

Chemical Engineering

2013/2014

Program Guide

Chemical Engineering provides the basic scientific engineering knowledge for the design, construction and operation of equipment and plants that process materials by chemical and physical operations into desired products. The curriculum is aimed at provision of a broad background in the underlying sciences of Chemistry, Physics and Mathematics, and detailed knowledge of Chemical Engineering principles, that will enable the graduate to proceed to further academic degrees by study and research at this University or elsewhere, or to carry on research, development or production operations in any process industry.

Students can choose the general program or specialize in an area by completing an option program: Energy Conversion Engineering or Biomedical Engineering Option.

The Department of Chemical Engineering considers practical training and close contact with Industry an important aspect of the engineering curriculum. The Industrial Practice Program includes both the two week Chemical Engineering Practice School and the work term or co-op components carried out in industry.



Important Program Changes and Notes

Course Renumbering & timetable changes

As you know, you are required to complete 12 credit hours of technical elective (TE) content to complete your degree. In order to help identify suitable TE courses in our department they have now all been renumbered to begin with a 5xxx. The courses that have changed numbers include:

Chemical Engineering Practice School (4ch): was CHE 4423
 changed to CHE 5423

Fundamentals of Chemical Process Design (CHE 2525) was Winter MWF 1:30
 Changed to MWF 11:30

Technical Electives

Please see the list of technical electives for 2013/2014 in the following pages. The department remains committed to offering its students a breadth of technical elective courses, consistent with the faculty's expertise and our option programs. Please be aware that elective courses from other engineering departments are considered creditable courses with the permission of the Director of Undergraduate Studies.

Academic Advisors

Dr. Guida Bendrich is taking over as the Director of Undergraduate Studies for 2013/2014. Please see Dr. Bendrich for information or advising outside of typical course-based scheduling. The academic advisors for the 2013-2014 academic year are:

1 st year and transfer students	Guida Bendrich
2 nd year	Willy Cook
3 rd year	Felipe Chibante
4 th year	Frank Collins
5 th year +	Guida Bendrich

I wish you all well and best of luck in your studies in 2013-2014!

W. Cook – May 31, 2013



Technical Electives

Technical Electives are scheduled as follows for 2013-2014:

Fall 2013

CHE 5254 Polymer Reaction Eng and Polymer Processing 3 ch (3C)

Basic polymer concepts. Polymer structural characteristics and properties. Mechanisms, kinetics and reactors for polymerization. Polymer rheology and transport processes. Processing applications and the effects of processing on polymer properties. Prerequisites: CHE 2501, CHE 2703, Math 3503. Co-requisite: CHE 3304 or equivalent.

CHE 5522 Nanotechnology 3 ch (3C)

Studies the science of nanotechnology and surveys current and emerging applications of nanomaterials and nanodevices in many engineering disciplines. The unique physical properties of materials at the nano-meter scale are discussed and explained. Fabrication methods and advanced instrumentation for the construction, manipulation and viewing of nanometer-sized materials are presented. Pre-requisite: CHEM1982/1987 or equivalent, plus 100ch of degree credit. Restricted to science and engineering students.

CHE 5834 Nuclear Engineering 3 ch (3C)

Radio-active decay, fission energy, nuclear interactions, neutron scattering and absorption. Neutron diffusion elementary reactor theory, four and six factor formulae, neutron flux variation. Reactor kinetics, source multiplication, decay heat, reactor start-up and shut down. Fuel burnup, fission product poisoning, refuelling. Temperature and void effects on reactivity, reactor control. Fuel handling and waste disposal.

Winter 2014

CHE 5234 Oil Refining and Natural Gas Processing 3 ch (3C)

An introduction to the physical, chemical, and engineering principles used in the processing of natural gas, petroleum, and bitumen. The nomenclature, common processes, basic designs, and relevant regulations will be covered. Prerequisites: [CHE 2004](#) , [CHE 3123](#) or approval by the instructor.

