

~ Mechanical Engineering - Bachelor of Science Curriculum ~

Although this is a **suggested** outline, **all** courses listed below are **REQUIRED** for this degree. Refer to the [Undergraduate Catalog](#) for verification.
In the event of conflicting information, the Degree Audit and UF Catalog supersede any information provided on this sheet.

Pre-professional critical tracking courses: MAC 2311, MAC 2312, MAC 2313, MAP 2302, PHY 2048, PHY 2049, CHM 2045 & EML 2023 must be completed by semester 5, not including summer terms. A 2.8 GPA is required for these 8 courses. A "C" or better must be earned in each course. Students have 2 attempts at each course, including drops.

Courses highlighted below and listed with an **asterisk (*)** - (*pre-professional critical tracking course*) or **pound (#)** - (*MAE critical tracking*) **require a grade of C or better**. All others require a D minus or better (i.e. a passing grade). Pre-professional critical tracking must be completed within 2 attempts. All others have no limit.

Every line below must be satisfied independently. One course cannot be used for two lines; for instance, a course **cannot** count as a technical elective **AND** a specialization elective simultaneously.

Students must complete general education **international** and **diversity** requirements. This is often done while completing another general education requirement, typically humanities or social and behavioral sciences.

Students must complete unique **State Core** general education requirements. Refer to your [Degree Audit](#) or the [UF Catalog](#) for the lists of acceptable courses.

✓	Course Prefix and Number	Cr	Course Title and Info	Projected Offer	Pre-Requisites (REQUIRED = NO OVERRIDES)
Semester 1 (15-16cr)					
	CHM 2045/2095 *	3	General Chemistry 1 / Chemistry for Engineers 1 (<i>GE - P</i>)	F S Su	CHM 1025 with a C, MAC 1147 or MAC 1140 plus MAC 1114 or higher MAC course with a C
	CHM 2045L	1	General Chemistry Lab 1 (<i>GE - P</i>)	F S Su	CHM 1025 with a C, MAC 1147 or MAC 1140 plus MAC 1114 or higher MAC course with a C
	MAC 2311 *	4	Analytical Geometry & Calculus 1 (<i>GE - M</i>)	F S Su	Mathematics Placement Exam (ALEKS)
	ENC 1101 or ENC 1102	3	(Gen Ed Composition) - [WR-6000]	F S Su	
	Quest 1 Course	3	(GE - H) (<i>possible Diversity, International, or writing</i>)	F S Su	All incoming freshmen w/out an AA degree
	EML 2920 or EGN 2020C	1,2	Dept & Professional Orientation or Engg Design & Society	F S	
Semester 2 (17cr)					
	MAC 2312 *	4	Analytical Geometry & Calculus 2 (<i>GE - M</i>)	F S Su	MAC2311
	PHY 2048 *	3	Physics with Calculus 1 (<i>GE - P</i>)	F S Su	MAC2311
	PHY 2048L/2053L	1	Physics Lab 1 (<i>GE - P</i>)	F S Su	
	EML 2023 *	3	Computer Aided Graphics & Design (<i>Laptop required</i>)	F S Su	
	ENC 3246	3	Professional Communication for Engineers - (<i>GE-C</i>) [WR-6000]	F S Su	ENC1101 or ENC1102
	Science Elective (<i>Pick 1</i>)	3	☐ CHM2046/2096 ☐ BSC2010 ☐ PHY3101 ☐ AST3018/3019	F S Su	<i>Check catalog</i>
Semester 3 (18cr)					
	Quest 2	3	(GE - SS) (<i>possible Diversity, International, or writing</i>)	F S Su	
	MAC 2313 *	4	Analytical Geometry & Calculus 3 (<i>GE - M</i>)	F S Su	MAC2312
	PHY 2049 *	3	Physics with Calculus 2 (<i>GE - P</i>)	F S Su	MAC2312 & PHY2048
	PHY 2049L/2054L	1	Physics Lab 2 (<i>GE - P</i>)	F S Su	
	COP 2271 (<i>Lab is optional</i>)	2	Computer Programming for Engineers Matlab (<i>no exceptions</i>)	F S Su	MAC2312
	EGM 2511 #	3	Engineering Mechanics - Statics	F S Su	PHY2048
	EML 2322L	2	Design & Manufacturing Lab	F S Su	EML2023, ENC3246, ASE/ME majors only
Semester 4 (18cr)					
	State Core GE - H	3	State Core Gen Ed Humanities (<i>list in Degree Audit</i>)	F S Su	
	EMA 3010	3	Materials	F S Su	CHM2045
	MAP 2302 *	3	Elementary Differential Equations	F S Su	MAC2312
	EGM 3344 #	3	Intro to Numerical Methods of Eng. Analysis	F S	MAC2313 & COP2271-Matlab
	EGM 3520 #	3	Mechanics of Materials	F S Su	EGM2511 & MAC2313
	EML 3100 #	3	Thermodynamics	F S Su	CHM2045, MAC2313, PHY2048
Semester 5 (15cr)					
	State Core GE - SS	3	State Core Gen Ed Social & Behavioral (<i>list is in Degree Audit</i>)	F S Su	
	EEL 3003	3	Elements of Electrical Engineering (<i>can sub-EEL 3111C</i>)	F S Su	MAC2313 & PHY2049
	EGM 3401 #	3	Engineering Mechanics - Dynamics	F S	EGM2511 & MAC2313
	EGN 3353C	3	Fluid Mechanics	F S	EGM2511, MAC2313, EML3100
	EML 3301C	3	Mechanics of Materials Lab - [WR-6000]	F S	EMA3010, COP2271, EGM3520, ENC3246
Semester 6 (15cr)					
	GE - H or GE - SS	3	Humanities or Social & Behavioral Sciences - [WR-6000]	F S Su	
	EML 3005	3	Mechanical Engineering Design 1	F S	COP2271, EGM3520, EML2322L, EGM3401
	EML 4140	3	Heat Transfer	F S	EGN3353C & MAP2302
	EML 4220	3	Vibrations	F S	EGM3401, EGM3520, EGM3344, MAP2302
	EML 4312	3	Control of Mechanical Eng. Systems	F S	EGM3401, EGM3344, MAP2302

