

TECH Electives

Technical Electives are any upper division (300 level or higher) in any engineering or science designation. Humanities and Economics courses do not fulfill this requirement with the exception of EBGN321: Engineering Economics.

CBEN Electives

6 hours are required with 3 hours being at the 400-level. Not all CBEN courses count as CBEN electives, please see list below.

Flexibility

CHGN351 – Physical Chemistry: This can alternatively be taken in senior year fall semester (co-requisite for CBEN418).

CBEN403 Process Control: This can alternatively be taken in senior year.

These two courses can be taken in senior year if one wants to create space in schedule to take electives in the junior year.

BIOLOGICAL ENGINEERING TRACK REQUIREMENTS

CHGN428: Biochemistry – Replaces CBEN/CHGN (>300) Elective

CBEN360: Bioprocess Engineering - Replaces CBENXXX (>300) Elective

6 credits TECH electives chosen from approved list of BIO TECH Electives

PROCESS ENGINEERING TRACK REQUIREMENTS

CBEN365: Introduction to Chemical Engineering Practice - Replaces CBENXXX (>300) Elective

6 credits TECH electives replaced with EBGN321: Engineering Economics and 3 credits from list of approved PROCESS TECH electives.

CBEN4XX: The required CBEN 400-level elective fulfilled from list of approved PROCESS electives.

Lists of Approved Courses: The lists below are periodically updated, if you have questions about a course that does not appear below please stop by the main office.

Approved CBEN Electives that

CBEN310	INTRODUCTION TO BIOMEDICAL ENGINEERING	3.0
CBEN315	INTRODUCTION TO ELECTROCHEMICAL ENGINEERING	3.0
CBEN340	COOPERATIVE EDUCATION	1-3
CBEN360	BIOPROCESS ENGINEERING	3.0
CBEN365	INTRODUCTION TO CHEMICAL ENGINEERING PRACTICE	3.0
CBEN368.	INTRODUCTION TO UNDERGRADUATE RESEARCH.	\1.0
CBEN398	SPECIAL TOPICS	1-6
CBEN399	INDEPENDENT STUDY	1-6
CBEN401	PROCESS OPTIMIZATION	3.0

CBEN408	NATURAL GAS PROCESSING	3.0
CBEN409	PETROLEUM PROCESSES	3.0
CBEN415	POLYMER SCIENCE AND TECHNOLOGY	3.0
CBEN416	POLYMER ENGINEERING AND TECHNOLOGY	3.0
CBEN420	MATHEMATICAL METHODS IN CHEMICAL ENGINEERING	3.0
CBEN430	TRANSPORT PHENOMENA	3.0
CBEN432	TRANSPORT PHENOMENA IN BIOLOGICAL SYSTEMS	3.0
CBEN435	INTERDISCIPLINARY MICROELECTRONICS	3.0
CBEN440	MOLECULAR PERSPECTIVES IN CHEMICAL ENGINEERING	3.0
CBEN469	FUEL CELL SCIENCE AND TECHNOLOGY	3.0
CBEN470	INTRODUCTION TO MICROFLUIDICS	3.0
CBEN472	INTRODUCTION TO ENERGY TECHNOLOGIES	3.0
CBEN480	NATURAL GAS HYDRATES	3.0
CBEN450	HONORS UNDERGRADUATE RESEARCH	1-3
CBEN498	SPECIAL TOPICS	1-6
CBEN499	INDEPENDENT STUDY	1-6

The following CBEN bio-related course DO NOT have sufficient engineering content and therefore DO NOT satisfy CBEN elective requirements

CBEN110	FUNDAMENTALS OF BIOLOGY I	4.0
CBEN120	FUNDAMENTALS OF BIOLOGY II	4.0
CBEN304/5	ANATOMY AND PHYSIOLOGY.	3.0
CBEN306/9	ANATOMY AND PHYSIOLOGY: BONE, MUSCLE, AND BRAIN.	3.0
CBEN311	INTRODUCTION TO NEUROSCIENCE.	3.0
CBEN320	CELL BIOLOGY AND PHYSIOLOGY.	3.0
CBEN321	INTRO TO GENETICS	4.0
CBEN322	BIOLOGY OF BEHAVIOR	3.0
CBEN324	INTRODUCTION TO BREWING SCIENCE.	3.0
CBEN325	MCAT REVIEW	3.0
CBEN411	NEUROSCIENCE, MEMORY, AND LEARNING	3.0
CBEN412	INTRODUCTION TO PHARMACOLOGY	3.0
CBEN431	IMMUNOLOGY FOR ENGINEERS AND SCIENTISTS	3.0
CBEN454	APPLIED BIOINFORMATICS	3.0

Approved BIO TECH Electives

CHGN429	BIOCHEMISTRY II	3.0
CHGN462	MICROBIOLOGY	3.0
CBEN320	CELL BIOLOGY AND PHYSIOLOGY	3.0
CBEN321	INTRO TO GENETICS	4.0
CBEN324	INTRODUCTION TO BREWING SCIENCE	3.0
CBEN412	INTRODUCTION TO PHARMACOLOGY	3.0
CBEN431	IMMUNOLOGY FOR ENGINEERS AND SCIENTISTS	3.0
CBEN432	TRANSPORT PHENOMENA IN BIOLOGICAL SYSTEMS	3.0
CBEN454	APPLIED BIOINFORMATICS	3.0
PHGN433	BIOPHYSICS	3.0

Approved PROCESS TECH Electives

CBEN401	PROCESS OPTIMIZATION	3.0
CBEN408	NATURAL GAS PROCESSING	3.0
CBEN409	PETROLEUM PROCESSES	3.0
CBEN3XX	Process Simulation	3.0
CBEN3XX	Bioenergy Tech	3.0
CBEN3XX	Distillation Plant Design	3.0
EBGN553	PROJECT MANAGEMENT	3.0