CHE 5413 Bioseparations Science and Engineering 3 ch (3C)

Sources of air pollution; modeling atmospheric dispersions; pollution control in combustion; particulate control methods; control of gaseous emissions; industrial odour control; indoor/in-plant air quality. Prerequisite: [CHE 3314](#) . Co-requisite: [CHE 4341](#) .

CHE 5423 Practice School 4 ch (W)

A two week industrial practice school in selected industrial process plants scheduled after spring examinations. Groups of students, with Faculty supervisors, are assigned to engineering projects to be carried out on industrial process units. Students are required to present an oral report to plant operating and technical personnel at the end of the practice session. A written report is also required. As there will be practical limitations to the number of students in any one practice school, application for positions in this course will be treated on a first-come, first-served basis. This course is strongly recommended as a technical elective for students not planning to complete either the co-op or professional experience programs. Prerequisites: CHE 2004, CHE 2412.

CHE 5515 Advanced Surface Characterization 3 ch (3C)

This course covers the basic principles and practical aspects of several advanced surface analysis techniques which include (i) X-ray photoelectron spectroscopy (XPS or ESCA), (ii) secondary ion mass spectrometry (SIMS), (iii) confocal laser scanning microscopy (CLSM), (iv) atomic force microscopy (AFM), and (v) scanning electron microscopy (SEM). Demonstrations will be given on most of these facilities. Students will propose a research method for tackling their interested problems by using one or two surface analysis techniques they have learned from this course.

CHE 5714 Electrochemical Engineering 3 ch (3C)

Electrochemical flux equations. Reversible cells. Energy producing cells. Energy consuming cells. Corrosion. Applications to include discussion of primary and secondary batteries, electrolytic processes, corrosion suppression.

CHE 5933 Biorefining: Principles, Processes and Products 3 ch (3C)

This course discusses various bio-refining processes, placing emphasis on fundamental process chemistry and biology in the conversion of biomass to engineered products. Pathways for the use of wood resources are described in detail; exemplary processes, such as gasification, pyrolysis, pre-extraction and bio-diesel production are discussed. Industrial fermentation, including sugar fermentation to produce ethanol, will be explored. The modeling concept for integrated pulp manufacturing and bio-refining will also be discussed. Pre-requisite: [CHEM 1982/1987](#) , [CHEM 2401](#) and a minimum of 80 credit hours.

CE 5432 Wastewater Treatment & Pollution Control 4 ch (3C) 2L

Applied wastewater microbiology, wastewater analysis (physical, chemical, and biological), wastewater treatment processes, industrial and municipal wastewater treatment and management, wastewater treatment systems and plant design. The course content will focus on treatment and management issues of wastewater from industrial, municipal, and domestic sources. Pollution control strategies and protocols are also examined. Prerequisites: [CHEM 1982](#) (or equivalent) and [CE 3403](#) or [CHE 2004](#) , or permission of course instructor.

Non-Technical Electives

Non-technical electives are an important element of engineering education. Regardless of engineering role, engineers require an appreciation of business concepts, good communication skills and a broad sense of the impact of technology on society. Most engineers end up in management roles, making decisions on time, people and money. It is wise therefore, for students with an interest in management to choose their complimentary studies courses carefully. In the chemical engineering program at UNB, three of the four non-technical elective courses required for the degree (12 ch total) are area specific:

Humanities (3 ch) – Sociology, Anthropology, History, Philosophy, Classics, Political Science

Business (3 ch) – Any TME or ADM course; or select ECON courses

Non-Language (3 ch) – Any Humanities or Business course; PSYC, RLS, ENVS, ENR, IDS, RCLP, ARTS, WLCS

Other (3 ch) – must be approved by the Director of Undergraduate Studies

The Department STRONGLY recommends that students to obtain business-related education through the complementary studies stream and to pursue a diploma in **Technology Management and Entrepreneurship** which is offered by the Faculty of Engineering. For more information on integrating this diploma with the undergraduate degree in chemical engineering, please contact the Director of Undergraduate Studies.

