

This degree is offered on NOC Enid and NOC Tonkawa campuses.

**Program Requirements 60 Total Credit Hours**

General Education Courses				37 Total Credit Hours	Program Requirement Courses				19 hours
English Composition Courses						MATH	1613	Plane Trigonometry	3 hours
	ENGL	1113	English Composition I	3 hours	**	MATH	2144	Calculus I	4 hours
	ENGL	1213	English Composition II	3 hours	**	MATH	2154	Calculus II	4 hours
History & Government Courses					**	MATH	2164	Calculus III	4 hours
	HIST	1483	American History to 1877	3 hours	**	PHYS	2114	Engineering Physics II	4 hours
or	HIST	1493	American History Since 1877						
	POLI	1113	American Government	3 hours					
Humanities Courses									
	Electives			6 hours	Recommended Program Elective Courses				4 hours
One 3 hour course to be chosen from those listed with the International Dimension and 3 hours of humanities electives.					(Combine with Gen Ed. Hours to choose 7 hours)				
						ENGR	1223	Technical Writing	3 hours
Mathematics Courses						ENGR	1111	Intro to Engineering	1 hour
	MATH	1513	Algebra for STEM	3 hours	**	ENGR	2113	Statics	3 hours
Science Courses					**	ENGR	2443	Thermodynamics	3 hours
*	CHEM	1515	Chemistry for Engineers	5 hours	**	MATH	2163	Differential Equations	3 hours
	PHYS	2014	Engineering Physics I	4 hours		BIOL	1114	General Biology	4 hours
Computer Science Courses						PHIL	2223	Business Ethics	3 hours
	CMSC	1013	Visual BASIC	3 hours					
or	Other approved computer course								
Orientation Course									
	ORNT	1101	Freshman Orientation	1 hour	* CHEM 1515 can be substituted for CHEM 1315 and CHEM 1414 if the classes are not offered on that campus.				
General Education Elective Course				3 hours					
Select courses from: Language Arts, Natural Sciences, Foreign Languages, Fine Arts, Humanities, Mathematics, Behavioral or Social Sciences					**These program courses are typically offered only once a year. See course descriptions for fall or spring designations and plan accordingly.				

\*\*Students scoring 26 or above on the math subsection of the ACT do not have to take MATH 1513 Algebra for STEM. Students scoring 28 or above on the math subsection of the ACT do not have to take MATH 1613 Plane Trigonometry. Students not taking Algebra & Trigonometry because of ACT scores or CLEP exam results are required to substitute 3-6 hours of credit in appropriate General Education Electives or RECOMMENDED PROGRAM ELECTIVES to complete 60 hours at NOC and maximize their transfer hours to the four-year institution.

The Pre-Engineering degree option is designed to transfer into all disciplines of engineering. It is important to secure a catalog from the engineering school to transfer so you may select the courses to meet the requirements needed to obtain the bachelor's degree you choose. The program features small class size and individual attention for this challenging degree.

**Career Opportunities:** Architect/Designer, Aerospace, Agriculture, Biosystems Engineer, Chemical Engineer, Construction Technology, Civil Engineer, Electrical Engineer, Environmental Engineer, Mechanical Engineer, Meteorology, Metallurgical Engineer, Petroleum Engineer

This suggested curriculum includes degree requirements and courses that are usually completed in the first two years of a four-year curriculum. Consult with the university or college of your choice and its catalog curriculum as you make plans on where to transfer. Be careful to select the courses that will meet all requirements for both the Associate and Baccalaureate degree programs.

### Year One

Fall Semester			Spring Semester		
ENGL	1113	English Composition I	ENGL	1213	English Composition II
ENGR	1111	Introduction to Engineering	HIST	1483	American History to 1877
CHEM	1515	Chemistry for Engineers	or		
ORNT	1101	Freshman Orientation	HIST	1493	American History Since 1877
**MATH	1513	Algebra for STEM -If ACT score requires it	*MATH	2144	Calculus I
		or Program Elective	*PHYS	2014	Engineering Physics I
**MATH	1613	Plane Trigonometry		3 hours	Computer Science Course
Total: 16 credit hours			Total 17 credit hours		

### Year Two

Fall Semester			Spring Semester		
ENGR	2443	Thermodynamics	*MATH	2164	Calculus III
PHYS	2114	Engineering Physics II	POLI	1113	American Government
	3 hours	Humanities Elective		Program Elective Recommended:	
*MATH	2154	Calculus II	ENGR	2113	Statics
			or		
			*MATH	2613	Differential Equations
				3 hours	Humanities Elective
			*These program courses are typically offered only once a year. See course descriptions for fall or spring designations and plan accordingly.		
Total 14 credit hours			Total 13 credit hours		

#### Suggested NOC courses for specific engineering disciplines:

ENGR 2123 Dynamics 3 hours

#### BIOSYSTEMS AGRICULTURAL:

BIOL 2124 Microbiology 4 hours

BIOL 1414 General Zoology 4 hours

Students need to consult with the engineering school of interest for Chemistry and Biology requirements.

NOC evaluates students for placement into either foundational or college-level courses, whichever will lead to the greatest possibility of student success. Academic placement is determined either by A.C.T. test scores or by Accuplacer test scores. These tests are administered in the Testing Center at NOC. Based upon the scores, students may be required to take one or more courses for remediation in English, Math, or Reading, either prior to or concurrent with credit courses. See the NOC testing web page by clicking on the following link: <http://www.noc.edu/act> for placement guidelines.