

# A.S. Electrical Engineering 2021-2022

## EXPECTED DEGREE

**AS in Engineering - Electrical (60 sch)**  
 + These courses are only offered in the semester indicated.  
 \*\* Please see faculty advisor or division chair to discuss requirements for your transfer university.

## PROGRAM DESCRIPTION

**Division Chair: Dr. Paula Wilhite (pwilhite@ntcc.edu) 903-434-8281**  
**Faculty Advisor: Mark Ellermann (mellermann@ntcc.edu) 903-434-8297**  
 Students should consult the division chair or a faculty advisor early in their program of study. These are suggested courses for students who plan to transfer to a four-year college or university and major in mechanical engineering. Transferability and specific requirements can be determined only by the receiving institution. Only college-level courses apply toward completion of this curriculum and the graduation requirements for the A.S. **CIP: 24.0102**

**Tuition Costs and Scholarship Information for this degree can be found at: <https://catalog.ntcc.edu/>**  
**Information for Financial Aid assistance can be found at: <https://catalog.ntcc.edu/>**

## RECOMMENDED COURSE SELECTION

Fall 1st Year	SCH	Semester Completed	Grade	Notes for Students:
MATH 2413 - Calculus I ^	4			^ Prerequisite for Calculus I (MATH 2413): Precalculus (MATH 2412) or equivalent or approval by division chair
CHEM 1409 - Gen Chem for Eng Majors +	4			
ENGR 1201 - Intro to Eng +	2			
ENGL 1301 - English Comp I	3			
<b>Semester Credit Hours</b>	<b>13</b>			
Spring 1st Year	SCH	Semester Completed	Grade	Notes for Students:
MATH 2414 - Calculus II	4			
PHYS 2425 - Advanced Physics I	4			
ENGL 2311 - Tech & Business Writing	3			
ECON 2301 - Prin of Macroeconomics	3			
<b>Semester Credit Hours</b>	<b>14</b>			
Summer 1st Year	SCH	Semester Completed	Grade	Notes for Students:
Core Course: History	3			
Core Course: History	3			
<b>Semester Credit Hours</b>	<b>6</b>			
Fall 2nd Year	SCH	Semester Completed	Grade	Notes for Students:
MATH 2415 - Calculus III	4			
MATH 2318 - Linear Algebra +	3			
PHYS 2426 - Advanced Physics II +	4			
COSC 1336 - Fund of Programming I	3			
<b>Semester Credit Hours</b>	<b>14</b>			
Spring 2nd Year	SCH	Semester Completed	Grade	Notes for Students:
MATH 2320 - Differential Equations +	3			<b>DO THIS:</b> Apply for graduation for AS Engineering
ENGR 2405 - Electrical Circuits +	3			
GOVT 2305 - Federal Government	3			
GOVT 2306 - Texas Government	4			
<b>Semester Credit Hours</b>	<b>13</b>			

**Total Required Associate of Science in Engineering (Mechanical) = 60 Semester Credit Hours**

**CAREER OPPORTUNITIES** - All data listed below incorporate Northeast Texas jobs and entry wages found on <http://www.texaswages.com/WDAWages>

<i>Career option #1</i>	<i>Electronics Tech</i>	<i>Career option #2</i>	<i>Electrical Engineer</i>
<i>\$Starting Salary</i>	<i>\$42,400</i>	<i>\$Starting Salary</i>	<i>\$64,936</i>
<i>w/Associate's Degree</i>		<i>w/Bachelor's Degree</i>	

<i>Career option #3</i>	<i>Electrical Engineer</i>
<i>\$Starting Salary</i>	<i>\$92,000</i>
<i>w/Doctoral Degree</i>	

