

#### COLLEGE OF ENGINEERING, ARCHITECTURE AND TECHNOLOGY

# **MECHANICAL ENGINEERING**



## WHAT IS MECHANICAL ENGINEERING?

Mechanical engineering combines engineering physics and mathematics principles with materials science, to design, analyze, manufacture, and maintain mechanical systems. It is one of the oldest and broadest of the engineering branches.

## WHY MECHANICAL ENGINEERING AT OSU?

Students in Mechanical Engineering at OSU endure intensive academic programs and gain hands-on experience with exciting projects, preparing them for careers after graduation. Whether students are battling robots, working on cars or other capstone projects, they are able to take theories learned in the classroom and apply them to real-world situations.

## **HIGHLIGHTS**

- Undergraduate students in the Mechanical Engineering program at OSU participate in hands-on experiences with exciting projects, preparing them for careers after graduation. Students who participate in competition teams (Baja Car, Formula One Car, ChemE Car, Mercury Robotics, Speedfest), research projects or the required senior capstone project are able to use theories learned in a classroom setting and apply them to real world situations.
- Engineering design is integrated throughout the curriculum with a strong emphasis the junior and senior years.
- All mechanical engineering courses are taught by a faculty member, many with extensive research and industry experience.

## **CAREER INDUSTRIES & FOCUS AREAS**

#### **OPTIONS**

Fire Protection Systems Petroleum Pre-medical

#### **CAREER OPPORTUNITIES**

- Mechanical Engineer
- Design Engineer
- Drilling Engineer
- Plant Engineer
- Field Engineer
- Project Engineer
- Applications Engineer

- Research and Development Engineer
- Manufacturing Engineer
- Process Engineer
- Quality Engineer
- Reliability and Safety Engineer
- Structural Engineer
- Test Engineer





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## BACHELOR OF SCIENCE MECHANICAL ENGINEERING Typical Four-Year Curriculum

## FIRST YEAR

### Fall Semester

CHEM	1414	Chem for Engr
ENGL	1113	Comp I
ENGR	1111	Intro to Engr
ENGR	1332	CAD/SolidWorks
MATH	2144	Calc I
Social & Behavioral Studies (S, D, I)		

#### **Spring Semester**

ENGL	1213	Fresh Comp II
ENGR	1412	Intro Eng Computer Prgm
ENGR	2421	Data Acq Ctrl Lab
HIST	1103	American Hist
MATH	2153	Calc II
PHYS	2014	Physics I

## SECOND YEAR

### Fall Semester

ENSC	2113	Statics
ENSC	2213	Thermo
MATH	2163	Calc III
MATH	2233	Differential Eq
PHYS	2114	Physics II

#### **Spring Semester**

ENSC	2123	Dynamics
ENSC	2141	Strength of Materials Lab
ENSC	2143	Strength of Materials
ENSC	2613	Circuits
ENSC	3231	Fluids and Hydraulics Lab
MAE	3333	Fluids

## **THIRD YEAR**

#### **Fall Semester**

ENSC	3313	Material Science
IEM	3503	Engr Econ
MAE	3013	Engr Analysis
MAE	3153	Intro ME Design
MAE	3233	Heat Trans

#### **Spring Semester**

MAE	3324	Mech Des 1
MAE	3403	Comp Meth
MAE	3524	Therm Fluid Design
MAE	3724	Sys Analysis

## **FOURTH YEAR**

#### Fall Semester

Basic Science Elective (3) MAE Cat I MAE Elect POLS 1113 Amer Govt Tech Elect

### **Spring Semester**

Humanities Elective (3) (H, D, I) Humanities Elective (3) (H, D, I) MAE CAT II MAE Elect

## **TOTAL HOURS: 121**

Accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.



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This course plan is for general guidance only. An official course plan will be provided upon enrollment.

## Contact | ceat.recruitment@okstate.edu | (405)-744-5279