

Student Orientation 2015

Planning Your First Semester



Rensselaer

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Admissions

(518) 276-6216
admissions@rpi.edu
<http://admissions.rpi.edu>

Advising & Learning Assistance Center

(518) 276-6269
<http://alac.rpi.edu>

Bursar

(518) 276-6610
bursar@rpi.edu
<http://finance.rpi.edu>

Counseling Center

(518) 276-6479
counseling_center@rpi.edu
<http://studenthealth.rpi.edu>

Dean of Students Office

(518) 276-6266
doso@rpi.edu
<http://doso.rpi.edu>

Disability Student Services

(518) 276-6266
dss@rpi.edu
<http://doso.rpi.edu/dss>

Financial Aid

(518) 276-6813
financial_aid@rpi.edu
<http://admissions.rpi.edu/aid/>

First-Year Experience

(518) 276-6864
fye@rpi.edu
<http://studentlife.rpi.edu/fye>

Mobile Computing Program

(518) 276-3838
mobile-L@rpi.edu
<http://www.rpi.edu/laptops>

Registrar's Office

(518) 276-6231
registrar@rpi.edu
<http://srfs.rpi.edu>

Student Health Center

(518) 276-6287
health_center@rpi.edu
<http://studenthealth.rpi.edu>

GENERAL INFORMATION

Planning for your first semester

Deciding what courses to take your first semester at college may seem like a difficult task. The truth is that in many cases your first semester courses are specified by your curriculum. These courses lay the foundations needed for the more in-depth specialized classes you'll take later. You will have some choices – read on to find out how to make the best use of this booklet. You may also contact the Office of the First-Year Experience with any questions either by e-mail at fye@rpi.edu or by calling (518) 276-6864.

Steps to success

Check it out

Start preparing for Student Orientation (SO) by reading over this booklet – paying particular attention to the sections that pertain to your intended major. Also if you are planning to apply Advanced Placement credit, International Baccalaureate credit, or transfer credits read pages 16-17 carefully. To make sure that your transfer credits are properly evaluated you must complete the form on page 19 and return it to the address indicated. Students who have not received credit for a lower-level course that is required for a more advanced course may not be able to register for their upper-level classes – contact the Registrar's Office at registrar@rpi.edu for more information.

Make a plan

After you've had a chance to review the enclosed information try to identify a couple of electives you might be interested in taking. When you arrive at SO you will receive a time schedule of classes that will help you see how your classes will fit together. If you'd like to start doing some planning at home, you can also access the class listings at <http://sis.rpi.edu/stuclshr.htm> (please note that not all courses will be listed here and enrollment numbers for some sections will be updated prior to registration). Before you come to your assigned registration time on the second morning of SO you should have prepared a couple of sample schedules that would allow you to take the classes you need without conflicting with each other.

Take care of business

To make sure that your advising and registration sessions go as smoothly as possible during SO there are a couple of things you can take care of now. First, it may seem like a long time since you filled out your application and selected a major. If you've changed your mind and would like to switch to another major you can e-mail admissions@rpi.edu. Since you will be meeting with an academic adviser at SO you should take care of that ahead of time if possible. Also, as mentioned above – be sure to have all AP and IB score reports sent directly to the Registrar's Office and return your transfer credit form as soon as possible to the address indicated on the form.

Take it easy

This is a lot of information, but don't worry. At Student Orientation you'll have a chance to meet with some of the staff at the Advising & Learning Assistance Center as well as an adviser in your curriculum to get your questions answered. You'll also have lots of help completing the registration process. The best thing you can do now is review the first semester curriculum and prepare a couple of different schedules. It is also a good idea to identify some back-up courses in case your first choices conflict with others you want to take or are closed. You may not get your first choice every time but you are guaranteed to leave registration with a full schedule of classes that will be useful to you! Additionally, the Rensselaer Open Course Scheduler (ROCS) is available to all students who have an active RCS ID to assist with scheduling classes. ROCS can be accessed at <http://coursescheduler.rpi.edu>.

GENERAL INFORMATION

Information about your major

When you arrive at Student Orientation you will have the opportunity to meet with a faculty member in your intended major. You'll get advice about which classes to register for, get to meet other students in your major, and have a chance to ask questions. To help ensure that you are primed to make the best use of this time, please review this book carefully and follow the steps outlined on the next page. In addition, double check your Student Orientation confirmation letter to make sure that the major listed matches your intended major. If there seems to be a mistake please contact the Office of the First-Year Experience if you think we've made a mistake. If you've changed your mind since you filled out your application and would like to switch to another major you can e-mail admissions@rpi.edu. Since you will be meeting with an academic adviser at Student Orientation you should take care of this as soon as possible so that we can schedule your advising session accordingly. Also, be sure to have all AP and IB score reports sent directly to the Registrar's Office and return your Transfer Credit form (in the back of this book) as soon as possible.

In addition to indicating a preferred major on your application you may also have indicated an interest in an interdisciplinary program (some of the more common programs are Minds & Machines, Design, Innovation & Society, or Ecological Economics, Values, & Policy). These programs are different from your major in that they "live" in two different departments or schools (in other words they are interdisciplinary). Because these programs are not majors you will not have an adviser specific to them. However, you will have a chance at Orientation to have your questions answered. For more information you can also contact the Admissions Office.

Advising & Learning Assistance Center (ALAC)

The Advising and Learning Assistance Center provides a unified approach to assisting students in the learning and advising process. Through a variety of services, the office provides professional support for undergraduate students in their academic endeavors.

Responsibilities of this office include coordination of academic advising events, primary advising of undeclared and non-matriculated students, academic counseling of students, provision of procedures and programs aimed at student retention, such as free course-specific undergraduate tutoring, supplemental instruction, and aid to students for whom English is a second language (ESL).

Additionally, the Advising and Learning Assistance Center staff serve on a number of campus committees and are involved in academic dismissal matters. Other areas of involvement include the awarding of commencement prizes and interpreting and determining exceptions to academic regulations.

ALAC student leaders include Learning Assistants (LAs) who reside in first-year resident halls, offering workshops on time management, study skills, and stress management. Additionally, the center employs undergraduate and graduate students who tutor all students at drop-in sessions four days a week.

Undeclared General Studies (UNGS)

Undeclared General Studies (UNGS) is a mechanism by which those students who have not chosen a major can explore the academic programs at Rensselaer and ultimately choose a major that best suits their needs.

At Student Orientation you will have an opportunity to meet with a staff member from the Advising and Learning Assistance Center who will help you plan your course selections for your first semester at Rensselaer. The selection of these courses should assure you that they will be used as either a required course or an elective in whatever curriculum you eventually choose as your major (with the exception of a few one (1) credit courses).

In order to facilitate a well informed decision on the part of the UNGS student, the Advising and Learning Assistance Center has set in place a one credit Freshman Seminar to help the student make this important decision.

During the course of the seminar, the UNGS student will be given an introduction and overview of the program. Interest tests will be administered and the results of these will be reviewed with each student individually. These tests are designed to help the student define his or her interests.

Goal setting, time management skills, decision making, and communication skills are topics that will also be addressed during the course of the seminar. Of course, these skills are necessary for the success of any first-year student.

Faculty and students from the Schools of Engineering, Science, Lally School of Management, and Humanities, Arts, and Social Sciences as well as the faculty of Information Technology will be in attendance at selected sessions of the seminar to give insight as to what career opportunities the UNGS student can expect to find.

