

**2020-2021 catalog**

**Student Name** \_\_\_\_\_ **TTU ID** \_\_\_\_\_ **Date** \_\_\_\_\_

**Email Address** \_\_\_\_\_ **ADVISING FOR** \_\_\_\_\_ (e.g., fall 2020)

**Students:** For courses taken at TTU, put the grade received next to the course.  
 For transfer credit, use T and the grade received (ex. TB).  
 For courses that you are currently enrolled in and expect to pass, use an R next to that course.  
**Advisors:** Indicate the courses to be taken in the following semester by circling the courses.

**FIRST YEAR**

<i>Fall</i>	<i>Spring</i>
ENGL 1301, Ess. Coll. Rhetoric _____	ENGL 1302, Adv. Coll. Rhetoric _____
MATH 1451, Calc. I _____	MATH 1452, Calc. II _____
CHEM 1307 & 1107, Prin. of Chem. I _____	ENGR 1320, Bio-Inspired Design _____
ENGR 1110 Engineering Seminar _____	ENGR 2392, Engr. Ethics (LPC) _____
ENGR 1330, Comp.Thinking/Data Sc. _____	PHYS 1408, Prin. of Phys. _____

**SECOND YEAR**

<i>Fall</i>	<i>Spring</i>
MATH 2450, Calc. III _____	MATH 3350, Adv. Math. for Engr. I _____
CHEM 1308 & 1108, Prin. Of Chem. II _____	CH E 3315, Fluid Mechanics _____
CH E 2310, Intro. to Chem. Proc. _____	CH E 2321, Chem. Eng. Thermo. I _____
PHYS 2401, Prin. of Phys. II _____	CHEM 3305 & 3105, O-Chem I _____

**THIRD YEAR**

<i>Fall</i>	<i>Spring (Apply for Grad School)</i>
CH E 2306, Expos. Tech. Info (Oral Comm) _____	CH E 3330, Eng. Mater. Sci. _____
CH E 3326, Heat Transfer _____	CH E 3232, Transport Lab. _____
CH E 3322, Chem. Eng. Thermo. II _____	CH E 3341, Mass-Trans. Oper. _____
IE 2324, Engr. Econ. Analysis(Soc/Behavior) _____	CH E 3323, Chem. Reaction Eng. _____

**FOURTH YEAR**

<i>Fall</i>	<i>Spring</i>
CH E 4232, Unit Oper. Lab. _____	CH E 4455, Chem. Proc. Des. & Sim. _____
CH E 4353, Process Control _____	CH E 4356, Process Safety _____
CH E 4322, CHE Review _____	CH E graduate core course _____
CH E graduate core course _____	CH E graduate core course _____
CH E graduate seminar _____	CH E graduate seminar _____

\*\*\*Research might be required for summer – consult faculty mentor\*\*\*

**FIFTH YEAR**

<i>Fall</i>	<i>Spring</i>
CH E graduate core course _____	CH E graduate elective _____
CH E graduate core course _____	CH E graduate elective _____
CH E graduate elective _____	CH E graduate elective _____
CH E research (3 hours) _____	CH E research (3 hours) _____
CH E graduate seminar _____	

**Additional Requirements for BS - Indicate the Course (ex. ART 1309) as well as the grade.**

American History (6 hrs) \_\_\_\_\_ Multicultural (3 hrs) \_\_\_\_\_  
 Political Science (6 hrs) \_\_\_\_\_ Creative Arts (3 hrs) \_\_\_\_\_  
 Chemistry Electives (6 hrs lecture, 1 hr. lab) \_\_\_\_\_  
 Int'l Experience - Completed \_\_\_\_\_ or Exempt \_\_\_\_\_ 18-hr rule \_\_\_\_\_ 3 engr repeats \_\_\_\_\_ 2 attempts per course \_\_\_\_\_  
 Foreign language – 2 yrs HS \_\_\_\_\_ or freshman-level courses \_\_\_\_\_

**Additional Comments:**

**Advisor Signature** \_\_\_\_\_

**Student Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**Return Form to Kristina Thompson (CHE 211) For Hold Removal**

## 2020-2021 catalog

### Polymer and Materials Minor

Minimum of six courses.

Two courses are required:

- \_\_\_\_\_ CH E 4344 Polym./Mat. Lab.
- \_\_\_\_\_ CH E 3330 Materials Sci.

