



# TEXARKANA COLLEGE

## Engineering & Physics | Associate of Science

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### LIST OF COURSES

Core Creative Arts\*  
CHEM 1311/1111 - General Chem I/lab  
ENGL 1301 - Composition I  
ENGL 1302 - Composition II  
Language, Philosophy Culture Core \*\*  
GOVT 2305 - Federal Government  
GOVT 2306 - Texas Government  
HIST 1301 - US History I  
HIST 1302 - US History II  
MATH 1316 - Trigonometry  
MATH 2320 - Differential Equations  
MATH 2413 - Calculus I  
MATH 2414 - Calculus II  
MATH 2415 - Calculus III  
PHYS 2325/2125 - University Physics I/lab  
PHYS 2326/2126 - University Physics II/lab  
PSYC 1300 - Learning Frameworks  
PSYC 2301 (or other) - General Psychology

YEAR 1	YEAR 2
FALL	FALL
ENGL 1301	**ENGL 2327 or 2328 or 2332 or 2333 OR HIST 2321 or 2322
CHEM 1311/1111	GOVT 2305
HIST 1301	PHYS 2325/2125
PSYC 1300	MATH 2414
MATH 1316	
SPRING	SPRING
ENGL 1302	GOVT 2306
HIST 1302	PSYC 2301 or 2308 or 2314 or SOCI 1301
SPCH 1315	PHYS 2326/2126
MATH 2413	*ARTS 1301 or DRAM 1310 or 2366 or MUSI 1306
*Requires Additional 1 Hour Elective	MATH 2318 or 2320* or 2415*

Consult the catalog of the four-year institution to which you intend to transfer.

### LEARNING OUTCOMES/MARKETABLE SKILLS

Critical Thinking | Teamwork | Communication | Empirical & Quantitative Reasoning | Mathematical Skills | Numeracy | Organization  
Self-Discipline | Time Management | Leadership | Investigative Skills | Analytical Skills | Management

### EDUCATIONAL OPPORTUNITIES

B.A. Business | B.S. Math Education | B.S. Physics | B.S. Mathematics | B.S. CIS | B.S. Statistics

### CAREER OPPORTUNITIES (B.S. or Higher)

Design Engineer | Biomedical Engineer | Chemical Engineer | Civil Engineer | Computer Engineer | Mechanical Engineer | Electrical Engineer | Environmental Engineer | Software Engineer | Software Designer | Physics/Math Teacher

### HIGH SCHOOL ENDORSEMENTS

STEM | Business & Industry | Multi-Disciplinary

### LINKS TO COLLEGES & PROFESSIONAL ORGANIZATIONS:

Texas A&M Texarkana Department of Electrical Engineering: <http://tamut.edu/Academics/Colleges-and-Departments/STEM/Electrical-Engineering/index.html>

Stephen F. Austin State University Department of Engineering/Physics: <http://www.engineering.sfasu.edu/>

University of North Texas College of Engineering: <https://engineering.unt.edu/>

Southern Arkansas University College of Science and Engineering: <https://web.saumag.edu/science/engineering-engineering-physics/>

