



Rensselaer

School of Engineering

Chemical & Biological Engineering

Class of 2022
Advising Handbook

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Department of Chemical & Biological Engineering

<http://cbe.rpi.edu/>

The major educational objective in the Howard P. Isermann Department of Chemical and Biological Engineering is to prepare students to enter their engineering practice dealing with chemical as well as physical processes to meet the challenges for the future. The curriculum, which builds on chemistry, biology, mathematics, basic sciences, and engineering science, culminates in professional applications in which theory is tempered by engineering art and economic principles. Through this curriculum, graduates are prepared equally well for professional practice or for advanced study.

Opportunities for creative and satisfying practice in chemical and biological engineering can be found in conception, design, control, or management of processes involving chemical and/or biochemical transformations. These processes range from the more conventional conversion of crude oil into petrochemicals and plastics, to the development of novel processes for the production of biopharmaceuticals, to the creation of lab on chip devices using nanomaterials. The chemical conversion of resources into new, more useful forms has been the traditional concern of chemical engineers. In recent years there has developed a critical concern with the depletion of resources, leading to increased efforts to conserve, recycle, and find alternatives. Concurrently with high-technology advances in biochemical and semiconductor processing, these developments pose challenges that fall on the chemical engineering profession.

An undergraduate degree that works! Our chemical engineering graduates are well prepared for advanced graduate study and for professional practice. The companies employing Rensselaer chemical engineering graduates during the past decade are;

Amgen (biopharmaceuticals)	BioGen-IDG (biopharmaceuticals)
Centocor (biopharmaceuticals)	ExxonMobil (oil and chemicals)
General Electric (plastics, energy)	Human Genome Sciences (biopharmaceuticals)
IBM (semiconductors)	Intel (semiconductors)
Genzyme (pharmaceuticals)	Millipore (biopharmaceuticals)
Merck (pharmaceuticals)	Momentive (specialty chemicals)
Procter & Gamble (consumer goods)	Regeneron (pharmaceuticals)
Sanofi (pharmaceuticals)	Schlumberger (petroleum)

Diverse career choices exist not only in the chemical industry, but in virtually all processing industries, including agricultural, biotechnology, biomedical, chemical, food, nuclear, semiconductor processing, and environmental operations. By emphasizing basic principles, the program prepares its graduates for positions spanning the spectrum of activities from research and development, to process and project engineering, to production, or to technical marketing. Chemical engineering also provides an excellent background for entering medical school and law school.

Contact List for ChBE

Department Head:

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General Links:

Class Hour Schedule: <http://sis.rpi.edu/stuclshr.htm>

Registrar Forms: <http://registrar.rpi.edu/update.do?catcenterkey=29>

Student Information System: <http://sis.rpi.edu/>

Advising and Learning Assistance Center: <http://info.rpi.edu/advising-learning-assistance/>

Center for Career & Professional Development: <http://www.rpi.edu/dept/cdc/>

Co-Ops: <http://www.rpi.edu/dept/cdc/students/experience/coop/>

Internships: <http://www.rpi.edu/dept/cdc/students/jobsearch/summer.html>

Dean of Students - Student Handbook: <http://doso.rpi.edu/>

Objectives of the ChBE Undergraduate Curriculum

Alumni of the Howard P. Isermann Department of Chemical and Biological Engineering will within five years of graduation be:

- Gainfully employed in a professional capacity and promoting the responsible application of technology to enhance the common good.
- Preparing for leadership roles in society by furthering their proficiency in engineering practice or by preparing for professional practice in related disciplines via further graduate or professional study.

Advising

Student's Responsibilities

- To know their advisor's office hours and advising schedule.
- To make an appointment and prepare for registration advising by reviewing the Catalog, Class-Hour Schedule, and the Degree Works worksheet.
- To formulate questions regarding curriculum, course selections, career options, etc.
- To be aware of their academic and personal needs and to seek assistance when needed.
- To understand that the role of their advisor is to advise them, not to make decisions for them. Each student needs to realize that it is his or her education at stake, and that, with advisement, *they* are ultimately responsible for making any final decisions.

Advisor Responsibilities

- To be accessible to students throughout the year at posted office hours. If an advisor will be away from campus for an extended period of time, he or she should post the names and office locations of alternate advisors outside their offices, so that students will have other advising resources.
- To set aside designated times for registration advising and individual discussions.
- To be knowledgeable about current curriculum requirements, academic policies and procedures, referrals and resources on campus, and career opportunities in the major field.
- To guide students through academic programs that will complement their personal, educational, and professional interests.

The HUB

<http://eng.rpi.edu/students/hub>

The School of Engineering Advising Hub is the primary source of academic advising for all engineering students during their first three semesters at RPI. The Hub is located in the Ansell lounge on the third floor of the Jonsson Engineering Center (JEC) and is staffed by experienced advisors who will offer academic assistance for all engineering majors. Hub advisors assist students in establishing a foundation for academic success through student responsibility and planning. The Hub is a resource for all advising purposes including:

- Semester course planning

- Clear Student Advising Meeting (SAM) holds
- Major/minor declaration or changes
- Form approvals
- Registrar Protocol
- The Arch planning
- HASS and other course requirements

The Advising Hub will offer academic support to students through the end of the fall semester of their sophomore year. At that time, students will transition to a faculty advisor specific to the student's major. The faculty advisor will then contribute to the student's academic success by offering valuable perspective on internships, research and job prospects in addition to graduation requirements.

The Advising Hub hours are Monday, Tuesday, Thursday, and Friday 9am-4pm, by appointment.

Walk-in Wednesdays offer 20 minute meetings with no appointment necessary.

Faculty Advisor

Beginning with the fourth semester, each undergraduate student has their own faculty advisor who should be the first line of contact if there are questions or problems. If your advisor is not available or if you have further questions, you may contact the Student Services Administrator for the department in room RI 103.

Useful Advising Links

- [Advising and Learning Assistance Center](#)
- [Career Development Center](#)
- [Co-Op / Internships](#)
- [Course Catalog](#)
- [International Programs](#)
- [Registrar Forms](#)
- [Student Handbook](#)
- [Student Information System](#)

Bachelor's Degree

The bachelor's degree is awarded to students who have pursued successfully, as evaluated by the faculty, a plan of study that encompasses several disciplines. Each plan of study has at least two objectives: first, to reach a pre-professional standing or fundamental mastery in a selected discipline; second, to develop some grounding in knowledge found in liberally educated persons, an appreciation of technology and science, and openness to ongoing learning.

