

# Mathematics Major Resource Summary

## Class of 2030

August 26, 2026

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# 1 Advising and Mentoring

## Undergraduate Math Faculty Advisors (for class of 2030):

Primary role: provide advice on which courses to take based on your goals and interests.

Additional role: help with any other academically related questions.

The advisors for the class of 2030 are:

Elizabeth Kam (student last name A-L): kamw@rpi.edu

Yangyang Xu (student last name M-Z): xuy21@rpi.edu

## School of Science (SoS) Advising Hub

Helps with:

- [First-year registration](#) planning
- Semester course planning
- Major/minor declaration or changes
- Form approvals
- RPI Experience planning
- Academic issues

Location: Empire State Hall 1107 (Polymer Center)

Open: Weekdays 8:00 a.m. - 4:00 p.m.

Drop-in hours: Weekdays 2:00 p.m. - 4:00 p.m.

Email: scienceHUB@rpi.edu URL: <https://science.rpi.edu/hub>

## SIS (Important)

Self-Service Information System (SIS): web-based system you can use to access your registration, curriculum, and graduation information. For example, you will use it to register each semester, find your final course grades, and check on your progress satisfying the graduation requirements. Access it at: <https://sis.rpi.edu/>

## Degree Works (Important)

Degree Works is a planning and advising tool that allows you to track the progress you're making toward your degree. You can access it from the main menu of the SIS. A step-by-step reference guide is at: <https://registrar.rpi.edu/services/academic-planning/degree-works>

## Useful Things to Know

- Add/Drop info: you have two weeks to add a course and to also drop a course without receiving a W grade (for Fall 2026 the deadline is Sept 11). You have ten weeks to drop a course, but after the second week a W grade will be issued (for Fall 2026 the deadline is Nov 6). More info is [Here](#) and [Here](#)

- P/NC: you can take up to 4 courses as Pass /No Credit. You can add, or remove, a P/NC designation through the 13th week of the semester (for Fall 2026 the deadline is Nov 13). More info is [Here](#).
- Forms Provided by Registrar: [Here](#)

## **RPI Experience Program**

- Students in the Class of 2030 are required to participate in the RPI Experience at some point during their tenure at RPI.
- Information Page: [Here](#)
- If you have questions about RPI Experience, it is recommended you first go to the SoS Advising Hub.

## **Course Help**

1. Instructor and/or TA
2. The [Student Success Center](#). They have drop-in tutoring, and individual directed learning support. The tutor schedule should be posted in the first couple of weeks of the semester (once they hire the tutors).

## **Disclaimer**

Much of the information in this article is an abbreviated version of what is stated in the [Rensselaer Catalog](#) for 2026-2027. In all cases, if there are any differences with the catalog, the catalog is the correct version.

## **Special Circumstances**

Every so often a situation can arise (like an illness) that requires an adjustment in a student's schedule. If you believe you are in such a situation, you should talk to a [Student Support Dean](#).

## 2 Mathematics Curriculum

### First Year

#### Fall

MATH-1010: Calculus I

PHYS-1100: Physics I

CSCI-1100: Computer Science I

HASS Core: Elective

MATH-1900: Art and Science of Math

#### Spring

MATH-1020: Calculus II

HASS Core: Elective

Elective

Elective

### Second Year

#### Fall

MATH-2010: Intro to Linear Algebra

BIOL-1010: Intro to Biology

BIOL-1015: Intro to Biology Laboratory

HASS Core: Elective

Elective

ADMN-1030 Exploration Semester

#### Spring

MATH-2400: Intro to Differential Equations

MATH-4090: Foundation of Analysis

HASS Core: Elective

Elective

ADMN 1030

### Third Year

#### Fall

MATH-4600: Advanced Calculus

MATH/P: Option

HASS Core: Elective

Elective

#### Spring

MATH/P: Capstone I

HASS Core: Elective

Elective

Elective

### Fourth Year

#### Fall

MATH/P: Capstone II

MATH/P: Option

Elective

Elective

#### Spring

MATH/P: Capstone III

Elective

Elective

### Comment and Warning

Which semester you take specific MATH/MATP capstone and option courses is unimportant for graduation, you just need to have taken them by graduation. However, be warned that most 4000-level courses are offered only certain semesters, and some are only every-other-year. Also, a few have 4000-level prerequisites. Therefore, it is important that you plan ahead. In fact, this is something you should do starting your first semester at RPI.

