

## Undergraduate Major Map

**Catalog Year** 2017  
**College / School** Engineering  
**Major** Mechanical Engineering - BS  
**Track / Concentration**  
**Career Path** Four Year Freshman

### Fall Term 2017

In order to declare your major in Engineering, you must be MAC 2311 Calculus I ready. For detailed information go to: <https://cec.fiu.edu/advising/admission-policy/>

**Term GPA:** 2.33  
**Term Hours:** 14  
**Cum GPA:** 2

CHM1045 + CHM 1045L Pre-requisite: Second year high school or MAC 1105 College Algebra or ALEKS with a score of 50.

Engineering Drawing (SolidWorks) is a deficiency. If not taken, it must be satisfied by taking EML 1533 by Term 3.

Course Group	Course Required	Course Description	Credit Hours	Critical Indicator	Course Notes
UCC First Year Experience	SLS 1501	First Year Exper	1		
UCC Communication	ENC 1101	Writing and Rhetoric I	3		
Mathematics and Sciences	CHM 1045	Gen Chemistry I	3	C	UCC Natural Science Group 1 Lecture (1) See Endnotes
Mathematics and Sciences	CHM 1045L	Gen Chem Lab I	1	C	UCC Natural Science Group 1 Lab (1) See Endnotes
UCC Mathematics Group One	MAC 2311	Calculus I	4	C	(1) See Endnotes
Required Courses	EGS 1006	Intro To Engineering	2		

### Spring Term 2018

Engineering Drawing (SolidWorks) is a deficiency. If not taken, it must be satisfied by taking EML 1533 by Term 3.

**Term GPA:** 2.33  
**Term Hours:** 15  
**Cum GPA:** 2

Course Group	Course Required	Course Description	Credit Hours	Critical Indicator	Course Notes
UCC Communication	ENC 1102	Writing and Rhetoric II	3		
Mathematics and Sciences	PHY 2048	Physics W/Calculus I	4	C	
Mathematics and Sciences	PHY 2048L	General Phys Lab I	1	C	
UCC Mathematics Group Two	MAC 2312	Calculus II	4		(1) See Endnotes
Required Courses	EML 2032	Programming for ME	3		

## Undergraduate Major Map

### Summer Term 2018

Engineering Drawing (SolidWorks) is a deficiency. If not satisfied, EML 1533 must be taken by this semester.

Use this semester to catch up on coursework and/or satisfy the 9 credits summer requirement (if needed). (3) See Endnotes

**Term GPA:** 2.33  
**Term Hours:** 11  
**Cum GPA:** 2

Course Group	Course Required	Course Description	Credit Hours	Critical Indicator	Course Notes
UCC Social Science Group One			3		(1) See Endnotes
Mathematics and Sciences	PHY 2049	Physics W/Calc II	4		UCC Natural Science Group 2 Lecture (1) See Endnotes
Mathematics and Sciences	PHY 2049L	General Phys Lab II	1		UCC Natural Science Group 2 Lab (1) See Endnotes
UCC Social Science Group Two	EGS 1041	Tech, Humans and Soc	3		(1) See Endnotes

### Fall Term 2018

**Term GPA:** 2.33  
**Term Hours:** 13  
**Cum GPA:** 2

Course Group	Course Required	Course Description	Credit Hours	Critical Indicator	Course Notes
UCC Humanities Group One			3		(1) See Endnotes
Required Courses	EGN 3365	Materials Eng	3		
Mathematics and Sciences	MAC 2313	Multivariable Calc	4	C	
Required Courses	EGN 3311	Statics	3	C	Corequisite: MAC 2313

### Spring Term 2019

**Term GPA:** 2.33  
**Term Hours:** 12  
**Cum GPA:** 2

Course Group	Course Required	Course Description	Credit Hours	Critical Indicator	Course Notes
Required Courses	EGN 3321	Dynamics	3		
Engineering Sciences	EIN 3390L	Manuf Processes Lab	1		
Mathematics and Sciences	MAP 2302	Differential Equat	3	C	
Engineering Sciences	EIN 3390	Manuf Processes	2		
Required Courses	EGN 3343	Thermodynamics I	3		

## Undergraduate Major Map

### Summer Term 2019

Use this semester to catch up on coursework and/or satisfy the 9 credits summer requirement (if needed). (3)See Endnotes

**Term GPA:** 2.33  
**Term Hours:** 6  
**Cum GPA:** 2

Course Group	Course Required	Course Description	Credit Hours	Critical Indicator	Course Notes
UCC Humanities Group One			3		(1) See Endnotes
Mathematics and Sciences	EGM 3311	Analysis Eng Syst	3		

### Fall Term 2019

**Term GPA:** 2.33  
**Term Hours:** 14  
**Cum GPA:** 2

Course Group	Course Required	Course Description	Credit Hours	Critical Indicator	Course Notes
Engineering Sciences	EEL 3110L	Circuits Lab	1		
Required Courses	EMA 3702	Mech & Mat Science	3	C	
Required Courses	EML 3126	Transp Phenon	3		
Required Courses	EMA 3702L	Mech & Mat Sci Lab	1		
Required Courses	EML 3036	Simultn Software ME	3		Corequisites: EMA 3702 and EML 3126
Engineering Sciences	EEL 3110	Circuit Analysis	3		

### Spring Term 2020

**Term GPA:** 2.33  
**Term Hours:** 14  
**Cum GPA:** 2

Course Group	Course Required	Course Description	Credit Hours	Critical Indicator	Course Notes
UCC Arts			3		(1) See Endnotes
Required Courses	EML 3126L	Transp Pheno Lab	1		
Required Courses	EML 4140	Heat Transfer	3	C	
Engineering Sciences	EGN 3613	Engineering Economy	3		
Required Courses	EML 3500	Mech Design I	3	C	
Required Courses	EML 3301L	Instrumentation Lab	1		

