The Master of Engineering in Engine Systems (MEES) is an award-winning online degree program focused on advances in the internal combustion engine and vehicle propulsion systems. This program allows the student to select between a base engine emphasis and an emphasis on engine application and vehicle electrification. The MEES degree is offered in partnership with the internationally recognized UW Engine Research Center.

What You Learn

The program of study affords engineers at all levels a systems knowledge of propulsion engineering in powertrain configurations where an internal combustion engine is the principle power source. The program of study includes both base engine development and application in conventional and hybrid vehicles. The courses provide a solid foundation in mechanical engineering, electronic controls, and project management, each with an emphasis on application to the internal combustion engine and transportation industries.

Where & How You Learn

Where  This is an online educational program in which you will interact with students and faculty from around the world.

How  You may start the program in spring or fall of any year. The majority of students will elect to take two courses per semester. A faster or slower pace can be selected as appropriate to the individual learner’s circumstances. The MEES degree is awarded upon completion of thirty credits – twenty core course credits, and ten elective credits.

I was halfway through the program when I applied to lead an engine program. I [wouldn’t have] had the confidence or the resumé to do that if I hadn’t been part of the program.

Stephany Severance
Cummins Inc.
A Typical Week in the Program
Your weekly workload will include assigned readings, real-world assignments using computer applications, one or more live web conferences and online project work. You’ll have great flexibility within each week to complete course activities, but most assignments are due by the end of the week. So while the program is flexible, it includes many regular check-in times and structured support to help keep you on track.

Advance Your Learning at Residencies
Each August, you will attend a three-to-five-day residency on the UW–Madison campus. Here you will meet your classmates and instructors face-to-face, while you dive into intensive coursework and group projects that correspond with your fall and spring courses. The program also brings in expert speakers—engineers with considerable experience and success in their industry.

Highlights of residency include visiting the Engine Research Center and networking with current students, faculty and staff in the engine industry.

Learn New Skills Instantly
The Engine Systems program provides you with knowledge that you can apply immediately. Courses are problem-based and application-oriented, providing knowledge that you can use immediately in your current projects while preparing you for future roles and responsibilities.

Build Your Professional Network with Others in the Engine Industry
Unlike many online degree programs, which funnel information to students without significant and meaningful interaction, UW–Madison’s Engine Systems program is designed for highly interactive, collaborative learning with peer professionals.

You will proceed through the program with the same small group of students. Students and alumni consistently note this cohort model as the key to their success in the program.

The program also emphasizes group projects, which means you will be constantly interacting with your colleagues via online tools like web conferencing, online discussion forums, email and conference calls. Problem-based assignments are structured to draw out and engage the extensive expertise of fellow students as part of the learning experience.

In addition to group work, there are multiple opportunities to build an extensive network of students, faculty and alumni within the internal combustion industry—another lasting benefit.

“[The program] provides not only a method to learn more about engines, but a way to meet others who share the same enthusiasm. The professors and fellow students become friends that you can count on for advice.”

Alan Thomason, Owner, Plymouth Machine Integration, ’15