## Capstone Topic Areas and Courses

*Mathematics:* These are the courses that stress theory, and proof, as well as some level of abstraction. MATH 4010, MATH 4020, MATH 4030, MATH 4040, MATH 4100, MATH 4120, MATH 4150, MATH 4200, MATH 4300, MATH 4950

*Applied Mathematics:* These are courses that stress methods and/or modeling. MATH 4100, MATH 4300, MATH 4400, MATH 4500, MATH 4700, MATH 4720, MATH 4800, MATH 4950

*Mathematics of Computation:* These courses involve the derivation and implementation of computational methods. MATH 4100, MATH 4800, MATH 4820, MATH 4840, MATH 4950, MATP 4400, MATP 4820

*Mathematics of Operations Research:* These courses involve optimization and data analysis methods to study systems that arise in management, engineering and the social sciences. MATH 4100, MATH 4800, MATH 4950, MATP 4600, MATP 4700, MATP 4820

## Graduation Information

- MATH/P capstone: the three choices must be from one of the above topic areas
- MATH/P option: any course with a MATH or MATP prefix at the 4000 level or above; but no more than one independent study or URP
- P/NC: can not be used on any math option or capstone course; it can also not be used for courses used to fill a communication-intensive requirement.
- At least one of the Capstones and/or one of the Math Options must be a Data Intensive course
- Graduation requirements: 124 credits, minimum 2.0 GPA, no more than 4 P/NC courses

## Course Recommendations Based on Post-RPI Plans

*Graduate School in Mathematics:* MATH 4100 - Linear Algebra, MATH 4200 - Mathematical Analysis, MATH 4300 - Introduction to Complex Variables: Theory and Applications. For pure math you should also take MATH 4010 - Abstract Algebra.

*Job (quantitative):* MATH 4100 - Linear Algebra, MATH 4800 - Numerical Computing, MATH 4840 - Numerical Linear Algebra with Applications, MATP 4820 - Computational Optimization. It is also recommended that you obtain at least a minor in economics, finance, or computer science.

### 3 HASS Core Requirements for Incoming SoS Freshmen

The HASS core requirements are:

*Integrative Pathway (IP):* 12 credits. You can find information about it [Here](#)

- **Recommendation:** You must be an effective communicator to be successful, so you should seriously consider pathway *Strategic Writing*
- P/NC: integrative pathway courses can not be P/NC

*4000-level HASS Course:* this must be a 4 credit course

*Communication Intensive (CI) HASS Course:* this should be within the first 3 semesters

- How to find the currently offered CI courses, go [Here](#)
- P/NC: this course can not be P/NC

*HASS Inquiry (INQR) Course:* this must be taken within the first 2 semesters. A list of these courses is [Here](#)

HASS Core Credit Requirements:

1. 24 credits total
2. A maximum of 12 credits at the 1000-level can be counted toward the HASS core
3. A maximum of 8 AP or transfer credits can be counted toward the HASS core
4. A maximum of 8 credits can be designated as P/NC

Resources

- List of Integrative Pathways: [Here](#)
- HASS Pathways (not an RPI site): [Here](#)
- HASS Webpage: [Here](#)
- Human help: HASS Hub, Russell Sage Labs building, Room 4307 (Drop-In Hours: Weekdays, 2:00 pm to 4:00 pm)

HASS Course Codes: COGS, COMM, ECON, GSAS, IHSS, LANG, LITR, PHIL, PSYC, STSH, STSS, WRIT

## 4 Dual Majors, Double Majors, and Minors

A dual major, upon graduation, will receive one diploma that identifies both majors. Some of the more common dual majors with math are computer science, physics, and economics.

- You must fill out the “Undergraduate Change of Major/Change of Status Form.” If approved by the new department, you will be assigned an advisor for that major (so you will have two, one for each department).
- The 24 credit mathematics/science requirement and the 24 credit humanities and social sciences requirement satisfy the Institute requirements for both majors.

