

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

Degree Map  
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**  
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**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 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	4	X			X		
BIOX	1406	Biology for Science Majors I - Lab	0	X			X		
BIOL	1407	Biology for Science Majors II	4	X			X		
BIOX	1407	Biology for Science Majors II - Lab	0	X			X		
BIOL	1408	Biology for Non-Science Majors I	4	X			X		
BIOX	1408	Biology for Non-Science Majors I - Lab	0	X			X		
BIOL	1409	Biology for Non-Science Majors II	4	X			X		
BIOX	1409	Biology for Non-Science Majors II - Lab	0	X			X		
BIOL	1411	General Botany	4	X			X		
BIOX	1411	General Botany - Lab	0	X			X		
BIOL	1413	General Zoology	4	X			X		
BIOX	1413	General Zoology - Lab	0	X			X		
BIOL	2401	Anatomy & Physiology I	4	X			X		
BIOX	2401	Anatomy & Physiology I - Lab	0	X			X		
BIOL	2402	Anatomy & Physiology II	4	X			X		
BIOX	2402	Anatomy & Physiology II - Lab	0	X			X		
BIOL	2420	Microbiology for Non-Science Majors	4	X			X		
BIOX	2420	Microbiology for Non-Science Majors - Lab	0	X			X		
BIOL	2421	Microbiology for Science Majors	4	X			X		
BIOX	2421	Microbiology for Science Majors - Lab	0	X			X		
CHEM	1406	Introductory Chemistry I	4	X			X		
CHEX	1406	Introductory Chemistry I - Lab	0	X			X		
CHEM	1407	Introductory Chemistry II	4	X			X		
CHEX	1407	Introductory Chemistry II - Lab	0	X			X		
CHEM	1411	General Chemistry I	4	X			X		
CHEX	1411	General Chemistry I-Lab	0	X					
CHEM	1412	General Chemistry II	4	X			X		
CHEX	1412	General Chemistry II - Lab	0	X			X		
ENVR	1401	Environmental Science I	4	X			X		
ENVX	1401	Environmental Science I - Lab	0	X			X		
GEOX	1403	Physical Geology	4	X			X		
GEOX	1403	Physical Geology - Lab	0	X			X		
GEOX	1404	Historical Geology	4	X			X		
GEOX	1404	Historical Geology- Lab	0	X			X		
PHYS	1401	College Physics I	4	X			X		
PHYX	1401	College Physics I - Lab	0	X			X		
PHYS	1402	College Physics II	4	X			X		

DEGREE REQUIREMENTS				HOME COLLEGE	ARMY SCHOOL	ARMY MOS	TESTS	CERT / LIC	DIST LRNG See Note 2
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		
<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					
<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 1306	Music Appreciation		3	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>			<b>3 SH</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 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>						

DEGREE REQUIREMENTS				HOME COLLEGE	ARMY SCHOOL	ARMY MOS	TESTS	CERT / LIC	DIST LRNG See Note 2
AGRI	1407	Agronomy		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		
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		
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
GEOX	1403	Physical Geology	AND	4	X		X		
GEOX	1403	Physical Geology Lab		0	X				
GEOX	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

DEGREE REQUIREMENTS				HOME COLLEGE	ARMY SCHOOL	ARMY MOS	TESTS	CERT / LIC	DIST LRNG See Note 2
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
KINE	1106	Basketball I	1	X					
KINE	1107	Basketball II	1	X					
KINE	1108	Bowling I	1	X					
KINE	1109	Bowling II	1	X					
KINE	1110	Fitness Walking I	1	X					
KINE	1111	Fitness Walking II	1	X					
KINE	1114	Spin Bike I	1	X					
KINE	1115	Spin Bike II	1	X					
KINE	1122	Kickboxing/Aerobics	1	X					
KINE	1123	Muay Thai Kickboxing I	1	X					
KINE	1124	Muay Thai Kickboxing II	1	X					
KINE	1125	Physical Conditioning I	1	X	X	X			
KINE	1126	Physical Conditioning II	1	X	X	X			
KINE	1127	Soccer I	1	X					
KINE	1128	Soccer II	1	X					
KINE	1132	Swimming I	1	X	X	X			
KINE	1133	Swimming II	1	X	X	X			
KINE	1135	Tennis I	1	X					
KINE	1136	Tennis II	1	X					
KINE	1137	Volleyball I	1	X					
KINE	1138	Volleyball II	1	X					
KINE	1139	Water Fitness I	1	X					
KINE	1140	Water Fitness II	1	X					
KINE	1143	Weight Training I	1	X					
KINE	1144	Weight Training II	1	X					
KINE	1146	Yoga I	1	X					
KINE	1147	Yoga II	1	X					
KINE	1149	Jogging I	1	X					
KINE	1150	Jogging II	1	X					
KINE	2100	Zoomba Cardio	1	X					
KINE	2104	Zoomba Cardio II	1	X					
KINE	2105	Krav Self-Defense I	1	X					
KINE	2106	Krav Self-Defense II	1	X					
KINE	2107	Boot Camp I	1	X					
KINE	2108	Boot Camp II	1	X					
KINE	2109	Eagle Fit I	1	X					
KINE	2110	Eagle Fit II	1	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				
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

DEGREE REQUIREMENTS				HOME COLLEGE	ARMY SCHOOL	ARMY MOS	TESTS	CERT / LIC	DIST LRNG See Note 2
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
KINE	ELEC	Physical Activity		X	X	X			
PHED	ELEC	Physical Activity		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.
    - a) Mathematics courses may include DSMA 0101 Basic Developmental Mathematics, DSMA 0120 Mathematics Lab, DSMA 0300 Developmental Mathematics I, DSMA 0301 Developmental Mathematics II, DSMA 0303 Developmental Mathematics IV, DSMA 0304 Fundamentals of Mathematics II, DSMA 0305 Pre-Algebra, DSMA 0306 Introductory Algebra, DSMA 0307 Intermediate Algebra, DSMA 0309 Fundamentals of Algebra, and/or DSMA 0310 Intermediate Algebra.
    - b) Reading courses may include DSRE 0101 Developmental Reading, DSRE 0300 Developmental Reading I, DSRE 0301 Developmental Reading II, DSRE 0302 Fundamentals of Reading I, DSRE 0303 Fundamentals of Reading II, and/or DSRE 0311 Developmental Reading II.
    - c) Writing courses may include DSWR 0301 Developmental Writing I, DSWR 0302 Developmental Writing II, DSWR 0303 Fundamentals of Writing I, DSWR 0304 Fundamentals of Writing II, and/or DSWR 0311 Developmental Writing II.
  - 7) The non-native English speaking student may be required to take English-as-a-Second Language courses in reading, speaking, and writing.
    - a) Reading courses may include DSLA 0310 Reading and Vocabulary I, DSLA 0320 Reading and Vocabulary II, and/or DSLA 0330 Reading and Vocabulary III.
    - b) Speaking courses may include DSLA 0323 Academic Listening and Speaking I, DSLA 0322 Academic Listening and Speaking II, DSLA 0332 Academic Listening and Speaking III, and/or DSLA 0340 Accent Reduction.
    - c) Writing courses may include DSLA 0314 Writing I, DSLA 0315 Grammar I, DSLA 0318 English for Foreign Students I, and/or DSLA 0321 Writing II.
  - 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-Jan-19
<b>Term Effective:</b>	T730