

Computer Science SOLs In the Elementary Classroom
Longwood University

Professional Studies *Non-Credit* Class

Instructor:

Dr. Julie Mersiowsky
Longwood University

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Office Hours
By Appt.

Class Description:

You have to teach Computer Science to you elementary students? But HOW! Through this course learners will creatively develop ways to integrate these standards into the lessons they are already teaching across multiple subject areas. The focus of the course is the elementary classroom and standards, however the content can be scaled up to address the middle school Computer Science Standards.

This is a non-credit bearing class and will not be reflected on a Longwood transcript. We recommend that it is equivalent in content and scope to a one credit graduate class or 30 recertification points.

Class Overview:

This class is designed to be self-paced and does not require participants complete the work at the same time or participate in activities or discussions at the same time. However, reviewing what your fellow participants post and initiating discussions with them will greatly enhance your learning and overall experience.

Text:

No textbook is required for this class. Readings will be posted online within the Canvas shell. Students are encouraged to spend book funds on copies of children's books and resources for their classroom instruction.

Goals & Objectives:

Upon completion of this course the learner will be able to:

- Identify the Computer Science Standards that apply to their students.
- Integrate the Computer Science Standards into existing curriculum.
- Create an annotated of set of resources that will support the integration of the Computer Science Standards.
- Develop a coded script that successfully runs.
- Apply content learned to the development of a unit plan sketch.

SCHEDULE		
Dates	Topics	Assignments
Module 1 Week 1 February 3-10, 2020	“Wait! I have to teach Computer Science?” Overview of Computer Science as it relates to the “regular” classroom. Resources you can use.	<ul style="list-style-type: none"> • Readings & activities • Introduction Discussion Board. • Resource set sample slides • Create your Scratch Account and/or Code Academy Account
Module 2 Week 2 February 11-17, 2020	How Coding applies to your students Coding Introduction Integrating Coding into your curriculum	<ul style="list-style-type: none"> • Readings & activities • Coding discussion board • Coding Assignment
Module 3 Week 3 February 18-24, 2020	What makes a quality Computer Science Resource?	<ul style="list-style-type: none"> • Readings & activities • Resource Set
Module 4 Week 4 February 25-March 2, 2020	Putting it All Together	<ul style="list-style-type: none"> • Readings & activities • Unit Sketch

Class Assignments: Detailed instructions are provided for all assignments within the online class modules located in Canvas. These are general descriptions of the expectations. A full rubric is supplied within each of the assignments on Canvas.

Participate in/Complete Class Activities:

Each module will have at least one activity that you will be asked to complete, post your results, and reflect upon.

- Complete all readings and viewings.
- Introduce yourself through the introduction discussion board.
- Complete the sample resource slides
- Coding discussion board
- Coding assignment

Coding Assignment:

Learners will identify a coding platform that fits with their intended grade level and subject area(s). Learners will use that platform to create a set of code “script” to run a simple program. (Yes, you can!)

Resource Set:

Student will select a concept related to their chosen topic/subject and create an annotated presentation of at least 10 different resources (videos, children’s books, trade books, audio recordings, etc.). The resources will support that concept at your chosen grade level or range of grade levels. The set should include the title, author, concept, and 2-3 sentences explaining why the resource was selected and/or how you plan to use it in your instruction. Detailed instructions can be found in Canvas.

A sample set of slides, to include 1 resource located, will be due at the end of the first week. The instructor will provide you with feedback on this assignment in order for you to fully develop your resource set. Detailed instructions can be found in Canvas.

Lesson Sketch:

Students will create a unit plan sketch (outline) where you have linked the Computer Science Standards for your grade level with you current curriculum in other subject areas. The unit sketch should cover at least 5 days of lessons covering multiple subject areas and standards (SOL), at least 3 levels of Bloom’s taxonomy, and a variety of activity types. Detailed instructions can be found in Canvas.

Class Grading:

Participation in /completion of Class Activities	50 points
Coding Assignment	50 points
Resource set presentation	50 points
FINAL PROJECT – Unit Sketch	100 points
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Total Points Possible	250 points

Grading Scale

Non-credit classes are Pass/Fail. If you earn 200 points (80%), you receive a grade of Pass for the class.

CLASS POLICIES**Student Responsibility:**

It is your responsibility to inform yourself of, and to observe, all regulations and procedures required by the university. In no case will a regulation be waived or an exception granted because students plead ignorance of the regulation or assert that they were not informed of the regulation by an advisor or other authority.

Communication Policy:

The instructor will respond to student messages within 24-48 hours, generally through email. For all assignments, feedback will be delivered within one week of each assignment’s due date.

Professor Contact: It is easiest to contact your professor through her cell phone – 434-414-6082. Texting is acceptable, be sure to identify yourself the first time you text. Office hours are flexible. Appointments can be made for in person and telephone meetings as needed. Your

instructor lives in an areas that does not have reliable cell service, so if you need to contact her after traditional office hours, try email or text. She will respond as soon as she is able, but within 24 hours.

Attendance & Participation Policy:

Attendance for online courses is determined by how many times and for how long you access the Canvas course (this information is available for each student to the instructor), your participation in the assignments, and your timeliness in submitting requested work or response. Online courses can get away from you if not carefully scheduled. Take the time to review your online commitments, schedule regular and consistent time to be online, and stick to the schedule. You are expected to participate in all Canvas activities. Failure to participate in Canvas activities may impair academic performance and result in a lower grade. You must assume full responsibility for an online presence.

Technical Assistance:

Please contact your instructor directly for assistance with Canvas.

Netiquette: In a fully online course, students will interact with the professor and other students in various online forums. The professor expects that students will engage in online discussions, emails, and other forms of communication in a professional manner. It is important to treat all of these online interactions as if they are occurring within a classroom setting. Students should carefully edit their written responses and ensure that Standard English is used in all posts and discussions.

Technology Skill Requirements: Students will need basic technology skills to engage fully in this online course. Students should refer to Longwood University's *Technical Skills and Requirements* webpage to ensure that you are prepared to take this course in a virtual environment. This can be found at the following link: <http://www.longwood.edu/online/28310.htm>

Class Evaluation:

At the conclusion of the course, each student will have the opportunity to evaluate the class and instructor through Canvas. Your feedback is important to us. Please take the time to complete the online evaluation.