Cleveland State University
Washkewicz College of Engineering
Bachelor of Science in Mechanical Engineering
Degree Map for students immediately eligible for College Writing I, General Chemistry I, and Calculus I

Name _____ **I.D. No.**_____

Curriculum Sheet (Effective Fall 2025)

First Year							
Fall Semester	**Credits**	**Major**	**CC**	**Spring Semester**	**Credits**	**Major**	**CC**
ENG 100 Intensive Writing or ENG 101 Writing I	3		FYV	ESC 102 Tech. Writing or ENG 102 College Writing II	3		RPW
MTH 181 Calculus I	4	X	FRQ	MTH 182 Calculus II	4	X	FRQ
CHM 261 General Chemistry I	3	X	SI	ESC 152 Programming with MATLAB	3	X	
CHM 266 General Chemistry Laboratory I	1	X	SIL	PHY 241 University Physics I	5	X	SI/SIL
INQ 170 Inquiry Launch to Engineering*	3	X	IL	MCE 181 Computer Aided Engineering II	2	X	
MCE 180 Computer Aided Engineering I	2	X					
Semester Total	16			Semester Total	17		

Second Year							
Fall Semester	**Credits**	**Major**	**CC**	**Spring Semester**	**Credits**	**Major**	**CC**
ESC 250 Differential Equations	3	X		ESC 202 Dynamics	3	X	
MTH 281 Multivariable Calculus	4	X		ESC 301 Fluid Mechanics	3	X	
ESC 201 Statics	3	X		PHY 242 University Physics II	5	X	SI/SIL
MCE 276 Materials & Manufacturing Processes	3	X		ESC 211 Strength of Materials	3	X	
MCE 286 Manufacturing Processes Lab	1	X		Society and Human Behavior	3		SHB
ESC 130 Engineering & Computer Science Career Pre	1						
Semester Total	14 or 15			Semester Total	17		

Third Year							
Fall Semester	**Credits**	**Major**	**CC**	**Spring Semester**	**Credits**	**Major**	**CC**
MCE 260 Kinematics	3	X	WAC	MCE 315 Electrical Systems for Mech. Eng.	3	X	
MCE 371 Vibrations	3	X		MCE 365 Machine Design I	3	X	
MCE 362 Machine Analysis	3	X		MCE 324 Intro to Heat Transfer	3	X	
ESC 321 Engineering Thermodynamics I	3	X		MCE 421 Applied Thermodynamics	3	X	
ESC 350 Linear Algebra for Engineers	3	X		MCE 481 Thermodynamics Lab	1	X	
				Global Human Perspectives	3		GHP
Semester Total	15			Semester Total	16		

Fourth Year							
Fall Semester	**Credits**	**Major**	**CC**	**Spring Semester**	**Credits**	**Major**	**CC**
MCE 450 Design Project I	2	X	WAC	MCE 451 Design Project II	3	X	CAP
MCE 441 Introduction to Linear Controls	3	X		MCE XXX Mechanical Engineering Elective	3	X	
MCE 470 Engineering Measurements	3			MCE XXX Mechanical Engineering Lab Elective	3	X	
MCE 480 Measurements Lab	1	X		PHL 215 Engineering Ethics	3	X	HCC
MCE XXX Mechanical Engineering Elective	3			American Civic Literacy	3		ACL
ESC 282 Engineering Economy	3			Complexities of Pluralistic Society	3		CPS
Semester Total	15			Semester Total	18		
Degree Total hours: 128 or 129 including ESC 130							

Degree Total Hours: 128 or 129 with ESC 130

Assumption: University Requirement of Foreign Language has been met by either successfully completing two (2) years of the same language in high school; or two (2) semesters of the same language in college; or passing CSU's language placement test in reading, writing, and speaking of a second language other than English.

College/Program Notes:

The plan above is a suggested guide to ensure that all Core Curriculum and College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of Core Curriculum courses, although some course requirements should be completed during the first year of study. The degree map ensures that a student accumulates the minimum credit hour totals needed for graduation. Students must have a minimum of 128 total credit hours, of which a minimum of 42 credit hours must be upper division (300 or 400-level courses). Depending upon other elective choices made, students may not need as many general electives as indicated above or may need additional electives.

University Notes:

Core Curriculum (CC) Key + Notes	
IL = Inquiry Launch	SHB = Society and Human Behavior
FYV = Finding Your Voice (required C or better)	ACL = American Civic Literacy
RPW = Research and Professional Writing (required C or better)	CPS = Complexities of Pluralistic Society
FRQ = Formal and Quantitative (two courses required, each C or better)	GHP= Global Human Perspectives
SI = Scientific Inquiry	WAC = Writing Across the Curriculum
SIL = Scientific Investigation Lab	CAP = Capstone Requirement
* INQ 170 is required for all engineering, technology, and computer science majors, and meets the Core Curriculum requirement for Inquiry Launch. ESC 120 is required in place of INQ 170 in the following cases: (a) transfer students; however, those who have had co-op experience in engineering/computer science and/or have transferred 12 credits of engineering/computer science courses can petition to waive ESC 120; (b) students who, as freshmen at CSU, started in another major and completed an Inquiry Launch course different from INQ 170; (c) Honors students who take the Honors Inquiry Launch course. Neither INQ 170 nor ESC 120 is required for transfer students with an Associates of Applied Science degree.	
** ESC 130 is not required but recommended.	