The UNGS student has three semesters in which to declare a major while still being able to graduate in four years. This gives sufficient opportunity to experience a broad range of subjects.

If you have any questions or would like more information, please contact the Advising and Learning Assistance Center at (518) 276-6269.

PLANNING YOUR FIRST SEMESTER

School of Architecture

Main Office
Phone (518) 276-6466, Fax (518) 276-3034
<http://www.arch.rpi.edu>

Architecture and Building Science

ARCH-2150.01	The Ethos of Architecture (2 cr)
ARCH-2160.01	Architectural Media (2 cr)
ARCH-2510.01	Materials & Design (2 cr)
ARCH-2800.01	Architectural Design Studio I (5 cr)
ARCH-2520.01	Digital Constructs 1 (2 cr)
MATH-1500	Calculus I for Architecture and HASS (4 cr) (section 3 or 4)

School of Engineering

Academic and Student Affairs
Phone (518) 276-6620, Fax (518) 276-4860
<http://www.eng.rpi.edu>

General advice for engineering majors

Rensselaer's philosophy of a common core curriculum in engineering doesn't necessitate that you indicated a preferred major in your first year, however doing so early has the following advantages: (1) motivating you to learn more about your choice; (2) allowing you to enroll in courses that fill quickly and are restricted to declared majors; and (3) allowing some early guided choice of electives. To the extent that you feel you can make a reasonably well informed choice on an engineering discipline you should do so. Your initial indication of major choice has already been reflected in your adviser assignment and in the Registrar's office. If you are still undecided, that is fine; you will be asked to choose your major by the end of the first year and will be required to do so before you register for courses for the fourth term.

When choosing courses for the first term, you should understand that any course normally taken in the first term can be delayed until the second and sometimes the third term for ANY anticipated engineering major. The only exception to this is MATH-1010 Calculus I, which you should be sure to take or receive credit for during your first term at Rensselaer.

The course listings below are only suggestions for first term engineering students – many modifications are possible. Additional information concerning choices and recommendations will be provided to you during your Student Orientation session.

Undeclared Engineering (ENGR)

CHEM-1100	Chemistry I
ENGR-1100	Introduction to Engineering Analysis or
PHYS-1100	Physics I
MATH-1010	Calculus I (See page 13 for important info.)
.....	HASS Elective (see page 9)
<i>1-credit course choice of following:</i>	
CHME-1010	Introduction to Chemical Engineering
ENGR-1200	Engineering Graphics & CAD
ENGR-1300	Engineering Processes

ENGR-1400	Engineering Communications
ENGR-1961	How to Change the World
MANE-1100	Introduction to Nuclear Engineering
MTLE-1200	Introduction to Materials Engineering

Aeronautical Engineering (AERO)

ENGR-1100	Introduction to Engineering Analysis
MATH-1010	Calculus I (See page 13 for important info.)
PHYS-1100	Physics I
.....	HASS Elective (see page 9)
<i>1-credit course choice of following:</i>	
ENGR-1200	Engineering Graphics & CAD
ENGR-1300	Engineering Processes
ENGR-1400	Engineering Communications
ENGR-1961	How to Change the World

Biomedical Engineering (BMED)

CHEM-1100	Chemistry I
MATH-1010	Calculus I (See page 13 for important info.)
ENGR-1100	Introduction to Engineering Analysis or
PHYS-1100	Physics I
.....	HASS Elective (see page 9)
<i>1-credit course choice of following: (easily delayed until a later term)</i>	
ENGR-1200	Engineering Graphics & CAD
ENGR-1400	Engineering Communications
ENGR-1961	How to Change the World

Chemical Engineering (CHEG)

CHEM-1110	Chemistry I with Advance Lab
CHME-1010	Introduction to Chemical Engineering
MATH-1010	Calculus I (See page 13 for important info.)
PHYS-1100	Physics I
.....	HASS Elective (see page 9)

Civil Engineering (CIVL)

CHEM-1100	Chemistry I
ENGR-1100	Introduction to Engineering Analysis
MATH-1010	Calculus I (See page 13 for important info.)
.....	HASS Elective (see page 9)
<i>1-credit course choice of following:</i>	
CIVL-1200	Engineering Graphics for Civil Engineers
ENGR-1200	Engineering Graphics & CAD

Computer & Systems Engineering (CSYS)

CSCI-1100	Computer Science I
MATH-1010	Calculus I (See page 13 for important info.)
ENGR-1100	Introduction to Engineering Analysis or
PHYS-1100	Physics I
.....	HASS Elective (see page 9)
<i>1-credit course choice of following: (easily delayed until a later term)</i>	
ENGR-1200	Engineering Graphics & CAD
ENGR-1400	Engineering Communications
ENGR-1961	How to Change the World

PLANNING YOUR FIRST SEMESTER

Design, Innovation & Society

This dual degree program (MECL/DSIS) is outlined on page 6.

Electrical Engineering (ELEC)

CSCI-1100	Computer Science I
ENGR-1100	Introduction to Engineering Analysis or
PHYS-1100	Physics I
MATH-1010	Calculus I (See page 13 for important info.)
.....	HASS Elective (see page 9)
<i>1-credit course choice of following: (easily delayed until a later term)</i>	
ENGR-1200	Engineering Graphics & CAD
ENGR-1400	Engineering Communications
ENGR-1961	How to Change the World

Environmental Engineering (ENVE)

CHEM-1100	Chemistry I
ENGR-1100	Introduction to Engineering Analysis
MATH-1010	Calculus I (See page 13 for important info.)
.....	HASS Elective (see page 9)

1-credit course choice of following:

CIVL-1200	Engineering Graphics for Civil Engineers
ENGR-1200	Engineering Graphics & CAD

Industrial Management Engineering (MGTE)

CHEM-1100	Chemistry I
ENGR-1100	Introduction to Engineering Analysis or
PHYS-1100	Physics I
MATH-1010	Calculus I (See page 13 for important info.)
.....	HASS Elective (see page 9)

1-credit course choice of following:

ISYE-1100	Introduction to Industrial & Systems Engineering
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Materials Engineering (MATL)

CHEM-1100	Chemistry I
ENGR-1100	Introduction to Engineering Analysis or
PHYS-1100	Physics I
MATH-1010	Calculus I (See page 13 for important info.)
.....	HASS Elective (see page 9)

1-credit course choice of following:

ENGR-1200	Engineering Graphics & CAD
ENGR-1400	Engineering Communications
ENGR-1961	How to Change the World
MTLE-1200	Introduction to Materials Engineering

Mechanical Engineering (MECL)

CHEM-1100	Chemistry I
ENGR-1100	Introduction to Engineering Analysis or
PHYS-1100	Physics I
MATH-1010	Calculus I (See page 13 for important info.)
.....	HASS Elective (see page 9)

1-credit course choice of following:

ENGR-1200	Engineering Graphics & CAD
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ENGR-1300	Engineering Processes
ENGR-1400	Engineering Communications
ENGR-1961	How to Change the World

Nuclear Engineering (NUCL)

CHEM-1100	Chemistry I
ENGR-1100	Introduction to Engineering Analysis or
PHYS-1100	Physics I
MANE-1100	Introduction to Nuclear Engineering
MATH-1010	Calculus I (See page 13 for important info.)
.....	HASS Elective (see page 9)

School of Humanities, Arts, and Social Sciences (HASS)

Main Office

Phone (518) 276-6575, Fax (518) 276-4871

<http://www.hass.rpi.edu>

Cognitive Science (COGS) and Psychology (PSYC)

