**Chemical Engineering and Business (Option C)**

**September 2018 (for students who entered HBA in September 2016 or earlier)**

### 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
- Bus 2257 Accounting & Business Analysis

#### Term B
- AM 2277b Applied Math Chemical and Civil Engineering III
- CBE 2207b Applied Industrial Organic Chemistry
- CBE 2211b Fluid Flow
- CBE 2224b Chemical Eng. Thermodynamics
- CBE 2291b Computational Methods for Engineering
- Bus 2257 Accounting & Business Analysis

### Year 3: HBA 1

### Year 4:
#### 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
- Bus 4569 Ivey Field Project

#### 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
- SS 2143b Applied Statistics and Data Analysis for Engineers

### Year 5:
#### Term A
- CBE 4497 Chemical Process and Plant Design
- Bus 4505a Global Macroeconomics for Managers
- Bus 4521a/b or 4522a/b or 4523a/b
- One 0.5 Technical elective
- 0.5 Business electives chosen from 4000 level Business courses.

#### Term B
- CBE 4497 Chemical Process and Plant Design
- ES 4498G Engineering Ethics, Sustainable Development and the Law
- One 0.5 Technical elective
- 1.5 Business electives chosen from 4000 level Business courses.

### NOTES:

#### Important:
Students are responsible for ensuring they have the correct courses required for their degree. If you are unsure which courses you still need or if you see courses listed on the progression sheet that are no longer offered or are not offered in the term you see listed here, please contact your Academic Counsellor. For HBA related questions, please contact the Richard Ivey School of Business. For Engineering related questions, please contact your Academic Counsellor in Engineering.

### 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>
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<tr>
<td>CBE 4409a/b</td>
<td>Wastewater Treatment</td>
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<tr>
<td>CBE 4413a/b</td>
<td>Selected Topic in Chemical Engineering</td>
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<td>CBE 4417a/b</td>
<td>Catalytic Processes</td>
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<td>CBE 4418a/b</td>
<td>Industrial Multiphase Reactor Design</td>
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<td>CBE 4420a/b</td>
<td>Computer Process Control</td>
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<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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<tr>
<td>CEE 3362a/b</td>
<td>Drinking Water Quality and Treatment</td>
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<td>CEE 4405a/b</td>
<td>Air Pollution</td>
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<td>GPE 4484a/b</td>
<td>Green Fuels and Chemicals</td>
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<td>MME 4429a/b</td>
<td>Nuclear Engineering</td>
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