

# Mechanical Engineering Checksheet

The Academic Plan of Study is a guide. Always confer with your Academic Advisor for your semester course plans

Common First Year (CFY)	Term(s)	Course #	Course Title	Hrs	Prerequisites		
Fall		ENGR 13xx	Foundational ENGR Course (ENGR 1300, 1301, 1302, or 1303)*	2-3		Only 2 attempts allowed	
		ENGR 13xx	Foundational ENGR Course (ENGR 1300, 1301, 1302, or 1303)*	2-3		Only 2 attempts allowed	
		MATH 1241	Calculus*	3		Only 2 attempts allowed	
		XXXX 15xx	Gen Ed Requirement (Theme 1501, 1502, 1511/1512   Fnd Amer Demo 1575)	3		Math Placement Level 4/MATH 1103 <a href="https://age.charlotte.edu/charlotte-core/general-education-curriculum/">https://age.charlotte.edu/charlotte-core/general-education-curriculum/</a>	
		XXXX 15xx	Gen Ed Requirement (Theme 1501, 1502, 1511/1512   Fnd Amer Demo 1575)	3		<a href="https://age.charlotte.edu/charlotte-core/general-education-curriculum/">https://age.charlotte.edu/charlotte-core/general-education-curriculum/</a>	
	<b>Total: 14-15</b>						
Spring		ENGR 13xx	Foundational ENGR Course (ENGR 1300, 1301, 1302, or 1303)*	2-3		Only 2 attempts allowed	
		ENGR 13xx	Foundational ENGR Course (ENGR 1300, 1301, 1302, or 1303)*	2-3		Only 2 attempts allowed	
		MATH 1242	Calculus II*	3		Only 2 attempts allowed	
		PHYS 2101	Physics I*	3		Only 2 attempts allowed	
		PHYS 2101L	Physics I Lab*	1		Only 2 attempts allowed	
		WRDS 1103/1104	Writing & Inquiry in Academic Contexts*	3		Only 2 attempts allowed	
<b>Total: 14-15</b>							
Second Year	Fall		MATH 2171	Differential Equations*	3	Only 2 attempts allowed	MATH 1242 w/grade of C or higher
			MEGR 2141	Eng Mechanics I (Statics)*	3	Only 2 attempts allowed	PHYS 2101 & MATH 1242 w/grade of C or higher
			MEGR 2152	CAD for Mechanical Engineers*	1	Only 2 attempts allowed	ENGR 1303 w/grade of C or higher
			MEGR 2233	Math & Science for Engineering II*	3	Only 2 attempts allowed	ENGR 1301 & MATH 1241 w/grade of C or higher
			PHYS 2102	Physics II*	3	Only 2 attempts allowed	PHYS 2101 w/grade of C or higher & MATH 1242
			PHYS 2102L	Physics II Lab*	1	Only 2 attempts allowed	PHYS 2101L & PHYS 2102
	<b>Total: 14</b>						
	Spring		MEGR 2180	Manufacturing Systems*	3	Only 2 attempts allowed	MEGR 2141 w/grade of C or higher   MEGR 2157
			MEGR 2157	Design Projects I Lab*	3	Only 2 attempts allowed	ENGR 1300, MEGR 2141, MEGR 2152 all w/grade of C or higher   MEGR 2180
			MEGR 2144	Solid Mechanics*	3	Only 2 attempts allowed	MEGR 2141 w/grade of C or higher
			MATH 2241	Calculus III*	3	Only 2 attempts allowed	MATH 1242
			MEGR 2173	Mechatronics I*	2	Only 2 attempts allowed	ENGR 1302, PHYS 2102 both w/grade of C or higher   MEGR 2174
		MEGR 2174	Mechatronics I Projects Lab*	1	Only 2 attempts allowed	PHYS 2102L w/grade of C or higher   MEGR 2173	
<b>Total: 15</b>							
Third Year	Fall		MEGR 3111	Thermodynamics I*	3	Only 2 attempts allowed	MATH 1242 & PHYS 2101 w/grade of C or higher
			MEGR 3121	Dynamics Systems I*	3	Only 2 attempts allowed	MEGR 2141 & MATH 1242 w/grade of C or higher