IHSS-1140	Minds and Machines
MATH-1010	Calculus I
CSCI-1100	Computer Science I
.....	HASS Elective (see page 9)

Communication & Media (COMM) - see EMAC

Design, Innovation & Society (DSIS, Single Track)

IHSS-1610	PDI Studio I (restricted to DSIS majors)
STSH-1110	Science, Technology and Society
MATH-1500	Calculus I for Architecture & HASS
.....	HASS Core Elective

Design, Innovation & Society (DSIS, Engineering Track)

IHSS-1610	PDI Studio I (restricted to DSIS majors)
STSH-1110	Science, Technology and Society
MATH-1010	Calculus I (See page 13 for important info.)
CHEM-1100	Chemistry I
ENGR-1200	Engineering Graphics and CAD

Design, Innovation & Society (DSIS, Management Track)

IHSS-1610	PDI Studio I (restricted to DSIS majors)
STSH-1110	Science, Technology and Society
MATH-1500	Calculus I for Management
MGMT-1100	Intro to Management

Economics (ECON)

ECON-1200	Introductory Economics
MATH-1010	Calculus I
.....	HASS Core Elective
.....	Science Elective

Electronic Arts (EART)

- ARTS-1020 Media Studio: Imaging
or
ARTS-1010 Music & Sound

Note: Select one of these courses; you will take the other course in the spring semester.

- ARTS-2210 Sculpture
MATH-1500 Calculus I for Architecture and HASS
..... HASS Elective (see page 9)
or
CSCI-1010 Introduction to Computer Programming
or
CSCI-1100 Computer Science I

Electronic Media, Arts, & Communication (EMAC)

- ARTS-1010 Music & Sound (required course for students pursuing the Sound Design concentration)

or

- ARTS-1020 Media Studio: Imaging
Note: ARTS 1030 Digital Filmmaking can be taken in the spring semester
COMM-1510 Introduction to Communication Theory
COMM-2610 Introduction to Visual Communication
MATH-1500 Calculus I for Architecture and HASS
..... HASS Elective (see page 9)
CSCI-1010 Introduction to Computer Programming
or
CSCI-1100 Computer Science I

Games and Simulation Arts and Sciences (GSAS)

- COGS-2520 Introduction to Game Design
CSCI-1100 Computer Science I
MATH-1010 Calculus I*
COMM-1600 History and Culture of Games
or
ARTS-1040 Art for Interactive Media
or
..... HASS Elective (see page 9)

*GSAS Students pursuing the CSCI or COGS concentrations must take MATH-1010. Students pursuing the Electronic Arts, HCI, Management, or Writing concentrations may substitute MATH-1500.

Science and Technology Studies (STSO)

- STSS-1110 Science, Technology, and Society
MATH-1500 Calculus I for Architecture and HASS
..... Science Option (see page 9)
..... HASS Elective (see page 9)

Sustainability Studies (SUSt)

- IHSS-1240 Environment & Politics
MATH-1500 Calculus I for Architecture and HASS
..... Science Option (see page 9)
..... HASS Elective (see page 9)

Other HASS Majors

- MATH-1500 Calculus I for Architecture and HASS

Information Technology & Web Science

Main Office
Phone (518) 276-2660, Fax (518) 276-6687
<http://itws.rpi.edu>

Information Technology & Web Science Major (ITWS)

- CSCI-1100 Computer Science I
Students with significant programming experience should register for CSCI-1200 Data Structures. Please see the CSCI-1100 course description on page 11 for details.
ITWS-1100 Introduction to Information Technology & Web Science
MATH-1010 Calculus I (See page 13 for important info.)
..... Concentration course (see list below)

Concentration	Suggested course
Arts	ARTS-1020 Media Studio: Imaging or ARTS-1010 Music and Sound or ARTS-1030 Digital Filmmaking
Civil Engineering	ENGR-1100 Intro. to Engineering Analysis
Cognitive Science	IHSS-1140 Minds and Machines
Communication	WRIT-2110 Rhetoric and Writing
Computer Hardware	PHYS-1100 Physics I (science elective)
Computer Networking	PHYS-1100 Physics I (science elective)
Data Science	BIOL-xxxx (science elective)
Economics	ECON-1200 Intro. to Economics
Entrepreneurship	MGMT-1100 Intro. to Management
Finance	MGMT-1100 Intro. to Management
Information Security	PHYS-1100 Physics I (science elective)
Machine & Computation Learning	Physics elective (PHYS-xxxx)
Management Info. Sys.	MGMT-1100 Intro. to Management
Mech./Aero. Engineering	ENGR-1100 Intro. to Engineering Analysis
Medicine	CHEM-1100 Chemistry I (science elective)
Pre-Law	PSYC-1200 General Psychology (Psych. track) STSS-1110 Science, Technology and Society (Values and Public Policy track)
Psychology	PSYC-1200 General Psychology or IHSS-1140 Minds & Machines
Science & Tech. Studies	STSS-1110 Science, Tech. and Society
Science Informatics	CHEM-1100 Chemistry I (science elective)
Web Technologies	Life science elective (BIOL-xxxx)

PLANNING YOUR FIRST SEMESTER

Lally School of Management

Main Office

Phone (518) 276-6585, Fax (518) 276-2665

<http://lallyschool.rpi.edu>

Business and Management Majors (BMGT)

MATH-1500 Calculus I for Management
or
MATH-1010 Calculus I (See page 13 for important info.)
MGMT-1100 Introduction to Management
MGMT-2510 Microcomputers and Applications
..... HASS Elective (see page 9)

School of Science

Main Office

Phone (518) 276-6305, Fax (518) 276-2825

<http://www.rpi.edu/dept/science>

Accelerated Physician Scientist Program

BIOL-1010 Introduction to Biology*
BIOL-1015 Introduction to Biology Lab*
CHEM-1110 Chemistry I Advanced Lab
MATH-1010 Calculus I (See page 13 for important info.)
..... HASS Elective (see page 9)

Biochemistry/Biophysics

BIOL-1010 Introduction to Biology*
BIOL-1015 Introduction to Biology Lab*
CHEM-1110 Chemistry I Advanced Lab
MATH-1010 Calculus I (See page 13 for important info.)
..... HASS Elective (see page 9)

Bioinformatics and Molecular Biology

BIOL-1010 Introduction to Biology†
BIOL-1015 Introduction to Biology Lab†
CHEM-1110 Chemistry I Advanced Lab
MATH-1010 Calculus I (See page 13 for important info.)
..... HASS Elective (see page 9)

Biology

BIOL-1010 Introduction to Biology*
BIOL-1015 Introduction to Biology Lab*
CHEM-1110 Chemistry I Advanced Lab
MATH-1010 Calculus I (See page 13 for important info.)
..... HASS Elective (see page 9)

Chemistry

CHEM-1110 Chemistry I Advanced Lab
MATH-1010 Calculus I (See page 13 for important info.)
PHYS-1100 Physics I
..... HASS Elective (see page 9)

Computer Science (CSCI)

CSCI-1100 Computer Science I
or
CSCI-1200 Data Structures
MATH-1010 Calculus I (See page 13 for important info.)
PHYS-1100 Physics I
..... HASS Elective (see page 9)

Environmental Science

BIOL-1010 Introduction to Biology*
BIOL-1015 Introduction to Biology Lab*
CHEM-1110 Chemistry I Advanced Lab
MATH-1010 Calculus I (See page 13 for important info.)
..... HASS Elective (see page 9)

