Course number: PRDV 74827
Title: Young Kids Who Code
Credit: 1
Location: Online
Date: TBD
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Note: When contacting me by email, please state the course name in the subject area.

Course Overview

Course Description:
This course is designed for preschool-K to grade 5 teachers and specialists. Each module, with its special topics, examines the impact of learning to code, has on student's K to grades 5.

Participants will explore what coding is, why kids should code, and the tools and strategies available to bring coding to the classroom. The focus is on how teachers can use coding to make learning more meaningful in the areas of Math, Science & Technology, English Language Arts and Literacy, as this is not a programming course.
Participants will become familiar with the Digital Literacy and Computer Science Framework, Massachusetts Curriculum Frameworks, and the NAEYC's position statement on Technology & Interactive Media.

Emphasis is placed on but not exclusive to the following:

The NAEYC’s position statement on Technology & Interactive Media.

Standards in this grade span ask students to demonstrate the ability to:

Kindergarten to Grade 2 - Computational Thinking (CT)
Explore abstraction through identification of common attributes.
Create and enact a simple algorithm.
Create a simple computer “program.”
Use basic models and simulations.

Grade 3 to 5 Computational Thinking (CT)
Create a new representation and breakdown a larger problem into sub problems.
Write, debug, and analyze an algorithm.
Understand databases and organizing and transforming data.
Write, debug, and correct programs using successively sophisticated techniques.
Create a model and use data from a simulation.
Participants will explore connections across Literacy, Math and Science Curriculum Frameworks. Specifically, connections are made in the area of Computational Thinking, K-2CT and 3-5CT. Note, this is not a programming course.
Participants will explore the resources the content within each weekly module, and complete all readings (text, audio, visual) prior to the online discussions.

Participants will come prepared for in-depth discussions and ready to participate actively in the online discussion forum, from the start to the completion of the week. A final project is required.

Course Content:
Week 1 - Module: What Exactly is Coding?
Week 2- Module: Why Should Kids Code, Why Should We Care?
Week 3- Module: Teaching Kids Coding Without a Computer
Week 4- Module: Teaching Kids Coding Using Computers

Student Outcomes
Students will be able to:
Define coding and its connection to the Digital Literacy and Computer Science Massachusetts Curriculum Frameworks
Explore connections across Literacy, Math and Science Curriculum Frameworks.
Describe and discuss why kids should code.
Examine how to apply this information to teaching and learning
Discuss and explore ways to incorporate coding across curriculum with and without computers

Grading Components:
40 points = Readings and Videos (tied to the frequency and quality of posts (See Rubric for Discussion Board).
40 points = Weekly Assignments (See Rubric for Weekly Assignments).
20 points = Final Project: PowerPoint, Prezi, Podcast, Adobe Spark or Research Paper (APA)
100 points

Grading/Grade Points
A, A- (95-100 A, 90-94 A-) Indicates that the level of work is of superior quality and exceeds specific guidelines in one or more ways. Work and discussion posts exceed expectations.
B+, B, B- (87 - 89 B+, 83 - 86 B, -80 – 82, B-) Indicates that the course work has met the requirements and was judged acceptable. Work and discussion posts meet expectations.
C+, C, C- (77 – 79 C+, 73-76 C, 70-72 C) indicates that the level of work did not adequately meet the requirements. D+ 69-67 D 66-63 D- 62-60 F 59-0

How to use the Guiding Questions
Each weekly discussion will be based on the required readings/viewings. Each weekly Discussion Board will begin with one or more questions, referred to as Guiding Questions or GQ. Discussions boards run week to week, once a week closes, posts cannot be made up. Please see the Rubric for Asynchronous Discussion Participation.
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IMPORTANT NOTE: ALWAYS CHECK THE MODULES FOUND ON THE COURSE BLACKBOARD FOR REQUIRED READINGS AND VIDEOS. READINGS AND VIDEOS LISTED WITHIN THE SYLLABUS, CAN AND
Week 1 - Module: What Exactly is Coding?
Required readings and videos


Week 2- Module: Why Should Kids Code, Why Should We Care?
Required readings and videos


Week 3 - Module: Teaching Kids Coding Without a Computer
Required readings and videos


**Week 4- Module: Teaching Kids Coding Using Computers**

**Required readings and videos**


**Weekly Assignments - Young Kids Who Code**

**Assignment 1:** What do you see as some of the benefits of young kids coding? Do not focus on high-end complex coding, rather focus on the "Act of Coding." Provide evidence for your statements, by quoting from readings and videos.

**Assignment 2:** What skills/subject areas do you anticipate kids might build on through the coding experience? Provide evidence for your statements, by quoting from readings and videos.

