



RUTGERS
School of Engineering

You're In!

Next Steps

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- **Now:** Take online placement test within **30 days** of enrollment.
- **May 1 :** Deadline for commitment
- **June 7:** Deadline to submit fall registration form
 - Email will be sent with details
- **June-July:** New Student Summer Orientations (NSO)
- **August 20:** Fall schedule available for review
- **August 28:** First-year Engineering Kick-off
- **September 1: First Day of Class**
- **8/31 – 9/9:** Add/Drop Classes, walk-in advising

Registration Form

- We create students' fall schedule
- Student must supply: AP test scores, IB credits, dual-enrollment credits, etc.
- Student may indicate one humanities/social sciences elective
 - This is NOT mandatory! You can complete your electives at any time before you graduate!!

Fall Semester Schedule (14-17 credits)

Course	Credits
General Chemistry for Engineers	3
Calculus 1 for Mathematical and Physical Sciences	4
Analytical Physics 1 (Fall Only)	2
Introduction to Engineering	1
Introduction to Experimentation*	1
Expository Writing 1 Introduction to Programming for Engineers	3
Humanities/Social Sciences Elective**	3

*Not every student will have Intro to Experimentation in the Fall.

**You are not required to take an elective in the Fall. Electives can be completed at any time before graduation.

Credit Requirements

- Full-time minimum: 12 credits
- Typical course load for engineering students ~ 15-16 credits.
- Credit requirement for graduation varies by major.
- Maximum credits for semester:
 - 19 credits
 - 21 credits during add/drop
 - >21 credits, need Dean's permission (not recommended)

Mandatory Fall Classes

Mandatory Math Classes

Math Placement Results*

Math Placement	Fall Math Course	Course #	Credits
Pre-Calculus	Pre-Calculus	01:640:115	4
Calculus	Calc 1 for Math Phys	01:640:151	4

*Math placement does **not** take into account AP test results.

AP Placement Results

Math AP Credit	Fall Math Course	Course #	Credits
Calculus AB ≥ 4	Calculus 2 for Math Phys	01:640:152	4
Calculus AB ≥ 4 Calculus BC ≥ 4	Multivariable Calculus	01:640:251	4

NOTE: Honors students will be placed into Honors sections of Math

Mandatory Math Classes

Other Credits

Math Credit	Fall Math Course	Course #	Credits
IB Math, 5,6, or 7	Calculus 2 for Math Phys	01:640:152	4
A-Level Math A,B,C,D (no credit for AS, O)	Calculus 2 for Math Phys	01:640:152	4
A-Level Math Further A,B,C,D (no credit for AS, O)	Multivariable Calculus	01:640:251	4

Dual enrollment credits: Math courses will transfer in as general elective credits, and will not be granted course equivalency

What happens if I will be taking Calculus AP exams, but the scores will not be available until after the deadline to take the placement exams?

- All students must take the Math Placement Exam.
- AP scores are honored once received; schedules are modified accordingly.
- Placement into a higher level math cannot be granted without final official AP scores.

What is the highest math class I can place into?

- Calculus 1 (01:640:151)
- Placement exam results **do not** take into account AP credits.
- Placement adjusted after AP scores are received.
- The highest math class that you are eligible for is Calculus 3 (Multivariable Calculus, 01:640:251), based solely on AP credits.
- We do not accept Calculus 3 credits taken at a community college as part of a dual enrollment program.
- The math department does not offer proficiency testing beyond pre-calculus.

If you are not happy with your math placement results, please contact the Math Department at 848-445-2390, advisor@math.rutgers.edu

Mandatory Physics Classes

Math Placement Results

Math Placement	Fall Math Course	Course #	Credits
Pre-Calculus	Ext. Analyt. Ia	01:750:115	3
Calculus	Analytical Phys Ia	01:750:123	2

AP Placement Results

Math AP Credit	Fall Math Course	Course #	Credits
Calculus AB ≥ 4	Analyt Phys IIa	01:750:227	3
Physics C Mech ≥ 4	Analyt Phys IIa lab	01:750:229	1
Calculus AB ≥ 4 Calculus BC ≥ 4 Physics C Mech ≥ 4 Physics C E&M ≥ 4	No Physics for the Fall The next level Physics is only offered in the Spring and not required for all majors.		

