

**Automotive System Electromagnetic Compatibility (EMC)**

CEE 2022

**Objective**

The objective of this 2-day course is to familiarize students with the basic concepts of EMC, the commercial and governmental regulations and standards that exist, and the design and test techniques that are used in the EMC work performed in the automotive industry.

**Description**

This course will include lectures, in-class demonstrations, and student discussions. Examples involving the design and evaluation of various automotive components and systems will be discussed. Students will learn how to evaluate EMC test results and discuss possible product design alternatives or solutions. Emphasis will be on “practical” use and applications of the concepts covered in the course.

**Topics covered**

- EMC concepts and relevance to the automotive industry
- EMC case studies
- Overview of Governmental and Commercial requirements
  - Domestic and international
  - Automotive industry specific
- Actual versus “ideal” product characteristics
- Electrical interconnections and shielding basics
- EMC measurement techniques
- Typical EMC laboratory equipment and facilities
- Product evaluation processes

**Prerequisite**

Work experience in electronic engineering design, basic knowledge of electromagnetic concepts, and familiarity with automotive systems.

**Course material**

To be provided by the instructor

**Instructor**

Mark Steffka, B.S.E., M.S., Adjunct Lecturer of Electrical and Computer Engineering

**Target audience**

This course is intended for design, validation, or test engineers that need to be familiar with product EMC requirements, test methods, and/or interpretation of test data.

**CEU**

A total of 1.6 Continuing Education Units (CEU’s) will be awarded to each participant who completes the program. The CEU is a nationally recognized means of tracking non-credit continuing education development. It confirms participation in a structured professional development activity or course work. One CEU is awarded for 10 hours of completed activity or course work. A permanent record of each attendee’s participation is maintained in the Office of the Registrar at the University of Michigan-Dearborn.

**Register**

Engineering Professional Development;

Phone: 313-593-0938 ask for corporate training; Fax: 313-593-4070

URL: <http://www.engin.umd.umich.edu/EPD/seminars.php> Email: tceccare@umich.edu