

Instructors: Mr. Cogswell
acogswell@aacps.org

Mr. Hershkowitz
whershkowitz@aacps.org

Mr. Smack
zsmack@aacps.org

Mr. Whyte
lwhyte@aacps.org

Course Description:

Engineers shape the world every day by finding more efficient ways of producing food, shelter, transportation, health care, and a clean environment. Technologists use hands on skills to implement the engineer's ideas. The current shortages of trained engineers and skilled technologists in the United States has created great career opportunities for students who are curious about how things work, like to solve problems, and create things that would improve peoples lives. This basic technology course is intended to provide the high school student with beginning engineering experiences in a variety of technology areas. This class meets on an A-B day rotation for one semester (.5 credit) which the student may apply toward the 1 credit requirement for graduation.

Instructional Philosophy:

Students will gain an overview of Technology- it's historical development, environmental impacts, and role in society. The students will also investigate the major core technology systems of communications, manufacturing, construction, power and energy, and transportation. Students will have an opportunity to develop both individual and group problem solving skills as they construct hands on activities that promote invention, creativity, and demonstrate application of tools, techniques and procedures used in technology. Computer based research assignments will be completed as part of the course. High quality work is expected and students will be given opportunities to redo work to meet standards specified during instruction.

Units of Instruction: Foundations of Technology Part A

- The History of Technology
- Relationships Among Technologies and Connections with other fields of study.
- Engineering Design

Units of Instruction: Foundations of Technology Part B

- Manufacturing Technologies
- Construction Technologies
- Power and Energy Technologies
- Information and Communication Technologies
- Systems Thinking "Putting it all Together"

Major Projects and requirements may include but will not be limited to:

- Maintaining a daily notebook journal of objectives, notes and assignments
- Research report, power point presentation or demonstration to class.
- Computers-Demonstrate various computer applications
- Communications-Appling Drafting techniques and plans for project development
- Manufacturing – using tools and machines to create useful products
- Structures – designing, constructing and testing for efficiency
- Electricity- principals and applications – Sumo-Bot challenge
- Fluid Technology- construct and operate hydraulic activated devices
- Aviation and flight

Evaluations-

Students are graded on individual and group project work, research reports, unit tests and quizzes homework, work habits and class participation as well as discussions.

All reports are to be typed in 12 pt New Times Roman or Ariel fonts using Microsoft Word. Every student will be assigned a class computer in our lab. No extra credit work will be accepted unless the required assignments are completed satisfactorily. As this is lab class, absenteeism has a direct bearing on the grade. Arrangements need to be made with the instructor for any make up work and assignments. It is the students' responsibility to make arrangements and inquires for missed assignments. **Late assignments will only be accepted in accordance with the Upgrade Policy.** Students may be given the opportunity to "re-take" or improve below par work following the policy and procedures for improving a poor grade listed on the next page. Home work will be assigned as needed. Daily class notes need to be reviewed by the student each night.

Materials Required:

- Inexpensive .7mm mechanical pencils (2) with leads and erasers.
- Notebook folder with pockets – will be provided
- College ruled notebook paper – no spiral bound notebooks permitted
- USB drive – suggested for data storage – useful for all HS classes

Lab Fee - There is a lab fee of \$10.00 to cover some of the material costs involved in the activities of the course. Please make any checks payable to: Arundel High School

Classroom Rules and Regulations-

Student's safety is of primary concern in a lab environment. Students are required to follow the rules established, including the wearing of safety equipment and passing operational tests on any machinery prior to use. A parent permission slip has been sent home and needs to be signed and returned.

Help sessions & office hours: Wildcat Hour as per semester schedule. Arrangements need to be made in advance on an individual basis for further assistance, contact your instructor at (410)- 674-6500

Improving a poor grade/Upgrade Policy

While it is hoped that students will put forth their best effort on all the work they do for class, it is understood that from time to time the resulting work may fall short of the teacher's expectations. **The Proficiency Practice is not automatically a given option for all students.** Students may be administratively denied access to this privilege when lack of academic preparation or commitment to do their best is demonstrated.

Proficiency Practice

Grading

Grades earned at Arundel High School will be a reflection of student's mastery of the related and relevant national, state, and industry standards pertaining to the course of study. Assignments, projects, and assessments are aligned with these standards.

- **Advanced Level** – denotes excellence in performance of each standard being assessed. At this level, a student demonstrates a strong understanding and application of real-world situations. In addition, students evaluate and create new learning.
- **Proficient Level** – denotes solid performance for each standard being assessed. Students reaching this level demonstrate competency in meeting challenges and applying problem solving strategies to real-world situations.
- **Minimal Proficiency Level** – denotes rudimentary mastery of knowledge and skills associated with the standard being assessed.
- **Not Yet** – denotes a lack of minimal knowledge and skills associated with the standard and an upgraded resubmission is required after completion of an academic intervention.

Grading Scale

Proficiency Level	Number Grade
Advanced	90 – 100%
Proficient	80 – 89%
Minimal Proficiency	70 – 79%
Not Yet	60 – 69%
	0 – 59%

Weighted Categories

Category	Percentage of Overall Grade
Summative Standards Based Assessments	85%
21 st Century Skills	15%
Total	100%

21st Century Skills

Student effort and participation are crucial to success in the classroom. Industry standards require that students master 21st century skills that are necessary for success in today's world. These skills may include but are not limited to: team work, oral communication, time management, organization, use of technology, use of particular formats or styles of writing, and work habits such as following directions, complete submission of assignments on time and other specific Technology education content driven skills

Assessment Re-do

Procedures for re-do:

- Students who have not yet met the minimal proficiency level ("C" grade) are required to re-submit a summative assessment or a portion of that assessment after receiving **feedback** from the teacher and participating in an **academic intervention**.
- Parents must sign the original work that is requested as a "redo"
- Students must submit the original work with the redone work to keep track of their improvement
- The **higher grade for the assessment will be recorded** in the grade book.
- Students will continue to **re-do until minimal proficiency is met (70%)**.
- Resubmissions are **due on the 5th class period after the assignment is returned** to students.

Assessment Upgrades

Procedures for an upgrade:

- Students who have met minimal proficiency on a summative assessment but want to improve their mastery may complete **one upgrade**.
- Students may resubmit standards based assessments for an upgrade **after completing an academic intervention prescribed by the classroom teacher**.
- Resubmissions are **due on the 5th class period** after the assignment is returned to students.

Late Assessments

- Late standards based summative assessments **will be accepted without penalty but must be submitted within five class periods**.
- Late standards based summative assessments **cannot be resubmitted for a redo or an upgrade**.

***Alternative assessments can be used as students re-do, upgrade, or submit late assessment.**