Geology or Hydrogeology

CHEM-1110 Chemistry I Advanced Lab
or
PHYS-1100 Physics I
ERTH-1100 Geology I: Earth's Interior
MATH-1010 Calculus I (See page 13 for important info.)
..... HASS Elective (see page 9)

Interdisciplinary Science

CHEM-1110 Chemistry I Advanced Lab
PHYS-1100 Physics I
MATH-1010 Calculus I (See page 13 for important info.)
..... HASS Elective (see page 9)

Mathematics

CSCI-1100 Computer Science I
MATH-1010 Calculus I (See page 13 for important info.)
MATH-1900 Art & Science of Mathematics I
PHYS-1100 Physics I
..... HASS Elective (see page 9)

Physics and Applied Physics

CHEM-1110 Chemistry I Advanced Lab
MATH-1010 Calculus I (See page 13 for important info.)
PHYS-1100 Physics I
or
PHYS-1150 Honors Physics I
..... HASS Elective (see page 9)

Undeclared Science

MATH-1010 Calculus I (See page 13 for important info.)
..... Science Option (see list on next page)
..... Science Option
..... HASS Elective (see page 9)

Students who are considering a major in Chemistry or a life science are advised to choose CHEM-1110 Chemistry I Advanced Lab as one of your science options.

** Students who use AP Biology credit to substitute BIOL-1010 and BIOL-1015 may take either BIOL-2120 Introduction to Cell and Molecular Biology or BIOL-4200 Biostatistics.*

† Students who use AP Biology credit to substitute BIOL-1010 and BIOL-1015 may take BIOL-2120 Introduction to Cell and Molecular Biology.

Science Options

To be chosen from the offerings of Biology, Chemistry, Computer Science, Earth & Environmental Science, or Physics. Appropriate first semester courses are:

BIOL-1010	Introduction to Biology and
BIOL-1015	Introduction to Biology Lab
CHEM-1100	Chemistry I
CHEM-1110	Chemistry I Advanced Lab
CSCI-1100	Computer Science I
CSCI-1200	Data Structures
ERTH-1100	Geology I: Earth's Interior
PHYS-1100	Physics I
PHYS-1150	Honors Physics I

ROTC programs

Air Force, Army, and Navy ROTC programs are available at Rensselaer. Most students taking ROTC classes are working toward becoming commissioned officers in the military. However, the classes are open to all students. In fact, opportunities exist for all interested students to join the program and compete for scholarships. For more information about the Air Force contact (518) 276-6236 or view their Web site at www.rpi.edu/dept/afrotc/www, the Army at (518) 276-6254 or www.rpi.edu/dept/armyrotc, or the Navy at (518) 276-6251 or www.rpi.edu/dept/naval/www/index.html. Visit all three services in the Alumni Sports & Recreation Center. For students in ROTC programs, the following are required first-semester courses:

Air and Space Studies (Air Force)

USAF-0010	Air Force Leadership Laboratory
USAF-1010	Air and Space Studies 100A

Military Science (Army)

USAR-0010	Leadership Laboratory
USAR-1010	Fundamentals of Military Science I

Naval Science (Navy)

USNA-0010	Drill/Laboratory
USNA-1010	Introduction to Naval Science

HASS electives for all students

The School of Humanities, Arts and Social Sciences (HASS) provides opportunities to expand your understanding of the social world in which you will live and work. This liberal arts component of your education will develop imagination, capacity for critical analysis, and communication abilities. Many of these courses will complement and enhance your professional concentration by connecting the liberal arts to issues of science and technology.

HASS Inquiry Courses

These courses serve as a basis for further work in science or engineering as well as in humanities, arts and social sciences. HASS inquiry courses focus on fundamental questions that cut across multiple disciplines: What are the larger social consequences of work in science and engineering? How do political forces shape what happens to our environment? Are we as rational as we claim to be? Can machines think? How does television shape our understanding of social problems? How do spectacles of technology and culture on display at World's Fairs and Theme Parks make meaning and wield social power? What assumptions are we making when we say we are living in a democracy?

This Fall's HASS Inquiry courses include the following:

IHSS-1110	Nature & Society
IHSS-1140	Minds and Machines
IHSS-1240	Environment and Politics
IHSS-1960	Back to the 60's
IHSS-1961	American Society & 'The Wire'
IHSS-1962	Public Health and the War on Drugs
IHSS-1963	Century of Environmental Thought
IHSS-1968	Blended Reality & the Internet
IHSS-1969	Are Humans Rational?
STSH-1110	Science, Technology, and Society
STSS-1110	Science, Technology, and Society

Other course offerings in the Humanities, Arts, and Social Sciences for first-year students

The following courses are also appropriate for first-year students:

ECON-1200	Introductory Economics
IHSS-1300	Race & Film in U.S. Culture and History
IHSS-1968	Blended Reality & the Internet
LANG-1410	Chinese I
PHIL-1110	Introduction to Philosophy
PSYC-1200	General Psychology

COURSE DESCRIPTIONS

ARTS-1010 Music & Sound

This course, which is the prerequisite for further courses in music theory and in computer music, is an introduction to the materials of music. Using a variety of examples from classical, popular and non-western musics, the class will introduce concepts of melody, harmony, rhythm, and musical form. Students will use their laptop computers for aural skills practice, notation, and basic recording exercises. No musical experience is required for this course. 4 credits

ARTS-1020 Media Studio: Imaging

This course introduces students to digital photography, web design, and interactive multimedia in making art. Students broaden their understanding of such topics as composition, effective use of images, color theory, typography, and narrative flow. Inquiry and experimentation are encouraged, leading towards the development of the skill and techniques needed to create visual art with electronic media. 4 credits

ARTS-1040 Art for Interactive Media

This course combines an introduction to traditional visual arts and digital media and serves as a foundation for work in game design and interactive art. Using studio projects that incorporate physical media, digital imaging and computer code, students develop their formal vocabulary, observational skills, and their understanding of issues in visual and interactive arts. 4 credits

ARTS-2210 Sculpture

A beginning sculpture course combining hands-on studio work sessions with lectures on the history and theory of sculpture practice. The studio component involves explorations of materials and techniques as tools for the enhancing of visual sensitivity and creative expression. 4 credits

BIOL-1010 Introduction to Biology

Introduction to biological systems. Discussion of problems associated with biological organization, scaling, and hierarchy. Major topics covered include evolution, genetics, molecular biology and biotechnology, and ecology. The course considers the biological components of various societal and individual problems. Taught in web-based, interactive studio mode with emphasis on biological simulations, problem solving, and peer teaching methods. Students must also register for BIOL-1015, Introduction to Biology Lab. 3 credits

BIOL-1015 Introduction to Biology Lab

Students registering for BIOL-1010 Introduction to Biology must also register for this course. 1 credit

BIOL-2120 Introduction to Cell and Molecular Biology

Structural and functional relationships of cells are discussed with regard to similarities among all living organisms. Introduction to cellular biochemistry, metabolism and energy flow, cellular and Mendelian genetics, and the chemical basis of heredity. The laboratory exercises illustrate current concepts in cellular and molecular biology. 4 credits

BIOL-4200 Biostatistics

An introduction to the concepts and techniques of modern statistics. Prerequisites: BIOL-1010, MATH-1010, or permission of the instructor. 4 credits

