

BSE: Mechatronics Engineering Concentration Model Program (Starting Fall 2023 or Later)

First Year

Fall (16)	<ul style="list-style-type: none"> • 4 Chemistry 101 + 101L General Chemistry I (F,S) • 4 Engineering 101 + 101L Intro to Engineering Design (F) • 4 Mathematics 171 Calculus I (F,S) • 2 Core Foundations CORE 100: Community and Commitment • 2 Interdisciplinary 102 Oral Rhetoric for Engineers (or CS 104) 	t ENGR
Spring (17)	<ul style="list-style-type: none"> • 4 Engineering 205 Principles of Materials Science (S) • 4 Mathematics 172 Calculus II (F,S) • 4 Physics 133 + 133L Introductory Physics: Mechanics and Gravity (S) • 4 Core Comp and Skills Foundational Writing (ENGL 101) • 1 Core Comp and Skills Health and Movement (Personal Fitness) 	

Second Year

Fall (16)	<ul style="list-style-type: none"> • 4 Engineering 20X t • 4 Mathematics 271 Multivariable Calculus (F,S) • 4 Physics 235 + 235L Introductory Physics: Electricity and Magnetism (F) • 2 Comp Sci 104 + 104L Applied Computing (F) (CS 106 or 108 may be substituted but each is 4 SH) • 2 Core Knowledge and Understanding (see Core Options sheet) - tagged • 0 Engineering 295 Internship Workshop (F,S) • 2 Interdisciplinary 184 Sustainability Challenge (ES Tag, required for students seeking the Sustainability Designation)
Spring (18)	<ul style="list-style-type: none"> • 4 Engineering 20X t • 4 Engineering 20X t • 4 Mathematics 231 Differential Equations with Linear Algebra (I) • 2 Statistics 241 Engineering Statistics (S) • 4 Core Foundations Foundations of Christianity I • 0 Engineering 294 Engineering Seminar (does not require registration in advance)

Third Year

Fall (16)	<ul style="list-style-type: none"> • 4 Engineering 305 Mechanics of Materials (F) • 4 Engineering 307 Electrical Signals and Systems (F) • 4 Engineering 311 + 311L Electronic Devices and Circuits (F) • 2 Core Foundations Foundations of Christianity II • 2 Economics (2 SH min) ECON 191 (2) or ECON 233 (4, ES tag) - ECON 221, 222, or 232 can be added or substituted
Spring (17)	<ul style="list-style-type: none"> • 4 Engineering 304 + 304L Fundamentals of Digital Systems (S) • 4 Engineering 322 Machine Design with Finite Element Analysis (S) • 4 Engineering 334 + 334L Dynamics of Machinery and Instrumentation (S) • 4 Core Knowledge and Understanding (see Core Options sheet) - tagged • 1 Core Comp and Skills Health and Movement (Leisure, Sport, and Skills)

Internship Experience (ENGR 385 Optional)

Fourth Year

Fall (16)	
Spring (16)	<ul style="list-style-type: none"> • 2 Engineering 350 Special Topics in Engineering - Mechatronics • 4 Elective Basic Science, Advanced Math, Engineering or Technical • 2 Core Knowledge and Understanding (see Core Options sheet - 26 SH of total K&U minimum) • 0 Engineering 394 Engineering Seminar (does not require registration in advance)

Other Requirements

- 0-8 Core Comp and Skills: World Languages I (3 years in HS with B or better)
- 0-3 Engaged Citizenship Commitment Tag: Diversity and Difference
- 0-3 Engaged Citizenship Commitment Tag: Environmental Sustainability
- 0-3 Engaged Citizenship Commitment Tag: Global Regions and Cultures

Revised Mar 2024