

Bachelor of Science in Mechanical Engineering and Physics

Name _____

I.D. No. _____

Curriculum Sheet (Effective Fall 2024)

First Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
ENG 100 or 101 English I	3		W/C	ESC 102 Tech. Writing or ENG 102 English II	3	X	W/C
MTH 181 Calculus I	4	X	M/QL	MTH 182 Calculus II	4	X	M/QL
MCE 180 Computer Aided Eng 1	2	X		PHY 243/243H University Physics I	5	X	NS/WAC
ESC 120 Introduction to Engineering Design	2	X		MCE 181 Computer Aided Eng 2	2	X	
ESC 100 Orientation*	1	X	INTRO	Social Diversity Elective**	3		DIV
ESC 152 Programming with Matlab	3	X					
Semester Total	15			Semester Total	17		

Second Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
MTH 281 Multivariable Calculus or MTH 283	2-4	X		MCE 276 Eng Mat&Maf + MCE 286 Mn Pro Lab	4	X	
PHY 244/244H University Physics II	5	X	NS/WAC	ESC 301 Fluid Mechanics	3	X	
ESC 250 Diff Equations	3	X		ESC 202 Dynamics	3	X	
ESC 201 Statics	3	X		PHY 325 Introduction to Theoretical Physics	3	X	
General Elective	0-2			Social Science Elective**	3		SS
Semester Total	15			Semester Total	16		

Third Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
ESC 211 Strength of Materials	3	X		PHY 341 Mechanics and Vibrations II	3	X	
PHY 340 Mechanics and Vibrations I	3	X		PHY Elective 3XX-4XX	3	X	
MCE 362 Machine Analysis	3	X		STA 323 Statistical Methods or ESC310	3	X	
PHY 330 Introduction to Modern Physics	3	X		MCE 365 Machine Design I	3	X	
PHY 474 or ESC 321 Eng. Thermodyna.	3	X		Social Science Elective**	3		SS
Semester Total	15			Semester Total	15		

Fourth Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
General Elective	3			Arts and Humanities Elective**	3		AH
PHY Elective 3XX-4XX	3	X		PHY 3XX/4XX/MCE 4XX Lab Elective	3	X	
MCE 470 Engineering Measurements	3	X		Social Diversity Elective**	3		DIV
MCE 450 Design Project I or PHY 493/497 Advanced Topics/Ind. Stu	2	X	CAP/WAC	MCE 451 Design Project II or PHY 498 Project+PHY 493/497 Adv. Topics	3	X	CAP/WAC
MCE 480 Measurements Lab	1	X		PHL 215 Engineering Ethics	3	X	AH&WAC
Semester Total	12			Semester Total	15		

Degree Total hours: 120

Gen Ed Key:	SS = Social Sciences Req (2 courses, one of which must be focused outside the US**)
INTRO = Introduction to University Life Requirement (one course)	A&H = Arts & Humanities Requirement (2 courses, one must be focused outside the US**)
W/C = Writing/Composition Requirement (two courses; C or better required)	DIV = Social Diversity Req (2 courses; one US Diversity and one African American Exp.)
M/QL = Mathematics/Quantitative Literacy Requirement (two courses)	WAC/SPAC = Writing/Speaking Across the Curriculum Req (3 courses, one in the major)
NS = Natural Sciences (two courses, one of which must have a lab)	CAP = Capstone Requirement
* ESC 100 is waived for transfer students.	
** of the SS and A&H courses focused outside the US, one must be focused on Africa, Latin America, Asia or the Middle East (ALAAME)	

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