Electives (12 credits)
- CENG Electives x 4 chosen from:
  - Area 1: Chemical Process Design
    - 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 4540 Nanomaterials and Applications in ChemE
    - CENG 4640 Biomolecular Engineering
    - CENG 4650 Biomaterials, Drug Delivery and Tissue Engineering
    - CENG 4660 Introduction to Biomicrosystem
    - CHEM 2311 Analytical Chemistry
    - CENG 4950 CHEM-E-CAR (Pre-approved elective)

Final Year Project (6 credits)
- [6] CENG4920 (Capstone)
- Or [6] CENG4930* (Research)
- Or [6] CENG4940 (Co-op)

Lab (4 credits)
- Chemical & Environmental Engg Lab
- [4] CENG3950

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

Credit Requirement
- CENG Major: 87-91
- Common Core: 36 (9 credits of double-counting allowed)

Pre-requisite
- Co-requisite

Introduction (6 credits)
- Intro. to CBE
  - [3] CENG1000
  - Or
  - 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
  - Or
  - Process Dyn. & Control
  - [3] CENG3110
  - Or
  - Process & Product Design Principles
  - [3] CENG2110
  - Or
  - Modeling for Chemical & Biological Engineering
  - [3] CENG2310

ChE Science (15 credits)
- Separation Process
  - [3] CENG3210
  - Or
  - Transport II
  - [3] CENG3220
  - Or
  - Transport I
  - [3] CENG2220
  - Or
  - CBE Thermo.
  - [3] CENG2210

Others (6 credits)
- Technical Communication
  - [3] LANG2030
  - Or
  - Tech. Comm. II
  - [3] LANG4035
  - Or
  - Engineering Seminars
  - [0] ENGG1010 & ENGG2010
  - Or
  - Tech. Comm. I
  - [3] LANG2030

Math. & Science (24-28 credits)
- Biology
  - [3] BIEN2410/BIEN2610/LIFS1901
  - Or
  - Calculus I [3-4]
  - MATH1012/1013/1023
- Or
  - Calculus II [3]
  - MATH1014/1024
  - Or
  - Acc. Calculus
  - [4] MATH1020

General Physics I [3]
- PHYS1112/PHYS1312

General Chemistry I [3]
- CHEM1010/1020

Organic Chemistry [3]
- CHEM2111

Or
- Technical Communication Lab [1]
- LANG2155

General Chemistry Lab [1]
- CHEM1050

Updated on: 24-Jun-2021