

BSET Mechanical ENGINEERING TECHNOLOGY (MET)**Catalog Year 2022-2023****Freshman Year**

MET 120	Engineering Graphics	3	MET 230	Computer Solid Modeling	3
ENGN 110	Engineering & Tech I	2	ENGT 111	Information Literacy	2
MATH 162M	Pre-Calculus I	3	MATH 163	Pre-Calculus II	3
CHEM 121N	Found. Of Chemistry I	3	PHYS 111N	General Physics I	4
CHEM 122N	Found. Of Chemistry I Lab	1	ENGL 110C	English Composition	3
_S	Human Behavior (S)	3			15
		15			

Sophomore Year

MET 200	Manufacturing Processes	3	MET 220	Strength of Materials	3
MET 210	Statics	3	MET 225	Strength of Materials Laboratory	1
MATH 211	Calculus I	4	STEM 221/231	Materials and Processes Tech.	3
PHYS 112N	General Physics II	4	_A	Fine and Performing Arts	3
ENGL 211C	English Composition	3	COMM 101R	Public Speaking	3
		17	_L	Literature	3
					16

Junior Year

MET 300	Thermodynamics	3	MET 330	Fluid Mechanics	3
MET 310	Dynamics	3	MET 335	Fluid mechanics Laboratory	1
MET 320	Design of Machine Elements	3	MET 350	Thermal Applications	3
ENGT 305	Advanced Technical Analysis	3	MET 370	Automation & Controls	3
EET 350	Fund. Of Electrical Tech.	3	MET 386	Automation & Controls Lab	1
EET 355	Electrical Laboratory	1	*	Approved Minor*	3
		16	ENMA 480	Ethical Leadership in Engr. Application	3
					17

Senior Year

MET 387	Power & Energy Laboratory	2	ENGT 435W	Senior Design Project	3
ENGT 434	Intro to Senior Design	1	**	Approved MET Elective**	3
**	Approved MET Elective**	3	**	Approved MET Elective**	3
**	Approved MET Elective**	3	*	Approved Minor*	3
ENGN 401	F.E. Review	1	*	Approved Minor*	3
*	Approved Minor*	3			15
_H	Historical Perspective(H)	3			
		16			

Total Amount of Credits to Complete BSET: 127 credits***Approved Minors: Students must select one of the following four options**

(1) A minor from the College of Engineering and Technology, (2) A minor from the College of Sciences, (3) A minor in Cybersecurity, (4) A minor in Computer Science

****Approved MET Electives:**

MET 400	Computer Numerical Control in Production	MET 445	Computer Integrated Manufacturing
MET 405	Introduction To Welding Technologies	MET 450	Energy Systems
MET 406	Additive Manufacturing	MET 455	Lean Engineering
MET 410	Advanced Manufacturing Processes	MET 460	Refrigeration and AC
MET 415	Introduction to Robotics	MET 465	Geometric Dimensioning & Tolerancing
MET 420	Design for Manufacturing	MET 471	Nuclear Systems I
MET 426	Introduction to Mechatronics	MET 472	Nuclear Systems II
MET 427	Mechatronic System Design	MET 475	Principles of Marine Eng. I1
MET 430	Mechanical Subsystem Design	MET 476	Principles of Marine Eng. II
MET 431	Modeling and Simulation of Mechatronic Systems	MET 485	Maintenance Engineering
MET 440	Heat Transfer	EET 360	Elec. Power & Machinery
		EET 405	Data Communications and Computer Networks

Program Concentrations. Concentrations are optional, if none is selected the student may take any of the Approved 400 MET electives

Mechanical Systems Design Choose from four of the following courses: MET 420, MET 430, MET 431, MET 440, MET 450, MET 460, MET 465, MET 480, MET 485, EET 360.

Marine Systems MET 475, MET 476, MET 485, and one additional 400 level MET elective

Manufacturing Systems Choose from four of the following courses: MET 400, MET 405, MET 406, MET 410, MET 415, MET 420, MET 445, MET 455, MET 465, MET 485, EET 360.

Mechatronic Systems MET 426, MET 427, MET 431, and any one additional course from the mechanical systems and/or manufacturing systems design electives, or EET 405

Nuclear Systems MET 471, MET 472, MET 450, and any one additional course from the mechanical systems and/or manufacturing systems design electives,

Students must earn a C or better in the following courses

ENGL 110C, ENGL211C, MATH 162M , MATH 163, MATH 211, PHYS 111N, MET 220, MET 300, and ENGT 435W

Important Notes:

All students must satisfy the university's foreign language requirement

Graduates of this program are eligible to take the Fundamentals of Engineering (FE) exam in Virginia and many other states.



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