Plus four courses chosen from the following list with two in another department:

- \_\_\_\_\_ CHEM 3306 Organic Chem. II
- \_\_\_\_\_ CHEM 4310 Polymer Chem.
- \_\_\_\_\_ CH E 4340 Polymer Proc.
- \_\_\_\_\_ CH E 4341 Polymerization Eng.
- \_\_\_\_\_ CH E 4342 Polymer Physics/Eng.
- \_\_\_\_\_ CH E 4345 Dyn. Polym. Nonlinear Fluids
- \_\_\_\_\_ CH E 4346 Polymer Viscoelasticity
- \_\_\_\_\_ CH E 4393 Colloid Science/Engr.
- \_\_\_\_\_ CH E 4394 Soft Materials
- \_\_\_\_\_ E E 4381 VLSI Processing
- \_\_\_\_\_ M E 3228 Materials & Mechanics Lab.

### Math Minor

Minimum of six courses.

Three courses are required:

- \_\_\_\_\_ MATH 1451 Calc. I
- \_\_\_\_\_ MATH 1452 Calc. II
- \_\_\_\_\_ MATH 2450 Calc. III

One elective is required for the BS Ch E degree:

- \_\_\_\_\_ MATH 3350 or 3354 Diff. Eqns. I

Plus six hours of approved courses (the following are recommended, others may be taken - see the Math Dept. for all options); for graduate school in Ch E, MATH 3351 or 4354 is recommended:

- \_\_\_\_\_ MATH 2360 Linear Algebra
- \_\_\_\_\_ MATH 3342 Math. Stat. for Eng.
- \_\_\_\_\_ MATH 3351 Higher Math for Eng. II
- \_\_\_\_\_ MATH 4310 Intro. Num. Anal. I
- \_\_\_\_\_ MATH 4354 Diff. Eqns. II

### Bioengineering Minor

(Catalog 2013-2014 and later)\*

Minimum of seven courses required.

Three courses are required:

- \_\_\_\_\_ BIOL 1403 Biology I (Fall)
- \_\_\_\_\_ CHEM 1308/1108 Prin. Chem II (Fall or Spr)

Plus one of the following:

- \_\_\_\_\_ BIOL 1404 Biology II (Spring)
- \_\_\_\_\_ CHEM 3306/3106 Organic Chem. II & Lab\*\*
- \_\_\_\_\_ MBIO 3400 Microbiology

Plus one of the following core bioengineering courses:

- \_\_\_\_\_ CH E 4363 Biochemical Engineering\*\*
- \_\_\_\_\_ ECE 5356 Bioinstrumentation/Biosensors

Plus two of the following (note must not include core course):

- \_\_\_\_\_ CH E 4363 Biochemical Engineering(if not used as core)
- \_\_\_\_\_ CH E 4364 Ch E Appl. in Biological Systems\*\*
- \_\_\_\_\_ CH E 4365 Biotransport\*\*
- \_\_\_\_\_ CH E 4366 Biomicrofluidics\*\*
- \_\_\_\_\_ CH E 4385 Bioprocess Control\*\*
- \_\_\_\_\_ CS 3368 Artificial Intelligence
- \_\_\_\_\_ CS 4379 Concurrent and Parallel Programming
- \_\_\_\_\_ CS 5393 Bioinformatics
- \_\_\_\_\_ ECE 4367 Image Processing
- \_\_\_\_\_ ECE 5351 Biomedical Signal Processing
- \_\_\_\_\_ ECE 5355 Genomic Signal Processing and Control
- \_\_\_\_\_ ECE 5356 Bioinstrumentation/Biosensors (if not used as core)
- \_\_\_\_\_ ENV E 3309 Environmental Engineering
- \_\_\_\_\_ ENV E 4385 Microbial Apps. in Envir. Engineering
- \_\_\_\_\_ ENV E 4399 Bio. Municipal Wastewater Treatment
- \_\_\_\_\_ IE 3361 Work Analysis and Design
- \_\_\_\_\_ IE 4361 Engineering Design for People
- \_\_\_\_\_ IE 4362 Industrial Ergonomics
- \_\_\_\_\_ IE 4363 Work and Product Safety Engineering
- \_\_\_\_\_ MBIO 3401 Principles of Microbiology (Fall or Spring):  
OR CHEM 3310 Molecular Biochemistry;  
OR BIOL 3320 Cell Biology

\*On catalog before 2013-2014, a statistics course is required: MATH 3342 or IE 3341 or CHE 4372

\*\* Denotes courses preferred for CH E Majors