Spring 2024

MTEN 101-002: Intro to Materials Engineering

Murat Guvendiren

MTEN 101 – Introduction to Materials Engineering
Spring 2024
Otto H. York Department of Chemical and Materials Engineering - NJIT

Instructor: Prof. Murat Guvendiren
Associate Professor and Director of the MTEN Program
Chemical and Materials Engineering Department
Email: muratg@njit.edu
Office Hours: TBD *(Schedule an appointment via email)*

Class Time: Monday 1:00pm-2:00pm

Class Location: CKB 223

Course Description: This course provides an introduction to the field of materials engineering and to the Otto H. York Department of Chemical and Materials Engineering. Topics include the program curriculum, student professional societies, undergraduate research, and cooperative education (co-op) opportunities, and learning about materials engineering profession and career pathways. Also included are lectures by MTEN faculty integrated with research laboratory tours and hands-on research experience.

Prerequisites: None

Course Administration: Administration of this course will be done through Canvas.

List of Topics:
- What does a Materials Engineer do?
- Materials Engineering profession and career pathways
- CME Department policies and MTEN program
- Materials Engineering faculty and research areas
- Undergraduate research opportunities
- Cooperative education opportunities
- Innovation in engineering
- Ethics and professionalism

Student Learning Outcomes:
- Learn about Materials Engineering profession and career pathways
- Meet with MTEN faculty and learn about their research
- Get familiar with undergraduate research and cooperative education opportunities
- Understand departmental policies and MTEN program
- Develop an academic plan and resume
- Understand the concepts of ethics and professionalism
- Get familiar with the path towards innovation in engineering
- Identify laboratory safety risks and follow safety protocol

Course Schedule:
Course schedule is tentative and may change throughout the term. The instructor will communicate any changes.

22-Jan	Introduction
29-Jan	Distinguished Lecture - Tentative
5-Feb	Prof. Murat Guvendiren
12-Feb	Visit to Guvendiren Lab
19-Feb	York Center Visit - Tentative
26-Feb	Prof. Kathleen McEnnis
4-Mar	Visit to McEnnis Lab
11-Mar	**Spring Recess**
18-Mar	Prof. Kerri-lee
25-Mar	Visit to Kerri-lee Lab
1-Apr	Prof. Mark Zhao
8-Apr	Visit to Zhao Lab
15-Apr	Prof. Josh Young
22-Apr	Visit to Young Lab
29-Apr	Final Project Presentations

The course grade will be determined using the following breakdown:

Lab Visit Reports: 50%
Final Project Presentation: 50%