

## Cognates taken by 1st year students Fall 2020-2022

All ChE graduate students entering without a previous graduate degree must take at least three credits outside the ChE department. Students typically take cognate courses within their research interests. These cognate courses must be in a technical area, and are usually satisfied at the graduate level, though 400 level courses can also satisfy cognate requirements. Students may be able to use a ChE course as a cognate course if it is cross-listed with another department. The list of cognate courses that were taken by our graduate students during the past two years are listed below.

BA	518	Business of Biology
BIOINF	524	Found BIOINF
BIOINF	527	Intr Bioinf&Comp Bio
BIOINF	540	Math of Bio Networks
BIOINF	580	Intro Sig Proc
BIOLCHEM	515	Intr Biochem
BIOLCHEM	690	Biochem Reg Mechanis
BIOMEDE	490	Dir Research
BIOMEDE	500	Biomd Eng Sem
BIOMEDE	503	Statistics for BME
BIOMEDE	504	Cell Biotech
BIOMEDE	551	Prot & Metabol Inf
BIOMEDE	599	Spec Topics
BIOSTAT	521	Appl Biostat
CDB	530	Cell Biology
CDB	550	Histology
CEE	482	Env Microbiology
CEE	563	Air Qual Engr Fund
CEE	565	Sem Energy Tech Pol
CHEM	525	Chem Biol I
CHEM	648	Anl Spectro&Imaging
CHEM	649	Electrochemistry
CMPLXSYS	511	Theory of CMPLXSYS
CMPLXSYS	530	Comp Modeling
CMPLXSYS	530	Comp Modeling
CMPLXSYS	535	Thry Soc Tech Netwks
CMPLXSYS	541	Nonlinear
EECS	402	Prog for Sci&Eng
EECS	409	Data Science Sem
EECS	505	Comp DS & ML
EECS	509	BIOMEMS
EECS	514	Advanced MEMS
EECS	517	Phys Proc in Plas
EECS	520	Solid State Physics
EECS	524	Org Elec Devices
EECS	528	M-Elec Proc Tech
EECS	537	Classical Optics
EECS	545	Machine Learn (CSE)
EECS	587	Parallel Computing
EECS	598	Special Topics
ENGR	570	Scientific Computing
ENSCEN	880	Sem En&Wtr Res Eng
ENTR	407	Entrepreneurship Hr

ENTR	500	Intro to Innovation
ENTR	550	Interpersonal Skills
ENTR	599	Spec Topics Entr
EPID	506	Intro Intrnl Hlth
ESENG	501	Sem Energy Tech Pol
ESENG	567	Energy Infrastr Sys
HS	650	Predictive Analytics
INTMED	409	Invest Exp Bacteriol
MACROMOL	512	Phys Polymer
MACROMOL	530	Adv Function Poly
MATH	463	Math Model Biol
MATH	471	Intr Num Meth
MATH	540	Math of Bio Networks
MATH	635	Differential Geom
MATSCIE	512	Phys Polymer
MATSCIE	517	Adv Function Poly
MATSCIE	550	Fund Mat Sci
MATSCIE	593	MSE Special Topics
MATSCIE	890	Colloq in Mat Sci
MCDB	411	Protein Structure
MCDB	436	Human Immunology
MCDB	472	Bld a Synthetic Cell
MCDB	800	Biology Seminar
MECHENG	523	Comp Fluid Dyn I
MECHENG	599	Spec Topics in M E
MFG	501	Topics Global Opns
MICRBIOL	540	Immunology
MICRBIOL	612	Microb Informatics
MICRBIOL	615	Viral Pathogen I
MICRBIOL	640	Mole&Cell Immun
NERS	570	Scientific Computing
NERS	571	Plas-Phys I
PHARMSCI	407	Sensors
PHARMSCI	700	Pharmacokinetics
PHARMSCI	702	Biopharmaceutics
PHARMSCI	705	Adv Drug Delivery
PHARMSCI	706	Biopharm Drugs
PHARMSCI	717	Biopharm Eng
PHARMSCI	760	Adv Pharmacok&Bioph
PHARMSCI	838	Sem in Pharmsci
PHARMACOL	601	Quant Prin Pharm
PHYSICS	514	Comp Phys
PHYSICS	514	Comp Phys
PHYSICS	629	Complex Fluids
PIBS	503	Res Respon&Ethics
PIBS	504	Rigor in Research
PIBS	550	Biomed Entrepren I
SI	506	Programming I
SI	618	Data Man & Analysis
SPACE	581	Space Pol&Manage
STATS	426	Intro to Theo Stat
STATS	513	Regress&Data Analys
TCHNCLCM	610	Tech & Prof Comm