2016-2017 through 2019-2020 catalogs TTU ID

Stude	ent Name	TTU ID	[Date		
Emai	I Address		ADVISING FOR	IG 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	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		CHEM 1308/1108 Prin. of Chem. II			
	CH E 1121 Freshman Seminar		CH E 1305 Engr. Analysis			
			PHYS 1408, Prin. of Phys.			
SECOND YEAR	Fall		Spring			
	MATH 2450, Calc. III		MATH 3350, Adv. Math. for Engr. I			
	CHEM 3305/3105 O-Chem I		CH E 3315, Fluid Mechanics			
	CH E 2410, Intro. to Chem. Proc.		CH E 2421, Chem. Eng. Thermo. I			
	PHYS 2401, Prin. of Phys. II		ENGR 2392 Engr. Ethics (LPC)			
THIRD YEAR	Fall		Spring (Apply for Grad Sch	hool)		
	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	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		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 b	e required for sun	nmer – consult faculty mento	r		
FIFTH YEAR	Fall		Spring			
	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					
Additio	onal Requirements for BS - Indicate the C	Course (ex. AR	T 1309) as well as the gr	ade.		
American History (6 hrs)		N	/lulticultural (3 hrs)			
Political Science (6 hrs)		C	Creative Arts (3 hrs)			
Chemis	stry Electives (6 hrs lecture, 1 hr. lab)					
	erience - Completed or Exempt					
Foreign	language – 2 yrs HS or freshman-leven					
Advis	sor Signature	– Nate				

Polymer and Materials Minor

2016-2017 through 2019-2020 catalogs

Bioengineering Minor

(Catalog 2013-2014 and later)*

Minimum of seven courses required.

Minimum of six courses.		Three courses are required:				
		BIOL 1403 Biology I (Fall)				
Two courses are required:			CHEM 1308/1108 Prin. Chem II (Fall or Spr)			
CH E 4344	Polym./Mat. Lab.					
CH E 3330	Materials Sci.	Plus one of the following:				
		BIOL 1404 Biology II (Spring)				
Plus four courses chosen from the following list with two in another department:			CHEM 3306/	3106 Organic Chem. II & Lab**		
CHEM 3306 Organic Chem. II			MBIO 3400 Microbiology			
CHEM 4310 Polymer Chem.						
CH E 4340	-	Plus one of the following core bioengineering courses:				
CH E 4341	Polymerization Eng.		CH E 4363	Biochemical Engineering**		
CH E 4342	Polymer Physics/Eng.		ECE 5356	Bioinstrumentation/Biosensors		
CH E 4345	Dyn. Polym. Nonlinear Fluids					
CH E 4346	Polymer Viscoelasticity	Plus two		ng (note must not include core course):		
CH E 4393	Colloid Science/Engr.			Biochemical Engineering(if not used as core)		
CH E 4394	Soft Materials		CH E 4364	Ch E Appl. in Biological Systems**		
E E 4381	VLSI Processing		CH E 4365	Biotransport**		
M E 3228	Materials & Mechanics Lab.		CH E 4366	Biomicrofluidics**		
			CH E 4385	Bioprocess Control**		
			CS 3368	Artificial Intelligence		
			CS 4379	Concurrent and Parallel Programming		
<u>N</u>	<u>lath Minor</u>		CS 5393	Bioinformatics		
				Image Processing		
Minimum of six course		ECE 5351	Biomedical Signal Processing			
-			ECE 5355	Genomic Signal Processing and Control		
Three courses are rec	•		ECE 5356	Bioinstrumentation/Biosensors (if not used		
MATH 1451				as core)		
MATH 1452				Environmental Engineering		
MATH 2450	Calc. III			Microbial Apps. in Envir. Engineering		
			ENV E 4399	Bio. Municipal Wastewater Treatment		
One elective is required for the BS Ch E degree:			IE 3361	Work Analysis and Design		
MATH 3350	or 3354 Diff. Eqns. I		IE 4361	Engineering Design for People		
			IE 4362	Industrial Ergonomics		
Plus six hours of approved courses (the following are recommended, others may be taken - see the Math			IE 4363	Work and Product Safety Engineering		
Dept. for all options);		MBIO 3401	Principles of Microbiology (Fall or Spring):			
MATH 3351 or 4354 is recommended:			OR CHEM 3	310 Molecular Biochemistry;		
MATH 2360	Linear Algebra		OR BIOL 33	20 Cell Biology		
MATH 3342 Math. Stat. for Eng.						
MATH 3351 Higher Math for Eng. II			*On catalog before 2013-2014, a statistics course is			
MATH 4310 Intro. Num. Anal. I		required	i: MATH 3342	2 or IE 3341 or CHE 4372		
MATH 4354 Diff. Eqns. II						
		** Deno	tes courses pr	eferred for CH E Majors		