

Mechatronics Engineering B.S. 4-Year Pathway 2024-2025

Fall Freshman Courses (15)		Course or GE Title	Units	GE/Major
MATH 150 (prereq MATH 130 or placement)		Calculus I	4	B4
CHEM 110 + 110L (pre or coreq MATH 130 or 150)		Chemistry I & Chemistry I Lab	4+1	B1,B3
FYS 110		Introduction to Engineering	3	FYS,E
GE A1		Fund of Speaking & Listening	3	A1
Spring Freshman Courses (14)		Course or GE Title	Units	GE/Major
MATH 151 (prereq MATH 150)		Calculus II	4	Major
PHYS 205 (Prereq MATH 150)		Physics for Engineering I	4	Major
CST 231		Problem Solving/Programming	4	Major
ENGR 150 (prereq or coreq MATH 150 & prereq FYS/ENGR 110)		Engineering Graphics	2	Major
Fall Sophomore courses (18)		Course or GE Title	Units	GE/major
MATH 265 (Prereq MATH 151)		Differential Eqs & Linear Algebra	4	Major
PHYS 210 (prereq = PHYS 205)		Physics for Engineering II	4	Major
ENGR 130 (prereq MATH 151 & PHYS 205)		Statics	3	Major
GE A2		Critical Reading and Writing	3	A2
CST 238 (prereq CST 231)		Introduction to Data Structures	4	Major
Spring Sophomore Courses (15)		Course or GE Title	Units	GE/Major
MATH 250 Prereq MATH 151)		Multivariate Calculus	4	Major
ENGR 140 + ENGR 140L prereq MATH 151 & PHYS 205 & CHEM 110 & 110L)		Materials Science & Engineering	3+1	Major
ENGR 260 + 260L (prereq MATH 151 & PHYS 210)		Circuit Analysis	3+1	Major
ENGR 240 (prereq ENGR 130)		Strength of Materials	3	Major
Fall Junior Courses (15)		Course or GE Title	Units	GE/Major
ENGR 330 (prereq = ENGR 130)		Dynamics	3	Major
ENGR 340 (prereq = ENGR 260&260L)		Signals	3	Major
ENGR 370 (prereq = ENGR 260&260L)		Digital Logic Design	3	Major
GE C1		Lower-division Arts GE course	3	C1
GE B2		Lower-division GE course	3	B2
Spring Junior Courses (16)		Course or GE Title	Units	GE/Major
ENGR 301 (GE areas A1, A2, A3, B4)		Technical Writing in Engineering	3	GWAR
ENGR 310 (prereq ENGR 370/ preq/coreq ENGR 330)		Mechatronics	4	Major
HCOM 251 or 265 or SBS 111 or CST 274		US History w/ Social Science	3	DGSS/US1
ENGR 375 (prereq (ENGR 330 and 260/L or ENGR 340) and MATH 265 and CST 231)		Feedback Control Systems	3	Major
US & CA government (US2,3		CSUMB DCSL	3	DCSL, US2,3
Fall Senior Courses (15)		Course or GE Title	Units	GE/Major
ENGR 380 (prereq ENGR 370)		Embedded Systems	3	Major
ENGR 480 (preq ENGR 310 & pre/coreq ENGR 320)		Mechatronics Design I	3	Major
ENGR 350 or 360 or 397		Engineering Elective	3	Major
ENGR 320 (prereq ENG 240 and GE A1,A2,A3, B4)		Machine Design	3	UDB
Any SL & UDD (CST 462S)		UD Social Science GE, UD SL	3	UDD/SL
Spring Senior Courses (16)		Course or GE Title	Units	GE/Major
ENGR 481 (prereq ENGR 480)		Mechatronics Design II	3	
ENGR 394 (prereq ENGR 301 and 310)		Engineering Internship	1	
UD C with World Culture & languages		UD C GE	3	UDC (lang)
GE F		Ethnic Studies course	3	F
GE area C1 or C2		GE area C1 or C2 for	3	C1 or C2
Language other than English (GE C2)		Language & Culture, GE area C2	3	C2, Lang
Total Mechatronics 4-yr p			123	