

**Georgia Tech
Engineering Electives 2023-24**

**School of Chemical & Biomolecular Engineering
(Standard Option)**

Course Title	Course No.	Course Title	Course No.
Statics	COE 2001	Research (FR & SO); any School within CoE	XXXX 2699
Deformable Bodies	COE 3001	* Chem. Eng. in Nanoscale Sys.	CHBE 4020
Microelectronics & Nanotech.Revol.	COE 3002	* Chemical Engineering of Energy Systems	CHBE 4030
Data Analytics for Engineers	COE 3803	* Microelec Fabrication	CHBE 4050
Low Speed Aerodynamics	AE 2020	** Bioprocess Engineering	CHBE 4310
Introduction to Mechanics	AE 2120	* Product Design	CHBE 4535
Intro. Bioengr. Stats.	BMED 2400	* Complex Fluids	CHBE 4610
Biomedical Systems and Modeling	BMED 3520	Research (JR & SR); any School within CoE	XXXX 4699
Intro. to Biomechanics	BMED 3400	* Microfluidics & Bio-Applications	CHBE 4710
Intro. to Biomaterials	BMED 4751	* Pulp & Paper Manufacturing	CHBE 4720
Dynamics	CEE 2040	* Emerging Tech in Forest Bioproducts	CHBE 4730
Environ. Engr. Principles	CEE 2300	* Fundamentals of the Sustainable Chemical Industry	CHBE 4743
Civil Engr. Systems	CEE 3000	* Data Analytics for Chemical Engineers	CHBE 4745
Environ. Engr. Systems	CEE 4300	* Data-Driven Process Systems Engineering	CHBE 4746
Air Pollution Engr.	CEE 4330	* Biofluid Mechanics	CHBE 4757
Environ. Impact Assessment	CEE 4620	* Electrochem Energy Storage and Conversion	CHBE 4759
Fund. Of Digital System Design	ECE 2020	* Biocatalysis	CHBE 4760
Intro. to Signal processing	ECE 2026	* Protein Engineering	CHBE 4762
Electromagnetics	ECE 3025	* Drug Design, Development & Delivery	CHBE 4765
Microelectronic Circuits	ECE 3040	Pulp & Paper Lab	CHBE 4767
Circuits and Microelectronics Lab	ECE 3043	* Polymer Science & Engineering I	CHBE 4775
Energy Systems	ECE 3072	* Polymer Science & Engineering II	CHBE 4776
Semiconductor Devices	ECE 3080	* Biosystems Analysis	CHBE 4782
Circuits & Electronics	ECE 3710	* Mechanical Behavior of Composites	CHBE 4791
Instrum & Electronic Lab	ECE 3741	* Composite Materials & Processes	CHBE 4793
Electromagnetic & Microwave Appl.	ECE 4350	* Composite Materials & Manufacturing	CHBE 4794
Probability w/Applications	ISYE 2027	Energy Technology: Options & Policy	CHBE 4801
Engineering Economy	ISYE 3025	* Aerosol Chemistry & Air Quality	CHBE 4803
Basic Statistical Methods	ISYE 3030	* Biorefining	CHBE 4803
Methods of Quality Improvement	ISYE 3039	* Biosurfaces	CHBE 4803
Statistics & Applications	ISYE 3770	* Chem. Engin. Applications in Materials Production	CHBE 4803
Stochastic Manufact & Svc.	ISYE 3232	* Colloids and Surfaces	CHBE 4803
Matls Characterization	MSE 2021	* Molecular Modeling	CHBE 4803
Mech. Behavior of Materials	MSE 3005	* Nanoporous Materials	CHBE 4803
Materials Science & Eng of Sports	MSE 3300	* Biomolecular Systems Engineering	CHBE 4803
Introduction to Biomaterials	MSE 4751	Tech. Leadership, Professionalism and Decision-making	CHBE 4803
Fund. of Nanomater.& Struct.	MSE 4330	* Prep. & Reactions - Polymers	CHBE 6750
Biologically Inspired Design	MSE 4740	* Advanced Biomaterials	CHBE 6777
Dynamics of Rigid Bodies	ME 2202	* Cellular Engineering	CHBE 6782
Design and Manufacture	ME 3210	* Tissue Engineering	CHBE 6794
Radiation Physics	NRE 3301		
Plasma Phys. & Fusion Engr.	NRE 4610		

* These CHBE classes can be applied as CHBE or Engineering Electives.

** CHBE 4310 is a required class for Biotechnology concentration; it can be a CHBE or technical engineering elective for standard option.

You are required to take 6 total hours of Engineering Electives in the Standard Option.

Up to 3 credit hours of 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 (XXXX 2699 and/or XXXX 4699) may be used as Engineering Electives in Standard Option if the research is performed within the College of Engineering, XXXX = CHBE/BME/ME/MSE/etc. Please see your academic advisor for additional rules governing research.

Any XXXX 480X Special Topics course (e.g. CHBE 4801 or MSE 4803) other than the specific course titles listed above must be approved as Engineering Elective by the Associate Chair for Undergraduate Studies in ChBE.

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

Approval of other College of Engineering courses as Engineering Elective will be at the discretion of the Associate Chair for Undergraduate Studies based on written request that includes a course syllabus.