

Engineering Department

Faculty

Department Chair: Dr. McCleary

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

Mechanical Engineering (BSME)

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 128 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 BSME 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 (55 hours)

EGN 1001C	Introduction to the Engineering Profession (1)
EGN 3311	Statics (3)
EGN 3321	Dynamics (3)
EGN 3343	Thermodynamics (3)
EGN 3365	Materials (3)
EGN 3373	Introduction to Electronics and Programming (3)
EGN 3940	Mechanical Engineering Internship (3) equivalent to 200 clock hours
EML 3011	Mechanics of Solids (3)
EML 3022	Computer-Aided Design (3)
EML 3262	Kinematics & Dynamics of Machinery (3)
EML 3701	Fluid Mechanics (3)
EML 4140	Heat Transfer (3)
EML 4312	Mechanical Controls (3)
EML 4321	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)
EML 4XXX	Advanced Manufacturing (3)

RECOMMENDED PLAN FOR BSME DEGREE IN MECHANICAL ENGINEERING (129 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 – 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	EML 3262 – Kin and Dyn of Machinery	3
EML 3022 – Computer-Aided Design	3	EGN 3373 – Intro to Elect and Prog	3
EML 4321 – Manufacturing	3	EML 4500 – Machine Design	3
MAP 2302 – Differential Equations	3	EML 4906L – Mechanical Laboratory	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 3701 – Fluid Mechanics	3	EML 4XXX – Advanced Manufacturing	3
EML 4312 – Mechanical Controls	3	EML 4140 – Heat Transfer	3
EML 4950 – Capstone Design I	3	EML 4951C – Capstone Design II	3
Total	17	Total	17