

Mechanical Engineering (14MEBS)

<i>Fall Semester</i>				<i>Spring Semester</i>			
		<i>Credits</i>			<i>Credits</i>		
CH	101	Chemistry, A Molecular Science ¹	3	CSC	113	Intro Comp MATLAB	3
CH	102	General Chemistry Lab ¹	1	MA	241	Calculus II ¹	4
E	101	Introduction to Engr & Prob Solv ^{1,2}	1	PY	205	Physics for Engr & Sc I ¹	3
E	115	Intro to Computing Environ ^{1,2}	1	PY	206	Physics for Engr & Sc I ¹ Lab	1
ENG	101	Academic Writing and Research ^{1,2}	4	GC	120	Foundations of Graphics	3
MA	141	Calculus I ¹	4	HESF	10*	Fitness & Wellness Course*	1
EC	205	Economics (or EC 201 or ARE 201)*	3	E	102	Engineering in the 21st Cent	2
HES	***	Health & Exercise Studies	1				
Semester Total 18				Semester Total 17			

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MA	242	Calculus III	4	MA	341	Appl Differential Eq	3
MAE	200	Introduction to ME Design ³	1	MAE	201	Thermal-Fluid Sciences ²	3
MAE	206	Engineering Statics ²	3	MAE	305	ME Lab I	1
PY	208	Physics for Engr & Sc II	3	MAE	208	Engineering Dynamics ²	3
PY	209	Physics for Engr & Sc II ¹ Lab	1	MAE	214	Solid Mechanics ²	3
ST	370	Prob & Stat for Engineers (or ST 371)	3	***	***	GEP Requirement*	3
***	***	GEP Requirement*	3				
Semester Total 18				Semester Total 16			

<i>Fall Semester</i>				<i>Spring Semester</i>			
		<i>Credits</i>			<i>Credits</i>		
ENG	331	Comm Engr & Tech	3	ECE	331	Principles of Elec. Engr. I	3
MAE	302	Engr Thermodynamics II	3	MAE	310	Heat Transfer Fundamentals	3
MAE	306	ME Lab II	1	MAE	316	Strength of Mech Comp	3
MAE	308	Fluid Mechanics	3	MSE	200	Mech. Prop. Engr. Materials (or MSE 201)	3
MAE	315	Fundamentals of Vibrations	3	**E	***	Tech Elective ⁴	3
***	***	GEP Requirement*	3				
Semester Total 16				Semester Total 15			

<i>Fall Semester</i>				<i>Spring Semester</i>			
		<i>Credits</i>			<i>Credits</i>		
MAE	405	Controls Lab	1	**E	***	Tech Elective ⁴	3
MAE	435	Prin of Auto Control	3	MAE	416	ME Senior Design 2	4
MAE	415	ME Senior Design I	3	***	***	GEP Requirement*	3
E	*	Tech Elective ⁴	3	***	***	Ethics (GEP Req*) ⁵	3
ISE	311	Engr Econ Analysis	3				
Semester Total 13				Semester Total 13			

Minimum Total Credit Hours Required for Graduation 126

Major/Program requirements and footnotes:

¹Courses required for Change of Degree Audit (CODA). CH 101, 102; MA 141, 241; PY 205, 206 must be completed with C or higher.

²Minimum grade of C-, E 115 requires satisfactory completion (S).

³MAE 200 may be taken in the fall semester of the sophomore or junior year.

⁴Technical electives must be selected from the following list: <https://www.mae.ncsu.edu/academics/undergraduate-programs/electives/>

⁵Select from EED 414, IDS 201, MS 402 (ROTC only), NS 420 (ROTC only), STS 302, STS 304, STS(PHI) 325, PHI 214, PHI 227 or PHI 375.

*General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at

<http://oucc.ncsu.edu/gep-courses>.

Humanities (6 credit hours selected from two different disciplines/course prefixes)

Choose from the University approved GEP Humanities course list .

Social Sciences (6 credit hours selected from two different disciplines/course prefixes)

Choose 3 credits from the University approved GEP Social Sciences course list in a discipline other than Economics.

Economics 205 (or EC 201 or ARE 201), taken as part of the Major requirements, satisfies 3 credit hours needed to fulfill the GEP Social Sciences requirement.

Health and Exercise Studies (2 credit hours – must include one HESF 100-level course and one additional HES course)

Choose from the University approved GEP Health and Exercise Studies course list.

USDEI - (3 credit hours to be selected from the following University approved GEP course lists)

Choose from the University approved GEP USDEI course list

Interdisciplinary Perspectives (5-6 credit hours)

Choose from the University approved GEP Interdisciplinary Perspectives course list.

The following Co-Requisites must be satisfied to complete the General Education Program requirements:

I. **Global Knowledge (GK)**

Choose from the University approved GEP Global Knowledge course list or choose a course identified on the approved GEP course lists as meeting the Global Knowledge (GK) co-requisite.

J. **Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.