

CHE/ACHE Electives: Major Electives, Engineering Electives and Free electives***Disclaimer: Please refer to the Page 2 for Exempted Courses, and Page 3 for Either/Or Courses***

Major Electives (400-499)	Engineering Electives	Free Electives
CHE 4XX:499	AE 100:499	AE 100:499
	CE 100:499	CE 100:499
	CHE 100:499	CHE 100:499
	EE 100:499	EE 100:499
	ME 100:499	ME 100:499
	MSE 100:499	MSE 100:499
	PETE 100:499	PETE 100:499
	ISE 100:499	ISE 100:499
	CIE 100:499	CIE 100:499
	BIOE 100:499	BIOE 100:499
	COE 100:499	COE 100:499
	SWE 100:499	SWE 100:499
	ARE 100:499	ARE 100:499
		ICS 100:499
		ARC 100:499
		CP 100:499
		ACCT 100:499
		ECON 100:499
		FIN 100:499
		MIS 100:499
		OM 100:499
		BUS 100:499
		ENTR 100:499
		HRM 100:499
		MGT 100:499
		MKT 100:499
		CPG 100:499
		GEOL 100:499
		GEOP 100:499
		CHEM 100:499
		BIOL 100:499
		AS 100:499
		MATH 100:499
		STAT 100:499
		PHYS 100:499
		GEO 100:499
		GS 100:499

Restricted Courses**Disclaimer: The Students Are Not Allowed to Take the Following Courses from Other Departments Due to****High Similarity with the CHE Core Courses**

Course Code	Title	CHE Course Code	CHE Course Title
AE 211	Fundamentals of Thermo-Fluids	CHE 204	Fluid Mechanics
AS 322	Numerical Methods for Actuaries	CHE 360	Numerical Methods in Chemical Engineering
CE 230	Engineering Fluid Mechanics	CHE 204	Fluid Mechanics
CE 318	Numerical & Statistical Methods in Civil Engineering	CHE 360	Numerical Methods in Chemical Engineering
CHEM 212	Physical Chemistry I: Chemical Thermodynamics	CHE 303	Chemical Engineering Thermodynamics
CHEM 315	Chemical Kinetics and Reaction Mechanisms	CHE 402	Kinetics and Reactor Design
CIE 418	Industrial Process Control	CHE 401	Process Dynamics and Control
CIE 305	Linear Control Systems	CHE 401	Process Dynamics and Control
CIE 301	Numerical Methods	CHE 360	Numerical Methods in Chemical Engineering
EE 315	Prob. Methods for EE	STAT 319	Prob.& Stat. for Engineers
ISE 307	Eng. Economic Analysis	CHE 405	Process Design and Economics
ISE 205	Eng. Probability and Statistics 3	STAT 319	Prob.& Stat. for Engineers
MATH 371	Intro. to Numerical Computing	CHE 360	Numerical Methods in Chemical Engineering
ME 413	Systems Dynamics and Control	CHE 401	Process Dynamics and Control
ME 205	Materials Science	ME 207 or MSE 207	Materials Science for CHE
ME 203	Thermodynamics I	CHE 200	Principles of Chemical Engineering
ME 203	Thermodynamics I	CHE 303	Chemical Engineering Thermodynamics
ME 204	Thermodynamics II	CHE 303	Chemical Engineering Thermodynamics
ME 311	Fluid Mechanics	CHE 204	Fluid Mechanics
ME 315	Heat Transfer	CHE 300	Heat Transfer
ME 440	Convective Heat and Mass Transfer	CHE 300	Heat Transfer
ME 440	Convective Heat and Mass Transfer	CHE 304	Mass Transfer
MSE 201	Introduction to Materials	ME 207 or MSE 207	Materials Science for CHE
PHYS 373	Introduction to Computational Physics	CHE 360	Numerical Methods in Chemical Engineering
PHYS 430	Thermal and Statistical Physics	CHE 303	Chemical Engineering Thermodynamics
STAT 201	Intro. to Statistics	STAT 319	Prob.& Stat. for Engineers

Cross Department Courses (Elective Courses)

Disclaimer: The Students Can EITHER take CHE Elective Course OR Other's Department Course. The students should not take two similar courses.

Course Code	Title	CHE Course Code	CHE Course Title
CE 471	Water and Wastewater: Treatment and Reuse	CHE 471	Process Water Pollution Control
CHEM 463	Industrial Catalysis	CHE 440	Catalysis & Catalytic Processes
CHEM 363	Industrial Catalysis	CHE 449	Catalysis & Catalytic Processes
CHEM 428	Separation Science and Applications	CHE 430	Rate-Based Separation Processes
CHEM 451	Polymer Chemistry	CHE 463	Polymer Technology
CHEM 454	Chemistry of Corrosion	CHE 472	Corrosion
CHEM 458	Materials Chemistry	CHE 477	Materials Evaluation and Selection
CHEM 461	Fundamentals of Petrochemical Industry	CHE 462	Petrochemical Industries
CIE 421	Simulation and Control for Process Industry	CHE 456	Industrial Process Control
GEOL 447	Energy and the Environment	CHE 480	Energy Technology
ISE 321	Optimization Methods	CHE 465	Process Integration and Optimization
ME 216	Materials Science and Engineering	CHE 477	Materials Evaluation and Selection
ME 423	Energy Conversion	CHE 480	Energy Technology
ME 441	Energy and the Environment	CHE 480	Energy Technology
ME 437	Design and Rating of Heat Exchangers	CHE 432	Principles of Heat Exchanger Design
ME 471	Mechanical Metallurgy	CHE 472	Corrosion
ME 448	Engineering of Nuclear Reactors	CHE 448	Engineering of Nuclear Reactors
ME 472	Corrosion Engineering	CHE 472	Corrosion
ME 460	Thermal Desalination Systems	CHE 473	Desalination
MSE 418	Corrosion Engineering	CHE 472	Corrosion
PHYS 261	Energy	CHE 480	Energy Technology