

**Central Texas College District**  
**Associate of Science in Engineering (AS-ENGF4) (AS-ENGR)**  
Fort Hood, TX

**Degree Objective-** Prepares graduates for transfer to university programs of study by introducing a broad base of concepts in the humanities, social/behavioral sciences, mathematics, and natural and physical sciences. Graduates receiving the associate of science degree will be prepared for further study at the university level in the sciences, engineering, and other professional and related fields. The degree plan comprises 60 semester credit hours of which 49 are in general education courses and 11 are in engineering. This degree is appropriate for transfer into a bachelor-level degree program.

**POINT OF CONTACT**  
Debbie Hansen, Director of Evaluations & Graduation  
P.O. Box 1800, Killeen, TX 76540  
(254) 526-1394 or (800) 792-3348, ext. 1394  
Fax (254) 526-1481  
debbie.hansen@ctcd.edu  
www.ctcd.edu

**Academic Residency-** 15 semester hours

DEGREE REQUIREMENTS				HOME COLLEGE	ARMY SCHOOL	ARMY MOS	TESTS	CERT / LIC	DIST LRNG See Note 2
<b>General Education</b>				<b>46-48 SH</b>					
<b>English</b>				<b>3 SH</b>					
ENGL	1301	Composition I		3	X		X		X
<b>Speech</b>				<b>3 SH</b>					
SPCH	1315	Public Speaking		3	X		X		X
SPCH	1318	Interpersonal Communication		3	X				
SPCH	1321	Business and Professional Communication		3	X				X
<b>Mathematics</b>				<b>8 SH</b>					
MATH	2413	Calculus I		4	X		X		X
MATH	2414	Calculus II		4	X		X		X
<b>Life and Physical Sciences</b>				<b>8 SH</b>					
AGRI	1407	Agronomy		4	X		X		
AGRI	1415	Horticulture		4	X		X		
AGRI	1419	Introductory Animal Science		4	X		X		
BIOL	1406	Biology for Science Majors I	AND	4	X		X		
BIOX	1406	Biology for Science Majors I - Lab		0	X		X		
BIOL	1407	Biology for Science Majors II	AND	4	X		X		
BIOX	1407	Biology for Science Majors II - Lab		0	X		X		
BIOL	1408	Biology for Non-Science Majors I	AND	4	X		X		
BIOX	1408	Biology for Non-Science Majors I - Lab		0	X		X		
BIOL	1409	Biology for Non-Science Majors II	AND	4	X		X		
BIOX	1409	Biology for Non-Science Majors II - Lab		0	X		X		
BIOL	1411	General Botany	AND	4	X		X		
BIOX	1411	General Botany - Lab		0	X		X		
BIOL	1413	General Zoology	AND	4	X		X		
BIOX	1413	General Zoology - Lab		0	X		X		
BIOL	2401	Anatomy & Physiology I	AND	4	X		X		
BIOX	2401	Anatomy & Physiology I - Lab		0	X		X		
BIOL	2402	Anatomy & Physiology II	AND	4	X		X		
BIOX	2402	Anatomy & Physiology II - Lab		0	X		X		
BIOL	2420	Microbiology for Non-Science Majors	AND	4	X		X		
BIOX	2420	Microbiology for Non-Science Majors - Lab		0	X		X		
BIOL	2421	Microbiology for Science Majors	AND	4	X		X		
BIOX	2421	Microbiology for Science Majors - Lab		0	X		X		
CHEM	1406	Introductory Chemistry I	AND	4	X		X		
CHEX	1406	Introductory Chemistry I - Lab		0	X		X		
CHEM	1407	Introductory Chemistry II	AND	4	X		X		
CHEX	1407	Introductory Chemistry II - Lab		0	X		X		
CHEM	1411	General Chemistry I	AND	4	X		X		
CHEX	1411	General Chemistry I-Lab		0	X				
CHEM	1412	General Chemistry II	AND	4	X		X		
CHEX	1412	General Chemistry II - Lab		0	X		X		
ENVR	1401	Environmental Science I	AND	4	X		X		
ENVX	1401	Environmental Science I - Lab		0	X		X		
GEOG	1403	Physical Geology	AND	4	X		X		
GEOX	1403	Physical Geology - Lab		0	X		X		
GEOG	1404	Historical Geology	AND	4	X		X		
GEOX	1404	Historical Geology- Lab		0	X		X		
PHYS	1401	College Physics I	AND	4	X		X		
PHYX	1401	College Physics I - Lab		0	X		X		
PHYS	1402	College Physics II	AND	4	X		X		
PHYX	1402	College Physics II - Lab		0	X		X		
PHYS	1403	Stars and Galaxies	AND	4	X		X		
PHYX	1403	Stars and Galaxies - Lab		0	X		X		
PHYS	1404	Solar System	AND	4	X		X		
PHYX	1404	Solar System - Lab		0	X		X		
PHYS	1415	Physical Science I	AND	4	X		X		
PHYX	1415	Physical Science I - Lab		0	X		X		

