revising Your Unit Plan
- Activity 5 - Sharing Your Results

Module 7 | Using the Seeing Reason Tool to Target Thinking Skills
*Note: This module is optional for Participant Teachers.
Teachers learn more about causal mapping and the communication, thinking, and collaboration that are associated with that process; discuss the benefits of the Seeing Reason Tool; discuss and view project ideas; and brainstorm ways to integrate Seeing Reason into their own classroom projects.

- Activity 1 - Looking at Seeing Reason in Action
- Activity 2 - Digging Deeper into Cause and Effect
- Activity 3 - Viewing Project Ideas
- Activity 4 - Clarifying Project Ideas for Using the Seeing Reason Tool
- Activity 5 - Sharing Your Ideas
- Activity 6 Planning Your Project

Module 8 | Considering the Seeing Reason Tool for Your Unit
*Note: This module is optional for Participant Teachers.
Teachers try out their project ideas by creating a practice Seeing Reason causal map, discuss and practice effective questioning techniques, provide and receive feedback on project ideas, and use tips on implementation and assessment to revise their project ideas.

- Activity 1 - Trying Out Your Seeing Reason Idea
- Activity 2 - Sharing Causal Maps and Practicing Effective Questioning
- Activity 3 - Revising Your Project
- Activity 4 - Revisiting Your Unit Plan
- Activity 5 - Sharing Your Results

Module 9 | Using the Showing Evidence Tool to Target Thinking Skills

*Note: This module is optional for Participant Teachers.
Teachers learn about argumentation and the communication, thinking, and collaboration that are associated with that process; discuss the benefits of the Showing Evidence Tool; discuss and view project ideas; and brainstorm ways to integrate Showing Evidence into their own classroom projects.

- Activity 1 - Looking at Showing Evidence in Action
- Activity 2 - Digging Deeper into Argumentation
- Activity 3 - Viewing Project Ideas
- Activity 4   Clarifying Project Ideas for Using Showing Evidence
- Activity 5 - Sharing Your Ideast
- Activity 6 - Planning Your Project

Module 10 | Considering the Showing Evidence Tool for Your Unit
*Note: This module is optional for Participant Teachers.
Teachers try out their project ideas by creating a practice Showing Evidence case, discuss and practice effective questioning techniques, provide and receive feedback on project ideas, and use tips on implementation and assessment to revise their project plans.

- Activity 1 - Creating a Practice Case
- Activity 2 - Reviewing Student Work
- Activity 3 - Sharing Your Practice Case
- Activity 4 - Revising Your Project
- Activity 5 - Revisiting Your Unit Plan
- Activity 6 - Shaing Your Results

Module 11 | Completing Your Unit
Teachers will complete their plan to effectively use one or more of the online thinking tools, review various types and formats of assessments, finalize their unit's assessment plan, create one or more assessments for their unit, and showcase their unit to colleagues.

- Activity 1 - Supporting Your Assessment Plan
- Activity 2 - Creating an Assessment
- Activity 3 - Finalizing Your Assessment Plan
- Activity 4 - Reflecting on Your Unit
- Activity 5 - Completing Your Unit Plan
- Activity 6 - Showcasing Your Unit
- Activity 7 - Reflecting on Thinking with Technology

Assessment:

This course involves a great deal of hands-on learning so attendance of all learning sessions is important and expected. The grade for the course will be determined on the following factors:

Attendance: Attendance* is required for each day of the 5-day course.
Participation: Active participation* in learning activities during each day of the 5-day course.
Unit Portfolio: Participants will email a copy of their Unit Portfolio to the Instructor of Record at the end of the course. Unit Portfolios will be assessed based on the attached rubric.

*Instructor of Record will verify this information with the Master Teacher prior to finalizing grades for each student.

- To receive an A, the student must be present and actively participate during each session of the 5-day course and submit their Unit Plan with a majority of the criteria in the "Excellent" column for each of the 4 categories (Student Learning, Integration of Technology, Project-Approach to Learning, and Student Assessment).
- To receive a B, the student must be present and actively participate during each session of the 5-day course and submit their Unit Plan with a majority of the criteria in the "Excellent" or "Good" column for each of the 4 categories (Student Learning, Integration of Technology, Project-Approach to Learning, and Student Assessment).

