

Master of Science in Engineering (MSE) – Motorsports Engineering Major

The M.S. Degree in Engineering (MSE) – Motorsports Engineering Major is applicable for either students seeking additional motorsport industry training immediately after completion of their bachelor's degree in an engineering program or for industry professionals wishing to resume their studies to complete a master's degree. The Motorsports Major provides an integrated experience in motorsports with emphasis on race engineering. Students pursuing the Motorsports Major may choose from a course only (non-thesis) option or thesis option requiring a research thesis in an area related to the motorsports industry. Both options require 30 credit hours. The non-thesis program requires a minimum of 30 credit hours of course work, and the thesis program requires a minimum of 21 credit hours of course work in addition to an acceptable research thesis (9 credit).

Thesis and Non-Thesis Options:

Students may choose either the thesis or the non-thesis option for their programs. The requirements for thesis and non-thesis options are as follows:

Thesis Option – MSE-MSTE:

- (1) Nine (9) credit hours of research thesis (MSTE 69800).
- (2) Minimum fifteen (15) credit hours of core MSTE courses.
- (3) Maximum three (3) credit hours of recommended electives or related area courses.
- (4) Three (3) credit hours of mathematics course.

Non-Thesis Option – MSE-MSTE:

- (1) Minimum fifteen (15) credit hours of core MSTE courses.
- (2) Maximum twelve (12) credit hours of recommended electives or related area courses, including up to six (6) credit hours of MSTE 59800 Motorsports Engineering Projects.
- (3) Between the primary and recommended electives/related area courses, at least 18 credit hours (6 course) must be MSTE.
- (4) Three (3) credit hours of mathematics course.

Master of Science in Engineering (MSE) - Motorsports Major Plan of Study

Course Area	Courses	Credits
Required Mathematics for MSE-MSTE (1 course)	MATH 53700 Applied Mathematics for Scientists and Engineers I	3
Core Courses for MSE-MSTE (For non-thesis: minimum of 5 courses) (For thesis: minimum of 5 courses)	MSTE 57200 Vehicle Dynamics	3
	MSTE 58200 Motorsports Aerodynamics	3
	MSTE 59200 Motorsports Simulations	3
	MSTE 57800 Composite Materials for Automotive Applications	3
	MSTE 57900 Design and Analysis of Materials and Structures in Lightweight Vehicles	3
	MSTE 57400 Advanced Vehicle Dynamics	3
	MSTE 58400 Advanced Motorsports Aerodynamics	3
	MSTE 58000 Design, Analysis and Experimental Characterization of Advanced Composite Materials	3
	MSTE 59400 Advanced Motorsports Simulations	3

Recommended Electives	MATH 52800 Advanced Mathematics: Engineering and Physics II	3
	ME 50400 Automotive Controls	3
	MSTE 59700 Selected Topics in Motorsports Engineering	3
	MSTE 59800 Motorsports Engineering Projects	3
	MSTE 59900 Motorsports Advanced Internship	3
	ME 56200 Advanced Dynamics	3
	ME 55000 Advanced Stress Analysis	3
	ME 56300 Advanced Vibrations	3
	ME 55800 Advanced Materials	3
Related-area mathematics courses for both tracks	MATH 53700 Applied Mathematics for Scientists and Engineers I	3
	MATH 52800 Advanced Mathematics for Engineering and Physics II	3
	MATH 57800 Mathematical Modeling of Physical Systems I	3
Thesis	MSTE 69800 Research MS Thesis	9

*Note: Non-thesis students can use a total of no more than 6 credits from MSTE 59800 and MSTE 59900 on their POS.

**Note: Thesis students may only include at most 1 credit of MSTE 59900 on their POS.

***Note: Thesis students cannot include credits from MSTE 59800 on their POS.

Admission Requirements – Motorsports Major:

Students applying for admissions to the Motorsports Major must have

- Graduated from an EAC of ABET accredited baccalaureate program or the equivalent.
- Obtained an undergraduate cumulative GPA of 3.0 or higher on a 4.0 scale.
- Taken the GRE.
- Students who are graduates of non-US institutions and whose first language is not English are required to take the Test of English as a Foreign Language (TOEFL). The minimum scores required for admission are the following:

Internet-Based Test (iBT):	Paper-delivered	IELTS
<ul style="list-style-type: none"> ▪ Writing 18 ▪ Speaking 18 ▪ Listening 14 ▪ Reading 19 ▪ Total 80 	<ul style="list-style-type: none"> ▪ Writing 18 ▪ Listening 14 ▪ Reading 19 	<ul style="list-style-type: none"> ▪ Writing 5.5 ▪ Speaking 6.0 ▪ Listening 6.0 ▪ Reading 6.5 ▪ Total 6.5

For questions contact the Graduate Office at (317)278-4960 or send e-mail to gradengr@iupui.edu.