The requirements of each baccalaureate program are outlined as follows:

- The number of courses and credit hours is prescribed by each curriculum. Minimum requirements are typically 124 credit hours for science, for humanities and social sciences majors and for management, **128 for engineering**, and 168 for the professional degree in the School of Architecture.
- The minimum grade point average (GPA) is **2.00**.
- To receive a baccalaureate degree, a student must have been admitted to the curriculum corresponding to the degree, must have satisfied the curriculum requirements, and must be enrolled in that curriculum at the time the degree is granted.
- The course content in physical, life, and engineering sciences must total a minimum of **24 credit hours**, including at least **eight credit hours** of mathematics. For information on additional requirements see the School of Science section of the course catalog.
- The course content in humanities and social sciences must total a minimum of **24 credit hours**, including at least **eight credit hours** in the humanities and **eight credit hours** in the social sciences. For information on additional requirements see the School of Humanities, Arts, and Social Sciences section of the course catalog.
- Every student is required to take at least **two** communication-intensive courses. At least one of these must be in the students' major and at least one of the courses must be writing intensive and taught in the School of Humanities, Arts, and Social Sciences.
- The minimum course concentration in the area of the selected discipline is prescribed by each curriculum but **cannot be less than 30 credit hours**.
- At least **24 credit hours are to be elective**, of which no less than **12 credit hours** are unrestricted electives.
- The student must be registered full-time for a minimum of four semesters. Two semesters of part-time study at Rensselaer will be considered equivalent to one semester of full-time study. In addition, the student must complete a minimum of **64 credit hours** at Rensselaer, all of which will be applied to the bachelor's degree. If a transfer student elects to study abroad or enroll in the co-op program, no more than 12 such credits may apply to the 64 needed for the bachelor's degree. The student's Plan of Study at Rensselaer must include at least 16 credits of courses above the 1000 level in the major field, or in an approved concentration.

Academic Information and Regulations

The Institute requires a degree candidate to earn the last 30 credits in courses completed on this campus or through a program formally recognized by the Institute. Transfer courses are limited to two courses or eight credits counting toward the student's last 30 credits and require approval of the director of the Advising and Learning Assistance Center.

Baccalaureate candidates must have passed all of the prescribed academic work and have satisfied the fee requirements. Candidates must also be in good academic and disciplinary standing. Undergraduate students on probation at the time of completion of course work may be required to meet certain stipulations for removal from probation. However, such requirements may be waived for those students whose cumulative GPAs satisfy the baccalaureate degree requirements. In general, a term's work with grades of not less than C will be required in programs arranged by the Committee on Academic Standing. The director of the Advising and Learning Assistance Center will state requirements to the students in writing.

Degree candidates must be registered during the semester in which they intend to graduate and must file a degree application with the registrar by the dates specified in the academic calendar. Students who previously applied for graduation but did not complete all their requirements on time must submit a new application specifying the new date of graduation.

Double Degrees

A student may become a candidate for a second baccalaureate degree when he or she has completed: (1) the equivalent of at least two terms (30 credit hours) of additional work beyond the requirements of a single degree, and (2) the courses in the department in which the student is registered and such other courses as are required for the second degree. From the ChBE department's perspective, students considering a Double Degree may want to instead consider a Co-terminal or regular Master's degree. The ability to obtain a graduate level degree by taking 30 credits beyond the Bachelor's degree should be seriously considered rather than taking 30 additional credits and still ending up with a Bachelor's degree.

Dual Majors

Undergraduate students who fulfill all the degree requirements for two curricula and who have met the conditions below will have completed a dual major. They will receive one diploma noting both majors. (1) The student must designate a first-named and second-named major in writing at least one semester prior to graduation, and have the appropriate department(s) approve this designation prior to filing the dual major form with the registrar. (2) Each student will be assigned an advisor in each department who will monitor progress towards degrees in that department. (3) The degree clearance officer in the department will certify that the student has met the degree requirements in that department. (4) The 24-credit-hour mathematics/science requirement and the 24-credit-hour humanities and social sciences requirement will satisfy the Institute requirements for both majors. Due to the undergraduate degree requirements of Chemical and Biological Engineering, the program does not recommend that students dual major.

Academic Minors

Due to the undergraduate degree requirements of Chemical and Biological Engineering, the program does not offer minors to students from other disciplines.

The Arch

<https://info.rpi.edu/the-arch>

The Arch is a unique approach for student development and growth that prepares students to meet the multifaceted challenges of the 21st century. The Arch will augment academic and experiential programs, and provide an even more robust-and transformative-educational experience for undergraduate students.

Students in the Class of 2022 will be required to participate in the Arch program in summer 2020. There is an [exception process](#) for athletes, ROTC, and a few other select cases.

The Arch is a restructuring of the Rensselaer academic calendar. It creates additional opportunities for experiential learning that complement curricular and co-curricular offerings at Rensselaer.

Rising juniors will attend a full summer semester, The Arch, between their sophomore and junior years. Juniors then spend a semester away during either the fall or spring semester of their junior year, still only taking 8 semesters to graduate.

This will allow students to take advantage of the numerous experiential learning activities available off campus, including international travel, internships, co-ops, research opportunities, and engagement in community service projects.

Academic Semester Experience

YEAR	FALL	SPRING	SUMMER
Freshman	Required	Required	Optional
Sophomore	Required	Required	Required
Junior	*	*	Optional
Senior	Required	Required	Graduate