Transfer Credits

As per university regulations, current students who are seeking transfer credit for courses taken at other institutions must receive permission prior to taking the course. Courses that have been taken without the proper approvals will not be counted towards your degree. Please obtain the appropriate permission slip (Request Form for Off-Campus Study) from the UNB Registrar, and seek approval from the Director of UG Studies for any courses you wish to take.

Pre- and Co-Requisites

Pre- and co-requisites are important guideposts along the degree program path. You must not attempt a chemical engineering course without having its stated pre- and co-requisites. If you find yourself out of sequence in the program (for example, as a transfer student or because of a late withdraw), please seek advising from the Academic Advisor or Director of UG Studies, and obtain official permission from the course instructor before enrolling into a course: a record of this permission must be put into your personal file in the Department. There is enough flexibility in the program to allow minor deviations, but no student will be allowed to take courses out of sequence if they are in academic jeopardy (GPA ≤ 2.2).

Chemical Engineering Option Registration Form

- refer to Calendar or Program Guide for details on Option programs
- the Department of Chemical Engineering reserves the right to remove registration in a chosen Option program, where students do not register in Option courses or where their studies clearly diverge from that Option program.
- the Department of Chemical Engineering will ensure that all students registered in an Option have a reasonable opportunity to complete that Option over two academic years of study.
- withdrawing from or failing Option courses is normally not a problem, but either could potentially make subsequent completion of an Option impossible.
- admission to Options is automatic for students enrolled in the BScE (Chemical Engineering) program who have successfully completed both ChE 2004 (or 2014) and ChE 2012, **along with the completion of this form.**

Name: _____ UNB email: _____

ID # _____ Expected Graduation Year: _____

For a list of courses required for completion of the Options below please refer to the Program Guide.

OPTIONS (You may register in more than one Option)

Biomedical Engineering Option

Energy Conversion Engineering Option

Signed: _____ Date: _____

Please return this completed form to the Chemical Engineering Office.

Biomedical Engineering Option in Chemical Engineering

The Biomedical Option is available to students in the Department of Chemical Engineering. In order to enter the option program students must meet approval by the Department of Chemical Engineering.

To complete the option program the student must complete four technical electives (12 ch minimum), consisting of one core course (which is normally offered every year),

APSC 3953	Basis of Biomedical Engineering	3ch
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and three courses selected from the list below (most courses are offered every year):

BIOL 2033	Biochemistry	3ch
BIOL 2043	Cell Biology	3ch
BIOL 2053	Genetics	3ch
BIOL 2073	Fundamentals of Microbiology	5ch
BIOL 2753*	Introduction to Human Anatomy	3ch
BIOL 2792	Human Physiology - Systems	3ch
CHEM 3003**	Biocomputing in Drug Design I	5ch
CHEM 4523	Medicinal Chemistry	3ch
CHEM 4003**	Biocomputing in Drug Design II	4ch
KIN 2062*	Introductory Biomechanics	3ch
KIN 3061*	Advanced Biomechanics	4ch
KIN 4163*	Workplace Ergonomic Design And Analysis	3ch
ME 5913	Biomechanics	4ch
PHYS 5993	Magnetic Resonance Imaging	3ch

* some option courses require that Biol 2753 be taken as a pre-requisite.

** some option courses require that Biol 1001 be taken as a pre-requisite.

Students with a special interest in biology and biochemical engineering are encouraged to pursue a Minor in Biology through the Faculty of Science. Such students should seek advising from the Director of Undergraduate Studies to embark upon this path as soon as possible in the degree program.

