

Navajo Technical University

Name: _____ ID#: _____

Bachelor of Science Degree – Electrical Engineering (120 Credits) revised May 2017

Semester ONE		Credits	Prerequisites	Semester/Transfer	Grade
EE 101	Electrical Engineering Fundamentals I	3			
ENGR 103	Introduction to Engineering	3			
CS-Elective	Computer Programming Elective	3			
ENG 110	Freshman Composition	3	ENG098		
NAV 101	Introduction to Navajo Language	4			
Semester TWO					
EE 102	Electrical Engineering Fundamentals II	3	EE101/MTH162/MTH105		
EE 103	Digital Logic Design	3	EE101		
CHM120	General Chemistry I	4	MTH120		
ENG 111	Composition and Research	3	ENG105 or 110		
HUMXX	Humanities Elective	3			
Semester THREE					
EE 201	Electrical Engineering Fundamentals III	3	EE102/MTH163/MTH105		
MTH 205	Discrete Mathematics	3	EE103		
MTH162	Calculus I	4	MTH123		
XXX	Concentration Course	3			
SSCXX	Social Sci or Behavioral Science Elective	3			
Semester FOUR					
EE 202	Electrical Engineering Fundamentals IV	3	EE201/MTH310/MTH105		
EE 203	Electronics I	3	EE201/EE202		
EE 212	Instrumentation I	2			
MTH 163	Calculus II	4	MTH162		
PHY111/121	Algebra or Calculus Based Physics I	4	MTH120121/123		
Semester FIVE					
EE 301	Signals & Systems	3	EE202		
ENGR-301	Intro to Modeling & Simulation	4	EE202/PHY122/MTH105		
XXX	Concentration Course	3			
PHY112/122	Algebra or Calculus Based Physics II	4	PHY111/121/MTH162		
MTH-130	Differential Equations	4	MTH 163		
Semester SIX					
EE 303	Probability & Random Signals	3	EE301/MTH310		
EE 313	Summer Internship	3			
EE 310	Embedded System Design	3	EE103		
EE 312	Instrumentation II	2	EE203/EE212		
XXX	Concentration Course	3			
XXX	Concentration Course	3			
Semester SEVEN					
EE 422	Capstone I	3			
EE 406	Computer Networks	3	MTH205		
XXX	Concentration Course	3			
XXX	Concentration Course	3			
Semester EIGHT					
EE 423	Capstone Design II	3	IE380		
MTH 410	Linear Algebra	3			
XXX	Concentration Course	3			
XXX	Concentration Course	3			
TOTAL REQUIRED CREDIT HOURS:		120			

Listing of Concentrations: choose one concentration

General Concentration		Credits	Prerequisites	Semester/Transfer	Grade
	Technical Electives	15			
EE 313	Summer Internship	3			
Computer Engineering/Digital Systems Concentration			Prerequisites	Semester/Transfer	Grade
ITS 250	Data Structures	3			
EE 230	Introduction to VHDL and FPGA	3			
EE 330	Computer Org & Assembly Lang Program	3	EE230		
EE 430	Computer Architecture and Design	3	EE230		
EE 440	Operating Systems I	3	EE430		
EE 313	Summer Internship	3			
Electrical Power and Energy Systems Concentration					
EE 370	Electrical Machinery	3	EE302		
EE 460	Electrical Power Plants	3	EE304		
EE 470	Electric Power Devices	3	EE304		
EE 471	Power System Analysis	3	EE460		
EE 472	Power Electronics & Power Management	3	EE470		
EE 313	Summer Internship	3			
Manufacturing Concentration					
ENGR234	Engineering Statistics	3	MTH121/ENGR169		
IE 235	Lean Production	3			
ENGR313	Engineering Economics	3			
IE 363	Design of Experiment	3	ENGR234		
IE 413	Quality Control	3	IE363		
IE 483	Rapid Prototyping	3	IE223		
EE 313	Summer Internship	3			

- **Core EE Requirements - 60 Credits**
- **General Education Requirements - 32 Credits**
- **Concentration Electives – 21 Credits**

Listing of Technical Electives:

EE 223 Semiconductors I EE 230 Introduction to VHDL/ FPGA
 EE 330 Computer Organization & Assembly Language Programming
 EE 343 Introduction to VLSI Design3 EE 370 Electrical Machinery
 EE 313 Summer Internship* EE 403 Digital VLSI
 EE 407 Communication Systems EE 413 Analog VLSI
 EE 430 Computer Architecture & Design EE 460 Electrical Power Plants
 EE 470 Electric Power Devices EE 471 Power System Analysis
 EE 472 Power Electronics & Power Mgmt EE 440 Operating Systems I
 IT 315 Multicore Programming MTH 410 Linear Algebra
 MTH433 Numerical Analysis w Computers EE-x95 Topics in EE
 EE 196 Freshman Research Project EE 296 Sophomore Research
 EE 396 Junior Research Project

	Signatures	Date
Student:		
Advisor:		
Registrar:		
Graduation Date:		