**Assignment 3:** What are some of the ways that we can teach kids to code without the use of a computer? Why is this useful in developing coding skills? Provide evidence for your statements, by quoting from readings and videos.

**Assignment 4:** How do you see coding impacting upon or not impacting upon lifelong learning? Provide evidence for your statements, by quoting from readings and videos.

**Discussion Board Rubric for Asynchronous Discussion Participation**

**A Quality of Postings Indicator**

Asynchronous discussion enhances learning as participants share their ideas, perspectives, and experiences with the class. Participants develop and refine their thoughts through the writing
process, plus broaden their classmates’ understanding of the course content. Each weekly discussion is organized around the Guiding Questions, which participants must respond to.

Post your thoughts and provide supporting evidence using the readings and videos. DO NOT just give the facts. Posts MUST reflect how the readings and videos have impacted upon your thinking and the work that you do.

Participants will use the following guidelines to improve the quality of their discussion contributions.

**Grading Discussion Board Posts**
Discussion postings that meet all criteria for a grade level will receive the highest points possible at that level. Postings that meet mixed levels of criteria will receive a score within the point range of the appropriate levels.

Participation in discussion activities can only be measured by the date on the discussion posting. For example, participating 3 times during the week is measured by postings on 3 different days; there may actually be 5-6 postings, but participation only occurred 3 times during the week.

**Rubric for Discussion Board**
There are four criteria, Posts throughout the week, Details in each post, The quality of information in response to other’s posts, and the Frequency of Weekly Discussion Posts. The highest amount of points that can be earned in one week, for a score of excellent, is a score of 10 points.

*Criteria – Excellent 10 points
*Posts throughout the weekly discussions - Build on other’s posts & comments analytically. Quotes directly from other’s posts.
*Information - Posts refer to what others have written, provides details from information gathered within the course, and encourages new ideas.
*Details in posts on the discussion board - Posts offer information that is highly detailed & correct. Quotes 3 or more times from readings or videos to support statements.
*Frequency of posts - Posts often, at least 7-8 times throughout the week.

*Criteria – Good 8 points
*Posts throughout the weekly discussions - Builds on others posts & comments analytically w/o direct quotes.
*Information - Posts refer to what others have written, provides some details from information gathered within the course.
*Details in posts on the discussion board - Posts offer information that is detailed & correct. Quotes 1 to 2 times from readings to support statements.
*Frequency of posts - Posts at least 5-6 times throughout the week.

*Criteria – Good 6 points
*Posts throughout the weekly discussions* - Posts respond to others posts, w/o quoting directly or indirectly. Posts lack depth.

*Information* - Posts refer only to what others have written, does not provide information gathered within the course.

*Details in posts on the discussion board* - Posts offer information that is somewhat detailed & correct. Does not quote but refers to readings/videos.

*Frequency of posts* - Posts at least 3-4 times throughout the week.

*Criteria* – Unacceptable 4 points

*Posts throughout the weekly discussions* - Posts are not relevant to the discussion.

*Information* - Posts do not refer to what others have posted.

*Details in posts on the discussion board* - Post responds to others with few details or facts. Does not refer to readings/videos.

What to Consider when posting:

- Guiding Questions (GQ)
- Refer to at least two specific points, from the article or reading.
- Conveying new information
- Contrasting earlier information learned in the course of new information (after week1).
- Convey information from the read, watch, listen information gathering, to personal experiences.
- Consider the importance of the final post to the Discussion board
- Discussion at a *critical level is not just facts from information gathering, but rather provides supporting evidence (see below).*
- Discussion at a critical level means discussing, for example, the following:
  - Opinion of the facts gathered or facts mentioned by others in the discussion group
  - Why the opinion is held
  - What is wrong with the fact/s mentioned
  - Are the points, facts, opinions, consistent and or inconsistent with the material presented so far
  - What are the implications for the future, consistencies, and or inconsistencies within the readings or videos?

Note: Participants will review readings/videos, by analyzing the content for information, what is interesting, and what is new, and what is considered the pros and cons of the information. Participants should justify their analysis, providing their own opinions, not just quote information. However, your opinion must be backed up by quoting from the readings/videos.

**Weekly Assignment - Levels of Achievement**

*Criteria*

*Proficient*: 10 Points - The Post fully addresses the Guiding Question (GQ). The post demonstrates a proficient understanding of the content. Three or more quotes from reading or videos are used to support your statements.
**Competent**: 8 Points - The Post addresses the Guiding Question (GQ). The post demonstrates above average or competent understanding of the content. Two quotes from readings or videos are used to support your statements.

