School of Engineering and Technology
BS Degree in Mechatronics
(For Students Entering the Program in the 2023-2024 Academic Year)

Freshman Year – Fall Semester

EGNR-101	Introduction to Engineering (1,2)	2
EGME-141	Solid Modeling (2,2)	3
MATH-111	College Algebra (3,0)[1]	3
ENGL-110	First-Year Composition I (3,0)	3
	Humanities Elective	3
	Free Elective	1
		15

Freshman Year – Spring Semester

EGRS-105	Robotics Applications and Trends (1,0)	1
EGEE-125	Digital Fundamentals (3,2)	4
MATH-131	College Trigonometry (3,0)[1]	3
ENGL-111	First-Year Composition II (3,0)	3
CHEM-108	Applied Chemistry (3,0)	3
CHEM-109	Applied Chemistry Lab (0,3)	1
		15

Sophomore Year – Fall Semester

EGET-270	Applied Electricity (3,2)[2]	4
EGNR-140	Lin. Algebra and Numerical Methods for Eng. (1,3)	2
PHYS-221	Principles of Physics I (3,2)	4
MATH-112	Calculus for Business and Life Sciences (4,0)[1]	4
EGRS-215	Introduction to Robotics (1,2)	2
		16

Sophomore Year – Spring Semester

EGET-275	Applied Electronics (3,3)[2]	4
EGNR-265	C Programming (3,0)[1]	3
EGME-110	Manufacturing Processes (2,3)	3
	Social Science Elective	3
MATH-207	Principles of Statistical Methods (3,0)	3
		16

Junior Year – Fall Semester

EGRS-235	Industry 4.0 (3,3)[2]	4
EGRS-380	Robotics Technology (2,0)	2
EGRS-381	Robotics technology Lab (0,3)	1
EGMT-225	Statics and Strength of Materials (4,0)[2]	4
	Technical Elective	4
		15

Junior Year – Spring Semester

EGRS-375	Cyber Physical Systems and Security (3,0)[2]	3
EGRS-365	Programmable Logic Controllers (2,3)	3
CSCI-265	Intro to Artificial Intelligence (3,0)[2]	3
EGNR-245	Calculus Applications for Technology (2,2)	3
	Humanities Elective	3
		15

Senior Year – Fall Semester

EGRS-480	Manufacturing Automation (3,0)	3
EGRS-481	Manufacturing Automation Lab (0,3)	1
EGNR-491	Engineering Design Project I (2,3)	3
	Technical Elective	3
	System Integration Elective	3
	Free Elective	3
		16

Senior Year – Spring Semester

EGNR-495	Engineering Design Project II (1,6)	3
EGRS-325	Industrial Control Systems (2,3)[2]	3
ECON-302	Managerial Economics (4,0)[2]	4
	Cultural Diversity Elective	3
	Communications Elective	3
		16

Total Credits: 124

Technical Electives* (7 credits minimum required)

CSCI105, CSSI221 or higher; EGEE250, EGEE300 or higher, EGME240 or higher, EGMT216 or higher, EGNR261 or higher, EGRS300 or higher, EGNR496, or approval of faculty advisor

System Integration Electives (3 credits minimum required)**

EGEE355 (Microcontroller Systems), EGRS372 (Mobile Robotics), EGRS430 (Systems Integration & Machine Vision), or approval of faculty advisor

[1] Grade of C or better required in these courses to continue
[2] These courses may be offered only every other year