BS Degrees in ESE

Year 1 Fall
- CSE 131 Computer Science I (3 Credits)
- Math 132 Calculus II (3 Credits)
- Phys 117A General Physics I (4 Credits)
- CSE 132 or 247 CS Course (3 Credits)

Year 1 Spring
- ESE 260 Intro to Digital Logic (3 Credits)
- Math 233 Calculus III (3 Credits)
- Phys 118A General Physics II (4 Credits)

Year 2 Fall
- ESE 205 Intro to Engineering Design (3 Credits)
- Math 217 Differential Equations (3 Credits)
- Chem 111A General Chemistry I (3 Credits)

Year 2 Spring
- ESE 230 Intro to Electronic Circuits (4 Credits)
- ESE 232 Intro to Electronic Circuits (3 Credits)
- ESE 231 Intro to Electrical Engineering (3 Credits)

Years 3-4
- ESE 319 Engineering Mathematics "B" (3 Credits)
- ESE 318 Engineering Mathematics "A" (3 Credits)
- ESE 351 Signals and Systems (3 Credits)
- ESE 441 Control Systems (3 Credits)
- Elective EE (3 Credits)
- Elective EE (3 Credits)
- Elective EE (3 Credits)
- Elective EE (3 Credits)

Elective Areas
- Devices and Circuits
- Optics and Photonics
- Quantum Engineering
- Imaging and Signal Processing
- Control, CPS and IoT
- Dynamics and Data
- Optimization and Theory of Learning

ESE Core Years 1-2
- ESE 105 Intro to Electrical and Systems Engineering (3 Credits)
- ESE 205 Intro to Engineering Design (3 Credits)
- ESE 230 Intro to Electronic Circuits (4 Credits)
- Math 217 Differential Equations (3 Credits)
- ESE 232 Intro to Electronic Circuits (3 Credits)

Elective Requirements
- ESE Core Years 1-2
- ESE 105 Intro to Electrical and Systems Engineering (3 Credits)
- ESE 205 Intro to Engineering Design (3 Credits)
- ESE 230 Intro to Electronic Circuits (4 Credits)
- Math 217 Differential Equations (3 Credits)
- ESE 232 Intro to Electronic Circuits (3 Credits)

Elective EE and SSE
- ESE Core Years 1-2
- ESE 105 Intro to Electrical and Systems Engineering (3 Credits)
- ESE 205 Intro to Engineering Design (3 Credits)
- ESE 230 Intro to Electronic Circuits (4 Credits)
- Math 217 Differential Equations (3 Credits)
- ESE 232 Intro to Electronic Circuits (3 Credits)

Elective EE
- ESE Core Years 1-2
- ESE 105 Intro to Electrical and Systems Engineering (3 Credits)
- ESE 205 Intro to Engineering Design (3 Credits)
- ESE 230 Intro to Electronic Circuits (4 Credits)
- Math 217 Differential Equations (3 Credits)
- ESE 232 Intro to Electronic Circuits (3 Credits)

Elective SSE
- ESE Core Years 1-2
- ESE 105 Intro to Electrical and Systems Engineering (3 Credits)
- ESE 205 Intro to Engineering Design (3 Credits)
- ESE 230 Intro to Electronic Circuits (4 Credits)
- Math 217 Differential Equations (3 Credits)
- ESE 232 Intro to Electronic Circuits (3 Credits)

Elective Social Science or Humanities
- ESE Core Years 1-2
- ESE 105 Intro to Electrical and Systems Engineering (3 Credits)
- ESE 205 Intro to Engineering Design (3 Credits)
- ESE 230 Intro to Electronic Circuits (4 Credits)
- Math 217 Differential Equations (3 Credits)
- ESE 232 Intro to Electronic Circuits (3 Credits)

Engr 310 Technical Writing (3 Credits)
- ESE Core Years 1-2
- ESE 105 Intro to Electrical and Systems Engineering (3 Credits)
- ESE 205 Intro to Engineering Design (3 Credits)
- ESE 230 Intro to Electronic Circuits (4 Credits)
- Math 217 Differential Equations (3 Credits)
- ESE 232 Intro to Electronic Circuits (3 Credits)

Engr 4501 Engineering Ethics and Sustainability (1 Credit)
- ESE Core Years 1-2
- ESE 105 Intro to Electrical and Systems Engineering (3 Credits)
- ESE 205 Intro to Engineering Design (3 Credits)
- ESE 230 Intro to Electronic Circuits (4 Credits)
- Math 217 Differential Equations (3 Credits)
- ESE 232 Intro to Electronic Circuits (3 Credits)

120 Units Total
- ESE Core Years 1-2
- ESE 105 Intro to Electrical and Systems Engineering (3 Credits)
- ESE 205 Intro to Engineering Design (3 Credits)
- ESE 230 Intro to Electronic Circuits (4 Credits)
- Math 217 Differential Equations (3 Credits)
- ESE 232 Intro to Electronic Circuits (3 Credits)