CHEM-1100 Chemistry I

Laws and theories of modern chemistry. Relationships between structure and property of materials. The dynamics of chemical changes are stressed in terms of chemical equilibrium, thermodynamics, and kinetics. 4 credits

CHEM-1110 Chemistry I Advanced Lab

Covers the same lecture material as CHEM-1100, but laboratory experiments will be more technique-oriented to provide better preparation for students who plan to take future laboratory courses in chemistry. Students cannot get credit for both this course and CHEM-1100. 4 credits

CHME-1010 Introduction to Chemical Engineering

This course is a series of lectures intended for anyone who is interested in understanding the chemical engineering curriculum and the career opportunities open to chemical engineering graduates. Faculty who are currently teaching courses in Mass and Energy Balances, Transport Phenomena, Process Dynamics and Control, Chemical Reactor Design, Separations and Chemical Process Design will outline the nature of these key courses in chemical engineering. Knowledgeable faculty will describe research and career opportunities in Biotechnology, Bioseparations, Energy and the Environment, Plastics and Polymers, the Electronics Industry, the Petrochemical Industry, Nanotechnology, Wall Street, Finance and Law. Recommended to students interested in learning about chemical engineering. 1 credit

CIVL-1200 Engineering Graphics for Civil Engineers

An introduction to the elements of computer aided design for Civil and Environmental Engineers using AutoCAD Civil 3D. Students will be introduced to basic AutoCAD drafting techniques as well as learn the key features of Civil 3D that aid site development and analysis. Topics covered will include general AutoCAD techniques, existing conditions development and analysis using field collected survey data and GIS information, pipe network design, grading design, and roadway corridor layout. 1 credit

COGS-2520 Introduction to Game Design

This course looks at the mathematics of game theory from a psychological perspective and serves as a primer in video game design. The psychology of players and designers are discussed, as well as the cognitive processes that people use when solving game-related puzzles. Additional topics include logic, human frailty, role playing, artificial intelligence, kinesics, theater, and human-computer interaction. 4 credits

COMM-1510 Introduction to Communication Theory

This course introduces students to basic topics in communication theory, including interpersonal, small group, organizational, and mass communication. Students will study a variety of theories related to these topics and will also study the cultural impact of new communication technologies and contemporary media systems. 4 credits

COMM-1600 History and Culture of Games

This course surveys 5000 years of game history, from ancient Sumeria to the latest next-generation consoles and MMOGs. In parallel with this historical tour, several major theories will be examined about the nature of play and the nature of games. Along the way we will also look at how games and play influence the cultures they are found in, and how culture in turn influences how people structure their leisure time will also be considered. This is a communication-intensive course. 4 credit

CSCI-1010 Introduction to Computer Programming

Computer programming is a way of thinking. A successful programmer needs to take a word problem, generate a pseudocode algorithm, and convert it to the syntax of a specific programming language. This course is an alternative to CSCI-1100 and is intended for students who want an introduction to this programming process but do not intend to do further course work in programming or computer science. Emphasis will be on the generation of the algorithms. Rather than using the complex syntax of a production language such as C or C++, this course will use Visual Basic. This allows us to concentrate on the fundamentals and not get sidetracked by language complexity. It also affords students a tool for creating useful personal applications or prototypes in the future. (Students cannot get credit for this course if they have already taken any other CSCI course.) 4 credits

CSCI-1100 Computer Science I

An introduction to computer programming algorithm design and analysis. Additional topics include basic computer organization; internal representation of scalar and array data; use of top down design and subprograms to tackle complex problems; abstract data type. Enrichment material as time allows. Interdisciplinary case studies, numerical and non-numerical applications. Students who have passed CSCI-1200 cannot register for this course. 4 credits

CSCI-1200 Data Structures

Programming concepts: functions, parameter passing, pointers, arrays, strings, structs, classes and templates. Mathematical tools: sets, functions, relations, order notations, complexity of algorithms, proof by induction. Data structures and their representations: data abstraction and internal representation, sequences, trees, binary search trees, and associative structures. Algorithms: searching and sorting, generic algorithms, iterative and recursive algorithms. Methods of testing correctness and measuring performance. Prerequisite: CSCI-1100 or permission of the instructor. 4 credits

ECON-1200 Introductory Economics

Every society faces the question of choosing how to use its natural and human resources to produce goods and services and how to distribute these resources among its people. This course studies how these choices are made in markets. It also explains the determinants of total output, employment, and inflation. Attention may also be given to special topics such as the environment, trade, and population. 4 credits

ENGR-1100 Introduction to Engineering Analysis

An integrated development of linear algebra and statics emphasizing engineering applications. Incorporates computer exercises involving matrix techniques and calculations using available software packages. 4 credits

ENGR-1200 Engineering Graphics and CAD

An introduction to the techniques for creating solid models of engineering designs. Topics include three-dimensional modeling of parts and assemblies, visualization, orthographic and isometric free-hand sketching, and computer-generated design documentation. This or a substitute is required for all engineering majors but not necessarily in the first term. 1 credit

ENGR-1300 Engineering Processes

The use of basic machine tools such as lathes, milling machines, drill presses, band saws, and grinders, including micrometers, vernier calipers, and other devices used in a machine shop or laboratory. Welding techniques and tool making. (Recommended for those planning on majoring in Aeronautical, Industrial and Management and Mechanical Engineering.) 1 credit

ENGR-1400 Engineering Communications

This is an undergraduate introductory course covering basic concepts and skills in engineering communication. Topics include technical writing, project planning and proposal writing, data visualization, system modeling and simulation, engineering graphics and CAD, and effective uses of software tools. Note: this course is recommended as an alternative to ENGR-1200 for the following disciplines only: Biomedical, Chemical, Industrial & Systems, Materials, Electrical, Computer Systems and Nuclear Engineering. 1 credit

ENGR-1961 How to Change the World

Do you want to be a leader and change the world, create disruptive technologies that make life better for all people and address threats to our planet? Are you motivated and courageous to do whatever it takes? Do you want to learn to see what others do not see, to analyze and understand, to imagine what could be and then work to turn your vision into a reality? If yes, then this course may be for you. Starting with personal values, mission and purpose, we will learn new skills and regain our creativity: suspending judgement, asking questions, sketching, dreaming, systematic and strategic thinking, identifying and challenging assumptions, insisting on achieving the ideal. 1 credit

ERTH-1100 Geology I: Earth's Interior

This course covers the material in EARTH-1010 Planet Earth I. Age and origin of the Earth, including internal constituents and energy sources; how plates move, oceans develop, and mountains rise. Aims to give a quantitative picture of the Earth's major processes and the ways in which they interact to provide the world's citizens with adequate material resources. This course meets with EARTH-1010 for lectures but, in place of recitation, there is a lab. Students cannot obtain credit for both this course and EARTH-1010. 4 credits

IHSS-1110 Nature and Society

This course focuses on the social and ecological aspects of humans in the natural world. We emphasize critical thinking about where we come from and where we are going as species. This course draws on historical perspectives and addresses contemporary issues such as climate change, our national energy resources, and the local foods movement. The course includes readings as well as student projects, field trips, guest lectures, and "ethnographic" assignments about our consumer society. 4 credit

IHSS-1140 Minds and Machines

This course is an introduction to the philosophy of mind and cognitive science. Students meet in small sections to have class discussions and debates about questions like: "Are minds physical or non-physical? Do we have free will? Does our reliance on technology turn us into cyborgs? How close are we to building an intelligent robot or machine? Do we want to?" Students will learn how to make a philosophical argument, and how to express them in writing or through an oral presentation. 4 credits