Energy Conversion Engineering Option in Chemical Engineering

This option places emphasis on emerging technologies and societal issues in the energy and environment sector within chemical engineering. This directed path consists of 3 technical elective courses and 1 complementary studies course (minimum total of 15 ch) selected from the approved lists below. Students may elect to receive a further specialization within the ECE Option by focusing their technical electives in nuclear & power plant technology, oil & gas processing or environmental disciplines.

To participate in the option, students must seek approval of the department.

Core:

CHE 5313 Energy and the Environment

Complementary Studies Elective: (1 course from the following list):

ECON 3865 Energy Economics
ENVS 2023 Climate Change
ENVS 4002 Stakeholder Approaches to Environmental Problem Solving
ENR 1001 Resource Management Issues
ENR 2021 Natural Resource Management, Institutions, Policy, Governance
ENR 2541 Climate Change
SOC 3373 Sociology of Science

Technical Elective: (3 courses from the following list):

Oil & Gas Processing

CHE 5234 Oil Refining and Natural Gas Processing
CHE 5244 Enhanced Oil Recovery
CHE 5264 Oil Sands Technology
CHE 5933 Biorefining: Principles, Processes and Products
CHE 5264 Oil Sands Technology

Nuclear & Power Plant Technology

CHE 5344 Combustion
CHE 5744 Steam Supply Systems
CHE 5824 Corrosion Processes
CHE 5834 Nuclear Engineering

Environmental

CE 5432 Wastewater Treatment and Pollution Control
CHE 5314 Chemical Process Industries
CHE 5413 Air Pollution Control
ME 5933 Industrial Ecology
ME 5473 Energy Management

Students with special interest in environmental studies are also encouraged to pursue a minor or secondary major in this area through the university's *Environmental Studies Program*, administered by the Faculty of Forestry and Environmental Management. The Department also encourages interested students to pursue a Masters of Engineering degree in environmental studies after graduation.

International Exchange

UNB recognizes that we live in an increasingly globalized world. This is why the university provides students with overseas opportunities. The Student Abroad Program involves exchanges, internship programs or courses at overseas institutions. Visit the Students Abroad section (<http://www.unbf.ca/international/studentabroad.htm>) at the International Relations website (<http://www.unbf.ca/international/index.html>) for more information on where you can go, how to get there, and other ways to get involved internationally!

Are you setting sails to new horizons? If yes, there are a few things that you should be aware of before departing. To help you get ready for an experience of a lifetime, detailed information on entry requirements, passports & visas information, study permit, travel warnings, immunization, fees, travel advice, etc, are necessary. The International Relations Office has several resources available to you. Please contact them for more information.

Chemical Engineering Exchange programs

Students should consult the Director of Undergraduate Studies for further information on the ChE exchange programs.

France

The Department of Chemical Engineering at UNB has exchange programs with the following École Supérieure de Chimie Physique Électronique de Lyon (<http://www.cpe.fr/fr2/default.asp>), Ecole Nationale Supérieure des Mines de Saint-Etienne (<http://www.emse.fr/index.php>) and Ecole Nationale Supérieure de Chimie de Montpellier (<http://www.cpe.fr/fr2/default.asp>) in France. Students who have completed 2 years of study at UNB can study for one term or one year at one of these French universities. Students take appropriate courses in Lyon, Saint-Etienne or Montpellier to obtain credits for some third and fourth year courses and complete the rest of their requirements upon returning to UNB. Students should consult with the Director of Undergraduate Studies for proper course selection prior to leaving for France.

Students who go to France pay full UNB tuition, and receive \$500 towards travel costs. This arrangement ensures that the year in France is financially comparable to the one in Fredericton in addition to providing a unique experience.

Summer School at CPE Lyon

The CPE Lyon Summer school program runs for four weeks (usually during the last week of May and first three weeks of June). During these four weeks, CPE Lyon offers short courses in science, French, and undergraduate research (literature project). The courses and the project are adapted to correspond with the background of the students. There are about 45 hours of French courses and 45 of scientific courses including the project. Two industrial visits are organized, as well as a cultural guided tour of Lyon (Lyon is a Unesco World Heritage Site) and a gastronomic dinner. The students will also be able to take part in the end-of-year weekend with French students.

