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A. Introduction

The intention of this handbook is to inform Bioenvironmental Engineering (BEE) students about academic processes, procedures and requirements that are particular to the BEE program and to answer some frequently asked questions. This handbook also provides faculty members with information for student advising.

Students and advisors should also familiarize themselves with the Academic Policies and Procedures, the Degree Requirements and University Policies and Procedures in the most recent New Brunswick Undergraduate Catalog (http://catalogs.rutgers.edu/generated/nb-ug_current/).

B. Program Overview

Bioenvironmental engineering utilizes engineering principles and the physical, chemical and biological sciences to prevent and solve environmental problems related to human activities. Bioenvironmental engineers may work in a variety of environmental engineering fields including air pollution control, bioremediation, environmental health and safety, hazardous waste management, site remediation, solid wastes management, renewable energy generation, stormwater treatment, and water and wastewater treatment. Employers include engineering consulting firms, treatment facilities, manufacturers, environmental regulatory and planning agencies, research laboratories, international development agencies, and public interest groups.

1. Program Mission

The mission of the Bioenvironmental Engineering Program at Rutgers University is to provide students with a broad and thorough education in bioenvironmental engineering fundamentals, applications, and design so as to prepare graduates for the practice of bioenvironmental engineering at the professional level with confidence and skills necessary to meet the technical and social challenges of the future and for continuing their studies at the graduate level.

2. Program Educational Objectives

Within the first few years on the job graduates will have met the following Program Educational Objectives (POE's):

1. Practice environmental engineering or pursue advanced degrees with technical competence.
   - Competently and efficiently collect, analyze and interpret data relevant to problems in the environmental engineering sectors
   - Demonstrate methodological and computational skills to operate effectively within the environmental engineering sectors.
   - Demonstrate skills in current technologies and fundamentals of environmental engineering to be able to adapt to future challenges.

2. Conduct themselves responsibly, professionally and ethically in their professional life.
   - Function and skillfully communicate complex issues orally and in writing, individually and within multidisciplinary teams.
   - Be ethical and professional in performance of their duties.
   - Continue the process of life-long learning.
3. Act as leaders in applying the global and societal benefits of environmental engineering solutions consistent with the principles of sustainability in the community.

3. Student Outcomes

Graduates of the Bioenvironmental Engineering Program will have demonstrated that they have attained the following Student Outcomes associated with the practice of Bioenvironmental Engineering:

a. an ability to apply knowledge of mathematics, science, and engineering
b. an ability to design and conduct experiments, as well as to analyze and interpret data
c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
d. an ability to function on multidisciplinary teams
e. an ability to identify, formulate, and solve engineering problems
f. an understanding of professional and ethical responsibility
g. an ability to communicate effectively
h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
i. a recognition of the need for, and an ability to engage in life-long learning
j. a knowledge of contemporary issues
k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
C. Degree Programs

The Bioenvironmental Engineering Program offers students a strong foundation in engineering, chemistry, physics and biological sciences. Upper-level courses provide graduates the environmental engineering tools and the ability to apply them to various environmental engineering fields.

Both four-year and five-year programs are available. Students normally matriculate into the four-year program through the School of Engineering (SOE) or enter the five-year program through the School of Environmental and Biological Sciences (SEBS). The latter is a dual-degree program resulting in two bachelor of science (B.S.) degrees in Bioenvironmental Engineering, one from SOE and one from SEBS. The B.S. degree program in engineering is accredited by the Accreditation Board for Engineering and Technology (ABET) as an environmental engineering program. Both programs prepare graduates for taking the Fundamental of Engineering (FE) examination pursuant to becoming a licensed professional engineer (PE).

1. Four-Year B.S. Degree Program (SOE)

Graduates in this program will complete 135 credits. These credits include the SOE General Education Requirements. The full list of General Education Requirements can be found at http://soe.rutgers.edu/oas/gened.

   a. SOE General Education Requirements

As part of the SOE General Education Requirements students are required to complete 6 courses (18 credits) in Humanities and Social Sciences (H/SS). Two of these courses (6 credits) are fulfilled by Expository Writing (355:101) and Microeconomics (220:102), students may choose H/SS courses to meet the remaining 12 credits. Note that at least TWO H/SS COURSES MUST BE UPPER LEVEL (300+). The list of acceptable H/SS courses can be found at:
http://soe.rutgers.edu/sites/default/files/imce/pdfs/humanities_list.pdf

As part of this program students are also required to meet a 3-credit General Elective (see definition below). There are several courses that MAY NOT be used as a General Elective. These courses include:

- CHEMISTRY( 01:160:110-140)
- COMPUTER SCIENCE (01:198:107, 110, 170)
- ENGLISH (01:355:096-099)
- EXERCISE SCIENCE (01:377:171-180)
- MATHEMATICS (01:640:011-115)
- Any University course with an "E" Credit Prefix

The scholastic requirements for graduation from SOE is a cumulative grade-point average (GPA) of 2.000.

   b. Four-Year Program Graduation Checklist

A copy of the Four-Year Program Graduation Checklist is presented on the next page.
# BIOENVIRONMENTAL ENGINEERING (116)

Name______________________________

## FRESHMAN YEAR

<table>
<thead>
<tr>
<th>Fall</th>
<th></th>
<th>Spring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01:160:171 Intro to Experimentation</td>
<td>1</td>
<td>01:640:152 Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>01:355:101 Expository Writing I</td>
<td>3</td>
<td>01:750:124 Analytical Physics Ib</td>
<td>2</td>
</tr>
<tr>
<td>01:640:151 Calculus I</td>
<td>4</td>
<td>14:440:127 Intro to Computers</td>
<td>3</td>
</tr>
<tr>
<td>01:750:123 Analytical Physics Ia</td>
<td>2</td>
<td>14:440:221 Eng’g Mechanics: Statics</td>
<td>3</td>
</tr>
<tr>
<td>14:440:100 Eng’g Orientation Lect.</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>14:440:221 Hum/Soc Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## SOPHOMORE YEAR

| | | | |
| | | | |
| 01:640:251 Multivariable Calculus | 4 | 01:640:244 Differential Eqs w/lin alg | 4 |
| 01:750:229 Analy Physics Ila Lab | 1 | 14:332:373 Elem of Elec Eng’g | 3M |

## JUNIOR YEAR

| | | | |
| | | | |
| 11:375:303 Num Methods (or 960:3xx/4xx) | 3M | 14:650:351 Thermodynamics | 3M |
| 14:180:387 Fluid Mechanics(or 650:312) | 3M | | Technical Elective | 3 |
| 14:180:389 Fluid Mechanics Lab | 1M | | | |

