

Fall 2021 - STEM 4033 Introduction to STEM Education Tentative Schedule

*Please keep in mind that this is a tentative schedule. All course content can be found on my website: <http://www.uastem.com/stem-4033/>. All assignments will be submitted through the course Blackboard page. Please check the <http://www.uastem.com> website for updates.

Week 6

Thursday, September 30

- Tinkering, Making, and Take-Apart learning to build Technological and Engineering Literacy
- Weekly Reading Assignment – What you need to know about tinkering, making, and engineering and Reading Review

Week 7

Tuesday, October 5 and Thursday, October 7

- Wrap up of Tinkering, Making, and Take-Apart learning to build Technological and Engineering Literacy
- Final Testing of Dogzilla – Dog Treat Slinger – Presentations – Turn in completed design journal, budget, and number line
- Construction Blocks PP
- Major Assignment 4 - Construction Blocks Curriculum Project
- Discuss working in teams on major projects
- Weekly Reading Assignment 8 - [Using Block Play](#) and [Blocks as a Tool for Learning](#) and Reading Review

Week 8

Tuesday, October 12 and Thursday, October 14

- Challenge 6 (in-class) - Keva Maze Design Challenge and Video
- [KEVA Resources](#)
- Construction Block Ideation Guide
- Reading Review
- Construction Blocks Curriculum Ideation Presentations

Week 9

Tuesday, October 19 and Thursday, October 21

- Technical Procedural Problem-Solving PP
- Major Assignment 5 - Technical Procedural Curriculum
- Challenge 8 (in-class) - Teacher Geek
- Weekly Reading Assignment 10 – Writing a Technical Procedural STEM Problem
- Technical Procedural Curriculum Development

Week 10

Fall Break – October 25-26

Thursday, October 28

- Technical Procedural Curriculum Development

Week 11

Tuesday, November 2 and Thursday, November 4

- Technical Procedural Curriculum Presentations
- The Quick Challenge PP
- Major Assignment 2 – Quick Challenge Project
- Quick Challenge Peer Review

Week 12

Tuesday, November 9 and Thursday, November 11

- Introduction to Electricity - Building electrical circuits to demonstrate transfer of energy
- Major Assignment 6 - Electricity Curriculum Project
- Challenge 9 (in-class) – Paper Circuit Weekly Reading Assignment 9 - Chapter 1: http://www.allaboutcircuits.com/vol_1/index.html
- Electricity Curriculum Project Development

Week 13

Tuesday, November 16

- Electricity Curriculum Project Presentations
- Cooperative and Collaborative Learning PP
 - 21st Century Skills
- Weekly Reading Assignment 10 - Cooperative and Collaborative Learning

Thursday, November 18 – NO CLASS - Mississippi Valley Technology Teacher Education Conference

- Computer Programming and Computational Thinking
 - Exploring Scratch and Pencil Code
 - Challenge 7 (at-home) - Scratch Programming and Reflection
- Weekly Reading Assignment 9 – Computer Science in the Elementary Classroom – Preview the K-4 and 5-8 Arkansas Computer Science Standards - <https://dese.ade.arkansas.gov/Offices/ar-comp-sci-initiative/computer-science-standards-and-courses>

Week 14

Tuesday, November 23

- Cooperative and Collaborative in STEM Education
- Challenge 10 (in-class) – Spy Game
- Challenge 11 (in-class) – Green and White/Gutterball/Crazy Forts

Thanksgiving Break – November 24-26

Week 15

Tuesday, November 30 and Thursday, December 2

- Paper Engineering PP
- Challenge 12 (at-home) – Pop-Up Card Quick Challenge
- Challenge 13 (in-class) - MakeDo

Week 16

Tuesday, December 7 and Thursday, December 9

- Automata – Final Project

December 10 – Dead Day

Final Exams

T/TH – 9:30-10:45 – Thursday, December 16 – 8:00 – 10:00am

T/TH – 2:00-3:15 – Tuesday, December 14 - 12:45 – 2:45pm