DEGREE REQUIREMENTS				HOME COLLEGE	ARMY SCHOOL	ARMY MOS	TESTS	CERT / LIC	DIST LRNG See Note 2
<b>Creative Arts</b>				<b>3 SH</b>					
ARTS	1303	Art History I	3	X					X
ARTS	1304	Art History II	3	X					X
DRAM	1310	Introduction to Theater	3	X					
DRAM	2366	Introduction to Cinema	3	X					
HUMA	1315	Fine Arts Appreciation	3	X					
MUSI	1306	Music Appreciation	3	X					
<b>Language, Philosophy, and Culture</b>				<b>3-4 SH</b>					
ANTH	2351	Cultural Anthropology	3	X					X
DRAM	2361	History of Theatre I	3	X					
DRAM	2362	History of Theatre II	3	X					
ENGL	2322	British Literature I	3	X			X		X
ENGL	2323	British Literature II	3	X			X		X
ENGL	2327	American Literature I	3	X			X		X
ENGL	2328	American Literature II	3	X			X		X
ENGL	2332	World Literature I	3	X					X
FREN	1411	Beginning French I	4	X			X		
FREN	1412	Beginning French II	4	X			X		
GERM	1411	Beginning German I	4	X			X		
GERM	1412	Beginning German II	4	X			X		
MUSI	1307	Music Literature	3	X					
PHIL	1301	Introduction to Philosophy	3	X					X
PHIL	1304	Introduction to World Religions	3	X			X		X
PHIL	2306	Introduction to Ethics	3	X					X
PHIL	2307	Introduction to Social and Political Philosophy	3	X					X
PHIL	2321	Philosophy of Religion	3	X					X
RUSS	1411	Beginning Russian I	4	X	X				X
RUSS	1412	Beginning Russian II	4	X	X				X
SPAN	1411	Beginning Spanish I	4	X			X		
SPAN	1412	Beginning Spanish II	4	X			X		
<b>Social/Behavioral Science</b>				<b>15 SH</b>					
GOVT	2305	Federal Government	3	X			X		X
GOVT	2306	Texas Government	3	X			X		X
HIST	1301	United States History I	3	X			X		X
HIST	1302	United States History II	3	X			X		X
<b>And one of the following courses:</b>									
AGRI	2317	Introduction to Agriculture Economics	3	X					X
ECON	2301	Principles of Macroeconomics	3	X			X		X
ECON	2302	Principles of Microeconomics	3	X			X		X
GEOG	1301	Physical Geography	3	X					X
GEOG	1302	Cultural Geography	3	X			X		X
GEOG	1303	World Regional Geography	3	X					X
GOVT	2304	Introduction to Political Science	3	X					X
HIST	2301	Texas History	3	X					X
HIST	2311	Western Civilization I	3	X			X		X
HIST	2312	Western Civilization II	3	X			X		X
HIST	2321	World Civilizations I	3	X					
HIST	2322	World Civilizations II	3	X					
HIST	2381	African-American History	3	X					X
PSYC	2301	General Psychology	3	X			X		X
PSYC	2308	Child Psychology	3	X			X		X
PSYC	2314	Life Span Growth and Development	3	X			X		X
PSYC	2315	Psychology of Adjustment	3	X					X
PSYC	2316	Psychology of Personality	3	X					X
SOCI	1301	Introduction to Sociology	3	X			X		X
SOCI	1306	Social Problems	3	X					X
SOCI	2301	Marriage and the Family	3	X					X
SOCI	2319	Minority Studies	3	X					X
<b>Component Area Option</b>				<b>3-4 SH</b>					
AGRI	1407	Agromony	4	X					
AGRI	1415	Horticulture	4	X					
AGRI	1419	Introductory Animal Science (Animal Husbandry)	4	X					
AGRI	2317	Introduction to Agriculture Economics	3	X					
ANTH	2351	Cultural Anthropology	3	X					
ARTS	1303	Art History I	3	X			X		X
ARTS	1304	Art History II	3	X					X
BCIS	1305	Business Computer Applications	3	X					X
BIOL	1406	Biology for Science Majors I	AND	4	X		X		
BIOX	1406	Biology for Science Majors I Lab		0	X				
BIOL	1407	Biology for Science Majors II	AND	4	X		X		