## SENIOR YEAR

| | | | |
| | | | |
| 11:117:423 BEE Lab I | 1M | 11:117:424 BEE Lab II | 1M |
| 11:117:474 Air Pollution Engineering | 3M | 11:117:468 Haz Waste Treat Eng’g | 3M |
| 11:117:488 BioenvEng’g Design I | 2M | 11:117:489 BioenvEng’g Design II | 2M |
| 11:375:322 Energy Technology (or 670:453) | 3M | | Technical Elective | 3 |
| | | | Technical Elective | 3 |

| | | | |
| | | | |
| | | | Hum/Soc Elect 300- | 3 |

Total credits: 135cr
2. Five-Year B.S. / B.S. Dual Degree Program (SOE and SEBS)

Graduates in this program will complete 159 credits. The degree in this dual-degree program results in two bachelor of science (B.S.) degrees in Bioenvironmental Engineering, one from SOE and one from SEBS. The curriculum includes the courses from the four-year program and additional 24 credits of core and bioenvironmental engineering courses at SEBS.

a. SEBS Core Requirements

A brief outline of the SEBS core requirements is provided below. The SEBS core requirements listed below apply to first-year students matriculating Fall 2015 and transfer students matriculating Fall 2016. Several SEBS core requirements are fulfilled by courses in the major, whereas others are fulfilled by SEBS area electives. For lists of acceptable SEBS area electives consult the SEBS core curriculum requirements in the most recent Undergraduate Catalog (http://sebs.rutgers.edu/core/).

Note that a single course may be used to meet multiple core curriculum requirements and/or goals. All courses must be credit-bearing, graded courses certified by the faculty as meeting core goals.

A. 21st Century Challenges (21C) - 3 Credits
   - Fulfilled by 374:279 Politics of Environmental Issues
B. Experience-Based Education (EBE) - 3 Credits
   - Fulfilled by 117:488/489 Senior Design I or II
C. Areas of Inquiry
   Natural Sciences (NS) - 6 Credits
   - Fulfilled by 119:115/116 General Biology I or II (Biological Discipline)
   - Fulfilled by 160:159/160 General Chemistry for Engineers I or II (Physical Discipline)
   Historical Analysis (HST) - 3 Credits
   - Students must choose one class from the approved list
   Social Analysis (SCL) - 9 Credits
   - Partially fulfilled by 374:279 Politics of Env. Issues (3 Credit Gov’t/Regulatory Analysis)
   - Partially fulfilled by 220:102 Intro to Micro Economics (3 Credit Economic Analysis)
   - Students must choose one class from the approved list (3 Credit Social/Cultural Analysis)
   Arts and Humanities (AH) - 6 Credits; two of four goals must be met.
   - Students must choose two classes from the approved list and meet two of the goals below.
   - Goal O: Examine critically philosophical and/or theoretical issues.
   - Goal P: Analyze arts and/or literatures.
   - Goal Q: Understand the nature of human languages and their speakers.
   - Goal R: Engage critically in the process of creative expression.
D. Cognitive Skills and Processes
   Writing and Communication (WCd) - 6 Credits
   - Partially fulfilled by 355:101 Expository Writing (3 Credits)
   - Students must choose one class from the approved list (Discipline-Based Writing and Comm.)
   Quantitative and Formal Reasoning (QQ and QR) - 6 Credits
   - Fulfilled by 640:151 Calculus I and 640:152 Calculus II
   Information Technology and Research (IRT) - 3 Credits
   - Fulfilled by 640:251 Multivariable Calculus
b. SEBS-to-SOE Transfer

Students normally enter the five-year program through SEBS, but must apply for a **school-to-school transfer** from SEBS to SOE. Students must submit a school-to-school application no later than the spring of their second year to transfer in for the fall of their third year, but may transfer earlier. There are several key requirements that must be met before students can transfer:

- Students must complete at least 15 credits at Rutgers University.
- Students must complete and obtain C+ or better in: the equivalent of Calculus I & II (01:640:151 &152), Analytical Physics Ia & Ib (01:750:123 & 124), and General Chemistry I (01:160:159).
- Students must have earned a cumulative and term GPA of 2.5 (with no D’s or F’s) when the application is submitted. For early admission, this requirement is 3.0 rather than 2.5.
- Students must obtain a C+ AVERAGE in each of the key areas (math, chem, physics, other sciences and engineering courses, separately). For example, if a student took Calculus I and Calculus II and has a C in Calc I, but a B in Calc II, the student would meet the math requirement.
- For more information, see Transferring within Rutgers at: [http://soe.rutgers.edu/oas/transfer_schooltoschool](http://soe.rutgers.edu/oas/transfer_schooltoschool).
- Once the transfer is complete, general academic concerns (e.g., academic policies, academic standing, graduation certification) are to be addressed with the SOE Office of Academic Services (B-100). Academic concerns regarding the major courses and the SEBS core requirements are continued to be handled at SEBS. Any information in Degree Navigator will also be altered; SOE uses Degree Navigator, but is not as up-to-date as the graduation checklist.

**Start your school-to-school transfer here:** [http://admissions.rutgers.edu/SchoolToSchool/](http://admissions.rutgers.edu/SchoolToSchool/)

c. Five-Year Program Graduation Checklist

A copy of the Five-Year Program Graduation Checklist is presented on the next page.
BIOENVIRONMENTAL ENGINEERING – Dual Degree (117)2019+
(*take SEBS GenEds where needed)

Name

<table>
<thead>
<tr>
<th>Fall</th>
<th>FIRST YEAR</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>01:119:115 General Biology I</td>
<td>4</td>
<td>General Biology II 4</td>
</tr>
<tr>
<td>01:355:101 Expository Writing I</td>
<td>3</td>
<td>Calculus II 4</td>
</tr>
<tr>
<td>01:640:151 Calculus I</td>
<td>4</td>
<td>Analytical Physics I b 2</td>
</tr>
<tr>
<td>01:750:123 Analytical Physics Ia</td>
<td>2</td>
<td>Intro to Computers 3</td>
</tr>
<tr>
<td>11:117:100 Intro BEE</td>
<td>1</td>
<td>Eng'g Mechanics: Statics 3</td>
</tr>
</tbody>
</table>

SECOND YEAR

| 01:160:159 Gen Chem I     | 3                         | Gen Chem II 3                |
| 01:160:171 Intro to Experimentation | 1                         | Differential Eqs (w/linalg) 4 |
| 01:640:251 Multivariable Calculus | 4                         | Princf Ecology 3             |
| 01:750:227 Analytical Physics IIA | 3                         | Elem of Elec Eng'g 3         |
| 01:750:229 Analy Physics Iia Lab | 1                         | Eng'gMech: Dynamics 3        |
| 14:180:215 Engineering Graphics | 1                         |                             |

117 Dual Degree students are required to transfer to the School of Engineering in their second year. Submit a School-to-School Transfer http://admissions.rutgers.edu/SchoolToSchool/