COURSE DESCRIPTIONS

IHSS-1240 Environment and Politics

Concerns about the environment have provoked intense and complicated political debate. In this course, we analyze the issues, challenges and opportunities to protect the environment. Students participate in oral debates, and design projects to help solve an environmental problem. This course is taught in collaboration with faculty from the School of Science and Engineering. 4 credits

IHSS-1300 Race & Film in U.S. Culture and History

This course will investigate the emergence and transformations of the concept of race in the history and culture of the United States by analyzing films. Hollywood classics will be featured, and will also be contrasted with documentary and experimental films. The course will focus on social and political contexts, as well as the film's critical reception and film form. 4 credits

IHSS-1610 Product Design and Innovation Design Studio I*

The first design studio in the Product Design and Innovation Program introduces students to general design through a series of short projects. The projects stress creative thinking and invention, observation and perception, communication and visualization, sketching, photography, model-making, and especially open-ended exploration. 4 credits

*Restricted to DSIS majors only

IHSS-1960 Back to the 60's

This course invites students to take a journey back to the activism of the 60's through the lens of history, sociology, political science, media, and the arts. Utilizing selected readings, videos, site visits, and guest lecturers, students will take a deep dive into the "movement" and explore the philosophy, programs, and activism of several major organizations. Through this exploration of a significant period in time, students will have the opportunity to unearth the work and significance of visual artists, poets, and musicians who chronicled the issues of the 60's through their respective mediums of communication. 4 credits

IHSS-1961 American Society & 'The Wire'

This course examines the politics, economy, and cultures of the United States. In addition to reading assignments, students watch the first two sessions of 'The Wire' outside of class, treating the program as a key "text" for analyzing the social institutions and social problems that shape urban life in the United States. Course work includes team-based, participatory projects that each how to collaborate, debate, and use a sociological perspective to investigate complex problems. 4 credits

IHSS-1962 Public Health & the War on Drugs

This course examines the history of social, political, and economic conditions of the War on Drugs. The television series "The Wire" serves as a major text for this course. By raising question of what a public health approach to drugs might look like, this course challenges first year students to play a policy-making role in the creation of evidence-based drug policy and public health policy. 4 credits

IHSS-1963 Century of Environmental Thought

This course examines the development of the worldviews,

organizations, and practices that shaped the 20th century American environmental movement. Students will read the original writings of some of the most important thinkers and activists in the history of environmentalism. Lectures and projects will examine the cultural contexts for the emergence of environmental ideas and their impacts. This course is cross listed with STSS/STSH 2310 and cannot be taken twice under different numbers. 4 credits.

IHSS-1968 Blended Reality & the Internet

Increasingly we live in a blended reality where real life and the internet are intertwined. This course provides the students with an opportunity to develop a multidisciplinary perspective on the impacts of blended reality; enhancing their capacity to critically evaluate the impacts of technology on contemporary life. This class is a joint venture; students provide the content knowledge of technology while the professor provides human perspective. 4 credits

IHSS-1969 Are Humans Rational?

This course is an introduction to the philosophy of mind and cognitive science. Students meet in small sections to have class discussions and debates about questions like: What are minds? Are minds physical or non-physical? If minds are purely physical, do we have free will? If we don't have free will, do we have moral responsibilities or rights? How are we defined anyway? Does our reliance on technology turn us into cyborgs? How close are we to building an intelligent robot or machine? Do we want to? Students will learn how to make a philosophical argument, and how to express them in writing or through an oral presentation. 4 credits

ITWS-1100 Introduction to Information Technology & Web Science

This course introduces students to the field of information technology, the types of problems encountered in the field, and the solution approaches used to solve them. Through a series of activities and projects, students are introduced to topics such as web systems design, emerging web standards, database systems, security, and computer networking. Guest speakers highlight information technology practices in industry. Students work in groups on a team project and presentation at the end of the course. 4 credits

LANG-1410 Chinese I

This course assumes no previous knowledge of the subject and is not for native speakers. The course is designed to provide students with fundamental skills in listening, speaking, reading, and writing Mandarin Chinese. Oral and aural skills will be emphasized. Background on Chinese culture will be introduced as an element of the course.

MANE-1100 Introduction to Nuclear Engineering

An overview of concepts applied to nuclear power production and non-power application of nuclear science and technology. Topics include next generation nuclear power plants, nuclear reactor material, waste management, environmental impacts of nuclear power, fusion power, medical applications, radiation protection, and other topics of current interest. Introduction to and tours of experimental facilities including an electron accelerator and a low power nuclear fission reactor. Discussions of education, research, and career opportunities in Nuclear Engineering. Recommended for students interested in learning about nuclear engineering. 1 credit

MATH-1010 Calculus I

Calculus I covers functions, limits, continuity, derivatives, implicit differentiation, related rates, maxima and minima, elementary transcendental functions, introduction to the definite integral with applications to areas and volumes of revolution. For Engineering and Science majors. 4 credits

Although there is no formal prerequisite, precalculus preparations are directly correlated with Calculus I grades. To get ready for Calculus I, students are encouraged to work the problems in the book "Ready... Set... Calculus." An online version is available at <http://calculus.math.rpi.edu/rsc/>

MATH-1020 Calculus II

Techniques and applications of integration, polar coordinates, parametric equations, infinite sequences and series, vector functions and curves in space, functions of several variables, and partial derivatives. For Engineering and Science majors. Prerequisite: MATH-1010, AB 4 or 5, or BC 3. 4 credits

In addition to knowing Calculus I, it is important to know precalculus to succeed in Calculus II. To review this material, students are encouraged to work the problems in the book "Ready... Set... Calculus." An online version is available at <http://calculus.math.rpi.edu/rsc/>

MATH-1500 Calculus I for Management

Basic concepts in differential and integral calculus for functions of one variable. Topics include functions, limits, continuity, derivatives, integration, exponential and logarithmic functions, and techniques of integration. Application areas will be topics in management with a special emphasis on the role of calculus in introductory probability. 4 credits

MATH-1500 Calculus I for Architecture and HASS

Basic concepts in differential and integral calculus for functions of one variable. Topics are the same as those in Calculus for Management, but application areas will be in architecture and social sciences. 4 credits

MATH-1900 Art & Science of Mathematics I

A seminar for first-year math majors. Weekly faculty-student discussions vary, but examples of topics are: unsolved math problems, countability and the arithmetic of the infinite, topology and the concept of dimension, geometry and one-sided surfaces, and the theory underlying topics currently covered in calculus. 1 credit

MATH-2010 Multivariable Calculus and Matrix Algebra

Directional derivatives, maxima and minima, double integrals, line integrals, div and curl, and Green's Theorem. Matrix algebra and systems of linear equations, vectors and linear transformations in R^n , eigenvectors and eigenvalues. Applications in engineering and science. Prerequisite: MATH-1020 or BC 4 or 5. 4 credits

MATH-2400 Introduction to Differential Equations

First-order differential equations, second-order linear equations, eigenvalues and eigenvectors of matrices, systems of first-order equations, stability and qualitative properties of nonlinear autonomous systems in the plane, Fourier series, separation of variables for partial differential equations. Prerequisite: MATH-1020 or BC 4 or 5. 4 credits

MGMT-1100 Introduction to Management

This is a required first course for management majors and minors. In a case-based format, it emphasizes broad, basic principles of managerial functions and processes using an interdisciplinary approach to goal-oriented situations of private and public organizations. It is offered in the fall and spring terms annually. 4 credits