* option for an "away" semester

Chemical & Biological Engineering Curriculum Checklist

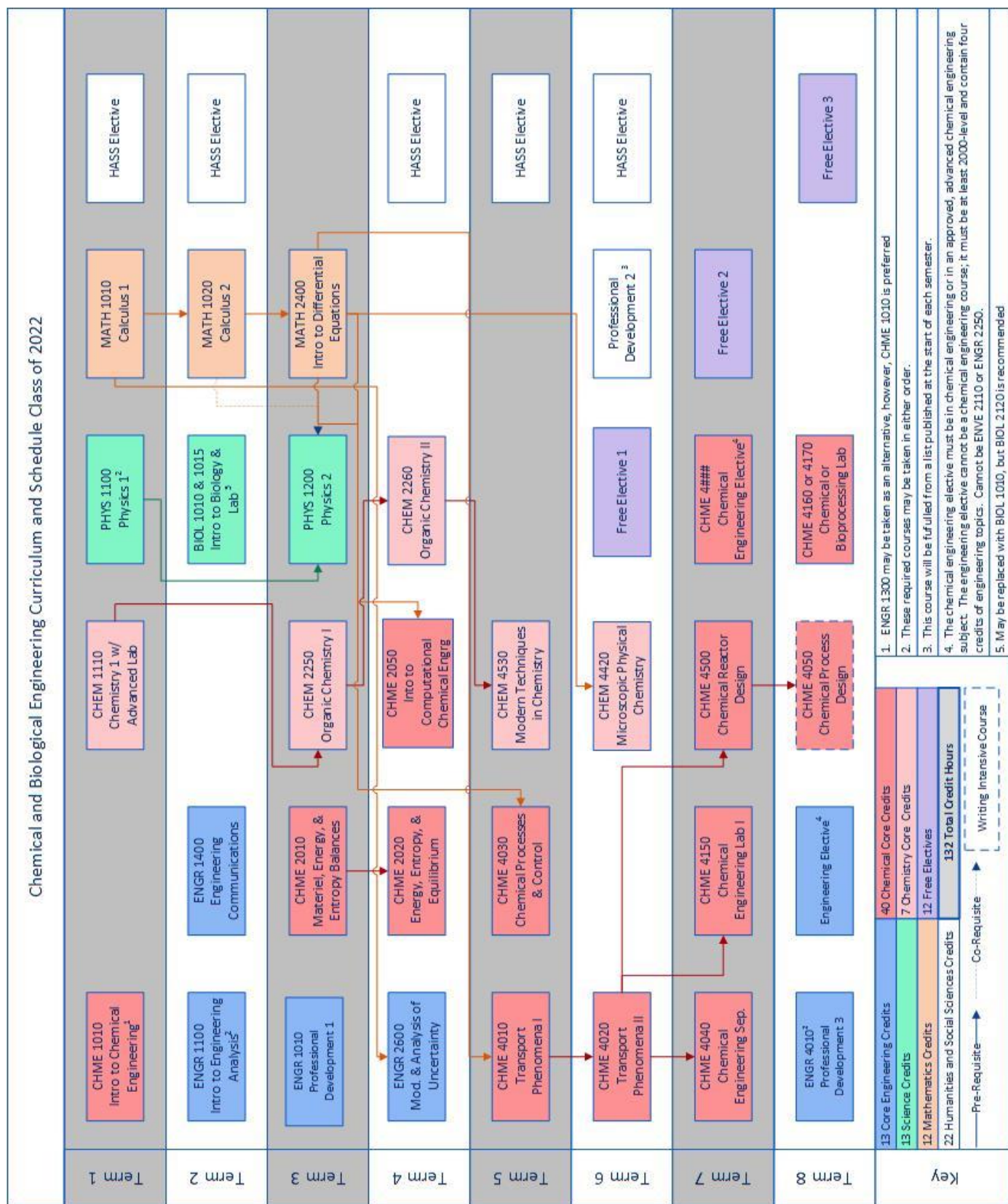
Class of 2022

NAME: _____

E-mail: _____

Fall 2018				Spring 2019			
CHME-1010	Intro to Chemical Engineering ¹	1		BIOL-2120	Intro to Cell & Molecular Biology ³	4	
CHEM-1110	Chemistry I with Advanced Lab	4		ENGR-1100	Intro to Engineering Analysis ²	4	
MATH-1010	Calculus I	4		ENGR-1400 or ENGR-1200	Engineering Communications or Engineering Graphics & CAD	1	
PHYS-1100	Physics I ²	4		MATH-1020	Calculus II	4	
	Hum., Arts or Soc. Sci. Elective	4			Hum., Arts or Soc. Sci. Elective	4	
Fall 2019				Spring 2020			
CHEM-2250	Organic Chemistry I	3		CHEM-2260	Organic Chemistry II	3	
CHME-2010	Material, Energy & Entropy Balances	4		CHME-2020	Energy, Entropy, and Equilibrium ³	3	
ENGR-1010	Professional Development I	1		CHME-2050	Intro to Computational Chemical Eng	3	
MATH-2400	Intro to Differential Equations	4		ENGR-2600	Modeling and Analysis of Uncertainty	3	
PHYS-1200	Physics II	4			Hum., Arts or Soc. Sci. Elective	4	
Summer 2020				Fall 2020 or Spring 2021			
CHEM-4530	Modern Techniques in Chemistry	4		CHEM-4420	Microscopic Physical Chemistry	3	
CHME-4030	Chemical Process Dynamics and Control	4		CHME-4020	Transport Phenomena II	4	
CHME-4010	Transport Phenomena I	4			Free Elective I	4	
	Hum., Arts or Soc. Sci. Elective	4			Hum., Arts or Soc. Sci. Elective	4	
					Professional Development II ⁴	2	
Fall 2021				Spring 2022			
CHME-4040	Chemical Engineering Separations	3		CHME-4050	Chemical Process Design	4	
CHME-4150	Chemical Engineering Lab I	3		CHME-4160 or 4170	Chemical Engineering Lab II or Bioprocessing Lab	3	
CHME-4500	Chemical Reactor Design	3		ENGR-4010	Professional Development III	1	
CHME 4####	Chemical Engineering Elective	3			Engineering Elective	4	
	Free Elective II	4			Free Elective III	4	
Electives	The chemical engineering elective must be 4000-level and above chemical engineering or in an approved, advanced chemical engineering subject. The engineering elective cannot be a chemical engineering course; it must be at least 2000-level and contain 4 credits of engineering topics. This elective cannot be ENVE 2110 or ENGR 2250.			Footnotes	<ol style="list-style-type: none"> 1. May be replaced by ENGR 1300, although CHME 1010 is recommended. 2. These required courses may be taken in either order. 3. May be replaced with BIOL 1010, but BIOL 2120 is recommended. 4. Choice of STSS #### or a course from the list of approved course published each year. 		

Chemical & Biological Engineering Curriculum Flowchart



HASS and PD II – Policies for Engineering Students

Engineering students at Rensselaer are required to successfully complete:

- 20 credits of HASS (Humanities and Social Sciences)
- 2 credits of PD II (Professional Development II)

As well as:

- 1 credit of PD I (typically as part of ENGR-2050 *Introduction to Engineering Design*, or alternatively as ENGR-1010 *Professional Development I* if ENGR-2050 transferred in as less than a 4 credit course)
- 1 credit of ENGR-4010 *Professional Development III*

For a total of:

24 credits to fulfill the HASS Core requirement.

Engineering Students shall distribute the 20 credits of HASS as follows:

- A minimum of 8 credits of Humanities (see table below)
- A minimum of 8 credits of Social Science (see table below)
- At least 4 credits must be 4000+ level
- No more than 3 courses at the 1000 level (but note depth sequence and CI restriction below)
- No more than 4 credits can come from 1 credit courses (e.g. music ensemble)
- No more than 2 courses (8 credits total) can be from transfer courses (including AP classes)
- No more than 8 credits can be from Pass/No credit courses (note depth sequence and CI restriction below)

HUMANITIES:	SOCIAL SCIENCE:
ARTS (ARTS, MUSIC)	COGS (COGNITIVE SCIENCE)
COMM (COMMUNICATION & MEDIA)	ECON (ECONOMICS)
LANG (LANGUAGE)	PSYC (PSYCHOLOGY)
LITR (LITERATURE)	STSS (ANTHROPOLOGY)
PHIL (PHILOSOPHY)	STSS (SOCIOLOGY)
STSH (HISTORY)	STSS (SCIENCE & TECHNOLOGY)
STSH (SCIENCE & TECHNOLOGY)	
WRIT (WRITING)	
IHSS (INTERDISCIPLINARY HASS)	IHSS (INTERDISCIPLINARY HASS)

Depth sequence of two courses is required, each of ≥ 4 credits, from the same area code (ARTS, COMM, etc., but not including IHSS) where a minimum of one course (≥ 4 credits) is at an advanced level (2000+), and no courses are taken on a Pass/No Credit basis. STSS and STSH count as the same area code.

In addition, students are required to take at least one HASS course that is “CI” (Communications Intensive – a list of these courses is available from a link on the SIS home page, and here: <https://info.rpi.edu/registrar/academic-planning/#Transcripts>). This course may not be taken on a Pass/No Credit basis. This CI course is not required to be part of the 24 credits of HASS Core; that is, it may instead be an HASS CI course taken as a free elective.

Enrolled Rensselaer students wishing to take an HASS course for credit at another accredited institution must obtain prior approval for the course from the HASS Manager of Student Services. Applicants must furnish either a syllabus (preferred) or a catalog description of the proposed course and a completed copy of Rensselaer’s Transfer Credit Approval form to the HASS Manager of Student Services to apply for approval.

Cross-listed STSS/STSH courses can be switched (between H and SS) after the course is taken by making a request to the Assistant Registrar.

THE 2-CREDITS OF PD II SHALL BE SATISFIED AS FOLLOWS:

The STSS -496# (number to be assigned each semester) course specifically titled PD2 Tech Issues and Solutions, will satisfy the PD II requirement.

A 4-credit PD II alternate course at any level (2000-4000) can be substituted for the 2-credit course. A list of these PD II alternate courses is available from a link on the SIS home page, and here:

<https://info.rpi.edu/registrar/academic-planning/#Transcripts>

A course used to satisfy the PD II requirement may **not** be taken on a Pass/No Credit basis.

