Mechatronics Engineering B.S. 4-Year Pathway 2025-2026

Mechatronics Engineering students are exempt from taking GE Area 1B: Critical Thinking

Fall Freshman Courses (15)	Course or GE Title	Units	GE/Major
MATH 150 (prereq MATH 130 or placement)	Calculus I	4	GE area 2
CHEM 110 + 110L (pre or coreq MATH 130 or 150)	Chemistry I & Chemistry I Lab	4+1	5A, 5C
ENGR 110	Introduction to Engineering	3	Major
FYS with any GE area * (FYS 191 recommended)	FYS Comparative Ethnic Experiences	3	FYS+GE 6
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 with lab	4	Major
ENGR 150	Engineering Graphics	2	Major
ENGR 115	Introduction to Machining	1	Major
HCOM 125: Written communication GE area 1A	Written communication GE	3	1A
Fall Sophomore courses (16)	**Course or GE Title**	**Units**	**GE/major**
MATH 265 (Prereq MATH 151)	Differential Eqs & Linear Algebra	5	Major
PHYS 210 (prereq = PHYS 205)	Physics for Engineering II with lab	4	Major
ENGR 130 (prereq MATH 151 & PHYS 205)	Statics	3	Major
CST 231	Problem Solving/Programming	4	Major
Spring Sophomore Courses (18)	**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 240 (prereq ENGR 130)	Strength of Materials	3	Major
ENGR 260 + 260L (prreq MATH 151 & PHYS 210)	Circuit Analysis	3+1	Major
GE 1C such as HCOM 110	Oral Communication GE	3	1C
Fall Junior Courses (16)	**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
CST 238 (prereq CST 231)	Introduction to Data Structures	4	Major
GE 5B life science such as BIO 204	Lower-division Life Sciences course	3	GE 5B
Spring Junior Courses (13)	**Course or GE Title**	**Units**	**GE/Major**
ENGR 301 (GE areas 1A, 1B, 1C and 2)	Technical Writing in Engineering	3	GWAR
ENGR 310 (prereq ENGR 370/ preq/coreq ENGR 330)	Mechatronics	4	Major
ENGR 375 (prereq (ENGR 330 and 260/L and ENGR 340 and MATH 265 and CST 231)	Feedback Control Systems	3	Major
CSU US & CA government (US2,3)	CSUMB DCSL requirement	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 Elective	Engineering Elective	3	Major
ENGR 320 (prereq ENGR 240 and 1A, 1B, 1C, and 2)	Machine Design	3	UDGE 2or5
Any SL & UDD (CST 462S or BUS 300S)	UD Social Science GE, UDSL	3	UDD/SL
Spring Senior Courses (16)	**Course or GE Title**	**Units**	**GE/Major**
ENGR 481 (prereq ENGR 480)	Mechatronics Design II	3	Major
ENGR 394 (prereq ENGR 301 and 310)	Engineering Internship	1	major
Upper-Division arts or humanities GE	UD GE area 3 (arts or humanities	3	UD GE 3
GE 3A Arts	Lower-division Arts GE course	3	GE 3A
HCOM 251 or 265 or SBS 111 or CST 274	US History w/ Social Science	3	US1+GE 4
Language other than English (GE area 3B)	Language & Culture, GE area 3B	3	3B, Lang
MENG has exemption for GE area 1B	**Total Mechatronics 4-yr p**	**123**	