

Pathway - Mechatronics and Robotics Engineering

Rend Lake College

Associate Engineering Science Degree

Fall Year 1

RLC Course	Hours
ENGL 1101 Rhetoric and Composition I	3
CHE 1103 Inorganic Chemistry	5
MATH 1121 Calculus and Analytic Geometry I	5
Fine Arts ART 1101, MUSI 1100 or THEA 1106	3
ORIE 1101 Orientation	1.5
Total	17.5

Spring Year 1

RLC Course	Hours
ENGL 1102 Rhetoric and Composition II	3
PHY 1103 University Physics I	5
MATH 2122 Calculus and Analytic Geometry II	5
Total	13

Fall Year 2

RLC Course	Hours
CSCI 1103 Introduction to Programming	3
PHY 1104 University Physics II	5
MATH 2123 Calculus and Analytic Geometry III	4
PHY 2101 Statics	3
ECON 2101 Principles of Economics I	3
Total	18

Spring Year 2

RLC Course	Hours
Social Science HIST 2101, HIST 2012 or SOCI 1101	3
PHY 2121 Electrical Engineering Circuits	4
PHY 2102 Dynamics	3
MATH 2130 Differential Equations	3
COMM 1101 Principles of Effective Speaking	3
Total	16

Associate in Engineering Total 64.5

Southern Illinois University Edwardsville

Bachelor Degree

Summer Year 3

SIUE Course	Hours
ECE 211 Circuit Analysis II	3
CE 242 Mechanics of Solids	3
Total	6

Fall Year 3

SIUE Course	Hours
ECE 282 Digital System Design	4
ME 356 Dynamic Systems Modeling	3
ME 354 Numerical Simulation	1
MRE 380 Design of Machine Elements	3
IE 106 Engineering Problem Solving	3
MATH 321 Linear Algebra	3
Total	17

Spring Year 3

SIUE Course	Hours
MRE 358 Introduction to Mechatronics	3
MRE 320 Sensors and Actuators	3
ME 450 Automatic Control	3
ECE 381 Microcontroller	3
PHIL 323 Engr. Ethics & Professionalism	3
Total	15

Fall Year 4

SIUE Course	Hours
MRE 454 Robotics, Dynamics & Control	3
MRE 480 Design in Mechatronics & Robotics I	2
XXX Technical Elective I	3
IE 345 Engineering Economic Analysis	3
EH ¹ Health Experience	2
IS/EGC Interdisciplinary Course	3
Total	16

Spring Year 4

SIUE Course	Hours
MRE 477 Computer-Integ Manufacturing Sys	3
Technical Elective II	3
MRE 481 Design in Mechatronics & Robotics II	2
STAT 380 Statistics for Application	3
BLS Breadth Life Science	3
Total	14

Bachelor of Science Total 132.5

** Students must complete 50% or more of SIUE degree requirements at SIUE (120 hours required for graduation).

¹Non-credit experiences available. See advisor.