In general, the PD II alternate course will be split as follows:

- two credits allocated to satisfy PD II
- the remaining credits allocated to free elective (or “Not Applied” to the degree if free elective credits have been completed)

With restrictions, the credits of a PD II alternate that are not allocated to PD II may be used to fulfill the 20-credits of HASS. These credits:

- **cannot** count toward the 4000 requirement,
- **cannot** count toward the depth requirement,

However,

- they can count toward the overall 20 credits of HASS,
- they can count toward the H and SS 8-credit minimums,
- they can count toward the HASS “CI” requirement.

If a student transfers in a course that is in name and course number equivalent to a PD II alternate it counts as that named HASS course, but it does **not** transfer in its status as a PD II alternate. The student would still be responsible for taking PD II or a PD II alternate at Rensselaer.

In the rare case that a student transfers in a course with Professional Development II content nearly identical to that in STSS -496# (number to be assigned each semester) course specifically titled PD2 Tech Issues and Solutions, they may furnish a syllabus of the transfer course and a completed copy of Rensselaer’s Transfer Credit Approval form to the Associate Dean of Engineering to apply for approval. Note that some courses in the Study Abroad program automatically satisfy the PD II requirement, as indicated in the transfer equivalency guide.

The School of Humanities, Arts, and Social Sciences (HASS) Associate Dean of Academic Affairs is:

Mike Kalsher (kalshm@rpi.edu, Sage 4302)

The Assistant Registrar is: **Kim Herkert** (herkek@rpi.edu, Academy Hall 2713)

The Associate Dean of Engineering is **Kurt Anderson** (anderk5@rpi.edu, JEC 3018)

Need an Extra Credit?

Q: What if I'm short 1-2 credits in H&SS?

A: Use a 4-credit PD II alternate, with 2 credits to PD II, 1-2 credits to H&SS as needed, and any remaining credits to free elective (or "Not Applied" if you have filled all of your free elective credits)

Q: What if I'm short 1-2 credits in Free Electives?

A: Use a 4-credit PD II alternate, with 2 credits to PD II and 2 credits to free elective

Q: Am I really free to choose my free electives?

A: There are some nominal restrictions for "free" electives. To count as a free elective, one credit classes must be either

- from the School of Engineering, or
- graded classes (though you can take these on a Pass/No Credit basis),

and

- ROTC courses (USAF, USAR, USNA) must not total more than six credits

One credit classes that are graded Satisfactory / Unsatisfactory (S/U) that are not in the School of Engineering may **not** be used as free electives. For example, PHYS-1010 A Passion for Physics is a 1-credit S/U course that will not count as a free elective.

Options for 1 credit free electives

- independent study (1 credit \approx 3 hours/week \Rightarrow \sim 45 hours of work)
- undergraduate research project (when taken for credit)
- School of Engineering courses, such as
 - CHME-1010 Introduction to Chemical Engineering
 - CIVL-1100 Introduction to Civil and Environmental Engineering
 - CIVL-1200 Engineering Graphics for Civil Engineers
 - ENGR-1300 Engineering Processes (if not required for your major)
 - ENGR-1700 Intro to Better World Engineering
 - ISYE-1100 Introduction to Industrial and Systems Engineering
 - MANE-1100 Introduction to Nuclear Engineering
 - MANE-1090 Introduction to Mechanics Hardware and Software
 - MTLE-1200 Introduction to Materials Engineering
- School of Science courses
 - ISCI-4510 Origins of Life Seminar (requires Junior standing or higher)
- HASS courses
 - ARTS-2300 Rensselaer Orchestra
 - ARTS-2310 Rensselaer Concert Choir
 - ARTS-2360 Roots of Africa Music Ensemble
- ROTC courses (USAF, USAR, USNA, up to six credits maximum)
- most one-credit topics courses (see <http://srfs.rpi.edu/update.do?artcenterkey=305>)

Checklist for HASS Core Requirements		
	Yes	No
Distribution Requirement		
<p>Have you completed the Humanities distribution requirement? (Minimum of 8 credits in courses with a Humanities and/or IHSS departmental prefix) NOTE: PD2 or alternative PD2 cannot be used</p>		
<p>Have you completed the Social Sciences distribution requirement? (Minimum of 8 credits in courses with a Social Science and/or IHSS departmental prefix) NOTE: PD2 or alternative PD2 cannot be used</p>		
Depth Requirement		
<p>Have you completed two 4-credit HASS courses with the same departmental prefix, one of which is above the 1000 level? Example COMM 1510 and COMM 2210 NOTE: Pass/No credit is not allowed Can be two courses at the 2000 level.</p>		
Communication Intensive (CI) Requirement		
<p>Have you completed at least one HASS course designated as CI? Courses designated as CI are listed online at https://sis/rpi.edu NOTE: Transfer credit and Pass/No Credit are not typically allowed.</p>		
4000 Level Requirement		
<p>Have you completed at least one 4 credit HASS course at the 4000 level?</p>		
Restrictions: Are you meeting....		
<p>A maximum of three 1000 level courses may be applied to the HASS Core</p>		
<p>A maximum of eight transfer/AP/IB credits may be counted towards the HASS core</p>		
<p>A maximum of two courses may be taken Pass/No Credit</p>		
<p>Have you completed a total of 24 credits of HASS courses? NOTE: Engineering is 22 and Architecture is 20</p>		
If you have answered all of the questions with “Yes”, then you have met the HASS Core Requirements		

Registration

When: Registration for the Spring semester generally occurs in early November. Registration for the Fall semester occurs the preceding Spring, usually in early April. Exact dates are included in the [Academic Calendar](#).

How: Use the [Student Information System \(SIS\)](#) to register for your courses.

Where: There are no assigned rooms for registration. You can register for your classes using any computer with Internet access.

Time tickets

As a student here at Rensselaer, you are issued a "time ticket," which assigns you a specific window of time during which you may register for the next semester. Your time ticket will be sent to your RPI email address, 2 - 3 weeks before registration.

Your registration time is assigned based on the number of credit hours you have **earned** as a student. The table to the right shows the range of earned credit hours associated with each class. Please note that classes which are still in progress or courses which have been graded as "incomplete" do *not* count towards earned credits, nor do transferred courses and Advanced Placement (AP) credit.

School of Engineering	
Freshman	0 - 30
Sophomore	31 - 60
Junior	61 - 95
Senior	96 - 128

You should receive your time ticket via e-mail approximately four weeks prior to the scheduled registration period. In addition to making the registration assignment, this e-mail message notifies you of any existing holds which may prevent you from registering if you do not resolve them.

Degree Works

Your Degree Works worksheet is a planning and advising tool -- available only to undergraduate students -- that allows you to track the progress you're making toward your Bachelor's Degree. You can access Degree Works via the main menu of the Student Information System (SIS).

Registration FAQs

What do I do if a class I want to register for is full?

Meet with the instructor of the course and request to be admitted to the course. If the class is a core/required course every effort will be made to accommodate the request. If this is an elective course you may be asked to take it in a subsequent semester. Note that for Core Engineering courses (ENGR prefix) there will be an electronic waitlist available at the time of registration which is capped at ten students per section.

How do I add/drop a course?