Mandatory Physics Classes

Other Credits

Physics Credit	Fall Physics Course	Course #	Credits
IB Physics, 5,6, or 7	No Physics for the Fall The next level Physics is only offered in the Spring, and not required for all majors.		
A-Level Math A,B,C,D (no credit for AS or O)	No Physics for the Fall The next level Physics is only offered in the Spring, and not required for all majors.		

Dual enrollment credits: Physics courses will transfer in as general elective credits, and will not be granted course equivalency

What if I don't want to take Physics in the fall?

- **Do not** drop any Physics courses during add/drop week! Not every course is offered every semester, and you may end up being a year behind.

What if I have AP credit for Physics 1 or Physics 2, but not for Physics C?

- The School of Engineering does **not** grant course credit for Physics 1 or Physics 2 since they are not calculus-based.

Chemistry Classes

Math Placement Results

Math Placement	Fall Chem Course	Course #	Credits
Pre-Calculus	Gen Chem for Engrs 1	01:160:159	3
Calculus	Gen Chem for Engrs 1	01:160:159	3

Note: Students may choose Gen Chem (01:160:161, 4 credits) instead. Please let your first-year advisor know!

AP Placement Results

Chem AP Credit	Fall Math Course	Course #	Credits
Chemistry = 4	General Chemistry 2 or No Chemistry	01:160:162	4
Chemistry = 5	No Chemistry: The next Chemistry in the sequence is Organic Chemistry (not required for all majors)		

Chemistry Classes

Other Credits

Chemistry Credit	Fall Chemistry Course	Course #	Credits
IB Chemistry, 5,6, or 7	No Chemistry for the Fall The next level course is not required for all majors.		
A-Level Math A,B,C,D (no credit for AS or O)	No Chemistry for the Fall The next level course is not required for all majors.		

Dual enrollment credits: Chemistry courses will transfer in as general elective credits, and will not be granted course equivalency

Classes You Should Take in the Fall

Writing or Programming Classes

All students who have AP or Rutgers credit for Expository Writing will automatically be placed into the programming course, Intro to Computers for Eng. (14:440:127).

Expository Writing Credit	Credit for Course #	Credits
Eng Lang & Composition AP ≥ 4	01:355:101	3
Eng Lit & Composition AP ≥ 4	01:355:101 or 01:358:201 (if Lang exam credit)	3
Rutgers Expository Writing	01:355:101	3
Community College Composition 1,2*	Dependent on placement	3

*Community college credit for Composition 1,2 will transfer in as equivalent writing courses only with correct writing placement results.

Students who take Expository Writing in the fall will take Intro to Computers in the spring and vice versa.

Elective Requirements

4 Humanities/Social Sciences (H/SS) Electives

- No more than two 100 level courses
 - All electives can be 200+
- NOT mandatory to take an elective during your first semester.
- Can be completed at any time before graduation, at Rutgers, or at another school.
- Other credits may be applied towards H/SS electives.

Elective Recommendations

4 Humanities/Social Sciences (H/SS) Electives: Recommendations

- Two electives in the same subject area
- Two electives in the same subject area, one lower and one upper

Humanities/Social Sciences Electives

H/SS electives at the School of Engineering: Course Numbers

1. A total of 4 H/SS electives (12 credits).
2. No more than two 100 level courses
3. Recommendation: Two of the courses in the same subject area, one lower, one upper.

Rutgers Course Numbers:

School 01:
SAS

Level: 100

01:830:101

Subject:
Psychology

School 14:
SOE

Level: 100

14:440:127

Subject:
General Engineering

Example

Student has credit (AP, IB, dual-enrollment, etc.) for the following classes:

Course	Course #	Credits
Microeconomics	01:220:102	3
Macroeconomics	01:220:103	3
Psychology	01:830:101	3

- All courses are 100-level (last 3 digits)
- Two are in Economics (middle digits, 220), and one in Psychology (830)
- Student can use two of them as lower level H/SS courses.

- Student needs two upper level (200+) electives to fulfill graduation requirements.
- Student can take an upper level course in Economics or Psychology to fulfill subject recommendation (not required)
- Student does not necessarily have to take an elective in the Fall.

Example

Student has credit (AP, IB, dual-enrollment, etc.) for the following classes:

Course	Course #	Credits
Eng. Lit and Comp	01:358:201	3
Spanish Language	01:940:203	3
Spanish Lit.	01:940:215	3

- All courses are 200-level (last 3 digits)
- Two are in Spanish (940), and one in English (358)
- Student has completed the subject recommendation with the two Spanish courses.
- Student only needs to take on more H/SS elective, any level, to fulfill graduation requirements.

