

Advanced STEM Syllabus



Mrs. Jerika McKeon

B.S. in Applied Physics, emphasis in
Secondary Education
Minor in Mathematics
jmckeon2@asu.edu
(480) 727-5769
<http://jmckeonasuprep.weebly.com>

Teaching Philosophy



It is my belief that each student has the ability to grow and improve. It is my job to provide each student with the environment and resources they need to succeed in this class and to encourage each student to reach their full potential. **Students learn best when they construct their own understanding from hands-on experiences and through group discussion.** As such, students will only be successful in this class if they put forth their full effort and participate actively in all classroom activities.



Course Outline

Block 1



Basic Making
Recyclables
Hand Tools
Different Materials

Large Builds
Power Tools
Soldering
Useless Project



3D Printing
Intro to 3D Printing
Teacher Project

Block 2

General Making
Hand Tools
Power Tools
Soldering
Different Materials
Useless Project
Useful project



Biomimicry
Unit Summaries
Final Project
Infographics



Maker Space Safety

Part of this curriculum is to learn to use various tools, many of which can be dangerous if not handled properly and professionally. If students do not behave in a safe or responsible manner, they may be restricted from class activities and given an alternative assignment.



Class will be held in the Maker Space on a regular basis. As such, students must wear long pants and tennis shoes every class period.

Long hair will be required to be pulled back while in the lab. I suggest keeping a spare hair tie/rubber band in your backpack.



Prior to using any tools, students must first pass a written test with a score of at least an 80%. These tests include such topics such as:

- proper protective equipment (PPE)
- safety procedures
- appropriate tool/equipment use
- material usage



Important Notes:

- A teacher must be present in the Maker Space in order for students to use any equipment.
- Students may not use or operate any tool that they have not been approved to use.
- Unauthorized or unsafe use of any tool will result in an immediate referral to the Dean of Students as well as communication with a parent/guardian.

Grading Information

Students enrolled at ASU Preparatory Academy will receive two letter grades in each of their courses. One of the letter grades is an academic grade that demonstrates if the student mastered the course objectives. The second grade is an effort grade that could reflect attendance, participation, discussions, or completion of practice assignments. Both of the letter grades will adhere to the following grading scale, but only the academic grade will be reflected on the student's final transcript and included in the grade point average.

Effort Grades

Opportunities to practice

Warm-ups

Homework

Printed on report cards, but does NOT count towards transcript grades

Letter Grades

A	Exemplary	90 - 100
B	Highly Proficient	80 - 89
C	Proficient	70 - 79
D	Partially Proficient	60 - 69
F	Minimally Proficient	50 - 59

Academic Grades

Opportunities to demonstrate mastery

Some homework problems and assignments

Projects/Labs/Quizzes/Tests

Printed on report cards, and DOES count towards transcript grades

Homework

In an effort to "go green," students will be required to submit written assignments online (such as project Post-Mortem reports).

Units will consist of the following grades:

- in-class participation/effort
- checkpoint assignments
- final projects
- presentations

Students will also have a monthly Engineering Design Process (EDP) assignment that will be due by 10pm on the last day of each month.

Attendance

This class is fast-paced and every lesson is important. It is crucial that you attend class and that you arrive on time and ready to work.

5 tardies in 1 class = 1 absence + Lunch Detention
Further Violation = Lunch Detention + Community Service

Late Work & Retakes

% Academic late work will be accepted for up to 80% credit. Academic assignments may be retaken** for up to 96% credit.

🚫 Effort assignments cannot be retaken. Effort assignments should be turned in late to meet the retake requirement for academic retakes, but will not receive credit.

5 You have 5 school days (1 week) to turn in academic late work or retake assignments. Check PowerSchool for exact dates.

📁 For test retakes, fill out the test retake form and turn it into the folder.








📄 Write the assignment title at the top

👤 Get it stamped by Mrs. McKeon

🗑️ Turn it into the make-up basket

**In order to retake academic assignments, students must submit a full attempt on time. Students must also complete all associated practice assignments (including all effort assignments).

Materials Needed

-  Pencils (mechanical preferred)
-  Ruler
-  Designated STEM notebook
-  Calculator (scientific or graphing)
-  1 package of whiteboard markers
-  \$25 Lab Fee (pay to front office)
-  An open mind and a positive attitude

Daily Expectations

🗑️ Get a drink, throw away trash, etc. before class begins.

🚪 Enter the room in "learning mode" and start the warm-up.

👤 Sit in your assigned seat.

📄 Passes from class are limited to 3 per student per quarter.

Plagiarism

It is the responsibility of the student to follow the ASU Prep Way with honesty in regard to the authorship of the work that he/she presents as his/her own. Consequences for plagiarism will be in accordance with the ASU Preparatory Student Code of Conduct / Handbook. Consequences may include the student receiving a zero on the assignment, and students may not be able to retake the assignment for credit.

For more information on plagiarism visit:

- <https://provost.asu.edu/academic-integrity>
- <https://provost.asu.edu/academic-integrity/resources/students#avoiding-plagiarism>