You may use the [Student Information System \(SIS\)](#) to add or drop courses. Generally speaking, from the beginning of the semester, you will have **two weeks to add** courses and **eight weeks to drop** them. Please refer to the Academic Calendar for specific add and drop deadline dates.

If you wish to petition to add or drop classes after the published deadline, you may do so using a Late Add/Drop Form. Please note that after the instructor's signature (if required), the form must also be approved by the Advising and Learning Assistance Center.

Professional / Student Societies in the Dept. of ChBE

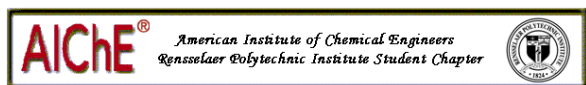
Omega Chi Epsilon – Faculty Advisor: Pankaj Karande, CBIS 3217

RPI's chapter of Omega Chi Epsilon (OXE), the national chemical engineering honor society, has recognized excellent scholastic performance of junior, senior, and graduate chemical engineering students since 2004. The mission of our chapter extends beyond recognition of academic excellence; we also strive to benefit our department and our community. Our chapter is involved in a few community service activities, authoring an undergraduate handbook, hosting an annual graduate school symposium, and providing class registration advice. For more information, please visit our website at <http://omegachiepsilon.union.rpi.edu/> or email omegachiepsilon@union.rpi.edu.

Society of Biological Engineers – Faculty Advisor: Georges Belfort, CBIS 3209

SBE maintains student chapters to serve the intellectual and professional interests of students in the biological sciences. Through their individual and collective activities, the members of chapters are ambassadors for their chapter, for their biological engineering department, for their college/university, and for SBE. They are dedicated to the broader SBE mission to connect people, cultivating knowledge, and catalyze the future. Membership in SBE is now free to undergraduates. To join, fill out the [membership form](#).

American Institute of Chemical Engineering – Faculty Advisor: Pankaj Karande, CBIS 3217



The American Institute of Chemical Engineers (AIChE) is a national organization with the mission to "promote excellence in the development and practice of chemical engineering." Its membership ranges from undergraduate students to professors, professional engineers to executive officers in major corporations.

RPI Membership Benefits:

- Here's your chance to meet and connect with the faculty and other ChBE students!
- Get your resume out to the companies through our resume CD circulations.
- Food and refreshments are provided during our general body meetings.
- AIChE Events:
 - Plant Tours (from plastics to brewing beer)
 - Guest Speakers (from Chemical Engineering companies in the area)
 - General Body Meetings
 - Workshops
 - Bowling Nights/Movie Nights/Paintball/Laser Tag

Chapter Membership Fee: \$10

National Membership: This year AIChE national membership is free so we encourage everyone to join! It is a great way to network and take advantage of a large pool of resources, all for free. Sign up at <http://www.aiche.org/students>

Visit our website: <http://www.rpi.edu/dept/chem-eng/WWW/AICHE/>

Undergraduate Research Program (URP)

URP information website: <https://info.rpi.edu/undergraduate-research>

URP application: <https://info.rpi.edu/undergraduate-research/undergraduate-research-program-academic-year/#Apply>

Many of our undergraduate students collaborate with graduate students and faculty on undergraduate research projects (URP). Plus, many of our students participate in Rensselaer's Undergraduate Research Forum & Awards... and often win!

Faculty research activities span a wide range of topics in biotechnology, nanotechnology and advanced materials. Much of this research is interdisciplinary, involving collaborative efforts with faculty in chemistry, mathematics, biology, as well as biomedical and materials engineering. The breadth of chemical engineering allows us to speak many technical "languages" and interact with scientists and engineers from a variety of disciplines. Rensselaer has a very strong Undergraduate Research Program. This is a program that allows students to work in a professor's laboratory for credit or cash. On average, we have 30% of the class taking advantage of these opportunities during their Rensselaer career.

The program offers many advantages and the opportunity to:

- work on a project whose impact could be worldwide and can lead to patents and/or grants
- apply knowledge gained in the classroom to actual problems and research situations
- network with faculty beyond the classroom, opening the door to other opportunities
- gain critical leadership, team-building and critical thinking skills
- publish as an undergraduate
- receive course credit in a more dynamic way or supplement your income

How to find a project

Most URP projects are found through direct contact with the faculty member supervising the research. Most undergraduates find projects from faculty members from whom they have taken classes. A good place to start your search is to determine a faculty member with whom you may want to work on a project. Check their website to investigate their field of research. If it sounds interesting, approach them about a possible URP project.

What if I have my own idea for a project?

You may work with a faculty member on an existing research project or on a project based on your own ideas. If you want to pursue your own project, find a faculty advisor who may be interested in your topic since you will be required to have a project advisor.

For credit or funding?

You can earn from one to four credit hours per semester for your participation in the URP. The number of credit hours you earn is negotiable between you and your faculty sponsor. If you choose this option you and your sponsor need to:

- Determine how many credit hours you will earn
- Decide exactly what is expected of you, such as your time commitment, the type of work to be submitted, etc.
- Agree on how your grade will be determined

In the past, students who have participated in the URP for pay have earned up to \$3,000 per semester. The majority of participants earn \$400 per semester.

URP funding comes from two sources:

- Your sponsoring faculty member or department
- The Office of Undergraduate Education

The faculty sponsor or department is responsible for the financial support of your research. In addition, the Office of Undergraduate Education pays URP participants a maximum of \$400 per semester in the form of matching funds.

Most projects expect eight to twelve hours of work per week.

The URP application should be submitted to the Department Coordinator, Sharon Sorrell; who:

- Checks the URP Application for completeness
- Fills out your payroll paperwork
- Forwards your application and payroll paperwork to the Office of Undergraduate Education for approval
- Will set up a schedule for reporting your hours. You must submit your hours to the Department Coordinator within the same payroll period that you worked. Please keep in mind that if you work and submit hours that exceed your funding allotment, you will not be paid for those hours. Pay checks are issued every other Friday

ChBE Faculty Research Interests

Chemical & Biological Engineering Current Research Interests 2018-19	Advanced Materials	Biochemical Engineering	Biomedical Engineering	Energy Sustainability	Fluid Mechanics	Interfacial Phenomena	Molecular Modeling & Simulations	Nanotechnology	Process Control, Design & Optimization	Separation & Bioseparation Processes
Nihat Baysal	▪		▪	▪	▪		▪	▪	▪	
Georges Belfort	▪	▪	▪	▪	▪	▪	▪	▪		▪
B. Wayne Bequette			▪	▪			▪		▪	
Vidhya Chakrapani	▪			▪		▪		▪		
Cynthia Collins		▪	▪	▪					▪	
Steven Cramer		▪	▪			▪	▪	▪		▪
Jonathan Dordick	▪	▪	▪	▪		▪		▪		
Shekhar Garde	▪	▪				▪	▪	▪		▪
Ron Hedden	▪			▪	▪	▪		▪	▪	
Pankaj Karande		▪	▪					▪		▪
Mattheos Koffas		▪	▪	▪						▪
Sangwoo Lee	▪			▪		▪		▪		
Joel Plawsky	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Todd Przybycien		▪	▪			▪		▪		▪
Steven Cramer		▪	▪			▪	▪	▪		▪
Sufei Shi	▪			▪				▪		
Patrick Underhill	▪			▪	▪		▪	▪		
Corey Woodcock					▪	▪	▪	▪		
Miao Yu	▪			▪		▪		▪		▪
Helen Zha	▪	▪	▪			▪		▪		
JOINT APPOINTMENT										
Chulsung Bae	▪			▪		▪		▪		
Richard Gross		▪	▪							▪
Juergen Hahn		▪	▪						▪	▪
Amir Hirsa		▪			▪	▪				
Robert Linhardt	▪	▪	▪					▪		▪
ADJUNCT APPOINTMENT										
Marlene Belfort		▪								▪

Study Abroad – International Programs

The information on equivalent Chemical Engineering courses is found on the study abroad website. Otherwise, courses taken may sometimes be counted as a free elective, an engineering elective, a chemistry elective or in some cases substitute for an H&SS requirement. Please meet with your undergraduate advisor EARLY (Freshman year / Sophomore year) to plan ahead if you are interested in study abroad.

