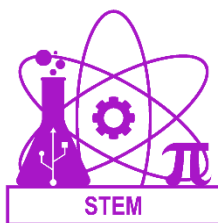


# BIG BEND COMMUNITY COLLEGE

## STEM

### Pre-Engineering – TRANSFER



Engineering is the application of math and science to solve problems. Engineers figure out how things work and find practical uses for scientific discoveries in a wide range of industries. Earning an Associate in Science Engineer Pre-Major Degree prepares students to be math and science ready when transferring into an engineering program at a university.

The engineering program provides courses to meet a variety of student needs. Please work with your academic advisor to customize your transfer educational plan to match up with major and university requirements. For assistance, visit: <https://www.bigbend.edu/transfer/>. Our advisors are happy to help guide students through this process. The sooner you come talk with us, the faster we can get you on track to an exciting career in the engineering.

### ENTRY REQUIREMENTS

- Complete Admissions and Placement processes
- Meet with an advisor prior to enrolling

### DEGREE REQUIREMENTS

#### Breadth and Engineering Core ( 55 Credits )

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> Communications Skills (5)<br/>(ENGL&amp; 101, ENGL&amp; 102, or ENGL&amp; 235)</li> <li><input type="checkbox"/> Humanities &amp; Social Sciences (15)<br/>(must select at least one HU and one SS course)</li> </ul> <p>Some recommended Humanities (HU) courses:<br/>CMST&amp; 220 – Public Speaking (5)<br/>HUM 214 – Diversity Issues (5)<br/><i>Meets EWU Diversity requirement</i></p> <p>World Language (FRCH&amp;, GERM&amp;, SPAN&amp;) (5)<br/><i>Some Universities and/or programs require one year of college-level or two years of high school world language</i></p> <p>Some recommended Social Science (SS) courses:<br/>ECON&amp; 202- Macroeconomics (5)<br/>ECON&amp; 201 – Microeconomics (5)</p> | <ul style="list-style-type: none"> <li><input type="checkbox"/> CHEM&amp; 161 – General Chemistry I (5)</li> <li><input type="checkbox"/> MATH&amp; 151 – Calculus I (5)</li> <li><input type="checkbox"/> MATH&amp; 152 – Calculus II (5)</li> <li><input type="checkbox"/> MATH&amp; 163 – Calculus 3 (5)(highly recommended) or MATH&amp; 146 – Introduction to Statistics (5)</li> <li><input type="checkbox"/> PHYS&amp; 221 – Engineering Physics I (5)</li> <li><input type="checkbox"/> PHYS&amp; 222 – Engineering Physics II (5)</li> <li><input type="checkbox"/> PHYS&amp; 223 – Engineering Physics III (5)</li> </ul> <p><i>The AS-T2 Engineering Pre-Major offers flexibility to customize Specified Electives to any major course requirements and Remaining Credits to general education, university requirements, or courses to prepare students for their intended major. Below are suggestions, but not an exhaustive list of options. Please consult with your academic advisor.</i></p> |
|--|---|

#### Specified Electives ( 20-25 Credits ) + Remaining Credits (10-15)

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> CHEM&amp; 121 – Intro Chemistry (5)</li> <li><input type="checkbox"/> CHEM&amp; 162 General Chemistry II (5)</li> <li><input type="checkbox"/> CHEM&amp; 163 General Chemistry III (5)</li> <li><input type="checkbox"/> CHEM&amp; 131 – Intro to Organic/BioChem (5)</li> <li><input type="checkbox"/> CS&amp; 131 or 141 Computer Programming</li> <li><input type="checkbox"/> CS&amp; 132 or 142 Advanced Computer Programming</li> <li><input type="checkbox"/> ENGL&amp; 235 – Technical Writing (5)</li> <li><input type="checkbox"/> ENGR 110 Intro to Science and Engineering (3)</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> ENGR&amp; 111 or 112 Engineering Graphics</li> <li><input type="checkbox"/> MATH&amp; 141 – Pre-Calculus I (5)</li> <li><input type="checkbox"/> MATH&amp; 142 – Pre-Calculus II (5)</li> <li><input type="checkbox"/> MATH 220 – Linear Algebra (5)</li> <li><input type="checkbox"/> MATH 230 – Differential Equations (5)</li> <li><input type="checkbox"/> MATH&amp; 254 – Multivariable Calculus (5)</li> <li><input type="checkbox"/> Other preselected transfer courses that have been identified with your advisor</li> </ul> |
|---|---|

