HAGERSTOWN COMMUNITY COLLEGE
Master Syllabus

COURSE: **EGR 103 Introduction to Engineering Science**   **(3 Credits)**

DATE: As Announced

INSTRUCTOR: Ed Sigler   240-500-2610 Office   cesigler1@hagerstowncc.eduSTEM 424

COURSE DESCRIPTION: This course will introduce students to the product development process, which includes: product research, product design, product analysis and evaluation, and product presentation. Additionally, each individual student should develop basic engineering and science principles as well as computer skills including; applications software, graphics software and programming software. Students enrolled in EGR 103 will be expected to have a basic knowledge of trigonometric functions.   Prerequisite: MAT-101.

TEXTBOOK: Engineering Your Future, 9th Ed., Oxford University Press ISBN 978-0-19-020892-92.
            Creo Parametric 3.0 Tutorial and Multimedia DVD, Toogood, SDC Pub. ISBN 978-1-58503-948-7

STUDENT LEARNING OUTCOMES**:**   The student will demonstrate the following:

1. Apply knowledge of mathematics, science and engineering,
2. Design and conduct experiments and analyze and interpret data.
3. Function in multi-disciplinary teams and develop an understanding of group dynamics
4. Develop computer skills including the use of the internet and databases for research, spreadsheets, mathematics software, word processors, graphical presentation software and engineering drawing software.
5. Develop basic computer programming skills.
6. Identify, formulate, and solve engineering problems,
7. Develop an understanding of the role engineers play in our modern society, and engineering ethics.
8. Develop communicate skills including oral, written and visual (engineering drawing).

MINIMUM CLOCK HOURS REQUIRED FOR THIS COURSE

TOTAL HOURS OF COURSEWORK:

LECTURE

	Direct Faculty Instruction	Student Work (Out of Class)
In Class Lectures	**37.5 Hours**	
2 Exams (Mid-Term + Exam)		**15 Hrs**
Homework & Individual Projects		**40 Hrs.**
Design Project		**40 Hrs.**
Robotics Project		**40 Hrs.**
TOTAL	**37.5 Hours**	**135 Hours**

HYBRID

	Direct Faculty Instruction	Student Work (Out of Class)
In Class Lectures	**22.5 Hours**	
Course Material Review/Problems		**30 Hrs.**
2 Exams (Mid-Term + Exam)		**15 Hrs.**
Homework & Individual Projects		**40 Hrs.**
Design Project		**40 Hrs.**
Robotics Project		**40 Hrs.**
TOTAL	**22.5 Hours**	**165 Hours**

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 or at 240-500-2530.