PRE-ENGINEERING (AA)

This program is designed to prepare students for transfer to a four-year institution of higher learning in an engineering discipline. Students who complete this program will have a background in mathematics, science, and engineering that enables them to succeed in the 3rd and 4th year of an ABET accredited 4-year engineering program.

1. The student will apply knowledge of Chemistry, Physics, mathematics through Calculus II, and introductory engineering to the analysis of engineering problems.
2. The student will conduct experiments and analyze and interpret data.
3. The student will design a system, component, or process to meet desired needs within realistic constraints at a level typical of a beginning 3rd year undergraduate in an ABET (Accreditation Board for Engineering and Technology, Inc.) accredited engineering program.
4. The student will function on teams having a diversity of educational, occupational, and cultural backgrounds.
5. The student will identify, formulate, and solve engineering problems at a level typical of a beginning 3rd year undergraduate in an ABET accredited engineering program.

Code	Title	Hours
General Education Requirements		
ENGL 110	Composition I	3
ENGL 120	Composition II	3
COMM 110	Fundamentals of Public Speaking	3
MATH 165	Calculus I	4
PSYC 100	First Year Learning Experience	3
SOC 120	Transitions-Graduation & Beyond	2
NAS 101	Ochethi Sakowin Language for Beginners	3
or NAS 103	Introduction to Ochethi Sakowin Language, Culture & History	
CSCI 101	Introduction to Computers	3
Humanities or Social & Behavioral Science		
Select two courses from:		6
Arts, English, History, Humanities, Music, Native American Studies, Philosophy, Anthropology, Criminal Justice, Economics, Geography, Human Services, Political Science, Psychology, and Sociology		
Health/Physical Education		
Select two one-hour courses or any one two-hour course		2
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
or PHYS 251	University Physics I	
Core Requirements		
ENGR 116		3
ENGR 117		1
ENGR 221		3
ENGR 222		3
MATH 129	Basic Linear Algebra	3
MATH 166	Calculus II	4
PHYS 252	University Physics II	4
Pre-Engineering Elective		
Select one course from the following areas:		3-4
Pre-Engineering		
Math		
Science or Computer Science		
Core Requirements - Math		
Select two courses of the following:		5-9
MATH 102	Intermediate Algebra	
or MATH 103	College Algebra	
MATH 105	Trigonometry	
or MATH 107	Precalculus	
MATH 265	Calculus III	
MATH 266	Differential Equations	
Total Hours		**69-74**