DEGREE REQUIREMENTS				HOME COLLEGE	ARMY SCHOOL	ARMY MOS	TESTS	CERT / LIC	DIST LRNG See Note 2
BIOX	1407	Biology for Science Majors II Lab		0	X				
BIOL	1408	Biology for Non-Science Majors I	AND	4	X				
BIOX	1408	Biology for Non-Science Majors I Lab		0	X				
BIOL	1409	Biology for Non-Science Majors II	AND	4	X				
BIOX	1409	Biology for Non-Science Majors II Lab		0	X				
BIOL	1411	General Botany	AND	4	X				
BIOX	1411	General Botany - Lab		0	X				
BIOL	1413	General Zoology	AND	4	X				
BIOX	1413	General Zoology - Lab		0	X				
BIOL	2401	Anatomy and Physiology I	AND	4	X				
BIOX	2401	Anatomy and Physiology I Lab		0	X				
BIOL	2402	Anatomy and Physiology II	AND	4	X				
BIOX	2402	Anatomy and Physiology II Lab		0	X				
BIOL	2420	Microbiology for Non-Science Majors	AND	4	X				
BIOX	2420	Microbiology for Non-Science Majors Lab		0	X				
BIOL	2421	Microbiology for Science Majors	AND	4	X				
BIOX	2421	Microbiology for Science Majors Lab		0	X				
BUSI	1301	Business Principles		3	X				
CHEM	1406	Introductory Chemistry I	AND	4	X				
CHEX	1406	Introductory Chemistry I-Lab		0	X				
CHEM	1407	Introductory Chemistry II	AND	4	X				
CHEX	1407	Introductory Chemistry II-Lab		0	X				
CHEM	1412	General Chemistry II	AND	4	X		X		
CHEX	1412	General Chemistry II-Lab		0	X				
COSC	1301	Introduction to Computing		3	X	X	X		X
DRAM	1310	Introduction to Theater		3	X				
DRAM	2361	History of Theatre I		3	X				
DRAM	2362	History of Theatre II		3	X				
DRAM	2366	Introduction to Cinema		3	X				
ECON	2301	Principles of Macroeconomics		3	X		X		
ECON	2302	Principles of Microeconomics		3	X		X		
EDUC	1101	Learning Frameworks		1	X				
ENGL	1302	Composition II		3	X				
ENGL	2322	British Literature I		3	X				
ENGL	2323	British Literature II		3	X		X		X
ENGL	2327	American Literature I		3	X				
ENGL	2328	American Literature II		3	X				
ENGL	2332	World Literature I		3	X				
ENVR	1401	Environmental Science I	AND	4	X		X		
ENVX	1401	Environmental Science I-Lab		0	X			X	
FREN	1411	Beginning French I		4	X	X	X	X	X
FREN	1412	Beginning French II		4	X	X	X	X	X
GEOG	1301	Physical Geography		3	X				X
GEOG	1302	Cultural Geography		3	X		X		X
GEOG	1303	World Regional Geography		3	X		X		X
GEOG	1403	Physical Geology	AND	4	X		X		
GEOX	1403	Physical Geology Lab		0	X				
GEOG	1404	Historical Geology	AND	4	X				
GEOX	1404	Historical Geology Lab		0	X				
GERM	1411	Beginning German I		4	X	X	X	X	X
GERM	1412	Beginning German II		4	X	X	X	X	X
GOVT	2304	Introduction to Political Science		3	X				
HIST	2301	Texas History		3	X				X
HIST	2311	Western Civilization I		3	X		X		X
HIST	2312	Western Civilization II		3	X		X		X
HIST	2381	African-American History		3	X				X
HUMA	1315	Fine Arts Appreciation		3	X		X		X
MATH	1314	College Algebra		3	X				
MATH	1332	Contemporary Mathematics (Quantitative Reasoning)		3	X		X		X
MATH	1342	Elementary Statistical Methods		3	X		X		X
MATH	1414	College Algebra		4	X				
MATH	2412	Pre-Calculus Math		4	X				X
MUSI	1306	Music Appreciation		3	X				X
MUSI	1307	Music Literature		3	X				X
PHIL	1301	Introduction to Philosophy		3	X				X
PHIL	1304	Introduction to World Religions		3	X		X		X
PHIL	2306	Introduction to Ethics		3	X		X		X
PHIL	2307	Introduction to Social and Political Philosophy		3	X				X
PHIL	2321	Philosophy of Religion		3	X				X
PHYS	1401	College Physics I	AND	4	X				