## A.S. Electrical Engineering Transfer Guide 2021-2022

	TAMU		✓	UT Tyler		✓	TAMU-T		✓
	NTCC	TAMU		NTCC	UT Tyler		NTCC	TAMU-T	
<b>Fall 1st Year</b>	MATH 2413	MATH 151		MATH 2413	MATH 2413		MATH 2413	MATH 2413	
	CHEM 1409	CHEM 107/117		CHEM 1409	CHEM 1311/1111		CHEM 1409	CHEM 1307 / 1117	
	ENGR 1201*	ENGR 111		ENGR 1201*	ENGR 1201*		ENGR 1201	ENGR 1201	
	ENGL 1301	ENGL 103		ENGL 1301	ENGL 1301		ENGL 1301	ENGL 1301	
<b>Spring 1st Year</b>	MATH 2414	MATH 152		MATH 2414	MATH 2414		MATH 2414	MATH 2414	
	PHYS 2425	PHYS 206 / 226		PHYS 2425	PHYS 2325/2125		PHYS 2425	PHYS 2325 / 2125	
	ENGL 1302 or 2311	ENGL 104 or 210		ENGL 1302 or 2311	ENGL 1302 or 2311		ENGL 1302 or 2311*	ENGL 1302 or Transfer*	
	ECON 2301	ECO 2302		ECON 2301	ECON 2301		ECON 2301	ECON 2308	
<b>Summer 1st Year</b>	HIST Choose Core	HIST 105		HIST Core	HIST Core		HIST Core	HIST Core	
	HIST Choose Core	HIST 106 or 226		HIST Core	HIST Core		HIST Core	HIST Core	
<b>Fall 2nd Year</b>	MATH 2415 MATH 2318*	MATH 253 MATH 311		MATH 2415* MATH 2318*	MATH (3404) MATH (3203)		MATH 2415 MATH 2318	MATH 2415 MATH 2318	
	PHYS 2426	PHYS 207 / 227		PHYS 2426	PHYS 2326/2126		PHYS 2426	PHYS 2326 / 2126	
	COSC 1336*	Transfer*		COSC 1336	COSC 1336		COSC 1336*	Transfer*	
<b>Spring 2nd Year</b>	MATH 2320	MATH 308		MATH 2320*	MATH 3305		MATH 2320	MATH 2320	
	ENGR 2405	ECEN 214		ENGR 2405*	EENG (3304/3104)		ENGR 2405	ENGR 2305	
	GOVT 2305	POLS 206		GOVT 2305	POLS 2305		GOVT 2305	PSCI 2301	
	GOVT 2306	POLS 207		GOVT 2306	POLS 2306		GOVT 2306	PSCI 2302	
	*Transfer as elective			*Transfer as elective			*Transfer as elective		

Course Equivalency Guides for all institutions can be found at <https://www.tccns.org/>

Core Credit Choices
<b>Gray - Complete all three courses below:</b> <input type="checkbox"/> ENGL 1301 English Composition I (3) <input type="checkbox"/> GOVT 2305 Federal Government (3) <input type="checkbox"/> GOVT 2306 Texas Government (3)
<b>ORANGE - Choose 1 from the following:</b> <input type="checkbox"/> SPCH 1315 Public Speaking (3) <input type="checkbox"/> SPCH 1321 Business and Professional Comm (3)
<b>GREEN - Choose 1 from the following:</b> <input type="checkbox"/> ECON 2301 Principles of Macroeconomics (3)
<b>RED - Choose 2 from the following:</b> <input type="checkbox"/> HIST 1301 United States History I (3) <input type="checkbox"/> HIST 1302 United States History II (3) <input type="checkbox"/> HIST 2301 Texas History (3) <input type="checkbox"/> HIST 2381 African American History I (3) <input type="checkbox"/> HIST 2382 African American History II (3)
<b>BLUE - Choose 1 from the following</b> <input type="checkbox"/> ENGL 1302 English Composition II (3) <input type="checkbox"/> ENGL 2311 Technical & Business Writing (3)
<b>PURPLE - Choose 1 from the following:</b> <input type="checkbox"/> PHIL 1301 Introduction to Philosophy (3) <input type="checkbox"/> PHIL 2306 Introduction to Ethics (3)
<b>PINK - Choose 1 from the following:</b> <input type="checkbox"/> ARTS 1301 Art Appreciation (3) <input type="checkbox"/> DRAM 1310 Theatre Appreciation (3) <input type="checkbox"/> DRAM 2361 Theatre History I (3) <input type="checkbox"/> MUSI 1306 Music Appreciation (3)