ENED - ENGINEERING EDUCATION

ENED101 Exploring Engineering Majors (1 Credit)
Designed to expose students to all engineering majors and assist them in narrowing down which engineering major they want to pursue. Students will self reflect, conduct interviews and tour engineering facilities to get a better understanding of what major their interests align with the most.
Restriction: Must be an undecided Engineering (09000) student in the Clark School of Engineering.
Additional Information: .

ENED115 Flexus & Virtus Seminar I: Transitions & Engineering Identity Development (1 Credit)
This is the first in a series of four seminars that students participating in the Dr. Marilyn Berman Engineering Living-Learning Programs: Flexus and Virtus. Transitions & Engineering Identity Development is designed to introduce students to the engineering discipline at the University of Maryland. Students will become acquainted with various resources and will be exposed to topical areas that aim to facilitate the transition into the university. Students will enhance technical and critical thinking skills through workshops and in-class activities. Encourages students to expand upon and balance their interpersonal, academic and technical skills through group work, in-class discussions, reflections, out-of-class activities and interacting with engineering mentors and role models.
Restriction: Must be in one of the Dr. Marilyn Berman Engineering Living-Learning Programs: Flexus or Virtus.
Credit Only Granted for: ENED115, ENES113, or ENES115.
Formerly: ENES113 or ENES115.

ENED215 Flexus & Virtus Seminar III: Introduction to Engineering Culture & Leadership (1 Credit)
This is the third in a series of four seminars for students participating in the Dr. Marilyn Berman Engineering Living-Learning Programs: Flexus and Virtus. The purpose of the course is to enhance students' awareness of issues within society at large and the engineering field in particular. By exploring the historical and cultural factors that inform the current state of engineering, this course aims to help students develop a deeper understanding of how different groups experience and navigate the field of engineering. Through critical dialogue, reflection, and in-class activities, students will develop self-awareness; cultivate a consciousness of different dynamics of culture, power, and privilege; examine and critique different perspectives; and identify and analyze different forms of bias.
Prerequisite: ENED116, ENES114 or ENES116.
Restriction: Must be in one of the Dr. Marilyn Berman Engineering Living-Learning Programs: Flexus or Virtus.
Credit Only Granted for: ENED215, ENES213 or ENES215.
Formerly: ENES213 or ENES215.

ENED290 Introduction to Design and Quality (4 Credits)
The first QUEST course introduces foundational principles of design and quality, emphasizing their impact on product development and customer satisfaction. Working in multidisciplinary teams, students will explore design thinking, project management techniques, and quality tools, applying these frameworks to real-world product redesigns and innovations.
Cross-listed with: BMGT290.
Restriction: Must be in the Quest program.
Credit Only Granted for: BMGT190, ENES190, ENED290, or BMGT290.
Formerly: BMGT190 and ENES190.

ENED390 Designing Innovative Systems (3 Credits)
The QUEST systems thinking course challenges students to analyze how processes interact in larger systems. Students will learn how to use process improvement tools and a systems thinking approach to solve problems and design innovative solutions. By drawing upon their multidisciplinary backgrounds, students will be able to understand and reframe problems from multiple perspectives to uncover new solutions.
Prerequisite: ENES190, BMGT190, ENED290 or BMGT290.
Cross-listed with: BMGT390.
Restriction: Must be in the QUEST program.
Credit Only Granted for: BMGT390, ENES390 or ENED390.
Formerly: ENES390.

ENED394 Applied Quantitative Analysis (3 Credits)
The QUEST data analysis course takes a human-centered approach to data analysis and focuses on teaching students how to frame the core problem, choose the right data, and uncover deep insights from data to build an understanding of people and expose opportunities for innovation. Students will use visualization and statistical techniques to explore data, generate insights, and share the human stories behind the data to move people to action.
Cross-listed with: BMGT394.
Restriction: Must be in the QUEST Program.
Credit Only Granted for: BMGT394, ENED394, ENES489A or BMGT438A.
Formerly: BMGT438A and ENES489A.

ENED396 Design and Innovation in Silicon Valley (3 Credits)
QUEST students will learn about design, innovation, and quality by studying the operations of Silicon Valley companies. This course will provide students with the opportunity to learn first-hand from a number of these organizations during visits over spring break.
Cross-listed with: BMGT396.
Restriction: Must be in the QUEST program.
Credit Only Granted for: BMGT396, ENED396, BMGT438G, or ENES489Q.
Formerly: BMGT438G or ENES489Q.

ENED397 Mentoring Multidisciplinary Teams (3 Credits)
QUEST mentors serve a valuable purpose in the program as they coach new cohorts of students progressing through BMGT/ENED290H. Mentors will learn and practice essential team-building and facilitation skills, including effective communication, conflict management, strengths-based leadership, and lesson planning. They will use these leadership skills to inspire their 290H teams and improve team performance.
Prerequisite: BMGT290 or ENED290.
Cross-listed with: BMGT397.
Restriction: Must be in the QUEST Program (TQMP).
Credit Only Granted for: BMGT397, ENES397 or ENED397.

ENED490 QUEST Capstone Professional Practicum (4 Credits)
The capstone course for the QUEST Honors Program provides students with an opportunity to learn in multidisciplinary teams of business, engineering, and science students in a real-world setting. Companies engage teams of QUEST students with real organizational challenges and dedicate resources to help students address these problems. Student teams must enhance their skills in quality management, process improvement, and systems design and will apply these to add value to a client. In the process, students will improve their teamwork skills.
Prerequisite: BMGT390, ENES390 or ENED390.
Cross-listed with: BMGT490.
Credit Only Granted for: BMGT490, ENES490 or ENED490.
Formerly: ENES490.

ENED491 Scoping Projects for Business Impact (3 Credits)
Students cultivate relationships with new and current corporate partners and prepare project scopes for QUEST courses. As part of the scoping process, students learn about techniques for reaching out to clients, assessing current relationships to determine how to approach an organization, pitching project sponsorship, and determining a project scope. The course includes independent work networking with clients and phone call and video discussions with potential clients.
Prerequisite: BMGT190, ENES190, ENED290 or BMGT290.
Cross-listed with: BMGT491.
Restriction: Must be in the QUEST Program (TQMP).
Credit Only Granted for: BMGT491, ENES491 or ENED491.
Formerly: ENES491.