It is not necessary to be fluent in French but a basic knowledge is required. This program is offered to first and second year students. In addition, there may be also a possibility of an internship in industry in France for the remainder of the summer. The application deadline is normally in early February.

Australia

Established in 1853, the University of Melbourne (<http://www.unimelb.edu.au/>) has a rich history. The Melbourne School of Engineering (<http://www.eng.unimelb.edu.au/>) has an international reputation for its research, teaching, academic staff and graduates. The program is recognized for its excellence and is ranked 21st in the world for Technology by The Times Higher Education World University Rankings 2007. A detailed course listing can be found at

<http://www.eng.unimelb.edu.au/courses/ugrad/courses/index.html>

Norway

Bergen University College (<http://www.hib.no/english/index.html>) is a state institution of higher education, established in August 1994 by the merging of six former independent colleges in Bergen, Norway. The Faculty of Engineering offers degrees within various fields of engineering. Among one of them being chemical engineering (<http://www.hib.no/english/AI/chemical/index.html>). The language of instruction is Norwegian!

China

The Central South University (<http://www.csu.edu.cn/index.htm>) offers an opportunity for an academic exchange. The language of instruction in the department of chemical engineering is Chinese.



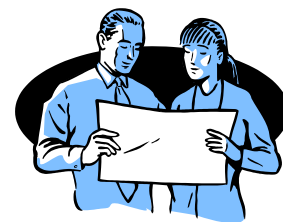
Chemical Engineering Co-op Scheduling

Students completing their BScE in Chemical Engineering may wish to gain work experience during their studies. The co-op program in Chemical Engineering is recommended for students who wish to maximize the reinforcement between academic and work experience. The schedule shown below is the recommended pattern of work terms for students in the co-op program who wish to add no more than one year to their time at UNB. By simply switching the order in which terms 5 and 6 are taken, it is possible to fit 20 months of co-op experience into a five-year degree program. An example of a 16 month Co-op term is also shown.

		standard program	recommended co-op schedule	16 month Co-op work term after third year
year 1	Sept.	term 1	term 1	term 1
	Jan.	term 2	term 2	term 2
	May			
year 2	Sept.	term 3	term 3	term 3
	Jan.	term 4	term 4	term 4
	May			
year 3	Sept.	term 5	co-op	term 5
	Jan.	term 6	term 6	term 6
	May		co-op	
year 4	Sept.	term 7	term 5	co-op
	Jan.	term 8	co-op	
	May	<i>graduation 4 years</i>	co-op	
year 5	Sept.		term 7	term 7
	Jan.		term 8	term 8
	May		<i>graduation 5 years</i>	<i>graduation 5 years</i>

Note: The minimum cumulative GPA for participation in the Co-Op Program is 2.7

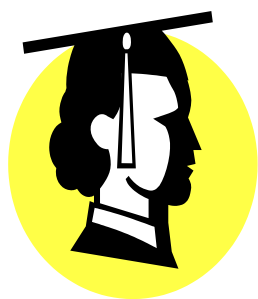
Plagiarism



The Department has a zero tolerance policy on plagiarism. Teaching Assistants and instructors will aggressively identify and severely penalize offenders, even for minor infractions.

The minimum penalty for plagiarism is a grade of zero on the work and a notation on your transcript.

Graduation Policy for Chemical Engineering (BScE)



The policy on graduation described in the UNB Calendar is that students must complete the degree as it is defined when they start a program. Unfortunately, this isn't really practical when courses are deleted or changed, so Chemical Engineering uses a modified version of this regulation: the policy is the lesser of the requirements when you start your degree and those when you complete it. If a course is dropped or changed in the program we will always make every attempt to ensure a reasonably fair transition. However, students who fail courses close to a change in requirements may sometimes be required to complete additional credit hours as a result. Following the recommended four-year program is generally the best way to avoid complications due to rule changes.