<http://info.rpi.edu/international-programs>

Study Abroad FAQ's

Is study abroad a requirement? Study abroad is currently not a formal requirement, but all students are strongly encouraged to take part in an international experience.

When can a student study abroad? Students generally go abroad during their junior year, although this is not a rule. You will need to consider your academic progress (i.e. what courses you have already taken, what you will take while abroad, and what you will need to take upon return) in order to remain on track and graduate on time.

Can I go abroad as a senior? Yes, but keep in mind that the primary recruiting season for employers is fall of the senior year. Make sure to inform the Career Development Center of your plans if you choose to study abroad as a senior.

When should I start planning my study abroad experience? Applications are generally due one semester in advance of your planned term abroad. Early planning is key to ensuring that you remain on track academically.

Can I get credit for any study abroad or international experience? Academic credit is granted for participation in RPI-affiliated exchange programs that take place during the academic year, or for faculty-led summer programs.

What if I want to study abroad on a non-affiliated study abroad program? During the academic year, you must take a leave of absence and no credit will be granted. During the summer months and the holiday break, students are encouraged to participate in international experiences, but no academic credit will be granted (with the exception of some RPI faculty-led summer programs).

What types of RPI-affiliated programs are currently available? Exchanges, architecture semester programs, short-term faculty led summer programs.

Does Rensselaer offer any international programs over the December-January semester break? No formal options are currently available, but the Office of International Programs is working to develop international opportunities for students to participate in during this period.

Am I guaranteed a space in the exchange program of my choice? No. Space is limited on most programs.

What is the application process for study abroad? Generally students complete an RPI Study Abroad Application and the required application of the host institution and submit an official transcript. Academic letters of recommendation and an essay are required for some programs.

Is a minimum GPA required? A 3.0 is generally required. Students who do not meet this requirement should discuss their plans with the appropriate study abroad administrator prior to completing an application.

What is the selection process for study abroad? All applications are reviewed by RPI faculty and study abroad staff. For most programs, an unofficial admissions decision is made at RPI, but official acceptances are always issued by the host institution.

Will my study abroad grades affect my Rensselaer GPA? No. Study abroad credits are effectively treated as transfer credits and are not factored into the GPA. The exceptions to this are the architecture programs which are taught by RPI faculty and treated as regular RPI courses.

What if I fail a course while on an exchange program? You must achieve the equivalent of a C- or better in order to receive RPI credit. If you fail a course it will not show up on your transcript, but no credit will be granted.

Do courses taken abroad show up on the RPI transcript? No, only credits earned will appear on your official transcript. Your unofficial transcript will show the RPI course equivalent.

How many credits/classes do I need to take while abroad? In order to maintain full-time status you must take the equivalent of 12 credits. The actual number of classes that you take will depend on the academic system of the host institution.

What classes may I take abroad? How do I find out what classes are available? This depends on the program. For most of the exchange programs, students select courses from among the regular course offerings at the host institution. For some programs, students select from a pre-approved list.

Do I need to have my course selections approved? YES! If you plan to participate in IMEP, GE³ or the Undergraduate Exchanges you must complete a Transfer Credit Approval Form and obtain the signature of the appropriate Transfer Credit Approval Evaluator from each academic department, as well as that of your academic advisor.

How do I register for study abroad classes? In most cases, this is done directly with the host institution following their registration procedures for exchange students.

What is my student status during my study abroad term? Students who participate in RPI-affiliated study abroad remain registered at RPI with full-time student status.

How much does it cost to study abroad? Students pay regular RPI tuition for participation in an RPI-affiliated study abroad experience and receive full RPI credit. Transportation and living expenses are the responsibility of the student, and in most cases are paid directly by the student.

Can I receive financial aid for study abroad? Yes, students who participate on RPI-affiliated study abroad programs receive their full financial aid package (with the exception of work study money), including any RPI scholarships.

Is housing guaranteed? This depends on the site, but in most cases, no. Each host institution provides students with housing information, and it is the responsibility of the student to apply.

What is a visa? Do I need one? Who will get this for me? A visa, or entry permit, is a stamp or attachment in your passport that allows you to enter a specific country for a certain period of time. A visa is issued by the country that requires it. It is the responsibility of the student to make sure that he or she understands the visa requirements of the host country, to obtain the necessary application materials and supporting documents, and to apply according to the regulations of the host country. Common visa requirements include biometrics (fingerprinting) and an appointment at the Consulate of the host country (located in major U.S. cities).

Co-Terminal B.S. / M.S. or M.E. Program

Co-Terminal Program: Co-Terminal BS/ME program is open only to current Rensselaer undergraduates. It is an honors program in chemical engineering intended to provide top students with the opportunity to apply for admission to the master's program at the end of the junior year and complete both the BS and ME degrees with one additional year of study. Co-terminal ME students are required to maintain a minimum GPA of 3.0 in advanced courses used towards their graduate degree. This program is not intended for students wishing to pursue a PhD degree, but does not exclude them should they wish to pursue it. However, the department recommends that those students apply directly to a PhD program at RPI or elsewhere.

The minimum eligibility requirements to be considered for admission into the program are listed below. Meeting these requirements does not guarantee admission and the final decision for admission rests with the graduate admissions committee in the department:

Eligibility requirements:

1. Two letters of recommendation: Reference forms are available at <http://www.rpi.edu/dept/admissions/resources/GraduateRecommendation.pdf>
2. Statement of purpose and goals (1-2 pages), indicating the applicant's reasons for pursuing the Co-Terminal program and preparations and qualifications for graduate work
3. A minimum average GPA of 3.5 in four core chemical engineering undergraduate courses: CHME 2010 (Material, Energy, and Entropy Balances); CHME 2020 (Energy, Entropy, and Equilibrium); CHME 4010 (Transport Phenomena I); and CHME 4030 (Chemical Process Dynamics and Control)

Co-terminal application website:

<https://info.rpi.edu/co-terminal-program/co-terminal-application/#Application>

Website with information from the Office of Graduate Education:

<https://info.rpi.edu/co-terminal>

Co-Terminal FAQ's

Admission

1. **When do I apply?** Co-terminal applications must be submitted before the end of the first semester of the applicants' senior year. Each department has their own application deadline separate from the Office of Graduate Education's deadlines of November 15th for spring admission and May 1st for fall admission into the Co-Terminal Program. Applicants must have 90 credits (in progress or earned) of coursework towards their undergraduate degree (101 credits for Architecture students).
2. **Where do I find a Plan of Study?** The Plan of Study is available on-line at the Office of Graduate Education website [Plan of Study Form](#).
3. **What if the courses I list on the Plan of Study change?** If the courses listed change, an updated plan must be filed with your Department, the Office of Graduate Education, and the Office of the Registrar.

