

Engineering Dual Degree Requirements

Motorsports Engineering & Chemistry

University Core Curriculum			Credits	Common Engineering			Credits
Common Core Requirements				Mathematics			
FYS	101	First Year Seminar	3	MA	106	Calculus & Analytical Geometry 1 ⁺	4
FYS	102	First Year Seminar	3	MA	107	Calculus & Analytical Geometry 2	4
GHS	201-209	Global and Historical Studies	3	MA	208	Calculus & Analytical Geometry 3	4
GHS	201-209	Global and Historical Studies	3	MA	215	Linear Algebra	3
				MA	334	Differential Equations	3
General Core Requirements			Credits	Science			Credits
TI	Text and Ideas (TI 244-PL) ¹		3	CH	105	General Chemistry 1	-
PCA	Perspectives in the Creative Arts		3	CH	106	General Chemistry 2	-
SW	The Social World		3	PH	201	Introduction to Analytical Physics 1 ⁺	5
AR	Analytical Reasoning (exempt)		3	PH	202	Introduction to Analytical Physics 2 ⁺	5
NW	The Natural World (exempt)		5				
PWB	Physical Well-Being		1	Engineering			Credits
		Core Credits	22(30)	DD	190	Elementary Engineering Design	3
Additional Core Requirements				DD	297	MATLAB	1
BCR	Butler Cultural Requirement		8 events	CS	142	Intro to Computer Science & Prog	3
ICR	Indianapolis Community Requirement		1 course	Other			Credits
SAC	Speaking Across the Curriculum		1 course	COM	101	Rhetoric and the American Demo	3
WAC	Writing Across the Curriculum		1 course	TCM	250	Career Planning for Engineers	1
Liberal Arts and Science Requirements			Credits	TCM	360	Comm in Engineering Practice (WAC/SAC)	2
Foreign Language (min 6 cr 200 level or above)			6-14	ENGR	200	Engineering Internship	1
Spanish, French, German, Chinese, Latin							Credits
		Credits	28-36				42
Chemistry			Credits	Motorsports Engineering			Credits
CH	105	General Chemistry 1 ⁺	5	PHIL	120	Ethics ¹	-
CH	106	General Chemistry 2 ⁺	5	PH	351	Analog Electronics (WAC)	4
CH	351	Organic Chemistry 1	5	MA	359	Probability and Statistics	3
CH	352	Organic Chemistry 2	5	ME	200	Thermodynamics	3
Additional Chemistry Courses ⁱ			12	ME	270	Basic Mechanics I	3
CH	332	Inorganic Chemistry		ME	272	Mechanics of Materials	3
CH	431	Advanced Inorganic Chemistry		ME	274	Basic Mechanics II	3
CH	432	Synthesis and Characterization		ME	310	Fluid Mechanics	3
CH	321	Analytical Chemistry 1		ME	325	Fluids Lab	1
CH	422	Analytical Chemistry 2		ME	344	Intro to Engineering Materials	3
CH	424	Instrumental Analysis Laboratory		ME	482	Control Systems	3
CH	361	Biochemistry 1: Bio-Organic Chemistry		MET	338	Manufacturing Processes	4
CH	462	Biochemistry IIA: Central Metabolism		MSTE	272	Introduction to Motorsports	3
CH	463	Biochemistry Laboratory 1		MSTE	297	Modeling for Motorsports	2
CH	471	Physical Chemistry 1 (Quantum Mechanics)		MSTE	298	Computer Modeling & Programming	2
CH	472	Physical Chemistry 2 (Thermo & Kinetics)		MSTE	312	Business of Motorsports	3
CH	473	Physical Chemistry Lab		MSTE	317	Motorsports Practicum II	1
		Credits	32	MSTE	320	Motorsports Design I	3
				MSTE	330	Data Acquisition in Motorsports I	2
				MSTE	331	Data Acquisition in Motorsports II	3
				MSTE	340	Dynamic Systems and Signals	3
				MSTE	350	Comp Aided Design & Analysis	3
				MSTE	414	Motorsports Design II	3
				MSTE	417	Motorsports Practicum III	1
				MSTE	426	Internal Combustion Engines	3
				MSTE	472	Vehicle Dynamics	3
				MSTE	482	Motorsports Aerodynamics	3
				Tech Electives			6
							Credits
							77
179 - 187 Total Credits							

¹ used as equivalents for degree requirements

⁺ also required for Chemistry major

[†] may take CH 107 Advanced General Chemistry for 6 cr, must make up 4 add'l cr in Chemistry electives

ⁱ must include two of the four areas of Chemistry- Analytical, Biological, Inorganic, Physical