2020-2021 and later catalogs TTU ID

Student Name		TTU ID Date				
Email	Address	ADVISING FOR (e.g., fall 202				
Students	DO NOT EDIT THE TEXT ON THIS FORM	eceived (ex. TB). ed in and expect to pass, use an R next to that course.				
IRST YEAR	Fall	Spring				
	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				
	ENOD 4440 E 0 ;	ENGR 2392, Engr. Ethics (LPC)				
	ENGR 1330, Comp.Thinking/Data Sc					
SECOND YEAR	Fall	Spring				
	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	Fall	Spring (Apply for Graduation)				
	CH E 2306, Expos. Tech. Info (Oral Comm)	Chemical Engineering elective				
	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.				
		CH E 3330, Eng. Mater. Sci.				
FOURTH YEAR	Fall	Spring				
	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	Chemical Engineering Elective				
	Chemical Engineering Elective					
Additio	nal Requirements - Indicate the Course					
America		Multicultural (3 hrs)				
		Creative Arts (3 hrs)				
Int'l Expe		18-hr rule 3 engr repeats 2 attempts per course				
	anguage – 2 yrs HS or freshman-lev	el courses				

2020-2021 catalog

Polymer and Materials Minor

Bioengineering Minor Minimum of seven courses required.

	willimum of seven courses require
Minimum of six courses.	

	Three co	Three courses are required:				
Two courses are required:			BIOL 1403 Biology I (Fall)			
CH E 4344	CHEM 1308/1108 Prin. Chem II (Fall or Spr)					
CH E 3330	Materials Sci.					
		Plus one	Plus one of the following:			
Plus four courses chosen from the following list with		BIOL 1404 Biology II (Spring)				
two in another department:		CHEM 3306/3106 Organic Chem. II & Lab**				
CHEM 3306 Organic Chem. II		MBIO 3400 Microbiology				
CHEM 4310 Polymer Chem.				<u> </u>		
CH E 4340		Plus one	of the follow	ing core bioengineering		
	Polymerization Eng.	courses		3 3		
CH E 4342	Polymer Physics/Eng.		CH E 4363	Biochemical Engineering**		
CH E 4345	Dyn. Polym. Nonlinear Fluids		ECE 5356	Bioinstrumentation/Biosensors		
CH E 4346	Polymer Viscoelasticity					
CH E 4393	Colloid Science/Engr.	Plus two	of the followi	ng (note must not include core course	e):	
CH E 4394	Soft Materials		CH E 4363	Biochemical Engineering(if not used	as core)	
E E 4381	VLSI Processing		CH E 4364	Ch E Appl. in Biological Systems**		
M E 3228	Materials & Mechanics Lab.		CH E 4365	Biotransport**		
			CH E 4366	Biomicrofluidics**		
			CH E 4385	Bioprocess Control**		
			CS 3368	Artificial Intelligence		
<u>N</u>	<u>llath Minor</u>		CS 4379	Concurrent and Parallel Programmin	ıg	
Minimum of six courses.			CS 5393	Bioinformatics		
Willimiditi of Six Cours	. 55.		ECE 4367	Image Processing		
Three courses are rec	ruired:		ECE 5351	Biomedical Signal Processing		
MATH 1451			ECE 5355	Genomic Signal Processing and Cor	ntrol	
MATH 1451			ECE 5356	Bioinstrumentation/Biosensors (if no		
				as co		
MATH 2450	Calc. III		ENV E 3309	Environmental Engineering	,	
One elective is requir	ad for the DC Ch E degree.	<u> </u>		Microbial Apps. in Envir. Engineering	1	
•	ed for the BS Ch E degree:			Bio. Municipal Wastewater Treatmer		
WATH 3330	or 3354 Diff. Eqns. I*			Engineering Design for People I		
Diversity become of some			IE 4306	Work and Product Safety Engr.		
Plus <u>six hours</u> of apprecommended, others			Principles of Microbiology (Fall or Sp	rina):		
Dept. for all options); for graduate school in Ch E,				3310 Molecular Biochemistry;	3//	
MATH 3351 or 4354 is recommended:			OR BIOL 3320 Cell Biology			
MATH 2360	•			3,		
MATH 3342	Math. Stat. for Eng.					
MATH 3351	Higher Math for Eng. II					
MATH 4310 Intro. Num. Anal. I		** Denot	** Denotes courses preferred for CH E Majors			
MATH 4354 Diff. Eqns. II		Dellot				

^{*}If Dif Eq is from community college, you must take upper-level courses for remaining 6 hours.