Cleveland State University
Washkewicz College of Engineering
Bachelor of Science in Mechanical Engineering - Co-op version
Degree Map for students immediately eligible for College Writing I, General Chemistry I, and Calculus I

Name _____ **I.D. No.**_____

Curriculum Sheet (Effective Fall 2025)

First Year

Fall Semester	Credits	Major	Spring Semester	Credits	Major	Summer Semester	Credits
ENG 100 Intensive Writing or ENG 101 Writing I	3		ESC 102 Tech. Writing or ENG 102 College Writing II	3			
MTH 181 Calculus I	4	x	MTH 182 Calculus II	4	X		
CHM 261 General Chemistry I	3	X	ESC 152 Programming with MATLAB	3	X		
CHM 266 General Chemistry Laboratory I	1	X	PHY 241 University Physics I	5	X		
INQ 170 Inquiry Launch to Engineering*	3		MCE 181 Computer Aided Engineering II	2	X		
MCE 180 Computer Aided Engineering I	2	X					
		X					
Semester Total	16		Semester Total	17			

Second Year

Fall Semester	Credits	Major	Spring Semester	Credits	Major	Summer Semester	Credits
ESC 250 Differential Equations	3	X	ESC 202 Dynamics	3	X	ESC 400 Fenn Co-op Education Experience	1
MTH 281 Multivariable Calculus	4	X	ESC 301 Fluid Mechanics	3	X		
ESC 201 Statics	3	X	PHY 242 University Physics II	5	X		
MCE 276 Materials & Manufacturing Processes	3	X	ESC 211 Strength of Materials	3	X		
MCE 286 Manufacturing Processes Lab	1	X	Society and Human Behavior (Core Curriculum)	3			
ESC 130 Engineering & Computer Science Career Pr	1						
Semester Total	15		Semester Total	17			

Third Year

Fall Semester	Credits	Major	Spring Semester	Credits	Major	Summer Semester	Credits
MCE 260 Kinematics	3	X	ESC 300 Co-op	1			
MCE 371 Vibrations	3	X					
MCE 362 Machine Analysis	3	X					
ESC 321 Engineering Thermodynamics I	3	X					
ESC 350 Linear Algebra for Engineers	3	X					
Semester Total	15		Semester Total	1			

Fourth Year

Fall Semester	Credits	Major	Spring Semester	Credits	Major	Summer Semester	Credits
ESC 300 Fenn Co-op Education Experience	1		MCE 315 Electrical SYstems for Mech. Eng.	3	X	ESC 400 Fenn Co-op Education Experience	1
			MCE 365 Machine Design I	3	X		
			MCE 324 Intro to Heat Transfer	3	X		
			MCE 421 Applied Thermodynamics	3	X		
			MCE 481 Thermodynamics Lab	1	X		
			Global Human Perspectives (Core Curriculum)	3			
Semester Total	1		Semester Total	16			

Fifth Year

Fall Semester	Credits	Major	Spring Semester	Credits	Major
MCE 450 Design Project I	2	X	MCE 451 Design Project II	3	X
MCE 441 Introduction to Linear Controls	3	X	MCE XXX Mechanical Engineering Elective	3	X
MCE 470 Engineering Measurements	3		MCE XXX Mechanical Engineering Lab Elective	3	X
MCE 480 Measurements Lab	1	X	PHL 215 Engineering Ethics (Core Curriculum)	3	X
MCE XXX Mechanical Engineering Elective**	3		American Civic Literacy (Core Curriculum)	3	
ESC 282 Engineering Economy	3		Complexities of Pluralistic Society (Core Curriculum)	3	
Semester Total	15		Semester Total	18	

* INQ 170 is required for all engineering, technology, and computer science majors, and meets the Core Curriculum requirement for Inquiry Launch. ESC 120 is required in place of INQ 170 in the following cases: (a) transfer students; however, those who have had co-op experience in engineering/computer science and/or have transferred 12 credits of engineering/computer science courses can petition to waive ESC 120; (b) students who, as freshmen at CSU, started in another major and completed an Inquiry Launch course different from INQ 170; (c) Honors students who take the Honors Inquiry Launch course. Neither INQ 170 nor ESC 120 is required for transfer students with an Associates of Applied Science degree.

** 3 credits of ESC 300/400 Co-op may replace one 3 credit MCE XXX Mechanical Engineering Elective.

Degree Total: 129 (Excluding ESC 300/400 Co-op courses) – SEE (CC) KEY ON REVERSE SIDE (non-co-op degree map version)