Engineering Department

Faculty

Department Chair: Mr. McCleary

Department Adjunct Faculty: Mr. Burke, Mr. Collier, Dr. Stetson

Mechanical Engineering (BS)

Aims of the Engineering Program

The aim of this Mechanical Engineering program is to prepare students for careers and leadership in Mechanical Engineering and related disciplines as well as lives of service to their Creator and humanity by providing an educational experience which develops them spiritually, mentally, physically, and socially. This education integrates biblical concepts that encourage further study of the nature and will of God while providing another perspective on the natural world as Creation. Graduates of this program will be high quality; bright, interactive people capable of succeeding in any environment while preserving the ability to think creatively and with moral clarity. These people will understand deeply the gravity of their actions both as Christians and engineers.

Entrance Requirements

Minimum GPA of 3.0, submission of application for admittance.

Total Semester Hours

Candidates must complete a minimum of 124 semester hours of accredited college work.

General Education Requirements

Students must complete the 36-hour general education core and two (2) hours of physical education classes. Students pursuing the BS will also complete additional lower-level courses in Mathematics and Natural Sciences, as well as meeting the Daily Bible requirement.

Quality of Work

Students must pass all required courses with a grade of "C" or better, and a minimum cumulative GPA of 2.50 is required for graduation.

Residency Requirement

Students must complete a minimum of 32 semester hours of upper-level work at Florida College.

Graduation Ceremony

Candidates must participate in graduation exercises in the year of completing their other requirements. Any exception must be cleared through the Provost.

Requirements for the Major in Mechanical Engineering

The Mechanical Engineering major will complete 10 hours of lower division core requirements and 42 hours of upper division requirements including 6 hours of Engineering Design Capstone courses.

Requirements for Admittance

Students must submit an application for admittance into the Mechanical Engineering program and provide transcripts with proof of cumulative GPA of 3.0 or higher on all college work and grades of "C" or higher for the following prerequisite courses:

- CHM 1045C Chemistry I with Lab
- EML 3011 Mechanics of Solids

- MAC 2311 Calculus I
- MAC 2312 Calculus II
- MAC 2313 Calculus III
- PHY 2048C General Physics I with Lab
- PHY 2049C General Physics II with Lab
- SPC 1608 Public Speaking

Core Requirements (52 hours)

- EGN 1001C Introduction to the Engineering Profession with Lab (1)
- EGS 3311 Statics (3)
- EGS 3343 Thermodynamics (3)
- EGS 3321 Dynamics (3)
- EGN 3365 Materials (3)
- EGN 3373 Introduction to Electronics and Programming (3)
- EGN 3940 Internship (3) equivalent to 200 clock hours
- EML 3011 Mechanics of Solids (3)
- EML 3022 Computer-Aided Design (3)
- EML 3041 Computational Methods (3)
- EML 3262 Kinematics & Dynamics of Machinery (3)
- EML 3701 Fluids (3)
- EML 4140 Heat Transfer (3)
- EML 4325 Manufacturing (3)
- EML 4500 Machine Design (3)
- EML 4906L Mechanical Laboratory (3)
- EML 4950 Capstone Design I: Engineering Ethics (3)
- EML 4951C Capstone Design II: Design Implementation (3)

RECOMMENDED PLAN FOR BS DEGREE IN MECHANICAL ENGINEERING (126 HOURS shown)

Fall – Year One	Hours	Spring – Year One	Hours
CHM 1045C – General Chemistry I	4	ENC 1101 – Freshman Comp I	3
MAC 2311 – Calculus I	4	MAC 2312 – Calculus II	4
PE Activity	1	SPC 1608 – Public Speaking	3
STA 2023 – Elementary Statistics	3	REL 1240 – Hist. & Geog.: NT	2
REL 1210 – Hist. & Geog.: OT	2	TR Daily Bible	1
TR Daily Bible	1	EGN 1001C – Intro to Engineering	1
Total	**15**	**Total**	**14**
Fall – Year Two	**Hours**	**Spring – Year Two**	**Hours**
ENC 1102 – Freshman Comp II	3	LIT 2371 – OT Poetry & Wisdom	3
PHY 2048C – Physics w/Calculus I	4	MAC 2313 – Calculus III	4
MWF Daily Bible	2	PHY 2049C Physics w/Calculus II	4
TR Daily Bible	1	TR Daily Bible	1
EGN 3365 - Materials	3	EML 3011 – Mechanics of Solids	3
EGN 3311 – Engineering Statics	3		
Total	**16**	**Total**	**15**
Fall – Year Three (even)	**Hours**	**Spring – Year Three (odd)**	**Hours**
MWF Daily Bible	1	PE Activity	1
TR Daily Bible	1	MWF Daily Bible	1
EGN 3321 - Dynamics	3	TR Daily Bible	1
EGN 3343 - Thermodynamics	3	EGN 3262 – Kin and Dyn of Mach	3
EML 3022 – Computer-Aided Design	3	EGN 3373 – Intro to Elect and Prog	3
EML 4325 - Manufacturing	3	EML 4500 – Machine Design	3
MAP 2302 – Differential Equations	3	EML 4906L – Mechanical Lal	3
Total	**17**	**Total**	**15**
Summer – Year Three			
EGN 3940 – Mechanical Engineering Internship			3
Total			**3**
Fall – Year Four (odd)	**Hours**	**Spring – Year Four (even)**	**Hours**
Behavioral or Social Science	3	Behavioral or Social Science	3
Behavioral or Social Science	3	Humanities	3
MWF Daily Bible	1	MWF Daily Bible	1
TR Daily Bible	1	TR Daily Bible	1
EML 3041 – Computational Methods	3	EML 3701 – Fluid Mechanics	3
EML 4950 – Capstone Design I	3	EML 4140 – Heat Transfer	3
Total	**14**	EML 4951C Capstone Design II	3
		Total	**17**