THIRD YEAR

| 14:180:387 Fluid Mechanics (or 650:312) | 3                         | Physical PrincEnvi-Sci 3     |
| 14:180:389 Fluid Mechanics Lab    | 1                         | Thermodynamics 3             |
| * (see SEBS GenEds below)        |                           | * (see SEBS GenEds below)    |
| 01:160:211 Elem Organic Chem Lab  | 1                         | Des Solid Waste Trtmt 3      |
| 11:374:460 Environmental Law/Policy I | 3                         | Envr. Fate and Transport 3   |
| 11:375:303 NumMethEnvsC (or 960:3xx)(4xx) | 3                         | Technical Elective 3         |
| * (see SEBS GenEds below)        |                           | (see SEBS GenEds below)      |

FOURTH YEAR

| 11:117:413 Unit Proc BEE I | 3                         | Unit Proc in BEE II 3        |
| 11:117:423 BEE Lab I       | 1                         | BEE Lab II 1                 |
| 11:117:474 Air Pollution Engineering | 3                         | Haz Waste Treat Eng'g 3      |
| 11:117:488 BioenvEng'g Design I | 2                         | BioenvEng'g Design II 2      |
| 11:375:322 Energy Tech(or 11:670:453) | 3                         | Senior Survey (or 440:487) 0 |
| * Technical Elective       | 3                         | Technical Elective 3         |
|                           |                           | Technical Elective 3         |

FIFTH YEAR

Total credits: 159cr

*SEBS GenEd Requirements (check with SEBS)

<table>
<thead>
<tr>
<th>Historical Analysis(3cr):</th>
<th>Humanities / Arts (a/p/q/r) (6cr):</th>
<th>SCL - Social/Cultural (3cr):</th>
<th>Discipline-Based Writing (3cr):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
3. **Prerequisites**

A prerequisite is a course that needs to be completed before an advanced course can be taken. For example, Calculus I is a prerequisite for Calculus II. Prerequisites ensure that students have the knowledge and abilities required for more advanced courses.

The prerequisite charts for the 4-year and the 5-year curricula provide an overview about the prerequisites for major and required courses. The prerequisite charts are believed to be accurate but this information is not guaranteed. Students should verify the prerequisites for any course themselves. The prerequisite charts for the 4-year and 5-year curricula are presented on the following pages.
BioEnvironmental Engineering 4-Year Curriculum Prerequisite Chart of Required Courses

Key: → Prequisite ← → Alternate Major Courses  Capstone Design (Seniors Only)
       ← → Co-requisite ← → Alternate Major Course  Offered Fall and Spring

<table>
<thead>
<tr>
<th>I Fall</th>
<th>I Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng'g Orientation 111.440.100</td>
<td>Expos Writing 01.355.101</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>II Fall</td>
<td>II Spring</td>
</tr>
<tr>
<td>Principles Biology 01.119.103</td>
<td>Gen. Biology I 01.119.115</td>
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<td></td>
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<tr>
<td>III Fall</td>
<td>III Spring</td>
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<tr>
<td>Bio/Pen Env Sci 113.375.201</td>
<td>Chem Env Sci 113.375.202</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>IV Fall</td>
<td>IV Spring</td>
</tr>
<tr>
<td>Waste Treatment 111.117.468</td>
<td>Waste Treatment 111.117.469</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Co-requisite</th>
<th>Alternate Major Courses</th>
</tr>
</thead>
</table>

IMPORTANT: This prerequisite chart meets additional graduation requirements for the 4-Year BEE Program including SOE HAS Requirements, 4 Technical Electives, 1 General Elective, and the Senior Survey. DISCLAIMER: This information is intended to be accurate but is not guaranteed. Students should verify the information for themselves.
D. Electives

1. Technical Electives
Technical electives allow students to learn a specific topic in more depth. They are generally engineering, math, or science related courses that are appropriate for bioenvironmental engineers. Bioenvironmental engineering students are required to complete 12 credits of technical electives (generally four 3-credit courses). Check with the Undergraduate Program Director before registering for a technical elective not on the approved list of technical electives found online on the Bioenvironmental Engineering website.

2. Humanities / Social Science Electives and SEBS Core Requirements
The purpose of humanities / social science electives is to help students “develop an understanding of the societal problems, a historical consciousness, a sense of values, knowledge of other cultures, an appreciation of the fine arts, and an ability to think logically and communicate effectively” (http://soe.rutgers.edu/oas/electives).

In the four-year program students complete 18 credits of humanities / social science electives (see http://soe.rutgers.edu/oas/gened and section C.1 in this document). In the five-year program students complete SEBS core requirements that are in most cases not explicitly specified in the curriculum (see https://sebs.rutgers.edu/core/ and section C.1 in this document). A few courses are built into the five-year curriculum; other requirements are fulfilled by courses selected by the students.

3. General Electives (SOE)
A general elective is a 3 credit course used to fulfill the minimum number of required credits for graduation. Almost any course could potentially be taken as a general elective with a few exceptions. The following list of courses are not acceptable as general electives at SOE (http://soe.rutgers.edu/oas/electives):

- Chemistry - 160:110 through 140
- Computer Science - 198:107, 110, 170
- English - 355:096 through 099
- Exercise Science - 377:171 through 180
- Mathematics - 640:011 through 115
- Any university course with an E-Credit prefix

At SEBS general electives are called free electives.
E. Course Registration

1. General Registration Rules

- Each semester students will receive emails detailing the undergraduate registration schedule. The earliest date at which students may register for classes is specified by this schedule and corresponds to the number of degree credits earned thus far by the student; this does not include credits in progress. It is in the student's best interest to schedule all of his/her classes on this date.

- Students may not register for two courses that conduct lectures, laboratories, or recitations at the same time of day. Furthermore, students may not register for two courses on separate campuses without allowing for 50 minutes of travel time for daytime classes (40 minutes for nighttime classes). These conflicts can easily be avoided through the use of the Course Schedule Planner. Lists of Standard Periods for all New Brunswick campuses are presented in section E.2.

- Students are not allowed to register for any course without meeting the proper prerequisites. If a student wishes to take a course without having met the prerequisite(s), then he/she must request prerequisite override (see section D.7).

- Students are not allowed to register for any section of any course that is already full. However, a student may be allowed into a section if the student can obtain a 6-digit Special Permission Number (see section C.8).

- Students must register for AT LEAST 12 credits each semester in order to be considered full-time students of SEBS or SOE. Full-time status is a requirement for financial aid.

- Students may register for NO MORE THAN 19 credits each semester during the undergraduate registration period.

- Following the undergraduate registration period, students may begin a semester with NO MORE THAN 19 credits if enrolled in SEBS OR 21 credits if enrolled in SOE. Students may wish to consult with an advisor if they plan to exceed credit limits.

- Students may take less/more credits than allowed but need to obtain special permission by a dean. In SOE students need to submit a Part-Time/Overload form to the Office of Academic Services at B-100 (http://soe.rutgers.edu/sites/default/files/imce/pdfs/parttime_overload.pdf).

- Students with prerequisite overrides, special permission numbers, maximum credit overrides, or other unique conflicts must add these courses IN-PERSON by visiting Office of Academic Services at B-100 on Busch, Office of Academic Programs in Martin Hall Room 205 on Cook, or the Office of the Registrar at the ASB on Busch. For the Environmental Sciences courses (375 courses) and Bioenvironmental Engineering courses (117 courses) the respective Undergraduate Program Directors will email the prerequisite overrides and the special permission numbers directly to the Registrar.