A double major requires 30 credits beyond the requirements of a single degree, and you get two diplomas (one for each major). This is not recommended. If you are set on doing the extra 30 credits, it would be much better to consider the co-terminal program or get a regular Master’s degree.

Minors vary in their requirements from 15 to 21 credit hours. Courses for the minor may not be taken on a Pass/No Credit basis. No more than half of the course credits for the minor may be drawn from credits applied to the major. Also, students are not permitted to pursue a minor in their major. As always, there is a form to fill out (which is the same one as for a dual major).

## 5 Transfer Credit

If you entered Rensselaer as a first year student, you may transfer up to 32 credits. AP credits are considered as transfer credits. You are further restricted to a maximum 8 transferred credits of HASS. Also, if use transfer credits to satisfy a RPI requirement it might be necessary to take a 1-credit course to reach the required number of credits. RPI transfer guide is [Here](#)

## 6 Important Dates for Fall 2026

Sept 11: Last day to add courses or change sections. Also, last day to drop a course without being issued a W grade.

Oct 19 - Oct 30: Advising for Spring 2027.

Nov 2 - 20: Registration for Spring 2025 term.

Nov 6: Last day to drop a course with a W grade.

Nov 13: Last day to add or remove Pass/No Credit designation.

Dec 11: Last day of classes.

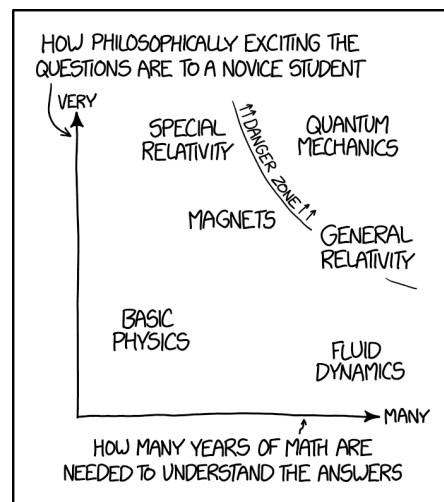
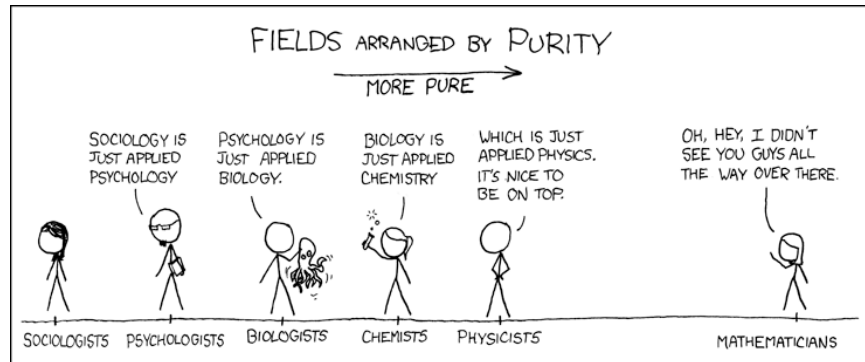
Dec 16 - 22: Finals

## 7 Math Organizations and Related Activities at RPI

- Math Mentors: lead weekly sessions in Calculus I where you provide help in solving calculus problems and give tips on adapting to college life; contact: Lucieli Trivizoli da Silva (trivil@rpi.edu)
- Mathematical Contest in Modeling: international contest involving teams of students to clarify, analyze, and propose solutions to open-ended problems; contact: Prof Kramer (kramep@rpi.edu)
- Putnam Competition: premier mathematics competition in North America; contact: Prof Stevenson (steved8@rpi.edu)
- Math Club: meets weekly to work on challenging mathematical problems; contact: Prof Stevenson (steved8@rpi.edu)
- Pi Mu Epsilon: national mathematics honor society; contact: contact: Lucieli Trivizoli da Silva (trivil@rpi.edu)

## 8 Student Experience

Be sure to explore all of RPI's resources that are here to help you! The [Student Experience Website](#) has a great overview of all resources and offices you have access to, as well as non-academic activities students can partake in.



WHY SO MANY PEOPLE HAVE WEIRD IDEAS ABOUT QUANTUM MECHANICS

Figure 1: Mathematicians' views of ourselves ...