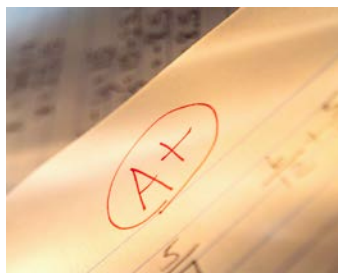
Deferred Exams

You are expected to follow the exam schedule set by the Registrar.

Students who by reason of illness or extenuating circumstances are unable to write final examinations at the specified times may apply to the Registrar for permission to write deferred exams written medical permission is required.

The Department of Chemical Engineering has set deferred examination dates of Thursday, January 9, 2014 and Thursday, May 8, 2014. Students who cannot write on these dates will normally be required to appeal for further deferral via the Registrar's Office.

For full Deferred Examination regulations please refer to University Regulations in the Undergraduate Calendar.



RECOMMENDED 4-YEAR PROGRAM FOR STUDENTS ENTERING IN 2013

Mondays, Wednesdays & Fridays

Time	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6	Term 7	Term 8
8:30 AM		CHEM 1982	CHE 2012	MATH 3503				
9:00 AM								
9:30 AM	MATH 1503	CHE 1004	CHEM 2401		CHE 3601	CHE 3314		
10:00 AM								
10:30 AM	PHYS 1081	ECE 1813	BIOL 1001	CHE 2703	CHE 3324	CHE 3123	CHE 4101	
11:00 AM								
11:30 AM	MATH 1003	MATH 1013	MATH 2513	CHE 2525	CHE 3304	CHE 3505	CHE 4341	CHE TE IV
12:00 PM								
12:30 PM	CS 1003 (Mon)			CHE 2418	NTE or TE	NTE or TE	NTE or TE	NTE or TE
1:00 PM								
1:30 PM	CS 1003	ENGG 1082	CHE 2004	NTE or TE	CHEM 3621	NTE or TE		
2:00 PM								
2:30 PM								
3:00 PM	ENGG 1003	ENGG 1082						
3:30 PM	(Mon)	(Mon)		CHE 2412	CHEM 3886		CHE 4225	CHE 4225
4:00 PM	PHYS 1081	CHEM 1987		(Wed or Fri)	(Monday)		(Wed)	(Wed)
4:30 PM	(Wed)	(Wed)						
5:00 PM								
5:30 PM								
6:00 PM								
6:30 PM		+NTE						
7:00 PM								

Tuesdays

8:30 AM		ECE 1813	CHE 2501	MATH 3503	CHE 3424	CHE 3434		
9:00 AM								
9:30 AM								
10:00 AM								
10:30 AM	ENGG 1003		CHE 2012	STAT 2593	CHE3304	CHE3505	CHE 4341	
11:00 AM								
11:30 AM	ENGG 1001		MATH 2513	CHE 2703		NTE or TE		
12:00 PM								
12:30 PM		NTE						
1:00 PM								
1:30 PM				CHE 2412				
2:00 PM								
2:30 PM								
3:00 PM					CHE 3424	CHE 3434		
3:30 PM	CS 1003	ECE 1813			or Mon	or Mon		CHEM 4886
4:00 PM					or Wed	or Wed		
4:30 PM					or Thurs	or Thurs		
5:00 PM								
5:30 PM								
6:00 PM								
6:30 PM								ENGG 4013
7:00 PM								