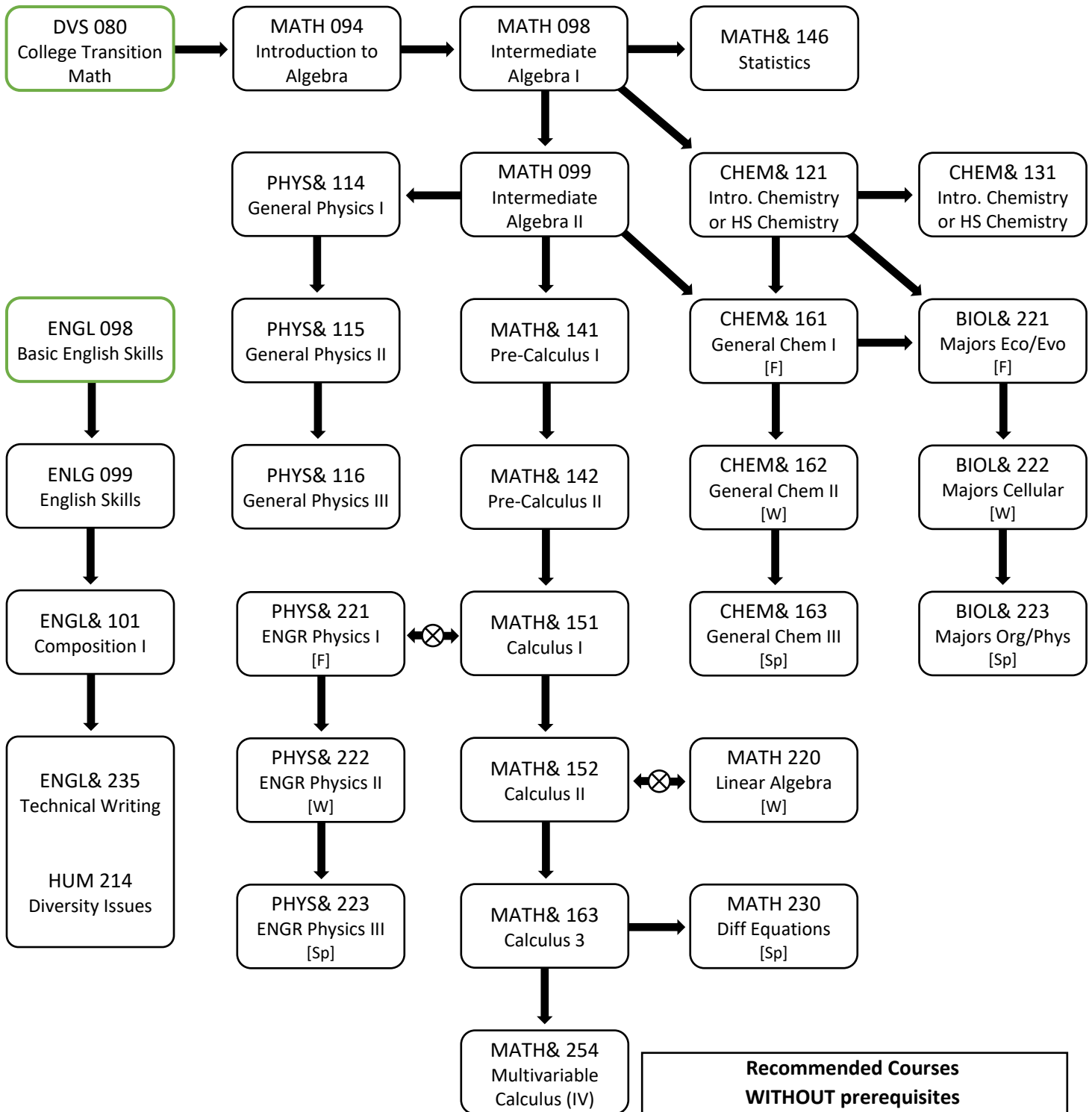
90 TOTAL DEGREE CREDIT

NAME:

SID:

## ENGINEERING PRE-MAJOR PREREQUISITE FLOW CHART

Start by talking with your assigned advisor to determine which courses to take first based on your placement scores.