Humanities/Social Sciences Electives

When filling out Registration form:

1. Keep in mind that some AP credits count as H/SS electives. Starred courses in this table are accepted as H/SS electives: <https://soe.rutgers.edu/oas/advanced-placement>
2. You do not have to let us know if you want us to count your AP credits towards H/SS electives. Once we process your AP credits, it will be automatic.
3. The registration form contains a list of the most common electives taken by freshmen. If you wish to take a course that is NOT on the list, please make sure it is on our overall approved list:
https://soe.rutgers.edu/sites/default/files/imce/pdfs/humanities_list.pdf
4. If you have dual enrollment credits to be applied to H/SS electives, you do not need to let us know. This happens automatically once transcripts are processed. Dual enrollment course equivalency will be based on www.njtransfer.org.
5. There is no requirement to take a H/SS elective in the Fall. H/SS requirements can be completed at any time before graduation.

Next Steps

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- **June 7: Deadline to submit fall registration form**
 - **Email will be sent with details**
- June-July: New Student Summer Orientations (NSO)
- August 20: Fall schedule available for review
- Last week of August:
Move In and First-year Engineering Kick-off
- **September 1: First Day of Class**
- 8/31 – 9/9: Add/Drop Classes, walk-in advising

Placement Test: **Online Now! Take it before June 7**

Students should take placement test even if they are expecting AP exam scores. We will honor results of AP scores received in July over your placement test results.

Placement Test Preparation

- Please refer to the Bulletin for more specifics about both exams:
<http://oirap.rutgers.edu/Bulletin.pdf>
- You can also review the final exam review exercises on
<https://math.rutgers.edu/academics/undergraduate/courses>. Focus on the final exam review exercises for Elementary Algebra, Intermediate Algebra, and Precalculus College Mathematics. Once you click on those subjects, you'll see the final exam review exercises posted towards the top of the page.

Placement Test: **Online Now! Take it before June 7**

Students who meet the following criteria are exempt from taking the placement test:

Exemptions – Math Placement Testing

- AP Exam in Calculus AB or BC with score of 4 or 5

Exemptions – English Placement Testing

- Evidence-Based Reading & Writing (ERW) SAT score of 650 or higher (test by Jan. 2020)
- ACT Reading score of 32 or higher (test by Jan. 2020)
- AP Exam in English Lang/Comp with score of 4 or 5 (completed before 2020)
- AP Exam in English Lit/Comp with score of 4 or 5 (completed before 2020)
- Rutgers Expository writing credits

Please note that we do not grant exceptions on potential scores.

Placement Test: **Online Now! Take it before June 7**

Students should take placement test even if they are expecting AP exam scores. We will honor results of AP scores received in July over your placement test results.

Other Pre-college Credits – if you have credit for Calc 1, you are exempt from taking the Math placement test.

- Degree credits are awarded for GCE Advanced Level (A-Level) examinations with grades of A, B, C, or D. (<https://soe.rutgers.edu/academic-credit>)
- Degree credits are awarded for International Baccalaureate Higher Level exams (IB High Level) with scores of 5, 6, or 7. (<https://soe.rutgers.edu/academic-credit>)

Other Pre-college Credits

More on Dual Enrollment Credits:

- First-year STEM courses will transfer in as general elective credits.
 - Level of rigor, course content variability
 - First year STEM courses have to be taken at Rutgers in the Fall
- All other courses, njtransfer.org will be used to determine equivalency.
- Transcripts will be evaluated in October.

Sample Schedules

Typical First-Year Curriculum

Fall Semester

Course #	Course	Credits
01:160:159	General Chemistry for Engineers	3
01:640:151	Calculus 1 for Math and Physical Sciences	4
01:750:123	Analytical Physics 1	2
01:160:171	Introduction to Experimentation*	1
01:355:101	Expository Writing 1*	3
14:440:100	Introduction to Engineering	1
	Humanities/Social Sciences Elective^	3

* May be taken in either semester
 ** Required for all majors except ECE
 ^ May be taken at ANY time before graduation, inside or outside of Rutgers, summer, or winter

Spring Semester

Course #	Course	Credits
01:160:160	General Chemistry for Engineers**	3
01:640:152	Calculus 2 for Math and Physical Sciences	4
01:750:124	Analytical Physics 1	2
14:440:127	Introduction to Computers for Engineers*	3
14:440:221	Engineering Mechanics: Statics	3
	Humanities/Social Sciences Elective^	3

Other courses we may add:

- Engineering Economics, 14:540:343
 - Required for graduation for ALL majors
 - No pre-requisite
- Analytical Physics IIa, and Lab: 01:750:227/229
 - Requires Phys C Mech, Calc 2 as pre-reqs.
- Engineering Mechanics, Statics, 14:440:221
 - Requires Calc 1, PhysC Mech as pre-reqs
- General Chemistry 2, 01:160:162
 - Requires Chem 1 as a pre-req.

