



GADOMSKI SCHOOL OF ENGINEERING

B.S. IN ENGINEERING TECHNOLOGY

Robotics & Mechatronics Curricula

This **sample paradigm** shows a normal 4-year progression towards a degree in engineering technology with a robotics & mechatronics emphasis. Some of the courses should be taken in this order due to prerequisite structures; others may be switched.

FRESHMAN YEAR

Semester I		Credits	Semester II		Credits
CBU 101	Orientation	0	CS 112 & 112L	Computers in Problem Solving & Lab	4
ENG 121/L or 122/L or 123	Writing & Critical Literacy	4 (3)	ENG 130	Writing & Critical Research	3
MATH 107	Functions	2	ET 210	Instrumentation for Technologists	3
MATH 110	Trigonometry	2	ME 201	Manufacturing Processes	3
ME 121	Solids Modeling	3	—	General Education	3
ET 100	Introduction to Engineering Technology	3			
Total		14(13)	Total		16

SOPHOMORE YEAR

Semester I		Credits	Semester II		Credits
MATH 106	Applied Math/Introduction to Calculus	3	MATH 201	Applied Statistics	3
ET 220	Introduction to Robotics & Mechatronics	3	ET 230	Applied Statics and Dynamics	3
PHYS 201 & 201L	Introductory Physics I & Lab	4	PHYS 202 & 202L	Introductory Physics II & Lab	4
—	General Education (2 courses)	6	CHEM 115 & 115L	General Chemistry	4
			—	General Education	3
Total		16	Total		17

JUNIOR YEAR

Semester I		Credits	Semester II		Credits
ET 310	Applied Mechanics	3	ENG 375	Scientific & Technical Writing	3
ET 320 & 320L	Applied Digital Circuits & Lab	4	ET 340	Quality Control	3
ET 362	Hydraulics & Pneumatics	3	ET 350	Applied Electronics	3
ET 372	Mechatronics I	3	ET 382	Mechatronics II	3
CHE 328	Materials Science	3	ET 410	Automatic Control	3
			ET 452	Programmable Logic Controllers	3
Total		16	Total		18

SENIOR YEAR

Semester I		Credits	Semester II		Credits
ET 330	Applied Thermodynamics & Heat Transfer	3	ET 392	Industrial Robotics	3
ET 422	Robotics Sensors	3	ET 400	Capstone Project	3
ET 432	Robotics Manipulators	3	ET 462	Artificial Intelligence	3
ET 442	Mechanisms for Automation	3	ET 472	Machine Vision & Image Processing	3
—	General Education	3	—	General Education	3
Total		15	Total		15

Total credits required for bachelor's degree completion: 124(123)