MGMT-2510 Microcomputers and Applications

An introduction to the fundamentals of microcomputer technology and its application in management and information systems. Topics include hardware, software, communications, and elements of the system design life cycle, database concepts, and data processing. Students build systems using spreadsheet and database packages. 4 credits

MTLE-1200 Introduction to Materials Engineering

The course will introduce the student to the field of Materials Science and Engineering (MSE). The goal will be to illustrate the relevance and importance of this discipline to virtually all fields of technology. This will be achieved primarily through overview lectures of a set of broad technological fields – ranging across medicine, energy, electronics, nanotechnology, sports technology, construction, transportation, and others – that demonstrate the crucial enabling role of materials engineering in each area. Students will be exposed to cutting edge applications of MSE by experts in each of these fields. The course will also integrate laboratory open houses, panel discussions, and a set of activities designed to expose students to the frontiers of MSE (attending seminars, researching key journal publications, etc.). Recommended for students interested in learning about materials engineering. 1 credit

PHIL-1110 Introduction to Philosophy

An introduction to the major areas of philosophy (ethics, theory of knowledge, philosophy of religion, etc.) and to some of the main problems treated within these fields. Selections from contemporary as well as classical authors are studied and discussed. Students are encouraged to develop a disciplined approach to intellectual problems. Emphasis varies with the instructor. 4 credits

PHYS-1010 A Passion for Physics

A weekly one-hour seminar by physics department faculty members, in which they describe their scientific and research interests, at a level suitable for first year college students. This course is graded satisfactory/unsatisfactory. 1 credit

PHYS-1100 Physics I

The first semester of a two-semester sequence of interactive courses. Topics include linear and angular kinematics and dynamics, work and energy, momentum and collisions, forces and fields, gravitation, elementary electrostatics, and motion of charged particles in a magnetic field. This is a laptop required course. It is important for students to have completed an introductory high school or college calculus course prior to taking PHYS-1100. 4 credits

ADVANCED PLACEMENT / TRANSFER CREDIT

Students entering as freshmen can obtain Rensselaer advanced placement or academic credit in either of two ways:

1. Advanced Placement Examinations, which are given by the College Entrance Examination Board in Princeton, New Jersey.
2. Transfer credit, which is granted for work done at an accredited college before beginning your freshman year at Rensselaer.

The following are the specific details involved in obtaining credit by these methods. If you have questions regarding Advanced Placement or transfer credit, please write to the Registrar (registrar@rpi.edu) or call (518) 276-6231.

Advanced Placement tests

You should request that the Educational Testing Service (ETS) send Advanced Placement (AP) scores to the Registrar's Office at Rensselaer. The scores are evaluated by individual departments using the criteria outlined on the right.

When credit is granted, no grade is assigned; therefore the grade received is not included in calculating the Quality Point Average (QPA) at Rensselaer. As an alternative to receiving AP credit, you may qualify for a course above the entry level.

You will have Rensselaer's credit or placement decision in time for your first semester registration at Student Orientation (SO), provided your scores have been reported on time. You always have the option of declining all or part of your Advanced Placement awards. Advanced Placement credit will be forfeited if a student takes an equivalent Rensselaer course.

Transfer credit

If you have completed, or are currently enrolled in courses at other colleges, the credit may be transferable to Rensselaer. The Registrar will have your courses evaluated by the appropriate departments on campus and will send you a copy of the department's evaluation decision. By June 25, send catalog course descriptions for each course taken, or in progress, to the Registrar, Rensselaer Polytechnic Institute, 110 8th Street, Troy, New York 12180-3590. Be sure your name and Rensselaer ID number are on all pages of course descriptions.

An official transcript of your grade(s) from the other college(s) must also be sent to the Office of the Registrar when the course is completed. Once the evaluation is done and the Registrar has official transcripts, the credit will be posted to your academic record. No grade is given for transfer credit and the grades are not included in calculating the QPA. Other information on transfer credit can be found in the Rensselaer Catalog.

Transfer credit will not be given for any college courses taken while in high school if these courses were used in obtaining the high school diploma. Transfer credit will be forfeited if a student takes an equivalent Rensselaer course.

Students entering as first-time freshmen can transfer a maximum of 32 credits (including Advanced Placement credit or other equivalent credit) toward their Bachelor's degree at Rensselaer.

Only a total of two courses for a maximum of eight (8) advanced placement and/or transfer credits can be used toward the HASS Core Requirements for graduation. Only a total of two courses for a maximum of eight (8) transfer credits may be used to satisfy the science core requirement. Any courses beyond those two (2) can be used towards free electives.

AP credit and placement rules

The following rules are used to award advanced placement/credit:

Art History or Music Theory

Students who achieve a grade of 4 or 5 on either of these exams will not receive academic credit but will be eligible for advanced placement in non-entry level courses.

Biology

Students who achieve a grade of 4 or 5 will receive 3 credits for BIOL-1010 Introduction to Biology and 1 credit for BIOL-1015 Introduction to Biology Lab.

Chemistry

Students who achieve a grade of 5 will receive 8 credits for CHEM-1100 Chemistry I and CHEM-1200 Chemistry II. Students who achieve a grade of 4 will receive 4 credits for CHEM-1100 Chemistry I. For students who are not required to take Chemistry II in their curriculum, the credits for Chemistry II could be applied to a science elective or free elective. Engineering students who are required to take Materials Science for Engineers should register for ENGR-1600 to complete the pre-engineering chemistry/materials requirement.

Computer Science A

Students who receive a grade of 5 on the Computer Science A test will receive 4 credits for CSCI-1100 Computer Science I.

Economics (Macroeconomics and Microeconomics)

Students who achieve a grade of 4 or 5 on both the microeconomics and macroeconomics exams receive 4 credit hours for ECON-1200 Introduction to Economics.

English Language and Composition or English Literature and Composition

Students who achieve a grade of 4 or 5 will receive 4 credit hours for WRIT-1000 Writing elective. Credit cannot be used to satisfy the Communication Intensive Requirement.

Environmental Science

Students who receive a score of 4 or 5 will receive 4 credits for IENV-1000 Environmental Science elective.

History

Students who achieve a grade of 4 or 5 on the United States History examination will receive 4 credit hours for STSH-1000 STS (Humanities) Elective. Students who achieve a grade of 4 or 5 in European History or World History will receive 4 credit hours for STSH-1000 STS (Humanities) Elective.

Human Geography

Students who receive a grade of 4 or 5 will receive 4 credit hours for STSS-1000 STS (Social Science) Elective.

Mathematics - Calculus

Engineering and Science majors who achieve a grade of 3 on the Calculus BC examination, or a grade of 4 or 5 on the Calculus AB examination, will receive 4 credits for Calculus I and should register for MATH-1020 Calculus II if required by the major. Students who achieve a grade of 4 or 5 on the BC exam will receive 8 credits for Calculus I and II and should register for MATH-2010 or MATH-2400 depending on the requirements of the student's major.

Architecture, HASS, and Management majors who achieve a grade of 3 or better on the Calculus BC examination, or a grade of 4 or 5 on the Calculus AB examination, will receive 4 credits for Calculus I and take no math in the fall semester; these students enroll in **MATH-1520 (Management) or MATH-1620 (Architecture and HASS)** in the spring semester. Students receiving a grade of 4 or 5 on the Calculus BC exam will receive 8 credit hours for Calculus I and II.