Example 1:

Student has credit (AP, IB, etc) for:

Course	Course #	Credits
Calculus 1 and 2	01:640:151, 152	6
Chemistry 1 and lab	01:160:159, 171	4

Possible Fall Schedule:

Course	Course #	Credits
Introduction to Engineering	01:440:100	1
Multivariable Calculus (Calc 3)	01:640:251	4
Analytical Physics Ia	01:750:123	2
H/SS elective		3
Expository Writing	01:355:101	3
TOTAL		13

Student can choose to add an elective (3 or 4 credit) or Intro to Computers, 14:440:127

Example 2:

Student has credit (AP, IB, etc) for:

Course	Course #	Credits
Calculus 1 and 2	01:640:151, 152	6
Chemistry 1 and lab	01:160:159, 171	4
Physics C Mech and E&M	01:750:123,124,227,229	8
Expository Writing	01:355:101	3

Possible Fall Schedule:

Course	Course #	Credits
Introduction to Engineering	01:440:100	1
Multivariable Calculus (Calc 3)	01:640:251	4
Engineering Mechanics Statics	14:440:221	3
H/SS elective		3
Intro to Comp (MATLAB)	14:440:127	3
		14

Student can choose to add an elective (3 or 4 credit) or Engng Econ

Example 3:

Student has credit (AP, IB, etc) for:

Course	Course #	Credits
Calculus 1 and 2	01:640:151, 152	6
Chemistry 1 and lab	01:160:159, 171	4
Physics C Mech	01:750:123,124	4
Expository Writing	01:355:101	3

Possible Fall Schedule:

Course	Course #	Credits
Introduction to Engineering	01:440:100	1
Multivariable Calculus (Calc 3)	01:640:251	4
Engineering Mechanics Statics	14:440:221	3
H/SS Elective		3
MATLAB	14:440:127	3

Student can choose to add an elective (3 or 4 credit) or Eng'ng Econ

Example 4: Student placed into pre-calculus

Possible Fall Schedule, 14 credits:

Course	Course #	Credits
Pre-calculus	01:640:115	4
Chemistry 1	01:160:159	3
Extended Analytical Physics Ia	01:750:115	3
Expository Writing	01:355:101	3
Introduction to Engineering	14:440:100	1

Possible Spring Schedule, 16 credits:

Course	Course #	Credits
Calculus 1	01:640:151	4
Extended Analytical Physics Ib	01:750:116	3
Chem 1	01:160:160	3
H/SS Elective		3
Intro to Computers (MATLAB)	14:440:127	3

Student will need to take Calculus 2 over the summer to get caught up

More Questions

1. Can I double major or minor?

Students can double major or minor in almost any subject. You cannot double major in Business, only Business Administration. For more info: <https://sasundergrad.rutgers.edu/major/list-of-majors-and-minors>

2. When can I start taking courses towards my minor?

Students can start taking courses towards a minor or second major at any point in time. Students can declare a minor or second major during their sophomore year.

3. Can I apply to get into the Honors College or Academy?

Students cannot apply to get into either honors program. There are other honors opportunities available to them as upperclassmen.

4. What five-year programs are there?

BS/MS, BS/MBA, BS/MEd

5. How do I get into the five-year programs?

You must apply as a junior, with a minimum GPA of 3.2. For more info: <https://soe.rutgers.edu/oas/BS-Masters>

SOE Class of 2024 Sakai Site – Available 5/2

Log into <https://sakai.rutgers.edu/> using NETID

- Chat sessions to be held throughout the summer.
- Resources includes presentations, curricular information, First Year Handbook.
- Forums: post questions pertaining to various topics.
- If you are unable to access the site, please email firstyear@soe.Rutgers.edu. Always include your 9-digit RUID in all communications.



RUTGERS

School of Engineering

Connect with Us

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