

# Navajo Technical University

Name: \_\_\_\_\_

ID#: \_\_\_\_\_

## Bachelor of Science Degree – Mechanical Engineering (123 Credits)

A Bachelor's degree in Mechanical Engineering requires 123 credit hours. It is designed for a four-year program of study. The minimum credit load for a full-time student is 12 credit hours per semester. A student must complete general courses and general education electives within the first two years of study with a grade point average of 2.0 or better before taking upper level core courses (300 and 400-level). To complete the program within four years, a credit load of 15 to 18 credits per semester is recommended. This time can be reduced by attending summer sessions and/or intersessions.

Semester ONE		Credits	Prerequisites	Semester/Transfer	Grade
ENGL 1110	Composition I	3	ENGL100		
MATH 1510	Calculus I	4	MTH150		
ENGR 123	Computer Skills for Engineering	3			
ENGR 130	Engineering Graphics	3			
ENGR 101	Fundamentals of Electrical Engineering	3	MATH 1215		
SSC 100	College Success Skills	1			
Semester TWO					
ENGL 2210	Professional Technical Communication	4			
NAVA XXX	Dine Studies Course	3			
CHEM 1120C	Introduction to Chemistry	4			
ENGR 103	Introduction to Engineering	3	MATH 1215		
ENGR 230	Advanced Engineering Graphics	3	ENGR 130		
Semester THREE					
MATH 1520	Calculus II	4	MATH 1510		
ME 345	Statics	3	MATH 1230		
PHYS 1310C	Calculus-Based Physics I	4	MATH 1220, MATH 1230, or MATH 1240		
IE 213	Structure and Properties of Materials	3	PHYS 1230C, CHEM 1120C		
SSCXXX	Social and Behavioral Science	3			
Semester FOUR					
MATH 2530	Calculus III	4	MATH 1520		
IE 243	Strength of Materials	3	IE 213		
HUMN 1180	History of American Indians in Media	4			
PHYS 1320C	Calculus – Based Physics II	4	PHYS 1310C		
ENGR 169	Basic Statistics and Probability	3	MATH 1215		
Semester FIVE					
MATH 2410	Differential Equations	4	MATH 1520		
ME 356	Machine Design	4	ME 345 & IE 243		
ENGL 2310	Introduction to Creative Writing	3			
IE 223	Design and Manufacturing Processes	3			
Semester SIX					
ME 354	Thermodynamics	3	PHYS 1230C & MATH 1510		
MTH 433	Numerical Analysis with Computers	3	MATH 1520 & MATH 2410		
ME 353	Fluid Dynamics	3	PHYS 1230C, & MATH 1510		
ME 331	Kinematics of Machinery	3	MATH 1230		
ME 305	System Dynamics	3	MATH 2410		
Semester SEVEN					
ME 400	Capstone Project I	3	ME 331 & ME 356		
ME XXX	ME Elective	3			
ME 405	Heat Transfer	3	ME 354		
IE 433	Metrology and Measurements	3	IE 223		
ME 316	Mechanical Laboratory	3			
Semester EIGHT					
ME XXX	ME Elective	3			
AMT 370	Robotics	3			

ME 410	Capstone Project II	3	ME 400	
ME XXX	ME Elective	3		
<b>TOTAL REQUIRED CREDIT HOURS</b>		<b>123</b>		

**Listing of Technical Electives:**

ME 401 Introduction to Artificial Intelligence    ME 407 Finite Element Analysis  
 ME 404 Compliant Mechanisms                    ME 409 Renewable Energy Sys.  
 ME 406 Gas Dynamics & Space Propulsion    ME 415 Additive Manufacturing

	Signatures	Date
Student:		
Advisor:		
Registrar:		
Graduation Date:		

*Created 4/25/2022*