			MEGR 3173	Mechatronics II*	2	Only 2 attempts allowed	MEGR 2173 w/grade of C or higher   MEGR 3174
			MEGR 3174	Mechatronics II Projects Lab*	1	Only 2 attempts allowed	MEGR 2174 w/grade of C or higher   MEGR 3173
			MEGR 2242	Computational Methods for Engineers*	2	Only 2 attempts allowed	MEGR 2233 w/grade of C or higher
			MEGR 2234	Math & Science for Engineering III*	4	Only 2 attempts allowed	MEGR 2233 & MATH 2171 w/grade of C or higher
	<b>Total: 15</b>						
	Spring		MEGR 3161	Introduction to Engineering Materials*	3	Only 2 attempts allowed	MEGR 2144 & MEGR 2233 or CHEM 1251 both w/grade of C or higher
			MEGR 3156	Design Projects II Lab*	2	Only 2 attempts allowed	MEGR 2144, MEGR 2157, MEGR 2173, MEGR 2174, MEGR 2180 all w/grade of C or higher
			MEGR 3114	Fluid Mechanics	3	Only 2 attempts allowed	MEGR 3121 & MATH 2241 both w/grade of C or higher
			MEGR 3152	Mechanics and Materials Lab	2	Only 2 attempts allowed	MEGR 2144 & MEGR 3174 both w/grade of C or higher   MEGR 3161
			MEGR 3123	Dynamic Systems II	3	Only 2 attempts allowed	MEGR 3121, MEGR 2234, & MEGR 2244 all w/grade of C or higher
		MEGR 3116	Introduction to Heat Transfer	3	Only 2 attempts allowed	MATH 2171 & MEGR 3111 both w/grade of C or higher   MEGR 3114	
<b>Total: 16</b>							
Fourth Year	Fall		MEGR 3255	Senior Design I	2	Only 2 attempts allowed	MEGR 3111, MEGR 3114, MEGR 3161, MEGR 3171L or MEGR 3174, and MEGR 3156 all w/grade of C or higher   MEGR 3152 & MEGR 3251
			MEGR 3251	Thermal/Fluids Lab	2	Only 2 attempts allowed	MEGR 3111, MEGR 3174, & MEGR 3114 all w/grade of C or higher
			MEGR 3221	Machine Analysis & Design I	3	Only 2 attempts allowed	MEGR 2144 & MEGR 3121 both w/grade of C or higher
			MEGR Technical Elec		3	Only 2 attempts allowed	
			MEGR Technical Elec		3	Only 2 attempts allowed	
			CTCM 2530	Critical Thinking and Comm	3	Only 2 attempts allowed	WRDS 1103/1104 and at least Sophomore Standing
	<b>Total: 16</b>						
	Spring		MEGR 3256	Senior Design II	3	Only 2 attempts allowed	MEGR 3255
			MEGR Technical Elec		3	Only 2 attempts allowed	See Degree Works for options
			MEGR Technical Elec		3	Only 2 attempts allowed	See Degree Works for options
			ENGR 3295	Professional Development	1	Only 2 attempts allowed	Junior Standing
			XXXX 15xx	Gen Ed Requirement (Theme 1501, 1502, 1511/1512   Fnd Amer Demo 1575)	3	Only 2 attempts allowed	<a href="https://age.charlotte.edu/charlotte-core/general-education-curriculum/">https://age.charlotte.edu/charlotte-core/general-education-curriculum/</a>
		XXXX 15xx	Gen Ed Requirement (Theme 1501, 1502, 1511/1512   Fnd Amer Demo 1575)	3	Only 2 attempts allowed	<a href="https://age.charlotte.edu/charlotte-core/general-education-curriculum/">https://age.charlotte.edu/charlotte-core/general-education-curriculum/</a>	
<b>Total: 16</b>							

\* = grade of C or better is required for degree progression  
 Courses in *italics* can be taken as a pre or co-requisite  
 Course in **bold** must be taken as a co-requisite

