CENG

Cohort Year 2022 (For Direct Entry students admitted to Year 2 in 2023)

Electives (9 credits)

CENG Electives x 3 chosen from:

Area 1: Chemical Process Design

BIEN 4110 Regulatory Science and Engineering
CENG 4130 Plant Design and Economics
CENG 4140 Energy Resources, Conversions and Technologies
CENG 4620 Bioproducts and Processing
CENG 4630 Food Processing Technology
CENG 4670 Pharmaceutical Engineering
CENG 4710 Environmental Control

Area 2: Chemical Product Design

CENG 4160 Prototype Development for Chemical Processes and Products
CENG 4540 Nanomaterials and Applications in ChE
CENG 4640 Biomolecular Engineering
CENG 4650 Biomaterials, Drug Delivery and Tissue Engineering
CENG 4950 CHEM-E-CAR (Pre-approved elective)
CHEM 2311 Analytical Chemistry

Final Year Project (6 credits)

[6] CENG4920 (Captsone)
Or [6] CENG4930* (Research)
Or [6] CENG4940 (Co-op)

Research Option (6 credits)

[3] CENG4980 and
[3] CENG4980 or any 5000-level course in CENG or BIEN)

*Students taking the Research Option must take CENG4930

Lab (4 credits)

Chemical & Environmental Engg Lab
[4] CENG3950

Credit Requirement

CENG Major: 95-101
Common Core: 30
(9 credits of double-counting allowed)

Pre-requisite →
Co-requisite - - - - - →

Fall Offering
Spring Offering
Year Long
Offering in both semester

Introduction (6 credits)

Intro. to CBE [3] CENG1000
Or
Materials [3] CENG1500

Intro to Envr. Engg. [3] CENG1700
Or
Intro to BME [3] BIEN1010
Or
Biotechnology [3] CENG1600

ChE Design (14 credits)

Integrated Process and Product Design [5] CENG3150
Process Dyn. & Control [3] CENG3110
Process & Product Design Principles [3] CENG2110
Modeling for Chemical & Biological Engineering [3] CENG2310

ChE Science (18 credits)

Separation Process [3] CENG3210
Transport II [3] CENG3220
Transport I [3] CENG2220
Data Science for Molecular Engineering [3] CENG3330
Reaction and Reactor Engg. [3] CENG3230
CBE Thermo. [3] CENG2210

Others (6 credits)

Industrial Training (modules throughout 4 years) [0] CENG1980
Academic & Professional Development [0] CENG1010 & CENG4020
Tech. Comm. II [3] LANG4035
Engineering Seminars [0] ENGG1010 & ENGG2010
Tech. Comm. I [3] LANG2030

Math. & Science (24-28 credits)

Intro to Comp [3-5] COMP1021 or COMP1022P or COMP2011 or COMP2012H
Multivariable Calculus [3] MATH2011
General Phys. I [3] PHYS1112/PHYS1312
Organic Chem. [3] CHEM2111
Org Chem. Lab [1] CHEM2155
Biology [3] BIEN2410/BIEN2610 /LIFS1901
Calculus I [3-4] MATH1012/1013/ 1023
Calculus II [3] MATH1014/1024
Or
Acc. Calculus [4] MATH1020
General Chem. I [3] CHEM1020
General Chem. Lab [1] CHEM1050

Updated on: 29-June-2023