- To receive a C, the student must be present and actively participate during most sessions of the 5-day course and submit their Unit Plan with a majority of the criteria in the "Good" column for each of the 4 categories (Student Learning, Integration of Technology, Project-Approach to Learning, and Student Assessment).

Class Attendance	**20%**
Participation (Creating Project Ideas, Sharing, Discussions)	**40%**
Unit Portfolio	**40%**

Grading Scale:
  90%-100% = A
  80% - 90% = B
  70% - 80% = C
  60%-70% = D
  59% and below = F

RUBRIC

INTEL® TEACH TO THE FUTURE
Workshop On Teaching Thinking With Technology

Portfolio Rubric

	Excellent	Good	Poor
Student Learning	• The unit, as a whole, has students investigate an open-ended, complex problem, system or idea • Targeted learning objectives are clearly defined, well articulated, and supported by the Essential and Unit Questions, and derived from content standards. • Student work will address the Curriculum-Framing Questions in a meaningful way. • Unit Plan has well-defined accommodations to support a diversity of learners.	• Parts of the unit require students to investigate a complex problem, system or idea. • Targeted learning objectives are defined and moderately supported by the Essential and Unit Questions. The alignment to standards is evident, but uneven. • Student work will moderately address the Curriculum-Framing Questions. • Unit Plan offers minimal accommodations to support a diversity of learners.	• Unit Plan requires very little, if any, higher-level thinking. • Targeted learning objectives are vague and not clearly supported by the Essential and Unit Questions, and do not appear to align to standards. • Student work will not address the Curriculum-Framing Questions in a meaningful way. • Unit Plan does not accommodate a diversity of learners.
Integration of Technology	• Proposed technology use is engaging, age appropriate, beneficial to student learning, and supportive of higher-level thinking skills. • Technology is integral to the success of the Unit Plan. • A clear relationship between the use of technology and student learning is evident through the use of the thinking tool(s). • The planned use of the thinking tool(s) supports and develops students' collaboration, communication and thinking skills.	• Proposed technology use is engaging and age appropriate, and somewhat enhances student learning. • Technology is important, but not integral, to the Unit Plan. • A limited relationship between the use of technology and student learning is evident through the use of the thinking tool(s). • The planned use of the thinking tool(s) is limited in how they will support and develop students' collaboration, communication and thinking skills.	• Proposed technology is not age appropriate nor engaging, and does not enhance student learning. • Importance of technology to the Unit Plan is unclear. • No limited relationship between the use of technology and student learning is evident through the use of the thinking tool(s). • The planned use of the thinking tool(s) does not support and develop students' collaboration, communication and thinking skills.
Project-Approach to Learning	• The unit has authentic applications outside of the classroom. Students investigate compelling problems with authentic tasks and products. • Students take an active role – as problem solver, decision maker, investigator, and documentarian. • Students make decisions about and monitor how they approach and complete project tasks.	• The unit contains some applications outside of the classroom, but tasks and products may or may not be authentic. • Students are placed in a somewhat active role, but for small parts of the project. • Students are provided limited opportunities to make decisions about and monitor how they approach and complete project tasks.	• The unit contain does not include any application outside of the classroom and the project does not include authentic tasks. • Students stay within their traditional role as "passive knowledge recipient." • Students are provided no opportunity to make decisions about and monitor how they approach and complete project tasks.

Student Assessment	• Assessment plan addresses all targeted objectives. • A clear relationship is evident between learning objectives and assessment of student learning. • Assessment tools contain content-specific criteria in order to serve as a helpful scaffold for students. • Effective assessments are embedded throughout the project.	• Assessment plan addresses most targeted objectives. • Some relationship is evident between learning objectives and assessment. • Assessment tools contain some content-specific criteria, but may be unclear to students. • Some assessments are embedded throughout the project, but not all are effective.	• Assessment plan does not match the targeted objectives. • Relationship between objectives and assessment tool is unclear. • Assessment tools contain only general criteria. • Assessment is only completed at the end of the project.

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