## Chemical: General Chemical Engineering (Option A)
### September 2019 (students who entered first year in September 2016)

### Year 2:
#### Term A
- AM 2270a: Applied Math for Engineering II
- CBE 2206a: Introductory Industrial Organic Chemistry
- CBE 2214a: Engineering Thermodynamics
- CBE 2220a: Chemical Process Calculations
- CBE 2290a: Fundamentals of Biochemical and Environmental Engineering
- Writing: Building Better (Communication) Bridges: Rhetoric & Professional Communication for Engineers

#### Term B
- AM 2277b: Applied Math Chemical and Civil Engineering III
- CBE 2207b: Applied Industrial Organic Chemistry
- CBE 2221b: Fluid Flow
- CBE 2224b: Chemical Eng. Thermodynamics
- CBE 2291b: Computational Methods for Engineering
- SS 2143b: Applied Statistics and Data Analysis for Engineers

### Year 3:
#### Term A
- CBE 3315a: Reaction Engineering
- CBE 3318a: Introduction to Chemical Process Simulation
- CBE 3322a: Heat Transfer Operations
- CBE 3325a: Particulate Operations
- CBE 3395y: Chemical Engineering Lab
- One 0.5 Non-technical elective taken from approved list

#### Term B
- CBE 3310b: Process Dynamics and Control
- CBE 3319b: Introduction to Plant Design and Safety
- CBE 3323b: Staged Operations
- CBE 3324b: Mass Transfer Operations
- CBE 3395y: Chemical Engineering Lab
- ECE 2208b: Electrical Measurements
- One 0.5 Non-technical elective taken from approved list

### Year 4:
#### Term A
- CBE 4497: Chemical Process and Plant Design
  - Three 0.5 Technical electives
  - 0.5 Non-technical elective taken from approved list

#### Term B
- CBE 4497: Chemical Process and Plant Design
- ES 4498G: Engineering Ethics, Sustainable Development and the Law
  - Three 0.5 Technical electives

*Accelerated Masters students can take a graduate course with special permission from the Department Chair.

**Student may choose a minimum of 4 half-courses from Group “A” and a maximum of 2 from Group “B”**

### NOTES:
- **Non-technical Electives:**
  - Please choose a maximum of 1.0 credits (one 1.0 credit course or two 0.5 credit courses) from the 1000 level and a minimum of one 0.5 credit from the 2000 (or higher) level.
  - [http://www.eng.uwo.ca/undergraduate/first_year/electives.html](http://www.eng.uwo.ca/undergraduate/first_year/electives.html)
  - [http://www.eng.uwo.ca/undergraduate/upper_year/electives.html](http://www.eng.uwo.ca/undergraduate/upper_year/electives.html)

- **Technical Elective List:**
  - Some technical electives may not be offered in a given academic year. Consult the Department for accurate listing.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CBE 4404a/b</td>
<td>Downstream Processing in Pharmaceutical Manufacturing</td>
</tr>
<tr>
<td>CBE 4407a/b</td>
<td>Solid Waste Treatment</td>
</tr>
<tr>
<td>CBE 4409a/b</td>
<td>Wastewater Treatment</td>
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<tr>
<td>CBE 4415</td>
<td>Chemical Engineering Project</td>
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<tr>
<td>CBE 4413a/b</td>
<td>Selected Topic in Chemical Engineering</td>
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<tr>
<td>CBE 4417a/b</td>
<td>Catalytic Processes</td>
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<tr>
<td>CBE 4418a/b</td>
<td>Industrial Multiphase Reactor Design</td>
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<tr>
<td>CBE 4420a/b</td>
<td>Computer Process Control</td>
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<tr>
<td>CBE 4421a/b</td>
<td>Introduction to Biomaterials Engineering</td>
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<td>CBE 4422a/b</td>
<td>Nanobiotechnology</td>
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<td>CBE 4423a/b</td>
<td>Tissue Engineering</td>
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<tr>
<td>CBE 4424a/b</td>
<td>Biosensor Principles and Applications</td>
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<tr>
<td>CBE 4432a/b</td>
<td>Energy and Fuels Production Systems</td>
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<tr>
<td>CBE 4463a/b</td>
<td>Water Pollution Design</td>
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<td>CBE 4485a/b</td>
<td>Energy &amp; Society</td>
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<tr>
<td>CBE 4493a/b</td>
<td>Polymer Engineering</td>
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<td>CEE 3362a/b</td>
<td>Drinking Water Quality and Treatment</td>
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<td>CEE 4405a/b</td>
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<td>GPE 4484a/b</td>
<td>Green Fuels and Chemicals</td>
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<tr>
<td>MME 4429a/b</td>
<td>Nuclear Engineering</td>
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The official version of the academic calendar can be found at: www.westerncalendar.uwo.ca