

# Hagerstown Community College Master Syllabus

## EGT-101: Foundations of Engineering Technology

### Course Information

EGT 101: Foundations of Engineering Technology

2 Credits

Fall 2018

January 7 through April 29, 2019

Tuesday and Thursday, from 12 P.M. to 12:50 P.M.

### Instructor Information

### Course Description

This course enables students to learn the techniques of decision making and engineering problem solving using an array of software such as Microsoft Excel and MATLAB.

### Textbook and Course Materials

Matlab: A Practical Introduction to Programming and Problem Solving (ISBN: 9780128154793)

Engineering with Excel: (ISBN: 9780134589664)

### Student Learning Outcomes

EGT-101 is a foundational course that sets the pathway for subsequent courses in the Mechanical Engineering Technology Program. It is expected that 80% of the students enrolled in this course will begin to use software programs analytically as well as methodically to solve technical problems.

Today's engineering technologist will be required to use software (as an added tool) in solving modern engineering problems. Consequently, it is anticipated that successful students will complete the MET program and be employed in a related field or continue their education.

The learning outcomes are as follows:

1. Students will **KNOW** how to effectively work on a team.
2. Students will **EFFECTIVELY** utilize software programming skills and modern engineering software, such as Microsoft Excel, and MATLAB in modern engineering practice.
3. Students will understand **HOW** to apply mathematical models to identify and quantify experimental data used in mechanical systems.
4. Students will be **ABLE** to develop effective communication (in written and oral form) skills utilized in engineering practices.

### Definition of Credit Hour: Classroom Courses

To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute "academic" hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours within the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit. For most classes, students should expect to do at **least 2 hours** of coursework outside of class for each hour of in-class coursework.

Minimum clock hours required for this course

Classwork type	DIRECT Faculty Instruction In-class <b>37.5 hours required</b>	Student Work Out of Classroom <b>70 hours required</b>
In-class lecture and discussion	37.5 hours	
Reading Chapters		15 hours
Quiz/activity for each chapter		10 hours
Programming		30 hours
Exam Preparation		15 hours
<b>Total</b>	<b>37.5 hours</b>	<b>70 hours</b>

**Services for students with disabilities:** Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at [dss@hagerstowncc.edu](mailto:dss@hagerstowncc.edu) or at 240-500-2530.