Robotics I Syllabus

Mr. Chip Deason

There are 14 Course Objectives:

1. Analyze & Evaluate Engineering Design Cycle.
2. Analyze Classroom Safety Procedures.
3. Analyze & Apply the concepts of block style programming language
4. Create a Computer Programming using C-Based Language
5. Use Lab equipment to demonstrate different modes of robotic control.
6. Analyze and apply concepts of motors to robotic systems.
7. Analyze and apply concepts of gears/gear trains to robotic systems.
8. Analyze and apply concepts of linear motion to robotic systems.
9. Analyze and apply concepts of friction to robotic systems.
10. Analyze and apply concepts of torque to robotic systems
11. Use lab equipment to construct robot to pull weighted sled.
12. Analyze and apply concepts of sensors to an electrical/electronic system
13. Analyze and apply concepts of physics to mechanical arm
14. Create a robot to meet criteria of Engineering Design Brief

Course Description:

In this course you will: Analyze, Evaluate, and Apply various Computer Programming, Engineering, Electronic, and Mechanical concepts in preparation for college or work environments. <u>You should have passed Math I to be successful in this course</u>!

Topics to be studied:

- Engineering Design/Classroom Safety
- Computer Programming
- Engineering Physics
- Electrical & Electronic Systems
- Mechanical Systems

Skills to be reinforced:

- ✓ Mathematics
- ✓ Technology
- ✓ Science

Grading

Students' grades will be earned by successfully completing:

- ***Classwork/Projects***
- ***Quizzes/Tests***
- ***Participation***
- ***Final Exam (mandated)***

I grade on a points system with category weighting. The final exam accounts for 25% of the entire semester (mandated).

Required Supplies:

- *3 Ring Binder*
- *Paper*
- *Pens &/or Pencils*

Expectations

- All school rules will be followed
- Respect for others, property & self
- Be on time – No pass/No entry
- Stay on task & turn work in on time
- Keep classroom clean
- **<u>Put materials away in their proper place</u>**
- **Put class laptops in the cart before leaving**
- Gaming or using cell phone will result in you being sent to ISS (2 warnings)
- Course is available on-line/any time

Contact Information:
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