CBE Graduate Courses Requirements

MESc & PhD students only

(MEng students please refer to http://www.eng.uwo.ca/chemical/graduate/current_students/meng_students.html)

Effective Sept. 1, 2019

Graduate Courses Streamlining

(Group A) - Fundamental Courses. These courses are intended to provide the ***Core Chemical Engineering knowledge.*** They are:

1- CBE 9160 TRANSPORT PROCESSES or CBE 9115 Fundamentals of heat & Mass Transfer
2- CBE 9450 Advanced Chemical Reaction Engineering
3- CBE 9211 Advanced Biochemical Engineering
4- CBE 9150 Advanced Chemical Engineering Thermodynamics
5- CBE 9190 Advanced Statistical Process Analysis OR CBE Mathematical Methods in. Eng.

(Group B) - Courses Relevant for the Interdisciplinary Work. These courses are intended to provide students with greater flexibility to choose as they see them fit for their research.

1) CBE 9550 Advanced Particles and Fluidization Engineering
2) CBE 9587 Fine Powder Technologies and Application
3) CBE 9561 Advanced High Velocity Fluidization Technology
4) CBE 9132 Oil Refining and Processing
5) CBE 9424 Computer Process Control
6) CBE 9461 Advanced Process Control
7) CBE 9190 Statistical Process Control **or** CBE 9170 Mathematical Methods in Engineering
8) CBE 9126 Partial Differential Equations
9) CBE 9260 Advanced Bioengineering and Biotechnology
10) CBE 9245 Cellular Bioengineering
11) CBE 9250 Biomaterials Engineering
12) CBE 9241 Nanobiotechnology
13) CBE 9544 Pharmaceutical Manufacturing Processes
14) CBE 9180 Instrumental Methods for Analysis for Engineers
15) CBE 9350 Physical Principles of Environmental Engineering
16) CBE 9321 Air Pollution Control
17) CBE 9361 Biological Wastewater Treatment
18) CBE 9334 Green Fuels and Chemicals
19) CBE 9455 Advanced Polymerization Engineering
20) CBE 9125 Interfacial Phenomena
21) CBE 9265 Microalgal Systems: Biotechnology and Applications
22) CBE 9552 Industrial Three-Phase Reactor Systems
23) CBE9556 Integrated Resource Recovery

C) Compulsory Course: CBE 9100 Advanced Engineering Communications

Revised Program Course Requirement (see notes at the end of the table)

Admission Type	Course Requirements			Total number of Courses
	From Group A	From Group B	Compulsory	
Students admitted with a Chemical Engineering Background				
Admission to PhD with a Masters in Chemical Engineering or highly related discipline	**0-3** depending on transfer credits	**0-4** depending on transfer credits	Advanced Engineering Communications	**8** (including a possible up to 4 courses transfer)
Direct admission to PhD with undergraduate degree in Chemical Engineering or highly related discipline	Minimum **3**	Maximum **4**	Advanced Engineering Communications	**8**
Admission to MESc with undergraduate degree in Chemical Engineering or highly related discipline	Minimum **1**	Maximum **2**	Advanced Engineering Communications	**4**
Students admitted with a non-Chemical Engineering Background				
Admission to PhD with Masters degree **which is not** in a Chemical Engineering or highly related discipline	Minimum **2**	**0-4** depending on transfer credits	• Advanced Engineering Communications • CBE 9110 • CBE 9112	**9** (including a possible up to 4 courses transfer)
Direct admission to PhD with an undergraduate degree **which is not** a Chemical Engineering or highly related discipline	Minimum **2**	Maximum **4**	• Advanced Engineering Communications • CBE 9110 • CBE 9112	**9**
Admission to MESc with an undergraduate degree **which is not** a Chemical Engineering or highly related discipline	Minimum **1**	Maximum **1**	• Advanced Engineering Communications • CBE 9110 • CBE 9112	**5**

Notes:

1) CBE 9110 and CBE 9112 are specialized bridging courses to bring non-chemical engineering students to the level that they can take other CBE graduate courses. These two courses replace the undergraduate CBE courses these group of graduate students were required to take in the past.

2) In lieu of courses from **group B**, special permission may be given for a graduate student upon satisfactory justification to take other courses outside of the Department provided that the courses are aligned to the research topic of the student.

3) No special permission may be given to replace **group A** courses from other departments.

4) A student may take additional courses beyond those prescribed above, if he/she wishes to do so.