



# Rensselaer



To: High School Guidance Counselors and Math/Science Teachers  
From: Barbara Ruel, Design Your Future Day Program Director  
Re: Hands-on Program for Exceptional 11<sup>th</sup> Grade Girls with Interest and Aptitude in Math/Science

Rensselaer is pleased to be able to extend an invitation to **your most talented high school junior girls** to participate in ***Design Your Future Day*** on Sunday, April 22 at RPI's campus in Troy, NY. This daylong program is designed for soon-to-be college-bound young women to explore possible college majors in Science, Technology, Engineering, or Math (STEM) through hands-on workshops and by engaging with RPI undergraduates majoring in STEM fields.

***Design Your Future Day*** offers fun and exciting hands-on workshops that introduce eleventh grade girls to a wide variety of STEM career options by providing hands-on experiences in Rensselaer's laboratories and studio classrooms. The program also provides an opportunity to meet high school junior women with similar interests. High school participants should have A and B grades and by the time they graduate from high school should have completed a minimum of 3 years of science, including Physics and 4 years of math, including pre-calculus.

**Attached is a two-page registration form for you to distribute directly to as many interested and ELIGIBLE female students from your high school. Please feel free to make more copies than what we have enclosed. Both pages must be completed** and returned to me by fax at 518-276-8788, or scanned, saved as .pdf files, and sent as email attachments to ruelb@rpi.edu.

Legibility is important, because we plan to mail a confirmation letter that includes parking and driving directions to every applicant via email and postal mail. **The registration deadline is April 16;** however, the program will fill very quickly this year, because capacity is limited to 100 students. Program and session registration will be handled on a first come, first served basis.

***This program is FREE to the high school girls and their parents/guardians who attend.***

The program will begin at 8:45 a.m. with check-in. After a short keynote speech from an alumna, students will be escorted to their hands-on sessions and parents will engage with a panel of students and alumnae. Lunch for students and parents will follow the morning panel and hands-on sessions. Students will meet many different RPI female students with different majors and different interests and will learn how college students successfully balance their academics and extracurricular activities and what the college students do to prepare for careers or Graduate School once they complete their B.S. degree. After lunch, high school students attend their second hands-on session, parents engage with a panel of professional staff from Admissions, Financial Aid, Residence Life, the Office of the First Year Experience, Career and Professional Development, Study Abroad, and the Advising and Learning Assistance Center. At 2:30 p.m. parents rejoin their daughters for the program closing and a campus tour which begins at 3 p.m. and ends at 4 p.m. A confirmation email and postal letter will be sent to all students who submit a registration form by April 16.

This is a great opportunity for your top students to meet Rensselaer students and recent graduates who can provide insights about college life at a technological university and as young professionals in a technological workplace

If you or your students have any questions, I can be reached by telephone at 518-276-2618 or by email at [ruelb@rpi.edu](mailto:ruelb@rpi.edu).

# Design Your Future Day: April 22, 2018

An event for extraordinary 11<sup>th</sup> grade women (and one parent/guardian)

## Registration Form, page 1 of 2

Fax completed pages 1 and 2 to 518-276-8788 or scan your form and send the file by email to Barbara Ruel at ruelb@rpi.edu.

Program capacity is limited to 100 students, and the program fills quickly. It's possible that the program could fill before the deadline of April 16. Registrations are handled on a first-come, first-served basis.

If you have questions, call Julie Granata at 518-276-6203.



**Please print legibly!** A confirmation will be mailed to the student's home address and **to the parent's email address** provided on this registration form. Ensure parent's email will accept mail from Barbara Ruel at ruelb@rpi.edu. Please check spam filters before calling us to inquire about registration.

Student First and Last Name \_\_\_\_\_

Home Address (street and number) \_\_\_\_\_ Apt. \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Home Telephone \_\_\_\_\_ Parent's Email \_\_\_\_\_

High School \_\_\_\_\_ Year of Anticipated High School Graduation: \_\_\_\_\_

- African American/Black (non-Hispanic)     Caucasian/White     Hispanic  
 American Indian/Alaskan Native     Asian/Pacific Islander     Multiple Races/Other

### **Number of Parents/Guardians Attending with Their Daughter(s):**

We've planned parallel activities on April 22 for one parent/guardian who may wish to visit the campus, see our facilities, have lunch, and speak to students, faculty, & staff. Lunch is available for **FREE** for one student and one parent from the same family. Please check the appropriate box below.