### Summer Term 2020

Use this semester to catch up on coursework and/or satisfy the 9 credits summer requirement (if needed). (3) See Endnotes

**Term GPA:** 2.33  
**Term Hours:** 3  
**Cum GPA:** 2

Course Group	Course Required	Course Description	Credit Hours	Critical Indicator	Course Notes
Required Courses	EML 3222	Systems Dynamics	3		

## Undergraduate Major Map

### Fall Term 2020

Senior Design Project is taken within 2 consecutive semesters:  
EML 4551 (Fall 2020) & EML 4905 (Spring 2021)

**Term GPA:** 2.33  
**Term Hours:** 13  
**Cum GPA:** 2

Both EML 4551 and EML 4905 satisfy the GL Discipline-Specific requirement. In order to fully satisfy the Global Learning requirement, 2 GL courses need to be completed (1 Foundation & 1 Discipline-Specific).

Go to <http://goglobal.fiu.edu> to get the list of the GL Foundation Courses. (2) See Endnotes

Course Group	Course Required	Course Description	Credit Hours	Critical Indicator	Course Notes
Required Courses	EML 4501	Mech Design II	3		
Senior Design Project	EML 4551	Ethics Dsn Proj Org	1		Satisfies GL Discipline-Specific. (2) See Endnotes
Required Courses	EML 4706	Des Therm Fluid Sys	3		
Required Courses	EML 4806	Modeling Of Robots	3		
Additional Electives			3		Refer to PDA: Select an Engineering Course from the "Additional Electives"

### Spring Term 2021

Senior Design Project is taken in two consecutive semesters: EML4551 (Fall 2020) and EML 4905 (Spring 2021). By completing the EML 4905, the student will have satisfied the One GL Discipline-Specific course required; however, the One GL Foundation course needs to be taken from the UCC (GL) or go to <http://goglobal.fiu.edu> to get the list of the Global Learning Foundation courses. (2) See Endnotes

**Term GPA:** 2.33  
**Term Hours:** 13  
**Cum GPA:** 2

Course Group	Course Required	Course Description	Credit Hours	Critical Indicator	Course Notes
Required Courses	EML 4804	Intro Mechatronics	3		
Senior Design Project	EML 4905	Senior Design Proj	3		Satisfies GL Discipline-Specific. (2) See Endnotes
Additional Electives			3		Refer to PDA: Select an Engineering Course from "Additional Electives"
Required Courses	EML 4906L	Mech Lab I	1		
Elective with Design Content			3		Refer to PDA: Select an Engineering Course from "Elective with Design"

### Summer Term 2021

Use this semester to catch up on coursework and/or satisfy the 9 credits summer requirement (if needed). (3) See Endnotes

**Term GPA:** 2.33  
**Cum GPA:** 2

## General Requirements

In order to declare your major in engineering, you must be "MAC 2311 Calculus I" ready. For detailed information go to: <https://cec.fiu.edu/advising/admission-policy/>

## Undergraduate Major Map

---

\*Critical Indicator is the minimum grade indicated in specific courses to demonstrate proficiency and progress in major. Earning less than the minimum grade is a trigger for a conversation with advisor.

### GENERAL UNIVERSITY REQUIREMENTS

See your Panther Degree Audit (PDA) for a real-time update on your academic career progress and additional information on University and major requirements at <http://my.fiu.edu>

(1) UCC: Students must meet the University Core Curriculum (UCC) requirements. Contact your undergraduate engineering advisor to satisfy this requirement. Students requesting to be transient must receive permission from the Dean of Undergraduate Education.

(2) GLOBAL LEARNING (GL): Freshmen entering FIU Summer B 2010 or later must take at least two Global Learning (GL) designated courses at FIU. See <http://goglobal.fiu.edu>. This will be satisfied by completing:

- One GL Foundation University Core Curriculum (UCC) course. Choose any GL course from the UCC list. Any Humanities(GL), Social Science(GL) or Arts(GL) will satisfy the GL Foundation. This could satisfy at the same time a Humanities, a Social Science or an Art the student may need,
- and
- One GL Discipline-Specific course. Mechanical Engineering student will satisfy this by completing the Senior Design Project EML 4905 during the student's senior year.

(3) SUMMER ENROLLMENT REQUIREMENT: All students entering FIU or any university within the State University System (SUS) of Florida with fewer than 60 credit hours are required to earn at least nine credit hours prior to graduation by attending one or more summer terms at a university in the SUS.

(4) GORDON RULE WITH WRITING (GRW) REQUIREMENT: All students are required to demonstrate college-level writing skills through six semester hours of Gordon Rule Writing designated courses (GRW). To fulfill this requirement, students can select any two GRW-designated courses in the University Core Curriculum (UCC). These courses can be from the same or different categories.

(5) FOREIGN LANGUAGE REQUIREMENT (FLENT/FLEX): A student who did not complete two years of the same foreign language in high school or at a post-secondary institution must successfully complete 8-10 credit hours of instruction in one foreign language prior to graduation. Exceptions include appropriate CLEP, AP, IB, TOEFL, or transfer credit. Contact your advisor for more information.

College of Engineering/Mechanical & Materials Engineering (MME) Department:

### Selected Requirements

GRADES: A minimum grade of a 'C' is required in every course of the Mechanical Engineering curriculum.

SENIOR DESIGN PROJECT courses (EML 4551 and EML 4905) must be taken in the last two semesters in sequence. These courses are NOT offered during the summers semesters.

This document only lists SELECTED requirements. See your Panther Degree Audit for a full list of College of Engineering and major requirements at <http://my.fiu.edu>