- Students who have completed a minimum of 60 credits may register for two Pass/No Credit courses (one per semester) (see the Pass/No-Credit section).

- Students who fail a required course must retake it and earn a passing grade. A passing grade is considered a D, unless the course is offered on a Pass/No Credit basis.

- Undergraduates with senior standing and a cumulative GPA of 3.000 or higher may register to take a graduate course with the approval of the graduate instructor and/or director of the graduate
program. Forms for requesting permission are available in the Martin Hall, Room 205 (Cook Campus, SEBS) or Office of Academic Services B-100 (Busch Campus, SOE).

- If a student registers for and completes any two courses that duplicate each other in subject matter, degree credit will only be granted for one course. Warnings will often be posted in course listings to prevent students from taking two or more classes in a subject matter.

2. **Standard Periods**

80-Minute Classes (MOST CLASSES)

<table>
<thead>
<tr>
<th>Period</th>
<th>College Avenue</th>
<th>Busch / Livingston</th>
<th>Cook / Douglass</th>
</tr>
</thead>
<tbody>
<tr>
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<td>8:40 - 10:00 AM</td>
<td>9:15 - 10:35 AM</td>
</tr>
<tr>
<td>3</td>
<td>11:30 AM -12:50 PM</td>
<td>12:00 -1:20 PM</td>
<td>12:35 - 1:55 PM</td>
</tr>
<tr>
<td>4</td>
<td>1:10 - 2:30 PM</td>
<td>1:40 - 3:00 PM</td>
<td>2:15 - 3:35 PM</td>
</tr>
<tr>
<td>5</td>
<td>2:50 - 4:10 PM</td>
<td>3:20 - 4:40 PM</td>
<td>3:55 - 5:15 PM</td>
</tr>
<tr>
<td>6</td>
<td>4:30 - 5:50 PM</td>
<td>5:00 - 6:20 PM</td>
<td>5:35 - 6:55 PM</td>
</tr>
<tr>
<td>7</td>
<td>6:10 - 7:30 PM</td>
<td>6:40 - 8:00 PM</td>
<td>7:15 - 8:35 PM</td>
</tr>
<tr>
<td>8</td>
<td>7:40 - 9:00 PM</td>
<td>8:10 - 9:30 PM</td>
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</tr>
<tr>
<td>9</td>
<td>9:10 - 10:30 PM</td>
<td>9:40 - 11:00 PM</td>
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</tr>
</tbody>
</table>

55-Minute Classes

<table>
<thead>
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<th>Busch / Livingston</th>
<th>Cook / Douglass</th>
</tr>
</thead>
<tbody>
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<td>8:25 - 9:20 AM</td>
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<td>9:30 - 10:25 AM</td>
</tr>
<tr>
<td>2</td>
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<td>11:10 AM - 12:05 PM</td>
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<td>1:55 - 2:50 PM</td>
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<td>9</td>
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<td>9:40 - 10:35 PM</td>
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</table>
3. Course Schedule Planner

The Course Schedule Planner (CSP) is very helpful in planning a schedule for the next semester (https://sims.rutgers.edu/csp/).

CSP allows students to: (1) build schedules for current/future semesters, (2) view saved schedules and export them to WebReg, and (3*) view the course catalog and create a wish list of future courses. *NOTE that CSP in this third feature may not be accurate, because course availability might change.

The Schedule of Classes (past, current, future) can be found at https://sis.rutgers.edu/soc/.

4. Degree Credits

Degree credits include all credits that count towards a degree and graduation at Rutgers University. Degree credits include credits for courses of the major, technical electives, humanities / social science electives, SEBS core requirements, and other electives that a student has successfully completed.

The number of degree credits a student has completed thus far in college, not including credits in progress, is used to determine when a student may register for classes. A registration schedule is emailed to all students each semester, specifying the registration dates and times at which students with a given number of degree credits may register for classes.

5. Credit Prefixes

There are several types of credit prefixes that may appear on a student's transcript.

E - No credit earned toward the degree and no grade computed in the cumulative GPA.
J - Credits are earned toward the degree, but the grade is not computed in the cumulative GPA.
K - Credits are not earned toward the degree, but the grade is computed in the cumulative GPA.
N - Assigned at the time the student initially registers for the course. It indicates no credit earned toward the degree, no grade computed in the grade-point average, no final exam taken.
P/NC - Indicates a course taken on a Pass/No Credit basis.
(Source: http://nbregistrar.rutgers.edu/undergrad/enrol-nb.htm#special)

6. WebReg

WebReg is the system students use to register for classes during the Undergraduate Registration Period and the Unrestricted Add/Drop Period. A student must input the index numbers of the course sections he/she wishes to register for. These numbers may be found in the Course Schedule Planner (CSP) or the Online Schedule of Classes (see section E. 3). If a student uses the Register icon in CSP then the appropriate index numbers will appear automatically in WebReg.

WebReg may be used to register for filled classes only after students have obtained special permission numbers, but WebReg does not accommodate prerequisite overrides or credit overloads. Certain classes also require permission of the instructor prior to registration.
7. Request for Prerequisite Override

In very few cases, if a student has not taken the prerequisite(s) for a course but feels prepared for the course, then he/she may request a prerequisite override from the undergraduate director of the department offering the course. Generally, a student should email the instructor of the course to ask for permission before contacting the undergraduate director. If the instructor/undergraduate director agrees to grant a prerequisite override, then written verification must be brought to the academic office corresponding to the school the student is currently enrolled in (SEBS Office of Academic Programs on the second floor of Martin Hall (5-yr program enrolled in SEBS), SOE Office of Academic Services in Eng. B-100 (4-yr or 5-yr program enrolled at SOE). Personnel in these offices will process the final prerequisite overrides and the course registration. General guidelines from the SOE Office of Academic Services for prerequisites and co-requisites for SOE undergraduate courses are found at: http://soe.rutgers.edu/oas/prerequisite.

Deviating from the above described general procedure, each department has slightly different procedures of handling prerequisite overrides. Therefore, the website or the handbook of the department offering the course should be checked.

Undergraduate Environmental Sciences (375) and Bioenvironmental Engineering (117) courses: To request a prerequisite override after obtaining permission from the instructor the following information should be emailed to the respective undergraduate program director:

Name:
RUID:
Course title and number:
Index number:

For undergraduate Environmental Sciences (375) and Bioenvironmental Engineering (117) courses the undergraduate program directors will email the Registrar the prerequisite override and request course registration.

8. Request for Special Permission Number

In the event that a course is full, not open to a student's major, or not open to a student's class year (e.g., "Junior/Senior-level standing only"), a student may request a special permission number from the undergraduate director of the department offering the course. Once a student has obtained a special permission number, he/she may register for the course by entering the number in WebReg or bring the number to Martin Hall or Eng. B-100 for registration assistance.