DEGREE REQUIREMENTS				HOME COLLEGE	ARMY SCHOOL	ARMY MOS	TESTS	CERT / LIC	DIST LRNG See Note 2
PHYX	1401	College Physics I Lab	0	X					
PHYS	1402	College Physics II	AND	4	X				
PHYX	1402	College Physics II Lab	0	X					
PHYS	1403	Stars and Galaxies	AND	4	X		X		X
PHYX	1403	Stars and Galaxies - Lab	0	X					X
PHYS	1404	Solar System	AND	4	X				X
PHYX	1404	Solar System - Lab	0	X					X
PHYS	1415	Physical Science I	AND	4	X		X		
PHYX	1415	Physical Science I Lab	0	X					
PSYC	2301	General Psychology	3	X			X		X
PSYC	2308	Child Psychology	3	X			X		X
PSYC	2314	Life Span Growth and Development	3	X			X		X
PSYC	2315	Psychology of Adjustment	3	X					X
PSYC	2316	Psychology of Personality	3	X					X
RUSS	1411	Beginning Russian I	4	X	X		X		X
RUSS	1412	Beginning Russian II	4	X	X		X		X
SOCI	1301	Introduction to Sociology	3	X			X		X
SOCI	1306	Social Problems	3	X					X
SOCI	2301	Marriage and the Family	3	X					X
SOCI	2319	Minority Studies	3	X					X
SPAN	1411	Beginning Spanish I	4	X	X		X	X	X
SPAN	1412	Beginning Spanish II	4	X	X		X	X	X
SPCH	1315	Public Speaking	3	X	X	X	X		X
SPCH	1318	Interpersonal Communication	3	X	X	X			
SPCH	1321	Business and Professional Communication	3	X	X	X			X
<b>Major Requirements</b>			<b>14 SH</b>						
ENGR	1201	Introduction to Engineering	2	X	X				X
ENGR	2301	Engineering Mechanics - Statics	3	X					X
ENGR	2302	Engineering Mechanics - Dynamics	3	X					X
ENGR	2305	Electrical Circuits I	3	X					
ENGR	2332	Mechanics of Materials	3	X					
<b>Total Credits</b>			<b>60 SH</b>						

- Notes:**
- 1) Students not prepared to enroll in MATH 2314 may be required to take MATH 2412.
  - 2) An "X" in a column indicates that the Institution guarantees to accept credit from the source shown for at least part of the requirement.
  - 3) This column indicates whether a school accepts transfer credit for courses taken through distance learning. It does not mean that the school offers the course through distance learning.
  - 4) A course may be used toward one requirement only.
  - 5) Only lower-level courses are accepted in transfer.
  - 6) The student is responsible for meeting course prerequisites. It is recommended that the student take placement tests prior to enrolling in mathematics, reading-intensive, and writing courses. Based on scores, the student may be required to take a series of developmental study courses.
  - 8) Soldiers electing to take the high end semester hour range of a degree requirement area will need to request an ESO override if the total degree credits earned exceed total semester hours required.
- \*Texas four-year colleges and universities require a physical activity course in the core general education area in the AS degree program. If the student transfers to a Texas college or university to complete a bachelor-level degree program, the student who was awarded physical education credits based on a military service school may be required to take a physical activity course.

<b>Date Effective:</b>	1-Oct-19
<b>Term Effective:</b>	T760