

Technical Electives 2017-18**(Standard Option)**

Course Title	Course No.	Course Title	Course No.
Statics	CoE 2001	Research (Freshman & Sophomore)	CHBE 2699
Deformable Bodies	CoE 3001	* Chem. Eng. in Nanoscale Sys.	ChBE 4020
Microelectronics & Nanotech.Revol.	CoE 3002	* Microelec Fabrication	CHBE 4050
Low Speed Aerodynamics	AE 2020	** Bioprocess Engineering	ChBE 4310
Introduction to Mechanics	AE 2120	* Product Design	ChBE 4535
Micro-renewable Energy Syst.	AE 4883	Research (Junior & Senior)	CHBE 4699
Intro. Bioengr. Stats.	BMED 2400	* Microfluidics/BioMEMS	ChBE 4710
Biomedical Systems and Modeling	BMED 3510	* Pulp & Paper Manufacturing	ChBE 4720
Intro. To Biomechanics	BMED 3400	* Emerging Tech in Forest Bioproducts	ChBE 4730
Intro. To Biomaterials	BMED 4751	* Biofluid Mechanics	ChBE 4757
Dynamics	CEE 2040	* Electrochem Energy Storage and Conversion	ChBE 4759
Environ. Engr. Principles	CEE 2300	* Biocatalysis	ChBE 4760
Environ. Engr. Systems	CEE 4300	* Drug Design, Development & Delivery	ChBE 4765
Air Pollution Engr.	CEE 4330	Pulp & Paper Lab	ChBE 4767
Environ. Impact Assessment	CEE 4620	* Polymer Science & Engineering I	ChBE 4775
Fund. Of Digital System Design	ECE 2020	* Polymer Science & Engineering II	ChBE 4776
Intro. to Signal processing	ECE 2026	* Mechanical Behavior of Composites	ChBE 4791
Electromagnetics	ECE 3025	* Composite Materials & Processes	ChBE 4793
Microelectronic Circuits	ECE 3040	* Composite Materials & Manufacturing	ChBE 4794
Circuits and Microelectronics Lab	ECE 3043		
Energy Systems	ECE 3072	* Adv Data Anal for ChBE	ChBE 4803
Semiconductor Devices	ECE 3080	* Advanced Process Systems Engineering	ChBE 4803
Circuits & Electronics	ECE 3710	* Aerosol Chem & Air Quality	ChBE 4803
Instrum & Electronic Lab	ECE 3741	* Biomolecular Eng. Of the Cell	ChBE 4803
Electromagnetic & Microwave Appl.	ECE 4350	* Biosurfaces	ChBE 4803
Probability w/Applications	ISyE 2027	* Cellular Engineering	ChBE 4803
Basic Statistical Methods	ISyE 2028	* Chem Eng App in Materials Production	ChBE 4803
Engineering Economy	ISyE 3025	* Chem Eng of Energy Systems	ChBE 4803
Methods of Quality Improvement	ISyE 3039	* Colloid and Surfaces	ChBE 4803
Stochastic Manufact & Svc.	ISyE 3232	* Complex Fluids	ChBE 4803
Matls Characterization	MSE 2021	* Energy Tech: Options & Policy	ChBE 4801
Mech. Behavior of Materials	MSE 3005	* Fund of Sust Chem Industry	ChBE 4803
Intro. Poly/Fiber Enterprise	MSE 3720	* Nanoporous Materials	ChBE 4803
Poly. Solns & Surfaces	MSE 4140	* Protein Engineering	ChBE 4803
Introduction to Biomaterials	MSE 4751	Tech Leadership Professionalis	ChBE 4803
Fund. of Nanomater.& Struct.	MSE 4330		
Biologically Inspired Design	MSE 4740	* Tissue Engineering	ChBE 6794
Dynamics of Rigid Bodies	ME 2202		
Design and Manufacture	ME 3210		
Radiation Physics	NRE 3301		
Plasma Phys. & Fusion Engr.	NRE 4610		

* These CHBE classes can be applied as CHBE or Technical Engineering electives.

** CHBE 4310 is a required class for Biotechnology concentration. It can be a CHBE or Engineering Elective for standard option. You are required to take 6 total hours of technical engineering electives in the Standard option.

Up to 3 credit hours of technical engineering electives may be taken at the 2000 level. At least 3 credit hours must be taken at the 3000 level or higher.

Undergraduate research (ChBE 2699 and/or ChBE 4699) may be used as engineering electives in standard option; research in other engineering programs (e.g. BME 2699 or 4699) may also be counted as engineering electives. Please see your academic advisor for additional rules governing research.

Any xxxx4801 or xxxx4803 Special Topics course must be approved by the department advisor.

No two courses will be allowed towards satisfying the degree requirements if there is more than 20% overlap in course content.