Financial Aid, Tuition and Fees

1. **Can I receive Undergraduate Financial Aid?**

You can no longer be considered for federal Undergraduate Financial Aid as you will have received a B.S. degree prior to starting the co-terminal year. However, you will be eligible for a graduate level Federal Direct student loan. The form and requirements are

the same for federal undergraduate/graduate financial aid. You will also remain eligible for the RPI financial aid during the two semesters of graduate course work. (Please contact the Office of Financial Aid for application deadlines).

2. Can I be considered for a TA or RA?

Co-terminal students are not eligible for a TA or RA.

Academic

- 1. When/how does a student get assigned a graduate adviser?** Co-terminal students will continue to work with their undergraduate adviser until completion of their B.S. degree. and should contact their department to be assigned a graduate advisor If you have not identified an advisor in the admission process, you should ask your department to assign a temporary advisor in your first semester.
- 2. How many credits will I be eligible to register for?** The maximum number of credits for graduate work is 15 credits.
- 3. Can I become a part-time student in the Co-Terminal Program?** Co-terminal student must remain as full time students and cannot shift to part-time status.
- 4. When do I receive my B.S. degree?** _You will receive your B.S. degree after you have met the degree requirements for the B.S. degree i.e. after 8 semesters. The Master's degree will be awarded upon the successful completion of your 10th semester. You should file a degree application with the Office of the Registrar for each degree at the beginning of the semester in which you will have met the degree requirements. See the academic calendar for deadline information.
- 5. Can I use a course for both my undergraduate and graduate degree?**
No - credits applied toward satisfying requirements of the undergraduate degree cannot be used to satisfy the requirements for the master's degree.
- 6. I finished my 9th semester but decided not to continue in the Master's program.**
You must formally withdraw from the co-terminal program. This is done using the [Graduate Student Request for Change of Status](#) form. The Change of Status form is required at any point that you decide to leave the program. This includes if you decide to leave the program upon completion of your B.S. degree.
- 7. Can I still designate courses as Pass/No Credit?**
Co-terminal students are subject to graduate degree program guidelines after they've earned the minimum number of credits required for their bachelor's degree (128 for BME). Any courses taken after a student has reached the minimum, will be subject to graduate level policies, and graduate policies prohibit designating a graduate course as Pass/No Credit.
- 8. Can I participate in the Commencement ceremony with my class?**
Yes, as you will receive your BS degree together with the rest of your class

Graduate Program

Areas of Study/Degrees	Chemical Engineering, MS, MEng, PhD	Typical Degree Requirements: MS 30 credits (24 coursework, 6 thesis) MEng 30 credits coursework PhD 72 credits beyond BS
Research Areas	We are actively pursuing research in a variety of multidisciplinary areas at the forefront of science and technology. Our research is externally funded by federal government and industry grants. Our research strengths are:	
	Advanced Materials Biochemical Engineering Biomedical Engineering Fluid Mechanics Drug Delivery Interfacial Phenomena	Mass Transport Molecular Simulations Polymers Process Control, Design, and Optimization Separation and Bioseparation Processes Thermodynamics
Research Centers	Center for Biotechnology and Interdisciplinary Studies Center for Future Energy Systems Center for Computational Innovations (CCI) Center for Automation Technologies and Systems (CATS) Fuel Cell and Hydrogen Research Center for Flow Physics and Control	Center for Materials, Devices, & Integrated Systems "Smart Lighting" Engineering Research Center Center for Cheminformatics Research New York State Center for Polymer Synthesis New York State Pollution Prevention Institute Center for Biological Functionally Organized Responsive Materials (BioFORM)
Admission	Submit on-line at: http://gradadmissions.rpi.edu/ Deadlines are January 1 for Summer and Fall admission and August 15 for Spring admission You'll need: a well-written Statement of Background & Goals; official transcripts from all colleges attended; at least 2 letters of recommendation (preferably from faculty); official GRE scores (minimum 550 GRE Verbal, general test only), Undergraduate GPA 3.0 or above, and official TOEFL or IELTS scores (570 required for all international applicants); non-refundable application fee.	
Financial Aid/Tuition	Most students receive financial aid. Apply for financial aid through the admission application, <i>no separate form is required.</i> Financial aid is available in the form of Fellowships, Teaching Assistantships, and Research Assistantships, that cover both tuition and stipend. International students are eligible for all forms of aid except some fellowships that require US citizenship. Awards are made based on merit with priority given to doctoral candidates. Tuition for the 2017-2018 academic year is \$51,000 fees and insurance are \$2,757, estimated living expenses are \$13,970, and estimated books and supplies are \$2,992. Total Estimated Cost of Attendance: \$70,719	
Contact Us	Student Services & Graduate Enrollment Ricketts 130, 110 8 th Street, Troy, New York 12180-3590 Phone: (518) - 276-6929 Fax: (518) - 276-3089 Email: http://www.cbe.rpi.edu/	

Application to the Doctoral Program in Chemical Engineering

Most successful Doctoral Program applicants have a Bachelor's degree in Chemical Engineering. The deadline for Fall applications is the preceding January 1st. The deadline for Spring applications is the previous August 15th. All required materials and scores must be received by the deadline for the application to be complete and sent to the Doctoral Review Committee. Please send all supporting required materials in one envelope to Graduate Admissions.

GRE and TOEFL scores (for International applicants) must be sent directly from the testing organization to Institute code 2757. We require a minimum of 570 on the TOEFL and 550 on the GRE Verbal. We only require the GRE general test. The GRE scores are valid for 5 years from the date of the exam. The TOEFL scores are valid for 2 years from the date of the exam. We require a minimum of 3.0 GPA on a 4 point scale on the undergraduate degree program. You may send us the unofficial test scores to begin your application process, but your application will not be considered complete until the official scores arrive from the testing institute.

We have a limited number of financial aid awards reserved for our most outstanding PhD applicants who have submitted a complete application by the deadline. Most financial awards are given for Fall admission. Normally, no aid is available for master's degree candidates. Most successful doctoral applicants have a Bachelor's degree in Chemical Engineering, evidence of interest in research, such as published papers in scholarly journals or conference proceedings or undergraduate independent research with a faculty mentor. You do not need to contact any professors at the time of application.

We encourage you to visit the Graduate Admissions Web site at: http://www.rpi.edu/dept/admissions/graduate/apply_now.html where you may apply directly on line.

Enrolling Students - Doctoral Program in Chemical Engineering

Upon your acceptance of our offer of admission, please be sure to update the ChBE Student Coordinator with an email address, mailing address and phone number where you may be reached over the summer. Keep this information up-to-date to receive important news and information throughout your affiliation with the department.

Most doctoral students are fully supported for the 4 – 5 years of study. You must always be registered in full-time status to receive financial aid and stipend pay. You will be given more information about this process in your award letter. Elaine Belokopitsky (beloke@rpi.edu) is the Business Administrator who will administer your financial pay.

You will be notified of the **department graduate orientation** over the summer. The orientation is usually held the Wednesday prior to the first day of class.

New students are also required to attend an **Institute Orientation** program. All students who will be assigned as **first-time TAs** are **REQUIRED TO ATTEND THE MANDATORY TA TRAINING**. No exceptions may be made. Financial support is dependent upon completing the required training.

