# BS IN ENGINEERING SCIENCE CURRICULUM

## FRESHMAN YEAR

**FALL** - 16 credit hours

- ENGR 101 Introduction to Engineering Design (4)
- MATH 161 Calculus I (4)
- CHEM 101 General Chemistry A
- CHEM 111 General Chemistry Lab A (1)
- PHYS 111K College Physics I
- UNIV 101 First Year Seminar (1)

**SPRING** - 17 credit hours

- COMP 170 Object-Oriented Programming
- MATH 162 Calculus II (4)
- PHYS 112K College Physics II
- PHYS 112L College Physics Laboratory (1)
- UCWR 110 Writing Responsibly
- LUC Core

## SOPHOMORE YEAR

**FALL** - 14 credit hours

- ENGR 201 Experiential Engineering
- MATH 263 Multivariate Calculus
- BIOL 101 General Biology I
- BIOL 111 General Biology Lab I (1)
- LUC Core

**SPRING** - 14 credit hours

- ENGR 311 Engineering Systems I
- ENGR 321 Electronic Circuits & Devices (2)
- MATH 266 Differential Equations and Linear Algebra
- LUC Core
- LUC Core

## JUNIOR YEAR

**FALL** - 15 credit hours

- ENGR 312 Engineering Systems II
- ENGR 322 Chemical & Thermal Processes
- ENGR 323 Digital Electronics/Computer Engineering (2)
- ENGR 324 Mechanics
- ENGR 324L Core Engineering Lab (1)
- LUC Core

**SPRING** - 16 credit hours

- ENGR 313 Engineering Systems III
- ENGR 325 Materials Engineering
- ENGR 3xx Specialty Engineering I
- ENGR 3xxL Specialty Engineering I Lab (1)
- STAT 203 Statistics
- LUC Core

## SENIOR YEAR

**FALL** - 16 credit hours

- ENGR 38x Specialty Capstone Design I (4)
- ENGR 3xx Specialty Engineering II
- LUC Core
- LUC Core
- LUC Core

**SPRING** - 12 credit hours

- ENGR 39x Specialty Capstone Design II
- ENGR 3xx Specialty Engineering III
- LUC Core
- LUC Core
- LUC Core
Loyola University Chicago’s BS in Engineering Science program is constructed to emphasize system theory and engineering design—two sets of topics that prepare students to be successful in industry positions.

Essential engineering, math, and science topics are covered in 6 core engineering, 5 math, and 8 science courses. Students will also take 12 Core Curriculum courses and the UNIV 101 orientation course.

Engineering Science students take common courses until junior year, when they choose a specialization: biomedical, computer, or environmental engineering. Each specialization involves taking 3 specialty lecture courses, 1 specialty lab course, and 2 specialty capstone design courses.

**A distinctive feature of our program** is that industry experts provide input into the topics taught in each specialty course. Therefore, students are prepared for summer internships after their junior year, and full-time positions after graduation.

We are training our students for positions such as:

- **BIOMEDICAL** software product development engineer in the medical device industry
- **COMPUTER** chip design engineer in the semiconductor industry
- **ENVIRONMENTAL** environmental engineer in the wastewater treatment industry