Semester 7 (15cr)				
EML 4147C	3	Thermal Systems Design & Lab	F S	EML3100, EML3301C, EML4140
EML 4501 or EML 4912	3	Mechanical System Design 2 or IPPD 1 (<i>must do IPPD 2</i>)	F S	EGM3401, EGN3353C, EML2322L, EML3005
EML 4507	3	Finite Element Analysis & Design	F S	COP2271, EGM3520, EGM3344
Tech Elective 1 of 3	3	See Technical Electives list for approved courses (<i>others require a petition</i>)		Check Catalog
Tech Elective 2 of 3	3	See Technical Electives list for approved courses (<i>others require a petition</i>)		Check Catalog
Semester 8 (15cr)				
EML 4321	3	Manufacturing Engineering	F S	EMA3010, EML2322L & EML3005
EML 4314C	3	Dynamics & Controls System Design Lab	F S	EML3301C & EML4312
EML 4502 or EML 4913	3	Mechanical Engineering Design 3 or IPPD 2 (<i>must do IPPD 1</i>)	F S	EML4501
Specialization Elective click for list	3	Choose any 4000, 5000 or 6000 level course with an EAS, EGM or EML prefix ** →	F S	**Engineering Research, Individual Study, Internship & Co-op credits will not count
Tech Elective 3 of 3	3	See Technical Electives list for approved courses (<i>others require a petition</i>)		Check Catalog
Total Hours		128		

- **Each** line requirement above must be met in order to meet the 128 credit hours of degree requirements for mechanical engineering.
- One single course **cannot** count for more than one line above. For example, you may not use BSC2010 as a science elective and also a technical elective; it will only count for one.
- Pre-requisites must be met in order to take a course. **No exceptions.**
- The Degree Audit and UF Catalog supersede the information in this document. **When in doubt, follow your Degree Audit.**