

## ***FORSYTH COUNTY COURSE SYLLABUS***

**South Forsyth High School  
585 Peachtree Parkway  
Cumming, GA 30041**

COURSE TITLE: <b>703045y - Foundations of Engineering &amp; Technology</b>	
TEACHER NAME: <b>N. Crowder</b>	E-MAIL: <b>ncrowder@forsyth.k12.ga.us</b>
ROOM: <b>183</b>	PHONE: <b>770-781-2264 EXT: 100183</b>

### **Course Description:**

Foundations of Engineering and Technology is the introductory course for all Georgia Engineering and Technology Education pathways. This course provides students with opportunities to develop fundamental technological literacy as they learn about the history, systems, and processes of invention and innovation.

### **Standards:**

The course standards in their entirety along with the connected standards for the core curriculum, (math, science, language arts, etc.), can be found on the Georgia Department of Education website. Only the engineering specific standards' reference numbers and title descriptions are listed on this syllabus. Please follow the link below to read the detail descriptions of each course standard.

<https://www.georgiastandards.org/standards/Georgia%20Performance%20Standards%20CTAE/Foundations-of-Engineering-and-Technology-ENGR.pdf>

**ENGR-FET1** – Students will describe the career pathways that are encompassed by Georgia Engineering and Technology Education.

**ENGR-FET2** – Students will describe the history of technological advancement.

**ENGR-FET3** – Students will explain the universal systems model.

**ENGR-FET4** – Students will apply mathematics and science to the solution of a technological problem.

**ENGR-FET5** – Students will describe the essential systems and processes involved with invention, innovation, and entrepreneurship.

**ENGR-FET6** – Students will use visual and verbal communication to express basic design elements.

### **Learning Resources/Textbooks:**

Due to the very broad nature of this course, several textbooks are necessary. Classroom sets will be available for reference as needed. Textbooks will not be issued to individual students. Main textbooks are listed below.

#### Textbooks:

**"Engineering Your Future"** by Gomez, Oakes, & Leone, Published by Great Lakes Press, Inc.

**"Technology"** by R. Thomas Wright, Published by Goodheart – Willcox Company, Inc.

**"Energy, Power, & Transportation Technology"** by Len S. Litowitz and Ryan A. Brown, Published by Goodheart – Willcox Company, Inc.

In addition to the textbooks, numerous on-line and server based tutorials related to the various software programs will be utilized. The key software programs will include; Google SketchUp Pro & Blender for concept visualization, SolidWorks for 3-D Modeling, mechanical, Adobe Creative Suite, Autodesk Suite of Design Software, plus others.

### **Availability for Extra Help:**

The instructor will be available for clarifications, additional questions, and individual assistance each school morning beginning at 7:45, and most days after school until 4:30.

### **Makeup Work:**

All missed work and assessments are the responsibility of the student when they are absent from school. Please see the instructor for missed assignments, and turn in no more than 5 days after absence.

### **Grading Calculations:**

Course Average = 50% (1<sup>ST</sup> Sem. Course Work) 50% (2<sup>ND</sup> Sem. Course Work)  
1<sup>ST</sup> & 2<sup>ND</sup> Semester Course Work = 75% Summative + 25% Formative

#### **Grading Policy:**

A = 90 – 100

B = 80 – 89

C = 70 – 79

Failing = Below 70

*\*Formative Assessments include, but are not limited to homework, class work, practice tests, rough drafts, and sections of projects/ research papers/presentations.*

*\*Summative Assessments include, but are not limited to unit tests, final projects, final essays, final research papers, and final presentations.*

### **Materials Required**

Each Student is required to provide:

A carboard folder type of notebook, that has prongs to hold 50 sheets of notebook paper (notebook paper must be affixed inside notebook, and not loose—no spiral bound notebooks will be accepted) and two pockets to keep returned work. Notebooks are kept in the classroom at all times. This type of notebook is typically around 50 cents at any store that sells school supplies, sometimes cheaper.

A flash drive to save student work

### **Materials Requested**

Each student is requested to provide the following:

**1 pack small hot glue slugs**—we use a lot of glue...large size can be used, too.

**#2 Pencils**—Engineers sketch/draw a lot. It is nice to have a good supply of pencils. If you can please provide a package of pencils.

**\$30 lab fee**—this will cover TSA membership, an SFHS Engineering shirt, and lab materials for all projects (robotics may require additional fees). Please send a check—no cash please--made to SFHS TSA and put student name on check. Technology Student Association (TSA) Membership is expected of engineering students.

# Foundations of Engineering 2012-2013

*My expectations are high, but together we can achieve our goals.  
Be here, be positive, be willing to work, and you will succeed!*

## Course Syllabus

Students, please sign the following and have your parent or guardian sign where indicated. Return the signed form & lab fee no later than the end of class on Wednesday August 15<sup>th</sup>.

*\*" I have received a copy of the syllabus during the first week of enrollment in this class. I understand what the expectations and responsibilities are of the student."*

Parent or Guardian (print) \_\_\_\_\_

Parent or Guardian signature \_\_\_\_\_ Date \_\_\_\_\_

Student Name (print) \_\_\_\_\_ Class Period \_\_\_\_\_

Student Signature \_\_\_\_\_ Student # \_\_\_\_\_

*Note: If there are extenuating circumstances regarding the requirements for this class, please have your parent or guardian contact Coach Crowder prior to the August 15<sup>th</sup> deadline at 770-781-2264 ext 100183 or at [ncrowder@forsyth.k12.ga.us](mailto:ncrowder@forsyth.k12.ga.us)*