

**Hagerstown Community College**  
**OFFICIAL MASTER SYLLABUS DOCUMENT**

**COURSE:** EGT 136 – Mechanics, 3 credits

**INSTRUCTOR:** Adam Bridendolph                      **SEMESTER/YEAR:** Spring 2016

**COURSE DESCRIPTION:**

This course uses the principles of statics to solve engineering problems that involve forces. Topics include finding reactions, equilibrium, friction, trusses, frames, centroids, and moment of inertia. (Prerequisite: MAT 102 or MAT 114)

**TEXTBOOK:**

Statics and Mechanics of Materials, Hibbler, Pearson 4<sup>th</sup> Edition, ISBN# 9780133451603

Engineering Statics, Carnegie Mellon University (Open Source: Free)

<https://oli.cmu.edu/jcourse/lms/students/syllabus.do?section=434a1e9780020ca601bc59bec0a55918>

**REFERENCES:**

Applied Statics and Strength of Materials, Burns, Cengage 2<sup>nd</sup> Edition, ISBN# 9781435413313

Statics and Strength of Materials, Cheng, Glencoe, 2<sup>nd</sup> Edition, ISBN# 9780028030678

**COURSE MATERIALS:**

Each student must have access to the following:

Scientific or Graphing Calculator

Protractor & Rule

Engineering spreadsheet software (Excel, Open Office, etc)

**STUDENT LEARNING OUTCOMES:**

EGT 136 – Mechanics is the first course in a sequence of courses that includes EGT 231 – Strength of Materials followed by EGT – 234 Machine Design. It is projected that 80% of the students enrolled in this course will continue on to complete the sequence of courses in the Mechanical Engineering Technology program.

**Total Hours of Coursework:**

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.

**Credit Hour to Clock Hour Calculation:**

**Direct Faculty Instruction:** 1 hour/week/credit for 15 weeks; 50 min = 1 classroom hour  
(50 min x 3 credits x 15 weeks) = 2250 minutes = 37.5 hours

**Student Work Outside the Classroom:** 2 hours/week/credit for 15 weeks  
(2 hrs x 3 credits x 15 weeks) = 90 hours

	<b>Direct Faculty Instruction (In Class) 37.5 Hrs. Required</b>	<b>Student Work (Out of Class) 90 Hrs. Required</b>
<b>Lecture</b>	<b>37.5 Hours</b>	
<b>4 Exams (3 Tests and Final Exam)</b>		<b>12 Hrs. Prep</b>
<b>10 Homework Assignments</b>		<b>60 Hrs.</b>
<b>Other Instructor Material</b>		<b>18 Hrs.</b>