

Navajo Technical University

Name:

ID#:

Bachelor of Science Degree – Industrial Engineering (123-124 Credits)

A Bachelor's degree in Industrial Engineering requires **123-124** credit hours and is designed for a four- year program of study. Students in the baccalaureate degree programs are required to complete a minimum of 30 credit hours in the upper division courses, i.e., 300 and 400 level courses before they can graduate. The minimum credit load for a full-time student is 12 credit hours per semester.

- **General Education Requirements -22 Credits**
- **Core IE Requirements - 72 Credits**
- **Mathematics and Sciences - 26 Credits**
- **Technical Electives - 3 Credits**

Semester ONE		Credits	Prerequisites	Semester/Transfer	Grade
ENGL 1110	Composition I	3	ENGL100		
EE 101	Electrical Engineering	3			
MATH 1510	Calculus I	4	MATH1230&MATH1240		
ENGR 130	Engineering Graphics	3			
ENGR 123	Introduction to Computing Technologies	3			
SSC 100	College Success Skills	1			
Semester TWO					
CS 101	Programming I	3			
ENGR 103	Introduction to Engineering	3			
ENGR 230	Advanced Engineering Graphics	3	ENGR130		
ENGR 169	Basic Statistics and Probability	3	MATH 1220		
PHYS 1230C	Algebra Based Physics I	4	MATH 1215		
Semester THREE					
MATH 1520	Calculus II	4	MATH1510		
CHEM 1120C	Introduction to Chemistry	3			
ENGL 2210	Professional & Technical Comm.	3			
IE 223	Design & Manufacturing Processes I	3			
ENGR 236	Inferential Engineering Statistics	3			
Semester FOUR					
NAVA XXX	Dine Studies course	3-4			
IE 343	Design & Manufacturing Processes II	3	IE223		
IE 213	Structure & Properties of Materials	3	PHYS1230C, CHEM1120C		
IE 235	Lean Production	3			
CFA XXX	Creative and Fine Arts Course	3			
Semester FIVE					
IE 380	Project Management	3			
HUMN 1180	History of American Indians in Media	3			
ME 345	Statics	3	MATH1230		
MTH 410	Linear Algebra	3	MATH1520		
ENGR 313	Engineering Economics	3			
Semester SIX					
MATH 2410	Differential Equations	4	MATH1520		
HIST 1120	United States History II	3	Prerequisite: C or better in ENGL-100 or permission of the instructor		
IE 323	Human Factors in Product Design	3	ENGR236		
XXX	Technical Elective – Advisor Approval	3			
IE 363	Design of Experiment	3	ENGR236		
Semester SEVEN					
IE 413	Quality Control	3	IE363		
IE 433	Metrology & Instrumentation	3	I223		
IE 453	Engineering Optimization	3	ENGR236 & MATH1520		
IE 423	Capstone I	3	IE 223, IE 343, IE 380		
Semester EIGHT					
IE 424	Capstone II	3	IE423		
IE 463	Facility Planning & Design	3	ENGR313		

IE 473	Inventory Control & Production Plan	3	ENGR313		
IE 494	System Simulation	3	ENGR236		
Fundamentals of Engineering Examination		NC			
Summer Session					
IE 312	Summer Internship	3			
TOTAL REQUIRED CREDIT HOURS		123-124			

	Signatures	Date
Student:		
Advisor:		
Registrar:		
Graduation Date:		

Updated 7/26/2026