Navajo Technical University

Name: _____ ID#:_____

Associate of Applied Science – Energy Systems (61-62 Credits)

The Energy Systems program teaches students the fundamentals of electricity, magnetism, photovoltaic electrical systems, and wind generation. This program emphasize techniques to harness the earth's renewable energy sources. Students study energy related applications, design, installation, and renewable energy, they learn residential and commercial wiring, programming controls and electrical motors. Students also learn to apply the National Electrical Code (NEC) for safe and reliable electrical installations. Solar street lighting, photovoltaic electrical systems, wind turbine fabrication and installation, and collection of wind resources will also be covered in addition to stand-alone, grid-tied, and net-metering systems. Students explore science, mathematics, technology, and engineering while they study the transformation of mechanical energy to electrical energy. Moreover, the design and construction of photovoltaic, wind, and solar systems will enable students to supplement existing energy needs at home, the communities, and throughout the Navajo Nation.

GENERAL EDUCATION REQUIREMENTS		**Credits**	**Prerequisites**	**Semester/Transfer**	**Grade**
English/Communication:					
ENGL1110 or ENGL 1210		3	ENGL 100 or satisfactory placement scores		
COMM 1130 or COMM 2120		3	ENGL 1210 or ENGL 1110		
Mathematics: MATH 1220 or higher		4	SEE CATALOG		
Dine Studies: NAVA 1110, NAVA 2210 or NAVA 2230		3-4			
ENVS 1110C Environmental Science I		4	SEE CATALOG		
Humanities/Social Science Course: 1.		3	SEE CATALOG		
Information Tech/Applied Computers: BCIS 1115 or ITS 120 Microsoft Office Suite		3			
SSC 100	College Success	1			
ENERGY SYSTEMS CORE REQUIREMENTS					
Semester ONE		**Credits**			
CHEM 1120C	Introduction to Chemistry	4			
ELC 101	Electrical Theory I	4	CT 103		
ERS 104	Electrical Mathematics	3	MTH 113		
Semester TWO					
ELC 102	Electrical Theory I	4	CT 103		
ERS 106	Wind Solar Theory I	3	ELC 101 & MATH 1220		
SUST 1134C	Sustainability	4			
Semester THREE					
ELC 111	Commercial Wiring	4	ELC 101 & CT 103		
ERS 102	Photovoltaic Theory and Design I	3	ERS 106 & MATH 1220		
ENGR 123	Computer Skills for Engineers	3			
Semester FOUR					
ERS 103	Photovoltaic Theory and Design II	3	ERS 102 & MATH 1220		
ERS 115	Systems Control	4	ERS 102- & ERS 106		
TOTAL REQUIRED CREDIT HOURS		**61-62**			

	Signatures	Date
Student:		
Advisor:		
Registrar:		
Graduation Date:		