**Yes, I am planning to attend with my daughter..**     **No, my daughter will attend alone.**

**Parent/guardian signature** indicating minor has permission to participate in Design Your Future Day 2018 on April 22, 2018 at Rensselaer Polytechnic Institute: \_\_\_\_\_

**Parent/guardian signature below permits child to be photographed** for print or live media coverage/advertising of event:  
\_\_\_\_\_

**Student's choice of sandwich:**    \_\_\_ ham+cheese \_\_\_ turkey \_\_\_ veggie wrap \_\_\_ Amer. cheese

**Parent's/Guardian's choice of sandwich:**    \_\_\_ ham+cheese \_\_\_ turkey \_\_\_ veggie wrap \_\_\_ Amer. cheese

**Students:** To help us learn more about you, please visit <https://www.rpi.edu/academics/> and list below 4 possible majors that interest you. Please list them in rank order with number 1 being your most favorite.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

**Campus Tour:** Please place a check mark on the appropriate line below to let us know how many people plan to stay for the campus tour from 3 to 4 p.m.

\_\_\_ 0 persons \_\_\_ 1 student    \_\_\_ 1 student + 1 parent.

# RPI's Design Your Future Day: Sunday, April 22, 2018

## Registration Form, Page 2

Student First and Last Name: \_\_\_\_\_

Please read the session descriptions below and select your top 5 choices. Place the number "1" in the box preceding your most favorite session, the number "2" for your second favorite choice, etc. Session placement is determined on a first-come, first-served basis. We'll do our best to get you into your two top choices. Each session is one-hour long.

<p><input type="checkbox"/> <b>Rapid Manufacturing and Prototyping:</b> Join us to learn how rapid manufacturing, using 3-D printers and laser cutters, fabricates end-use products in medical implants, dental restorations, aircraft, automobiles, and even fashion products. Add layer upon layer of plastic to create your own 3-D designs and objects!</p> <p>(Mechanical Engineering)</p>	<p><input type="checkbox"/> <b>Designing a Safe Roller Coaster</b> Roller coasters provide the ultimate physical experience, but some people are fearful to ride them. We dispel the myths about inherent risks involved with riding roller coasters by analyzing forces on the body, track design considerations, and restraining systems.</p> <p>(Civil Engineering)</p>
<p><input type="checkbox"/> <b>How Bacteria in Your Intestines Shape You</b> Bacteria that populate the human intestines assist in a variety of functions ranging from digestion to the development of the immune system. By using microbiological, genetic, and biochemical methods, you will examine bacteriodes to understand how they have become one of the most common organisms in the intestines.</p> <p>(Biology)</p>	<p><input type="checkbox"/> <b>How to Change Your Genes</b> Learn about revolutionary new gene editing tools that may allow scientists and doctors to cure diseases! Students will learn about genetic diseases and the CRISPR gene editing technology that can correct mutations by investigating a gene sequence, identifying any errors in the gene, and designing tools to correct the errors.</p> <p>(Biology)</p>
<p><input type="checkbox"/> <b>Prosthetic Design</b> Learn about the engineering design process as it is applied to developing biomedical prosthetic devices and build your own prototype for a prosthetic finger!</p> <p>(Biomedical Engineering)</p>	<p><input type="checkbox"/> <b>Minimizing Suffering After Catastrophic Disasters</b> Tackle the challenge of delivering life-saving supplies to a site impacted by a catastrophic disaster and gain insight about systems, process, and techniques that ensure an expedient response.</p> <p>(Transportation and Industrial &amp; Systems Engineering)</p>
<p><input type="checkbox"/> <b>Optimizing Traffic</b> Traffic delays impact people all over the world and result in lost time, resources, and money. Examine what causes traffic back-ups, the type of engineers who solve traffic challenges, and the highway designs and traffic devices that are in use and in development to optimize traffic flow.</p> <p>(Transportation Engineering)</p>	<p><input type="checkbox"/> <b>Digitized Illumination Impacting Your Everyday World</b> Join us to discover the ways solid state lighting systems are impacting your everyday life – from the food you eat, to the colors you see and the energy you use in the environment you live in.</p> <p>(Electrical and Computer Systems Engineering)</p>