Thursdays

8:30 AM	MATH 1003	MATH 1013	CHE 2501		CHE 3324		CHE 4101	
9:00 AM								
9:30 AM								
10:00 AM								
10:30 AM	ENGG 1003			STAT 2593	CHE 3601			
11:00 AM								
11:30 AM	ENGG 1015					NTE or TE	CHE 4404	CHE 4404
12:00 PM								
12:30 PM		NTE						
1:00 PM								
1:30 PM			CHE1024*	CHE 2525				
2:00 PM								
2:30 PM								
3:00 PM								
3:30 PM	ENGG 1015		CHE 2506			CHEM 3897		
4:00 PM								
4:30 PM								
5:00 PM								
5:30 PM								
6:00 PM								
6:30 PM								ENGG 4013
7:00 PM								

lecture	tutorial	lab
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**Degree Audit Form Chemical Eng.
Students Entering in 2013/2014**

Name: _____ Date: _____

UNB ID: _____ email: _____

UNB Course	ch	Note(s)	Grade(s)	UNB course	ch	Notes	Grade(s)
ChE 1004	3			Phys 1081	5		
ChE 2004	3			Biol 1001	3		
ChE 2012	3			CS 1003	4		
ChE 2412	3			EE 1813	4		
ChE 2418	3			Engg 1082	4		
ChE 2501	3			Engg 1001	CR		
ChE 2506	1			Engg 1003	4		
ChE 2525	4			Engg 1015	2		
ChE 2703	3			Engg 4013	3		
ChE 3123	3						
ChE 3304	4			Math 1003	3		
ChE 3314	3			Math 1013	3		
ChE 3324	4			Math 1503	3		
ChE 3424	3			Math 2513	4		
ChE 3434	3			Math 3503	3		
ChE 3505	4						
ChE 3601	4			Stat 2593	3		
ChE 4101	3						
ChE 4225	8			NTE Humanities	3	Anth, Clas, Hist, Phil, Pols, Soci	
ChE 4341	4			NTE Business	3	ADM, TME, Econ	
ChE 4404	3			NTE Non-Lang	3	Hum, Bus, Psyc, RLS, ENV5, ENR, IDS, RCLP, ARTS, WLCS	
CHE TE							
CHE TE				NTE Other	3	With Approval of Dir. UG Studies	
CHE TE							
CHE TE							
				Notes:			
Chem 1982/1987	5						
Chem 2401	3						
Chem 3621	3						
Chem 3886	2						
Chem 3897	1						
Chem 4886	2						

Chemical Engineering Faculty

<u>Name</u>	<u>Office Phone</u>	<u>Room No.</u>	<u>Email</u>
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Frank Collins	452-6063	E230F	fcollins@unb.ca
William Cook	452-6318	E230C	wcook@unb.ca
Michel Couturier	453-4690	GD126	cout@unb.ca
Mladen Eić	453-4689	D32B	meic@unb.ca
Kecheng Li	451-6861	I-217 Enterprise UNB	kecheng@unb.ca
	453-4628	E230B	kecheng@unb.ca
Brian Lowry (Chair)	453-4691	D39	bjl@unb.ca
Jamie Miles	458-7308	TBA	jamie.miles@unb.ca
Yonghao Ni	451-6857	I-219 Enterprise UNB	yonghao@unb.ca
Laura Romero-Zeron	453-5044	D32A	laurarz@unb.ca
Kripa Singh	453-5108	H214	singhk@unb.ca
Huining Xiao	453-3532	E46B	hxiao@unb.ca
Ying Zheng	447-3329	E39B	yzheng@unb.ca

ChE Office Info

Phone: 453-4520

Fax: 453-3591

Location: D-39 (Head Hall)

Hours: winter - 8:15 - 4:30, summer 7:45 - 4:00 (closed for lunch: noon-1 pm)

Faculty Advisors

Guida Bendrich	<i>1st Year and Transfer Students</i>
Willy Cook	<i>2nd Year</i>
Felipe Chibante	<i>3rd Year</i>
Frank Collins	<i>4th Year</i>
Guida Bendrich	<i>5th Year</i>

Director of Undergraduate Studies (for 2013/2014)

Guida Bendrich
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447-3238

Student Studies Assistant (Undergraduate Studies)

Sylvia Demerson
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453-4520