

EXPECTED DEGREE

PROGRAM DESCRIPTION

AS in Engineering - Chemical (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.

Division Chairs: Dr. Mary Hearron, Dr. Paula Wilhite
Faculty Advisor: Dr. Drew Murphy (dmurphy@ntcc.edu) 903.434.8214
 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 chemical 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 | | | ** Meet with faculty advisor or division chair ^ Prerequisite for Calculus I (MATH 2413): Precalculus (MATH 2412) or equivalent or approval by division chair |
| CHEM 1411 - Gen Chemistry I | 4 | | | |
| ENGL 1301 - English Comp I | 3 | | | |
| | | | | |
| Semester Credit Hours | 11 | | | |
| Spring 1st Year | SCH | Semester Completed | Grade | Notes for Students: |
| MATH 2414 - Calculus II | 4 | | | ** Meet with faculty advisor or division chair DO THIS: Schedule campus tour w/ transfer university. ^ CHEM 1412 - Gen Chemistry II is also offered in Sum II semester. |
| PHYS 2425 - Advanced Physics I | 4 | | | |
| CHEM 1412 - Gen Chemistry II ^ | 4 | | | |
| ENGL 2311 - Tech & Business Writing | 3 | | | |
| Semester Credit Hours | 15 | | | |
| Summer 1st Year | SCH | Semester Completed | Grade | Notes for Students: |
| Core Course: History | 3 | | | |
| Core Course: History | 3 | | | |
| Semester Credit Hours | 6 | | | |
| Fall 2nd Year | SCH | Semester Completed | Grade | Notes for Students: |
| MATH 2415 - Calculus III | 4 | | | |
| PHYS 2426 - Advanced Physics II + | 4 | | | |
| CHEM 2423 - Organic Chemistry I + | 4 | | | |
| Core Course: Government | 3 | | | |
| Semester Credit Hours | 15 | | | |
| Spring 2nd Year | SCH | Semester Completed | Grade | Notes for Students: |
| MATH 2320 - Differentials Equations | 3 | | | DO THIS: Apply for graduation for AS Engineering |
| CHEM 2425 - Organic Chemistry II | 4 | | | |
| ECON 2301 - Prin of Macroeconomics I | 3 | | | |
| Core Course: Government | 3 | | | |
| Semester Credit Hours | 13 | | | |

Total Required Associate of Science in Engineering (Chemical) = 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>Chem Eng Tech</i> | <i>Career option #2</i> | <i>Chemical Engineer</i> | <i>Career option #3</i> | <i>Chemical Engineer</i> |
| <i>\$Starting Salary</i> | <i>\$63,182</i> | <i>\$Starting Salary</i> | <i>\$84,720</i> | <i>\$Starting Salary</i> | <i>\$110,000</i> |
| <i>w/Associate's Degree</i> | | <i>w/Bachelor's Degree</i> | | <i>w/Doctoral Degree</i> | |

A.S. Chemical Engineering
Transfer Guide 2021-2022

| | TAMU | | ✓ | Univ of Texas | | ✓ | Texas Tech | | ✓ |
|-----------------|------------------------|----------------------|---|------------------------|-------------------------|---|------------------------|---------------------------|---|
| | NTCC | TAMU | | NTCC | Univ of Texas | | NTCC | Texas Tech | |
| Fall 1st Year | MATH 2413 | MATH 151 | | MATH 2413 | M 408K | | MATH 2413 | MATH 1451 | |
| | CHEM 1411 | CHEM 119 | | CHEM 1411 | CH 301 CH 104M | | CHEM 1411 | CHEM 1307/1107 | |
| | ENGL 1301 | ENGL 103 | | ENGL 1301 | RHE 306 | | ENGL 1301 | ENGL 1301 | |
| Spring 1st Year | MATH 2414 | MATH 152 | | MATH 2414 | M 408L | | MATH 2414 | MATH 1452 | |
| | PHYS 2425 | PHYS 206 226 | | PHYS 2425 | PHY 303K PHY 103M | | PHYS 2425 | PHYS 1408 | |
| | CHEM 1412 | CHEM 120 | | CHEM 1412 | CH 302 CH 104N | | CHEM 1412 | CHEM 1308/1108 | |
| | ENGL 1302 or 2311 | ENGL 104 or 210 | | ENGL 1302 or 2311 | RHE 309K or RHE 317 | | ENGL 1302 or 2311 | ENGL 1302 or 2311 | |
| Summer 1st Year | HIST Core | HIST 105 | | HIST Core | HIS 315K | | HIST Core | HIST 2300 | |
| | HIST Core | HIST 106 or 226 | | HIST Core | HIS 315L or HIS 3 TX | | HIST Core | HIST 2301 or Transfer* | |
| Fall 2nd Year | MATH 2415 GOVT 2305 | MATH 253 POLS 206 | | MATH 2415 GOVT 2305 | M 408 M GOV 3 US | | MATH 2415 PHYS 2426 | MATH 2450 PHYS 2401 | |
| | CHEM 2423 | CHEM 227/237 | | CHEM 2423 | CH 310M CH 110K | | CHEM 2423* | CHEM (3305/3105) | |
| | PHYS 2426 | PHYS 207 / 227 | | PHYS 2426 | PHY 303L PHY 103N | | GOVT 2305 | POLS 1301 | |
| Spring 2nd Year | MATH 2320 | MATH 308 | | MATH 2320 | M 237K | | MATH 2320* | MATH 3305 | |
| | CHEM 2425 | CHEM 228/238 | | CHEM 2425 | CH 310N CH 110L | | CHEM 2425* | CHEM (3306/3106) | |
| | ECON 2301 | ECO 2302 | | ECON 2301 | ECO 304L | | ECON 2301 | ECO 2302 | |
| | GOVT 2306 | POLS 207 | | GOVT 2306 | GOV 3 TX | | GOVT 2306 | POLS 2306 | |
| | *Transfer as elective | | | *Transfer as elective | TBD | | *Transfer as elective | | |

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

| Core Credit Choices |
|---|
| Gray - Complete all three courses below: |
| <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) |
| ORANGE - Choose 1 from the following: |
| <input type="checkbox"/> SPCH 1315 Public Speaking (3) |
| <input type="checkbox"/> SPCH 1321 Business and Professional Comm (3) |
| GREEN - Choose 1 from the following: |
| <input type="checkbox"/> ECON 2301 Principles of Macroeconomics (3) |
| RED - Choose 2 from the following: |
| <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) |
| BLUE - Choose 1 from the following |
| <input type="checkbox"/> ENGL 1302 English Composition II (3) |
| <input type="checkbox"/> ENGL 2311 Technical & Business Writing (3) |
| PURPLE - Choose 1 from the following: |
| <input type="checkbox"/> PHIL 1301 Introduction to Philosophy (3) |
| <input type="checkbox"/> PHIL 2306 Introduction to Ethics (3) |
| PINK - Choose 1 from the following: |
| <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) |