**Adequate**: 6 Points - The Post addresses the Guiding Question (GQ) and demonstrates an adequate understanding of the content. One quote from readings or videos is used to support your statements.

**Unacceptable**: 0-2 Points - The Post does not clearly address the Guiding Question (GQ) and does not appear to be tied to the topic. Quotes from readings or videos are not used to support statements. The post is found unacceptable.

**Final Project – Due on or before the last day of class**
Participants are required to create a Final Project. The Final Project should address how the course content has influenced their thinking. The Final Project can be a tool to be used by you for professional purposes, a presentation or an activity. It should be short, for example, no more than 20 slides, concise, and cite from course content. DO NOT provide an overview of the course content.

*Format choices:
1. PowerPoint (Visual & Audio) might be useful if the intent is to share the information.
2. A Prezi (instead of a PowerPoint)
3. A Podcast may be useful to create a report, much like a newscast **
4. Writing a 10-page double-spaced APA style paper. One page of the paper may include a Wordle.
5. Or use of any other application that you choose to create your Final Project.

**Note: If a participant chooses to create a Podcast, a summary of the podcast and sources cited, using APA style guidelines is required.

**Rubric for the Final Project**
Five criteria for the Final Project are as follows: Question, Information, Quotes and Encourages new ideas.

**First criteria, the question**
If the question directly relates to the course topics and the work that you do, this question earns a score of 4 points.
If the question is somewhat related to the course topics, and the work that you do, this question earns a score of 3 points.
If the question indirectly relates to the course topics, and the work that you do, this question earns a score of 2 points.
If the question does not directly relate to the course topics, and or the work that you do, this question earns a score of 1 to 0 points.
Second criteria, the information
If the information is highly detailed and correct, you earn a score of 4 points.
If the information is somewhat detailed and correct, you earn a score of 3 points.
If the information has some detail and somewhat correct you earn a score of 2 points.
If the information lacks detail, and or is not correct, you earn a score of 1 to 0 points.

Third criteria, how analytical is it
If the information is analytical and demonstrates a proficient understanding, you earn a score of 4 points.
If the Information is analytical and demonstrates above average understanding, you earn a score of 3 points.
If the Information is analytical and demonstrates an acceptable level of understanding, you earn a score of 2 points.
If the Information is not analytical and or demonstrates a poor understanding, you earn a score of 1 to 0 points.

Fourth criteria, using quotes
If 4 quotes or more are used to support statements/assertions you earn a score of 4 points.
If 3 quotes or more are used to support statements/assertions you earn a score of 3 points.
If 2 quotes or more are used to support statements/assertions you earn a score of 2 points.
If quotes are not used, or 1 quotes are used to support statements/assertions you earn a score of 1-0 points.

Fifth criteria, encouraging new ideas or new thinking
If the Final Project responds to the Final Project question and responds to misconception, new ideas or new thinking you earn a score of 4 points.
If the Final Project responds to the Final Project question and responds somewhat to misconception, new ideas or new thinking you earn a score of 3 points.
If the Final Project responds the Final Project question and responds to misconception yet does little to encourage new ideas or new thinking you earn a score of 2 points.
If the Final Project does or does not respond to the Final Project question, and does or does not responds to misconception, or new ideas or new thinking you earn a score of 1 to 0 points.

College Policy Regarding Academic Honesty
Integrity is essential to academic life. Consequently, students who enroll at Framingham State College agree to maintain high standards of academic honesty and scholarly practice. They shall be responsible for familiarizing themselves with the published policies and procedures regarding academic honesty. Refer to FSU Graduate Catalog, Student Conduct section, page 7 at: http://www.framingham.edu/graduate-and-continuing-education/documents/grad-catalog-0910.pdf.

Research
Additional supporting information can be researched at the Framingham State University Online Library. Just logon to your FSU My Campus account and go to the tab that says Library.

**Academic Accommodations Policy**
Framingham State University offers equal opportunities to all qualified students, including those with disabilities and impairments. The University is committed to making reasonable accommodations as are necessary to ensure that its programs and activities do not discriminate, or have the effect of discriminating, on the basis of disability. Academic Support serves students with learning and psychiatric disabilities as well as students with visual, mobility and hearing impairments. For further information about this, please visit the website at: [https://www.framingham.edu/academics/center-for-academicsuccess-and-advising](https://www.framingham.edu/academics/center-for-academicsuccess-and-advising)

or contact Ms. LaDonna Bridges, Director of Academic Support/Disability Services, in the Center for Academic Support and Advising (CASA) at 508-626-4906 or lbridges@framingham.edu

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**Note:** Syllabus is subject to change with notice. Check Blackboard regularly for updates.