

Pathway - Mechatronics and Robotics Engineering

Southwestern Illinois College Associate in Engineering Science Degree Fall Year 1

SWIC Course		Hours
ENG 101	Rhetoric and Composition I	3
CHEM 105	General Chemistry I	5
ENGR 103 ¹	Engineering Graphics	4
MATH 203	Analytical Geom & Calc I	5
Total		17

Spring Year 1

SWIC Course		Hours
SOC 230 ²	Race and Ethnicity in U.S. (ERGU)	3
MATH 204	Analytical Geom & Calc II	5
PHYS 204	Physics- Mechanics	4
COMM 155	Interpersonal Communications	3
ENG 102	Rhetoric and Composition II	3
Total		18

Summer Year 1

SWIC Course		Hours
MATH 210 ³	Computer Prog. For Engineers	3
Total		3

Fall Year 2

SWIC Course		Hours
PHYS 205	Physics-Heat/EL/Mag	4
MATH 205	Analytical Geom & Calc III	4
ENGR 263	Analytical Mech-Statics	3
HES 151 ⁴	Personal Health & Wellness	2
IAI Fine Arts	ART 103 or MUS 110	3
Total		16

Spring Year 2

SWIC Course		Hours
MATH 290	Differential Equations	3
BIOL 100/101	General Biology/Prin. Of Biol I	4
ENGR 271	Electrical Circuits	3
ENGR 264	Analytical Mech-Dynamics	3
ECON 201	Prin. Of Economics I (Macro)	3
Total		16

Associate in Engineering Science Total **70**

¹Students should follow AES specialty curriculum at SWIC.

ENGR 103 is within the AES at SWIC but not the BS at SIUE.

²SOC 230 satisfies both the human relations and ERGU requirements. Spring only.

³Students can substitute MATH 171 for 210.

⁴Students may also take HES 152 or HES 130 and 131.

*Students must complete 50% or more of degree requirements at SIUE.

Southern Illinois University Edwardsville Bachelor of Science Degree Summer Year 2

SIUE Course		Hours
² CE 242	Mechanics of Solids	3
² ECE 211	Circuit Analysis II	3
Total		6

Fall Year 3

SIUE Course		Hours
ECE 282	Digital Systems Design	3
ME 356	Dynamic Systems Modeling	3
ME 354	Numerical Simulation	3
MRE 380	Design of Machine Elements	3
MATH 321	Linear Algebra	3
ERGU	EXP- US Race Gender and Equity	3
Total		18

Spring Year 3

SIUE Course		Hours
MRE 358	Introduction to Mechatronics	3
MRE 320	Sensors and Actuators	3
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 & Controls	3
MRE 480	Design in Mechatronic & Robotics I	3
MRE XXX	MRE Elective I	3
IE 345	Engineering Economic Analysis	3
IS/EREG	IS/EREG	3
Total		15

Spring Year 4

SIUE Course		Hours
MREXXX	MRE Elective II	3
MRE 477	Comp. Integ. Manufac. Systems	3
MRE 481	Design in Mechatronic & Robotics II	2
EH	Health Experience	1
STAT 380	Statistics for Applications	3
Total		12

Bachelor of Science Total **129**

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NOTE: Students must apply for admission to upper-division classes before starting the junior year at SIUE. The form for 'APPLICATION FOR ADMISSION TO UPPER-DIVISION' must be submitted by the deadline to the academic advisor in the School of Engineering at SIUE.

Students must earn 60 hours from a senior institution for graduation requirements. If students take all SIUE junior and senior level courses, stated above, at SIUE, they will meet this requirement. Please note: deviating from the planned schedule above may jeopardize this requirement.

*A course that satisfies both the ERGU and EREG requirement will only be counted as one and not both.

School of Engineering Transfer Credit Advisory Note: *The University may accept transfer "D" grades; however, in the School of Engineering, a grade of C or better is required in all chemistry, computer science, mathematics, physics, and engineering courses applied to major or minor requirements. A course that transfers in as 1xx, 2xx, 3xx or TRF 1xx; TRF 2xx; TRF 3xx may require a course description and/or syllabus for further evaluation.*