University of Arkansas College of Engineering: <https://engineering.uark.edu/>

National Society of Professional Engineers: <https://www.nspe.org/>

*Start Smart. Finish Strong.*

# Texarkana College Core Curriculum

Component Area & Number	SCH	Courses to Choose From:	
(010) Communication	6	ENGL 1301: Composition I (3) ENGL 1302: Composition II (3) or ENGL 2311: Technical & Business Writing (3)	
(020) Mathematics	3	MATH 1314: College Algebra (3) MATH 1316: Plane Trigonometry (3) MATH 1324: Finite Math (3) MATH 1325: Calculus for Business & Social Science (3) MATH 1332: Math for Liberal Arts (3) MATH 1350: Fundamentals of Math I (3) MATH 1442: Elementary Statistical Methods (4) MATH 2412: Pre-Calculus (4) MATH 2413: Calculus I (4)	
(030) Life & Physical Sciences	6	BIOL 1322: Nutrition & Diet Therapy (3) BIOL 1306: Biology for Science Majors I (3) BIOL 1307: Biology for Science Majors II (3) BIOL 1308: Biology for Non-Science Majors I (3) BIOL 1309: Biology for Non-Science Majors II (3) BIOL 1311: General Biology (3) BIOL 1313: General Zoology (3) BIOL 2301: Anatomy & Physiology I (3) BIOL 2302: Anatomy & Physiology II (3) BIOL 2306: Environmental Biology (3) BIOL 2320: Microbiology for Non-Science Majors (3)	BIOL 2321: Microbiology for Science Majors (3) CHEM 1305: Introductory Chemistry I (3) CHEM 1311: General Chemistry I (3) CHEM 1312: General Chemistry II (3) CHEM 1307: Introductory Chemistry II (3) GEOL 1303: Physical Geology (3) PHYS 1301: College Physics I (3) PHYS 1303: Stars & Galaxies (3) PHYS 1304: Solar System (3) PHYS 1315: Physical Science I (3) PHYS 2325: University Physics I (3)
(040) Language, Philosophy & Culture	3	ENGL 2322: British Literature I (3) ENGL 2323: British Literature II (3) ENGL 2327: American Literature I (3) ENGL 2328: American Literature II (3) ENGL 2332: World Literature I (3) ENGL 2333: World Literature II (3) ENGL 2341: Forms in Literature (3) HIST 2321: World Civilizations I (3) HIST 2322: World Civilizations II (3) PHIL 2306: Introduction to Ethics (3)	
(050) Creative Arts	3	ARTS 1301: Art Appreciation (3) DRAM 1310: Introduction to Theater (3) DRAM 2366: Development of the Motion Picture I (3) MUSI 1306: Music Appreciation (3)	
(060) American History	6	HIST 1301: United States History I (3) HIST 1302: United States History II (3)	
(070) Government/Political Science	6	GOVT 2305: Federal Government (3) GOVT 2306: Texas Government (3)	
(080) Social & Behavioral Sciences	3	COMM 1307: Introduction to Mass Communication (3) GEOG 1303: World Regional Geography (3) PSYC 2301: General Psychology (3) PSYC 2308: Child Psychology (3) PSYC 2314: Lifespan Growth & Development (3) SOCI 1301: Introductory Sociology (3) ECON 2301: Principles of Macroeconomics (3) ECON 2302: Principles of Microeconomics (3)	
(090) Component Area Option	6 3  3	Choose 3 SCH from the following: SPCH 1315: Public Speaking (3) SPCH 1318: Interpersonal Communication (3) SPCH 1321: Business & Professional Speaking (3) or any courses in Component Areas (010), (020), (030), (040), (050), & (080) that are not used to fulfill another core requirement except MATH 2413: Calculus, which is listed below.  OR any courses in Component Areas (010), (020), (030), (040), (050), & (080) that are not used to fulfill another core requirement except MATH 2413, which is listed below.  And Choose 3 SCH from the following: BCIS 1305: Business Computer Applications (3) MATH 2413: Calculus I (4) PSYC 1300/EDUC 1300 Learning Frameworks (3)	The following are labs that should be taken with lecture courses for those needing 8 SCH of Life & Physical Sciences for a degree. BIOL 1106: Biology for Science Majors I (lab) (1) BIOL 1107: Biology for Science Majors II (lab) (1) BIOL 1108: Biology for Non-Science Majors I (lab) (1) BIOL 1109: Biology for Non-Science Majors II (lab) (1) BIOL 1111: General Botany (lab) (1) BIOL 1113: General Zoology (lab) (1) BIOL 2101: Anatomy & Physiology I (lab) (1) BIOL 2102: Anatomy & Physiology II (lab) (1) BIOL 2120: Microbiology for Non-Science Majors (lab) (1) BIOL 2121: Microbiology for Science Majors (lab) (1) CHEM 1105: Introductory Chemistry I (lab) (1) CHEM 1111: General Chemistry I (lab) (1) CHEM 1112: General Chemistry II (lab) (1) PHYS 1101: College Physics I (lab) (1) PHYS 1103: Stars & Galaxies (lab) (1) PHYS 1104: Solar System (lab) (1) PHYS 1115: Physical Science I (lab) (1) PHYS 2125: University Physics (lab) (1)
Total Minimum Requirements	42		

## TEXARKANA COLLEGE

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The following person has been designated to handle inquiries regarding the nondiscrimination policies:  
Human Resources Director, 2500 N. Robison Rd., Texarkana, TX, 75599 (903) 823-3017 human.resources@texarkanacollege.edu