Deviating from the above described general procedure, each department has slightly different procedures of handling prerequisite overrides. Therefore, the website or the handbook of the department offering the course should be checked.

For undergraduate Environmental Sciences (375) and Bioenvironmental Engineering (117) courses the undergraduate program directors will email the Registrar the special permission numbers and request course registration, if at the same time a prerequisite override is requested.
9. **Pass/No Credit Courses**

Certain courses are offered on a Pass/No Credit basis and are designated the prefix "P/NC" in course listings of the Undergraduate Catalog and in the Schedule of Classes. The credits earned on a Pass/No Credit basis count towards graduation but are not included in a student's cumulative GPA.

Students who have completed 60 degree credits may register for two unspecified elective courses (one per term) on a Pass/No Credit basis. Required courses and courses substituted in the place of required courses may not be taken on a Pass/No Credit basis. A student enrolled for a course on a Pass/No Credit basis is subject to the same grading scheme as all other students taking the course. A grade of C or better must be achieved in order to receive a grade of "PASS." A grade of D or F earns "NO CREDIT" and does not count towards graduation.

For SOE students, the last day to submit an application to designate a course as Pass/No Credit is the last day to drop a course with the Dean's Permission (end of the 12th week). For SEBS students, the last day to submit an application to designate a course as Pass/No Credit is September 30 (Fall semester) or February 20 (Spring semester). For summer courses, the application must be submitted by the end of the first week of summer classes. Once the course is designated on the transcript as Pass/No Credit it cannot be reversed.

**NOTE:** If you take an engineering course as a technical elective, you can choose to make it Pass/No Credit ONLY if all your departmental electives have already been fulfilled.

If enrolled at SEBS more information can be found at [http://sebs.rutgers.edu/academics/forms/Pass-No_Credit_Course_Application.pdf](http://sebs.rutgers.edu/academics/forms/Pass-No_Credit_Course_Application.pdf) and if enrolled at SOE at [http://soe.rutgers.edu/oas/pnc-repeat](http://soe.rutgers.edu/oas/pnc-repeat).

10. **Summer/Winter Session Registration**

Summer/Winter Sessions are an excellent way for students to catch up on courses required for their degree. Students may register for a Summer or Winter Session at Rutgers University on the New Brunswick, Newark, or Camden campuses using WebReg. Generally, first- and second-year courses are offered during the Summer or Winter Sessions along with unique colloquia, online courses, and seminars not offered during the fall or spring terms. During the summer session, students enrolled at SOE can take a maximum of 11 credits and students enrolled at SEBS 12 credits. During the winter session students can only enroll for three credits. It is recommended discussing summer and winter courses with your advisor.

11. **Special Problems / Topics Courses**

Special problems / topics courses allow students to pursue independent studies or research alongside faculty. Slade Scholars and George H. Cook students sign up for Special Problems courses to work on their research projects. Students who want to enroll in special problems / topics courses in BEE need to submit a written approval of the supervising professor to the Undergraduate Program Director. The Undergraduate Program Director will issue a special permission number. Students will not be permitted to take a special problems course that is the same as a course they have already received credit for.

Students should contact the Undergraduate Program Director or consult with their advisors/professors to find out about special problems / topics opportunities.
With permission of the Undergraduate Program Director engineering internships or co-op experiences can count as Special Problems credits. Generally, in addition to the internship or co-op experience additional assignments given by a BEE faculty mentor need to be completed. This needs to be arranged before the internship or co-op experience starts.

### 12. Graduate Courses

Undergraduates may register for graduate courses numbered 500 and above if they have attained senior standing and a cumulative grade point average of at least 3.000. Any undergraduate who successfully completes a graduate course will be awarded credit applicable towards his/her graduate school education. However, the undergraduate must obtain approval of the graduate instructor or the director of the graduate program offering the course, the administrator of the school offering the course, and their faculty advisor. The Graduate Course Registration Form can be found at the end of this section.

Additionally, undergraduates must complete a form requesting permission to register for the course. These forms may be obtained at the Office of Academic Programs (Martin Hall) or the Office of Academic Services (Engineering B-100).

### 13. Repeating Courses, E-Credit, Grade Replacement

The academic policies concerning repeating courses, E-credit and grade replacement are slightly different between SEBS and SOE and therefore should be carefully reviewed. SOE's policies can be found at [http://soe.rutgers.edu/oaa/pnc-repeat](http://soe.rutgers.edu/oaa/pnc-repeat) and [http://soe.rutgers.edu/oas/gpa-calculation](http://soe.rutgers.edu/oas/gpa-calculation) and SEBS's policies at [sebs.rutgers.edu/academics/repeat-courses.html](http://sebs.rutgers.edu/academics/repeat-courses.html).

- Students must repeat any courses they have failed (earned a "F" in) that are required for graduation.
- A "D" is a passing grade, but the student is allowed to retake the course.
- Both, the original grade of "D" or "F" and the new grade, remain on the student's transcript and in the student’s cumulative grade-point average.
- However, for no more than four courses (up to 16 credits), the failing grade will be removed from the cumulative grade-point average if the student repeats the course and earns a higher grade. The original failing grade will remain on the transcript with an "E" (E-credit) prefix attached, and the repeated course grade will have an "R" (repeated) prefix. A Repeated Courses/E-Credit form must be completed in order to remove the "D" or "F" from the cumulative grade-point average. Grade replacement needs to be requested at the academic office in charge.
- At SOE, major courses are not eligible for E-credit.
- If a student earns a grade of "C" or better in any course, then he/she is not allowed to retake it.
- The E-credit policy stated above may be applied anytime during the undergraduate years, but only for one course per term, once for a given course, and this course must be repeated at Rutgers University. If a non-school 14 (engineering) course was approved as a substitute for a school 14 course, then that course is ineligible for E-credit/grade replacement.
- These policies may not be applied to any punitive grade of "F" given for reasons such as academic dishonesty or other violations of academic integrity.
UNDERGRADUATE REGISTRATION FOR GRADUATE COURSES

Undergraduates wishing to register for graduate courses numbered 500 and above should have senior standing and a cumulative grade point average of at least 3.0.

SECTION 1. TO BE COMPLETED BY THE STUDENT:

Name of Student / School / Class / Major / Cum. GPA / Student ID. #

E-mail Address

Application for Graduate Course:

Course Title / Subject Number / Course Number / Registration Index No. / Term/Yr

Special reasons for seeking this course:

SECTION 2. OBTAIN SIGNATURES IN THE FOLLOWING ORDER:
Graduate Instructor or Director of Graduate Program Offering Course

Recommend Approval / Date
(prerequisites have been satisfied)

Do Not Recommend Approval / Date

Administrator of Graduate School Offering Course:

Approved / Date

Not Approved / Date

Approval of this form does not constitute approval for degree credits. Students should check with college and department offices for graduation/degree requirements.
F. Taking A Course At Another School

Rutgers University students may take certain courses at external colleges during the summer or winter sessions. If students choose to take courses at an external college ONLY the credits earned for these courses will be applied towards the degree at Rutgers University. Grades earned for these courses will NOT be applied towards the cumulative GPA. A grade of C or better is required for the credits to be applicable towards your degree.