Physics

Students who achieve a grade of 4 or 5 on both Physics C: Mechanics and Physics C: Electricity and Magnetism receive 8 credits for Physics I and II. Students who receive a grade of 4 or 5 on only Physics C: Mechanics receive 4 credits for Physics. Students who achieve a grade of 4 or 5 on the Physics 1: Algebra-based examination and have received credit for Calculus I (AP credit, transfer credit, or have completed Rensselaer credit) receive 4 credits for Physics I.

Psychology

Students who achieve a grade of 4 or 5 will receive 4 credits for PSYC-1200 General Psychology.

United States Government and Politics or Comparative Government and Politics

Students who achieve a grade of 4 or 5 will receive 4 credit hours for STSS-1000 STS (Social Science) elective.

IB higher-level examinations

Art/Design

Students who earn a grade of 5, 6, or 7 will receive 4 credit hours for a course ARTS-1000 Arts Elective.

Biology

Students who earn a grade of 5, 6, or 7 will receive credit for BIOL-1010/1015 Introduction to Biology, 4 credits.

Business and Management

Students who earn a grade of 5, 6, or 7 will receive credit for MGMT-1100 Introduction to Management, 4 credits.

Chemistry

Students who earn a grade of 5, 6, or 7 will receive credit for courses CHEM-1100 & CHEM-1200, Chemistry I & II, 8 credit hours.

Classical Languages

Students who earn a grade of 5, 6, or 7 will receive 4 credit hours for a course COMM-1000 Communications Elective.

Economics

Students who earn a grade of 5, 6, or 7 will receive credit for a course ECON-1200 Introductory Economics, 4 credit hours.

English

Students who earn a grade of 5, 6, or 7 will receive 4 credit hours for a course WRIT-1000 Writing Elective.

Foreign Languages

Students who earn a grade of 5, 6, or 7 will receive 4 credit hours for a course LANG-1000 Language Elective.

History

Students who earn a grade of 5, 6, or 7 will receive credit for a course STSH-1000 STS (Social Science) Elective, 4 credit hours.

Statistics

Students who achieve a grade of 4 or 5 will receive 4 credits for MGMT-2100 Statistical Methods. Non-Management majors cannot count the course as part of the Math/Science requirement. Students will not receive credit for ENGR-2600 Model & Analysis of Uncertainty.

Studio Art: 2D Design or Studio Art: 3D Design or Studio Art: Drawing

Students who achieve a grade of 4 or 5 will not receive academic credit but will be eligible for advanced placement in non-entry level courses.

World Languages and Cultures

Students who achieve a grade of 4 or 5 will receive four credit hours for LANG-1000 Language Elective. Courses include Chinese Language and Culture, French Language and Culture, German Language and Culture, Italian Language and Culture, Japanese Language and Culture, Latin, Spanish Language and Culture, and Spanish Literature and Culture.

To receive credit, the original or certified copy of the exam results must be forwarded to the Registrar. Standard level exams are not considered.

History of the Islamic World

Students who earn a grade of 5, 6, or 7 will receive credit for a course STSH-1000 STS (Humanities) Elective, 4 credit hours.

Information Technology in a Global Society

Students who earn a grade of 5, 6, or 7 will receive credit for a course STSS-1000 STS (Social Science) Elective, 4 credit hours.

Mathematics

Students who earn a grade of 5, 6, or 7 will receive credit for Calculus I, 4 credit hours.

Music

Students who earn a grade of 5, 6, or 7 will receive 4 credit hours for a course ARTS-1000, Arts Elective.

Philosophy

Students who earn a grade of 5, 6, or 7 will receive credit for course PHIL-1110, Introduction to Philosophy, 4 credit hours.

Physics

Students who earn a grade of 5, 6, or 7 will receive credit for Physics I and Physics II, 8 credit hours.

Psychology

Students who earn a grade of 5, 6, or 7 will receive credit for course PSYC-1200 General Psychology, 4 credit hours.

Social Anthropology

Students who earn a grade of 5, 6, or 7 will receive credit for a course STSS-1000 STS (Social Science) Elective, 4 credit hours.

Theatre Arts

Students who earn a grade of 5, 6, or 7 will receive credit for ARTS-1000 Arts Elective, 4 credit hours.



Rensselaer

Incoming Freshmen Transfer Credit Procedure

To obtain transfer credit for courses taken at other colleges and universities, please follow this procedure:

1. Send copies of the course descriptions of the courses you've completed or are completing this semester to the Office of the Registrar. Write your name and Rensselaer ID number on all copies. Course descriptions are usually found in university catalogs. Many colleges now provide this information on their Web site. As soon as we have the course descriptions, we will send them to the appropriate department(s) for evaluation.
2. Ask your high school principal or guidance counselor to fill out the statement below certifying that the course(s) you've completed (or are taking) are not needed for your high school diploma. Return this statement to the Office of the Registrar also.
3. If you have already completed the coursework that you will transfer, you should forward the descriptions, statement form, and transcripts to us immediately. For courses that you are still completing, send the course descriptions and statement form immediately to initiate the departmental evaluation, and you can forward the transcript to us later when it becomes available.
4. Once the transfer credit evaluations come back to us from the department and we have received both an official transcript from the college attended and the statement from your high school, we will notify you of credits you will receive. Your notification will be a copy of the signed evaluation form.

You must earn a C grade or better to be awarded transfer credit. All transcripts, course descriptions, and statement forms should be mailed to the Office of the Registrar, Rensselaer Polytechnic Institute, Academy Hall 2000 level, 110 8th Street, Troy, NY 12180-3590. Effective Fall 2010, all students entering as a first-time freshman can transfer a maximum of 32 credits (including Advanced Placement credit or equivalent credit). It is important to note that only 8 credits of the HASS core curriculum can be brought in to Rensselaer either through transfer of credits or through Advanced Placement exams. Sixteen hours of the core must be completed at Rensselaer. Students entering as a freshmen may transfer up to two science courses (up to 8 credit hours) towards satisfying their science core requirement. Students who have Advanced Placement or who have the International Baccalaureate may be granted credit for the mathematics and science courses depending on their scores.

If you have any questions about transferring in credits, please contact Kim Tobio in the Registrar's Office at (518) 276-6299 or at tobiok@rpi.edu. If you need additional copies of this form, go to: http://www.rpi.edu/dept/srfs/incoming_freshmen_transfer_credit.pdf.

Transfer credit will be forfeited if a student takes an equivalent Rensselaer course.

Keep top portion for your records

Send bottom portion to your high school

_____ has requested Rensselaer academic credit for

 Name of student RIN #

_____ taken while a student at _____

 Number and name of course Name of preparatory or high school

and supervised or sponsored by _____

 Name of college or university

It is Rensselaer's policy to only transfer credit for college courses taken while in high school if these courses were not used in obtaining the high school diploma. Please indicate by entering a check in the appropriate box whether the course was used, or was not used, to obtain the high school diploma.

- The course was used to obtain the high school diploma
- The course was not used to obtain the high school diploma

To be returned to:
Office of the Registrar
Rensselaer Polytechnic Institute
Academy Hall 2000 Level
110 8th Street
Troy, NY 12180-3590 USA

Signature and title of high school official

Fax (518) 276-6180

Rensselaer Polytechnic Institute

110 8th Street

Troy, NY 12180-3590

Rensselaer admits qualified students without regard to age, race, color, gender, sexual orientation, religion, national or ethnic origin, veteran status, marital status, or disability.