

Mechanical Engineering (14MEBS) 2+2 Curriculum

NC State Semester by Semester Plan:

<https://oucc.dasa.ncsu.edu/coe-14mebs-nosubplan-2157/>

Freshman Year (UNCW)					
<i>Fall Semester</i>			<i>Spring Semester</i>		
		<i>Credits</i>			<i>Credits</i>
CHM 101	General Chemistry I	4	CSC ***	Matlab or C/C++ ¹	3
EGN 101	Introduction to Engineering	2	ECN 221	Microeconomics ⁺	3
ENG 101	College Writing & Reading I	3	MAT 162	Calculus/Analytic Geometry II	4
MAT 161	Calculus/Analytic Geometry I	4	PED 101	Physical Activity & Wellness	2
UNI 101	First Year Seminar (UNCW reqd.)	3	***	GEP Requirement ⁺	3
Semester Total					15

Sophomore Year (UNCW)					
<i>Fall Semester</i>			<i>Spring Semester</i>		
		<i>Credits</i>			<i>Credits</i>
ENG 201	College Writing & Reading II	3	E 115	Intro. to Computing Environ. ²	1
MAT 261	Multivariate Calculus	4	ENG 204	Intro. to Pro. Writing (ENG 331)	3
MSE 201	Struct. & Prop. of Engr. Materials ²	3	MAE 206	Engineering Statics ²	3
PHY 201	General Physics I	4	MAT 361	Differential Equations	3
***	GEP Requirement ⁺	3	PHY 202	General Physics II	4
			***	GEP Requirement ⁺	3
Semester Total					17

Junior Year - Summer (NCSU)					
<i>Summer Session I or II</i>			<i>Summer Session I or II</i>		
		<i>Credits</i>			<i>Credits</i>
MAE 208	Engineering Dynamics	3	MAE 201	Engineering Thermodynamics I ³	3
Semester Total					3

Junior Year (NCSU)					
<i>Fall Semester</i>			<i>Spring Semester</i>		
		<i>Credits</i>			<i>Credits</i>
MAE 200	Introduction to ME Design	1	ECE 331	Principles of Electrical Engr. I	3
MAE 205	ME Lab I	1	GC 120	Foundations of Graphics	3
MAE 214	Solid Mechanics	3	MAE 302	Engineering Thermodynamics II	3
MAE 308	Fluid Mechanics	3	MAE 306	ME Lab II	1
MAE 315	Dynamics of Machines	3	MAE 310	Heat Transfer Fundamentals	3
ST 370	Prob. & Statistics for Engr. ⁴	3	MAE 316	Strength of Mechanical Comp.	3
Semester Total					16

Senior Year (NCSU)					
<i>Fall Semester</i>			<i>Spring Semester</i>		
		<i>Credits</i>			<i>Credits</i>
ISE 311	Engineering Economic Analysis	3	MAE 416	ME Senior Design	4
MAE 405	Controls Lab	1	**E ***	Technical Elective ⁵	3
MAE 435	Principles of Auto. Control	3	**E ***	Technical Elective ⁵	3
MAE 4**	Mech. Engr. Design Elective ⁶	3	***	GEP Requirement ⁺	3
E *	Technical Elective ⁵	3	***	GEP Requirement (Ethics) ⁷	3
***	GEP Requirement ⁺	3			
Semester Total					16

+ General Education Program (GEP) Requirements: To complete the requirements for graduation and the General Education Program, various categories of credit hours and co-requisites must be satisfied. NCSU approved GEP course lists for each category can be found at: <https://oucc.dasa.ncsu.edu/general-education-program-gep/>. Equivalent UNCW courses that satisfy NCSU GEP requirements can be found at: <http://uncw.edu/preeng/CurrentStudents/NCSUGeneralEducation.html>.

¹ C/C++ may be an acceptable substitute, but may not be offered at UNCW.

² Courses listed in red will be taken through the NC State College of Engineering Distance Education Program.

³ Every 200- and 300-level ME course in this degree plan is offered in the summer, therefore taking an MAE course in the summer preceding the junior year is recommended.

⁴ Alternatively, students may take ST 370 in second semester sophomore year via NC State's DE Program (DELTA).

⁵ Technical Electives: See NCSU semester by semester plan for departmental approved list.

⁶ Mechanical Engineering Design Electives: See NCSU semester by semester plan for departmental approved list.

⁷ Ethics Electives: See NCSU semester by semester plan for departmental approved list.