Before registering for any course outside of Rutgers University a student must obtain approval by the academic office corresponding to the school the student is currently enrolled in (SEBS Office of Academic Programs on the second floor of Martin Hall (5-yr program enrolled in SEBS), SOE Office of Academic Services in Eng. B-100 (4-yr or 5-yr program enrolled at SOE)).

Acceptable Summer / Winter Courses at External Colleges (no math/sciences courses during winter session):

- Chemistry: Gen. Chem. for Engineers I&II (160:159, 160)
- Math: Calculus I - Differential Equations (640:151, 152, 251, 244)
- Physics: Analytical Physics Ia - IIa (750:123, 124, 227)
- Biology
- Humanities / Social Science Electives
- Non-engineering (School 14) Technical Electives
- Sophomore level major courses
- Courses approved by the BEE Undergraduate Program Director

More information about SOE policies regarding taking course outside of Rutgers University can be found at [http://soe.rutgers.edu/oas/transfer-courses](http://soe.rutgers.edu/oas/transfer-courses).

Other Concerns

- Visit NJ Transfer ([https://www.njtransfer.org/artweb/chgri.cgi](https://www.njtransfer.org/artweb/chgri.cgi)) to check if a course at a New Jersey Community College is equivalent to a course at Rutgers University BEFORE you register for the course.

G. Transfer from External College

Any student who has completed a minimum of 12 transferable academic credits at a college or university at the time of their Rutgers University undergraduate application will be considered a transfer student at Rutgers University.

Information for Students Transferring to SEBS (Five-Year BEE)

- Evaluation of Transfer Credits ([http://sebs.rutgers.edu/transfer/evaluation-of-transfer-credits.html](http://sebs.rutgers.edu/transfer/evaluation-of-transfer-credits.html))
- Frequently Asked Questions ([http://sebs.rutgers.edu/transfer/](http://sebs.rutgers.edu/transfer/))
- State-Wide Transfer Agreement ([http://sebs.rutgers.edu/transfer/NJTransferAgreement.pdf](http://sebs.rutgers.edu/transfer/NJTransferAgreement.pdf))
- First-Year Transfer Credit and Placement Testing Exemptions ([http://sebs.rutgers.edu/new/first-year-transfer-credit.html](http://sebs.rutgers.edu/new/first-year-transfer-credit.html))
- Transfer Student Placement and Advising ([http://sebs.rutgers.edu/new/placement/transfer-students.html](http://sebs.rutgers.edu/new/placement/transfer-students.html))
• Transfer Student Transcript Appeals Process
  (http://sebs.rutgers.edu/transfer/transcript-appeals-process.asp)

Information for Students Transferring to SOE (Four-Year BEE)
• Application, Requirements, Preparation, Credits and Course Evaluation
  (http://soe.rutgers.edu/oas/transfer_external)

Advice to Transfer Students Entering the BEE Program
• If students transfer into the Bioenvironmental Engineering program at SEBS, it is recommended that
  they meet the SOE outside-of- Rutgers transfer requirements; 2 semesters of calculus, 1 semester of
  calculus-based physics, and 2 semesters of chemistry. Students should have earned a cumulative
  AND term GPA of at least 3.0 (out of 4.0) with no Ds and Fs. Students should also have a 3.0 with no
  Ds and Fs in key courses including math, physics, and other science and engineering courses.
• If possible, follow the BEE engineering curriculum prior to transferring to Rutgers University such as
  taking courses including Engineering Mechanics – Statics, MATLAB Programming, Microeconomics,
  Expository Writing / English Composition, and Calculus.
• If coursework did not transfer as degree credit to your transcript, then you may wish to appeal the
  transcript decision. For example, if you completed Principles of Ecology at another college and it did
  not transfer as degree credit, but the course description and content sufficiently matches the
  equivalent course at Rutgers University, then you can appeal that decision and thereby avoid
  retaking the course if the appeal is accepted.
• ONLY the credits from courses at your previous college or university will be applied towards your
  degree at Rutgers. Grades earned will NOT be applied towards your cumulative GPA.

H. School-to-School Transfer (5-Year Program)

As part of the Five-Year Dual Degree Program BEE majors must transfer from SEBS to SOE (School-to-
School Transfer), which should be initiated after the sophomore year. This School-to-School Transfer
effectively enrolls students in SOE so that the student will receive both, a B.S. in Bioenvironmental
Engineering from SOE and a B.S. in Bioenvironmental Engineering from SEBS. Note, once the student has
successfully transferred into SOE, he/she is considered a SOE student for registration, financial aid,
accounting, and other purposes. However, the student is still responsible for fulfilling both, the SEBS and
the SOE graduation requirements of the major.

For the most recent information, see Transferring within Rutgers at:
http://soe.rutgers.edu/oas/transfer_schooltoschool.

School-to-School Transfer Application
Students must complete a School-to-School Transfer Application to initiate the transfer process.
Spring Transfer Application Window: October 1st to December 1st
Fall Transfer Application Window: February 1st to June 1st

SOE Transfer Requirements (Rutgers-New Brunswick)
• Students must complete at least 15 credits at Rutgers University.
• Students must complete and obtain C+ or better in: the equivalent of Calculus I & II (01:640:151
  &152), Analytical Physics Ia & Ib (01:750:123 & 124), and General Chemistry I (01:160:159).
• Students must have earned a cumulative and term GPA of 2.5 (with no D's or F's) when the
  application is submitted. For early admission, this requirement is 3.0 rather than 2.5.
• Students must obtain a C+ AVERAGE in each of the key areas (math, chem, physics, other sciences and engineering courses, separately). For example, if a student took Calculus I and Calculus II and has a C in Calculus I, but a B in Calculus II, the student would meet the math requirement.

**Early Admission Criteria (Rutgers-New Brunswick)**

• Calculus I (640:151) and Gen. Chem. (01:160:159 or 161) are in progress.
• Students must have earned a cumulative and term grade-point-average of **3.0** with no D’s or F’s at Rutgers-New Brunswick.
• Students must obtain a grade of B or better in all “key courses” including math, physics, and any other sciences / engineering courses completed at Rutgers-New Brunswick.

### I. Advising

#### 1. Faculty Advisors

**Undergraduate Program Director**

<table>
<thead>
<tr>
<th>Dr. Uta Krogmann</th>
<th>ENR Room 246</th>
<th>848-932-5729</th>
<th><a href="mailto:krogmann@aesop.rutgers.edu">krogmann@aesop.rutgers.edu</a></th>
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</thead>
</table>

**Bioenvironmental Engineering Faculty**

<table>
<thead>
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<td><a href="mailto:cuchrin@rci.rutgers.edu">cuchrin@rci.rutgers.edu</a></td>
</tr>
</tbody>
</table>

**Advisors by graduation year:**

- Drs. Krogmann and Uchrin: Graduation in 2016
- Drs. Fennell and Huang: Graduation in 2017
- Drs. Both and Carlton: Graduation in 2018
Bioenvironmental Engineering students should see their advisor at least once per year to review progress.

