

Spring 2023 - Tentative Schedule

STEM 4043/5023 Creativity and Innovation - T/TH – 2:00 – 3:15pm

*Please keep in mind that this is a tentative schedule. Please check the <http://www.uastem.com> website for updates.

Week 1

Tuesday, January 16 and Thursday, January 18

Introductions and Syllabus Review

Engineering Design Challenge

Reading: Introduction and Chapter 1 – STEAM Makers: Fostering Creativity & Innovation in the Elementary Classroom

Introduction to the Final Project

Introduction to Tinkering and Take-Apart

Week 2

Tuesday, January 23 and Thursday, January 25

Reading Review

Complete Take-Apart Challenge (Pictures and sorting loose parts)

Fostering Creativity in the Classroom

Introduction to using AI to Develop Integrated STEM Curriculum – Creating a ChatGPT Account

Reading: Remaking Literacy - Introduction and Chapter 1 – What the Research Says

Homework: Not a Box Design Challenge

Week 3

Tuesday, January 30 and Thursday, February 1

Reading Review

Paper Creatures

Introduction to the CO2 Laser

Reading: Remaking Literacy - Chapter 2 – Creative Pathways to Learning

Week 4

Tuesday, February 6 and Thursday, February 8

CO2 Laser -Putting it all together

Introduction to TinkerCAD

Reading: Remaking Literacy Chapter 3 – Thinking and Designing

STL files, Cura, and 3D printing

Week 5

Tuesday, February 13

STL files, Cura, and 3D Printing

Reading: Remaking Literacy Chapter 4 – Low Tech Making

Thursday, February 15 – Unfield Trip to the Amazeum – 2:00 - 4:00pm

Week 6

Tuesday, February 20 and Thursday, February 22

Tools/Materials/Processes/Measurement – Catapult Design Challenge

Reading: Remaking Literacy Chapter 5 – Remaking with Maker Tech

Week 7

Tuesday, February 27 and Thursday, February 29

Day One – Engineering a Play/Puppet Pals

Homework Assignment

Reading: Remaking Literacy Chapter 6 – Guidance for Implementation

Week 8

Monday, March 4 – Holcomb Elementary School STEM Night – 5:30pm

Tuesday, March 5

Thursday, March 7 – we will not officially meet for class as I will be attending and presenting at the International Technology and Engineering Educators (ITEEA) Conference, Memphis, TN - March 6 - 9

Week 9

Tuesday, March 12 and Thursday, March 14

STEAM kits (LittleBits)

ArtBOT/VibroBOT Challenges

Caine's Arcade – Intro to the Frugal Teacher

*All 3D Printing Projects are due March 12

Week 10 - Spring Break

Week 11

Tuesday, March 26 and Thursday, March 28

Frugal Teacher Assignment Development

Week 12

Tuesday, April 2 and Thursday, April 4

Frugal Teacher Assignment Development

Frugal Teacher Presentations

Week 13

Tuesday, April 9 and Thursday, April 11

Introduction to Makey Makey and [Scratch Programming](#)

MaKey MaKey Design Challenge Project Development

Week 14

Tuesday, April 16 and Thursday, April 18

MaKey MaKey Design Challenge Project Development

Presentations to students from the Jean Tyson Child Development Study Center

Week 15

Tuesday, April 23 and Thursday, April 25

Introduction to Magnetic Levitation Transportation

MagLev Project Development

Week 16

Tuesday, April 30 and Thursday, May 2

MagLev Project Development

MagLev Race Day

May 3 – Reading (Dead) Day

Final Exam Time: TBD