Doctoral students will be given many opportunities to explore which research area they would like to pursue. In mid-September, the new doctoral students will attend two evening sessions to hear presentations by the ChBE faculty. The faculty will briefly describe their current research interests. Students will then schedule individual appointments with at least six faculty members to further discuss topics of mutual interest. Students will be given a deadline to complete the appointments, and then will turn in their top three choices. The faculty will also give their top choices. The process usually takes approximately two additional weeks to finalize a student/research advisor match, and then each student is notified of the decision by letter.

You should meet regularly with your research advisor. You should make a Graduate Plan of Study by November 1st of your first year, and then update the plan as necessary. The Graduate School and Registrar's office require a valid, signed, up-to-date plan be on file at all times.

In the spring of each term, doctoral students are required to meet with their advisor to complete the Doctoral Yearly Review. You will be sent an email when this is due to the Office of Graduate Education.

Your research advisor will guide you about doctoral requirements and Institute requirements, such as nomination of your doctoral committee, completion of your Candidacy and your Doctoral Defense.

Office of Graduate Education

<http://gradoffice.rpi.edu/setup.do>

1516 Peoples Avenue

(518) 276-2626

(518) 276-2256 fax

Registrar's Office

<http://srfs.rpi.edu/setup.do>

OPEN M-F 9am-4:30pm

2000 Level, Academy Hall

(518) 276-6231

(518) 276-6180 fax

Most forms you will need as a graduate student may be found at these Registrar and Grad Ed websites:

Grad Ed forms

<http://gradoffice.rpi.edu/update.do?catcenterkey=20>

Registrar forms

<http://registrar.rpi.edu/update.do?catcenterkey=29>

Frequently Asked Questions relating to the BS/Chemical Engineering degree:

- **Describe your curriculum.** The ChBE curriculum builds on the engineering core, requiring an additional 1/2 year of advanced chemistry, and courses in process control, separations, chemical-reactor design, transport phenomena, advanced thermodynamics, and ChBE laboratory and process design.
- **Minors?** Chemistry, Economics, Environmental Engineering, Biology and Management are popular options for minors.
- **Size of Graduating Class?** Currently, we have 407 undergraduate students: 97 seniors, 108 juniors, 99 sophomores and 103 freshmen.
- **Male/Female Ratio?** 40% female students. The Institute average is typically 31%.
- **How Many Faculty?** Currently, 14 faculty, plus numerous affiliated RPI faculty. All have Ph.D.'s, and most have industrial and/or consulting experience.
- **Internship and Co-op Opportunities?** Ample. Over 25% of ChBE seniors have participated in a summer internship experience or co-op. More students opt for an internship so as to stay on schedule for graduation. Co-ops are possible with careful planning early in your studies.
- **Undergraduate Research?** There are lots of opportunities. About 15% ChBE seniors have participated in Rensselaer's Undergraduate Research Program. Most faculty have openings for research experiences for credit, and some have funding.
- **Graduate Program?** We have a strong graduate program, with about 65 full-time graduate students.
- **Eventual Employment Opportunities?** You name it: Chemicals, Petroleum, Personal Products, Biochemicals, Pharmaceuticals/Drug Delivery, Semiconductors, Aerospace, Utilities, Government/Military, Contractors/Consultants. The breadth of ChBE education provides our graduates with a diversity of career options.

Frequently Asked Questions

Accelerating Courses

1. If I have advanced placement credit, what course should I take in place of the listed course? For many topics, the first years are sequences of 2 or 3 courses that are taken in order. Advanced placement credit will be posted by the Rensselaer course name so the action by you might be to take the next topic course in the sequence. The Mathematics sequence is a prime example of this. A second option is to delay taking the next course in the sequence and to substitute in its place another future semester course provided all the prerequisites for the course are met.

2. Can I take senior level courses as a sophomore when I meet the course prerequisites? The general guidance provided in course level numbering is that 1000 level courses are freshman level, 2000 are sophomore, and 4000 are junior – senior level. The recommendation is to respect this guidance especially when looking at 4000 level courses.

Pass No Credit Usage

1. Can pass - no credit be used for courses selected from a list? No courses that are listed by name as degree requirements (including ones that are selected from a list of restricted electives) can be applied to the named degree requirement if taken pass – no credit.

2. Who signs the pass – no credit election form? Your advisor must sign the form. The purpose of this signature is to force a meeting between you and your advisor so that the consequences of your election are fully understood. No signature is required to remove the designation.

3. Can pass – no credit be used for HASS courses? Pass – no credit can be used for HASS courses with restrictions. The catalogue lists the current restrictions so refer to the latest issue of the catalogue to get the current policy. No course used for the depth sequence in a topic can be graded pass – no credit.

Registration

1. What do I do if a class I want to register for is full? For many courses, the class size listed on SIS is the room size so no additional students can be added to the room. For CHEG courses, meet with the instructor of the course and request to be admitted to the course. If there is physical space to accommodate you, your request is very often honored. If this is an elective course you may be asked to take it in a subsequent semester. Note that for Core Engineering courses (ENGR prefix) there will be an electronic waitlist available at the time of registration which is capped at ten students per section.

2. How do I add/drop a course? You may use the [Student Information System \(SIS\)](#) to add or drop courses. Generally speaking, from the beginning of the semester, you will have **two weeks to add** courses and **eight weeks to drop** them. Please refer to the Academic Calendar for specific add and drop deadline dates. Meet with your advisor about the changes you want to make.

If you wish to petition to add or drop classes after the published deadline, you may do so using a [Late Add/Drop Form](#). Please note that after getting the instructors signature (if required), the form must also be approved by the Advising and Learning Assistance Center.

The Arch FAQ's

1. **When will I be expected to take The Arch?** Students in the Class of 2022 will be required to participate in the Arch program in Summer 2020.
2. **Does this mean it will take more than four years to graduate?** With the exception of students in the five-year bachelor of architecture program, matriculation to degree completion is not intended to take more than eight terms at Rensselaer. To accelerate your academic progress, and graduate in fewer than eight semesters, you may take classes elsewhere prior to enrollment at Rensselaer, obtain AP/IB credit from high school, take summer courses in subsequent summers, study abroad during the away semester, or some combination of these options.
3. **Do I have to pay tuition during my "away" semester?** No. The semester away is an opportunity to pursue internships, co-ops, and collaborative research, as well as athletic, entrepreneurial, philanthropic, and community service activities.
4. **What will I do on my semester "away" from Rensselaer?** You can take advantage of numerous co-curricular and experiential activities available off campus, including international travel, internships, co-ops, research opportunities, and engagement in community service projects.
5. **Will I have help in finding a co-op or internship?** Students seeking a co-op or internship experience during their "away" semester will have the full resources of the Center for Career and Professional Development available to assist them in their search.
6. **What if I want to study abroad?** Study abroad has become an integral part of a well-rounded undergraduate experience. The Arch provides additional experiential learning opportunities for students to gain a greater understanding and appreciation of other cultures and customs. This includes short-term and faculty-led international programs, and other international experiences such as internships and service learning.

Formal study abroad through our exchange programs would not be considered an away semester as students' pay Rensselaer tuition.

Students can, however, also pursue study abroad during their away semester through non-affiliated programs. In that case students pay tuition to the host institution.
7. **Will there be air conditioned residence halls and classrooms for all students during the Arch?** There is an AC plan in place so that all students here for the summer will be in air conditioned residence halls (and air conditioned classrooms and laboratories).