2. Deans and Academic Offices

SEBS Office of Academic Programs, Cook Campus
Courses, Credits, Scheduling, Degree Requirements for Five-Year BEE majors prior to SOE Transfer
848-932-3000 -- 2nd Floor Martin Hall, 88 Lipman Drive, New Brunswick, NJ
(Online Contact Form)

SOE Office of Academic Services, Busch Campus
Courses, Credits, Scheduling, Degree Requirements for Four-Year BEE majors and Five-Year BEE majors after SOE Transfer
848-445-2212 -- Engineering B-100, 98 Brett Rd, Piscataway, NJ
(Online Contact Information for B-100 Staff)

Rutgers Office of the Registrar, Busch Campus
Academic Records, Registration, Transcripts and Verifications, Posting of Grades and Degrees
Administrative Services Buildings (ASB), 65 Davidson Road, Rooms 200-A, B, F, L, Piscataway, NJ
(http://nbregistrar.rutgers.edu)

3. Fellow Students, Peer Mentors and Environmental Sciences and Engineering Club

- Upper-level BEE students are excellent resources for information regarding classes and registration. Network with your peers to find out where the opportunities are!
- It is also recommended to participate in the activities of the Environmental Sciences and Engineering Club. Look out for announcements. Consider also participating in other clubs that are listed on the SEBS and SOE websites.
- Douglass Engineering Living-Learning Community provides the opportunity for incoming women in SOE to connect with each other, while being a part of the unique Douglass Residential College for women. This program also offers a variety of extracurricular opportunities to its residents.
- Peer mentors and mentorship opportunities are offered through academic departments, honors programs, on-campus organizations (clubs, fraternities, etc), and residence halls. The best way to find out about these opportunities is to ask fellow students and faculty.
- Most fraternities and honor societies based on campus offer some form of mentorship.
J. Academic Policies

1. Academic Integrity

Principles of Academic Integrity at Rutgers
(This is taken word-by-word from http://academicintegrity.rutgers.edu/academic-integrity-at-rutgers/)

- Properly acknowledge and cite all use of the ideas, results, or words of others
- Properly acknowledge all contributors to a given piece of work
- Make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of unsanctioned materials or unsanctioned collaboration
- Obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions
- Treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress
- Uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Violations of Academic Integrity
(This is taken word-by-word from https://slwordpress.rutgers.edu/academicintegrity/wp-content/uploads/sites/41/2014/11/AI_Policy_2013.pdf)

Plagiarism: Plagiarism is the use of another person’s words, ideas, or results without giving that person appropriate credit. To avoid plagiarism, every direct quotation must be identified by quotation marks or appropriate indentation and both direct quotation and paraphrasing must be cited properly according to the accepted format for the particular discipline or as required by the instructor in a course. Some common examples of plagiarism are:

- Copying word for word (i.e. quoting directly) from an oral, printed, or electronic source without proper attribution.
- Paraphrasing without proper attribution, i.e., presenting in his/her own words another person’s written words or ideas as if they were his/her own.
- Submitting a purchased or downloaded term paper or other materials to satisfy a course requirement.
- Incorporating into one’s work graphs, drawings, photographs, diagrams, tables, spreadsheets, computer programs, or other nontextual material from other sources without proper attribution.

Cheating: Cheating is the use of inappropriate or prohibited materials, information, sources, or aids in any academic exercise. Cheating also includes submitting papers, research results and reports, analyses, etc. as one’s own work when they were, in fact, prepared by others. Some common examples are:

- Receiving research, programming, data collection, or analytical assistance from others or working with another student on an assignment where such help is not permitted.
- Copying another student’s work or answers on a quiz or examination.
• Using or possessing books, notes, calculators, cell phones, or other prohibited devices or materials during a quiz or examination.
• Submitting the same work or major portions thereof to satisfy the requirements of more than one course without permission from the instructors involved.
• Preprogramming a calculator or other electronic device to contain answers, formulas, or other unauthorized information for use during a quiz or examination.
• Acquiring a copy of an examination from an unauthorized source prior to the examination.
• Having a substitute take an examination in one’s place.
• Submitting as one’s own work a term paper or other assignment prepared by someone else.

Fabrication: Fabrication is the invention or falsification of sources, citations, data, or results, and recording or reporting them in any academic exercise. Some examples are:

• Citing a source that does not exist.
• Making up or falsifying evidence or data or other source materials.
• Falsifying research papers or reports by selectively omitting or altering data that do not support one’s conclusions or claimed experimental precision.

Facilitation of Dishonesty: Facilitation of dishonesty is knowingly or negligently allowing one’s work to be used by other students without prior approval of the instructor or otherwise aiding others in committing violations of academic integrity. A student who intentionally facilitates a violation of academic integrity can be considered to be as culpable as the student who receives the impermissible assistance, even if the facilitator does not benefit personally from the violation. Some examples are:

• Collaborating before a quiz or examination to develop methods of exchanging information.
• Knowingly allowing others to copy answers to work on a quiz or examination or assisting others to do so.
• Distributing an examination from an unauthorized source prior to the examination.
• Distributing or selling a term paper to other students.
• Taking an examination for another student.

Academic Sabotage: Academic sabotage is deliberately impeding the academic progress of others. Some examples are:

• Intentionally destroying or obstructing another student’s work.
• Stealing or defacing books, journals, or other library or University materials.
• Altering computer files that contain data, reports or assignments belonging to another student.
• Removing posted or reserve material or otherwise preventing other students’ access to it.

Violation of Research or Professional Ethics: Violations in this category include both violations of the code of ethics specific to a particular profession and violations of more generally applicable ethical requirements for the acquisition, analysis, and reporting of research data and the preparation and submission of scholarly work for publication. Some examples are:

• Violating a canon of the ethical or professional code of the profession for which a student is preparing.
• Using unethical or improper means of acquiring, analyzing, or reporting data in a senior thesis project, a master’s or doctoral research project, grant-funded research, or research submitted for publication.
• Misuse of grant or institutional funds.
• Violating professional ethics in performing one’s duties as a Teaching Assistant or Graduate Assistant.

Violations Involving Potentially Criminal Activity: Violations in this category include theft, fraud, forgery, or distribution of ill-gotten materials committed as part of an act of academic dishonesty. Some examples are:

• Stealing an examination from a faculty member’s or University office or from electronic files.
• Selling or distributing a stolen examination.
• Forging a change-of-grade form.
• Falsifying a University transcript.

For more information regarding the Academic Integrity Policy and the Code of Student Conduct at Rutgers please click here.