**Recommended Courses  
WITHOUT prerequisites**

CMST& 220 – Public Speaking  
 ECON& 202 - Macroeconomics  
 ECON& 201 – Microeconomics  
 ENGR 110 – Intro to Science and Engineering  
 ENGR 111 or 112 – Engineering Graphics

**KEY**

STARTING POINT of SEQUENCE

PRE-requisite

CO-requisite

[F = fall W = winter Sp = spring Su = summer]

**STARTING WITH PLACEMENT AT  
BELOW PRE-CALCULUS  
QUARTERLY PROGRAM PLAN (YEAR ONE)**

FALL (15 credits)	WINTER (15 credits)	SPRING (15 credits)
ENGR 110 (3) ENGL 098/099 (5) MATH 094-099 (5) LIB 101 (2) or other 2 credit course	HU/SS (5) ENGL& 101 (5) MATH& 141 (5)	HU/SS (5) CHEM& 121 (5) MATH& 142 (5)
QUARTERLY PROGRAM PLAN (YEAR TWO)		
FALL (15 credits)	WINTER (15 credits)	SPRING (15 credits)
CHEM& 161 (5) MATH& 151 (5) Specified Elective (5)	CHEM& 162 (5) or Specified Elective MATH& 152 (5) HU/SS (5)	CHEM& 163 (5) or Specified Elective MATH& 163 or 146 (5) Specified Elective
EXAMPLE QUARTERLY PROGRAM PLAN (YEAR THREE)		
FALL (10 credits)	WINTER (10 credits)	SPRING (10 credits)
PHYS& 221 (5) MATH& 254 (5) or Specified Elective	PHYS& 222 (5) MATH 220 (5) or Remaining Credit	PHYS& 223 (5) MATH 230 (5) or Remaining Credit

**STARTING WITH PLACEMENT OF  
PRE-CALCULUS  
QUARTERLY PROGRAM PLAN (YEAR ONE)**

FALL ( 15 credits)	WINTER ( 15 credits)	SPRING ( 15 credits)
CHEM& 161 (5) ENGL& 101 (5) MATH& 141 (5)	CHEM& 162 (5) or Specified Elective Advisor Approved HU/SS (5) MATH& 142 (5)	CHEM& 163 (5) or Specified Elective MATH& 151 (5) Advisor Approved HU/SS (5)
QUARTERLY PROGRAM PLAN (YEAR TWO)		
FALL ( 15credits)	WINTER ( 15 credits)	SPRING ( 15 credits)
PHYS& 221 (5) MATH& 152 (5) ENGR 110 (3) or Remaining Credits Additional 2 Remaining Credits for 15 cr. total	PHYS& 222 (5) MATH& 163 or 146 (5) MATH 220 or Specified Elective	PHYS& 223 (5) MATH 230 or Remaining Credit Advisor Approved HU/SS (5)

**ADVISING**

FALL	WINTER	SPRING
<input type="checkbox"/> Fill out FAFSA or WAFSA for next year <input type="checkbox"/> Meet with your advisor  Last fall @ BBCC <input type="checkbox"/> Begin university admissions process <input type="checkbox"/> Research outside scholarships <input type="checkbox"/> Identify letters of recommendation	<input type="checkbox"/> Assess program plan with advisor <input type="checkbox"/> BBCC Foundation scholarship app  Last winter @ BBCC <input type="checkbox"/> Submit admissions app by Jan 15 <input type="checkbox"/> Complete university scholarship apps <input type="checkbox"/> Apply for BBCC graduation	<input type="checkbox"/> Assess program plan with advisor <input type="checkbox"/> Research summer employment  Last spring @ BBCC <input type="checkbox"/> Submit final transcripts to universities <input type="checkbox"/> Confirm with a university