2. Academic Review and Standing

After each term, student grades are reviewed. Students whose grades fall below a certain level can receive a warning, be put on probation or be dismissed. SEBS’s policies can be reviewed at http://catalogs.rutgers.edu/generated/nb-ug_current/pg712.html and SOE’s policies at http://soe.rutgers.edu/oas/scholasticstanding.

Do not take any warning or probation lightly and seek help from your advisor and/or a dean.

3. Withdrawal (from Course or University)

Withdrawing From a Course
At SOE, you may withdraw from courses up to the 8th week of the term by phone or online, or withdraw with the permission of the Associate Dean prior to the 12th week of the term. Beyond the 12th week, the reason for withdrawal must be significant and beyond your control in order to warrant permission from the Dean. At SEBS, you may withdraw from courses up to the 8th week of the term online or in person. Beyond the 8th week, the reason for withdrawal must be due to extenuating circumstances and beyond your control in order to warrant permission from the Scholastic Standing Committee.

Once a student withdraws from a course, he/she receives a "W" grade for that course, which appears on the transcript, but is not used to calculate the student’s term or cumulative GPAs. However, it might affect the completion rate and therefore the financial aid.

Withdrawal from All Classes / Rutgers OR Extended Leave of Absence (1 Semester or More)
Students who wish to withdraw from Rutgers should consult their faculty adviser and a dean in the Office of Academic Services or Office of Academic Programs. After these consultations are conducted, the student must fill out a withdrawal form stating the reasons for withdrawal. SEBS students will
submit this form to the Office of Academic Programs; SOE students will submit this form to the Office of Academic Services.

Withdrawing from the university will impact your financial aid. A student receiving financial aid must wait for 60% of the semester (9th week of the term) to have passed before withdrawing completely from the university. Otherwise, the student must pay back all financial aid received for that semester.

More information about SOE’s policies about Withdrawal from All Classes/Extended Leave of Absence can be found at http://soe.rutgers.edu/oas/withdrawal.

4. **Course Substitution**

Course substitutions should be avoided. If a course substitution is necessary permission needs to be obtained by email from the Undergraduate Program Director prior to registration. The Undergraduate Director’s permission of the course substitution must later be presented to the Assistant Dean(s) to ensure that SOE and/or SEBS acknowledge the course substitution in place of the required course.

All course substitutions should substitute “like for like;” the substitute course should have the same or similar subject matter to the original course. Unsuitable course substitutions may be denied.
K. Professional Development

1. Internships and Co-ops

Internships and co-ops give students practical, professional level experience in the field of their study. You can test out your career options and build your skills for your future job or graduate school. Some use the terms “internship” and “co-op” interchangeably while others define internships as work experience for one term or one summer and a co-op as work experience over several terms. Internships and co-ops are excellent ways for students to gain the experience employers are looking for. Internships and co-ops may be full- or part-time, paid or unpaid, or for credit or no credit.

Some students find their internships or co-ops on your own, others find them via Rutgers resources. The BEE undergraduate program director emails various opportunities to the BEE students as they become available. Rutgers University also offers students several avenues to pursue internships and co-ops in their fields of study, which may range from laboratory research to hands-on experiences outside of academia. Opportunities pertaining to BEE majors include:

- Aresty Research Center
- CareerKnight
- Faculty research projects
- Rutgers Center for Urban And Environmental Sustainability (CUES)
- Rutgers Energy Institute (REI)
- Rutgers Engineering Co-op Program (SOE)
- Rutgers Internship & Co-op Program (RICP sponsored by SAS)
- Student to Professional Internship Network (SPIN for SEBS)
- Rutgers Career Services Internship Fairs

2. Professional Registration / Licensure

Professional registration is the legal process by which practitioners become licensed professionals in their respective fields. Professional registration is required of highly recommended for all environmental engineers because they are ethically and (to a degree) legally responsible for the safety, health, and welfare of the public. Environmental engineers that are not professionally licensed do not have the authority to take legal responsibility for engineering work and projects. Therefore, professional registration is fundamental to an environmental engineer's future career. The professional registration process for engineers in New Jersey consists of several steps:

1. Completion of an ABET accredited four-year Bachelor of Science degree in engineering.
2. Successful completion of a Fundamentals of Engineering Exam (FE) offered by the National Council of Examiners for Engineering and Surveying (NCEES) with a passing score.
3. Submittal of a completed Engineer-In-Training application, a full transcript sent directly from the university, and 3 references (one reference from a currently licensed professional engineer) to the New Jersey State Board of Professional Engineers (or another state board).
4. Acceptance by the State Board of Professional Engineers and Land Surveyors and issuance of an Engineer-In-Training (EIT) license.
5. Four years of professional experience as an EIT with (a) at least 2 years of experience gained in the U.S. and (b) at least 2 years of original engineering design experience that demonstrates increased responsibility and technical experience over time under the supervision of a licensed professional engineer. Completion of a master's degree is equivalent to one year required under (a). Completion of a doctorate degree is equivalent to one year required under (a) and some experience may be substituted for (b). All professional engineering experience will be reviewed by the State Board Professional Engineers and Land Surveyors.

6. Successful completion of the New Jersey Law Exam.

7. Successful completion of the Principles and Practices of Engineering Exam (PE) in the engineer's area of practice offered by NCEES with a passing score.

8. Submittal of a completed PE application, a full undergraduate transcript sent directly from your university, and 5 references (three references must be from currently licensed professional engineers) to the New Jersey State Board of Professional Engineers (or another state board).

9. Acceptance by the State Board of Professional Engineers and Land Surveyors and issuance of a Professional Engineer (PE) license.

10. Biennial license renewal and Continuing Professional Competency (CPC) credits. At least 15 CPC credits must be completed during the proceeding biennial period, and 2-8 of these credits shall be in professional practice ethics, in order for a PE to renew his/her license in New Jersey.

The first step for a BEE student, beyond completing his/her undergraduate degree, is completing the Fundamentals of Engineering Exam (FE) offered by National Council of Examiners for Engineering and Surveying. Engineering students typically take the FE late in their senior year or immediately following graduation. Students who wait too long to take the FE exam often forget the material that they have learned in classes. Most students devote 3-6 weeks to studying for the FE; other students may prefer to devote 2 months to studying for the FE. BEE alumni that have taken the FE have said that they felt the BEE curriculum prepared them well for the Environmental FE.

Students can find the current FE exam specifications, references, pass rates, and more here.

Once students have successfully completed the FE exam, they should begin working on their EIT application. Many engineering firms expect their entry-level engineers to possess an EIT license or be able to acquire an EIT license soon after starting the job. Students might find the links below to be helpful when they begin their EIT application.

- NJ State Board of Professional Engineers and Land Surveyors Home Page
- N.J.A.C. 13:40 - State Board of Professional Engineers and Land Surveyors
- Notice to All EIT Applicants and FE Candidates
- EIT Application Directions and Eligibility
- EIT Application Form
- EIT Reference Form