A PROGRAM for extraordinary young women
www.eng.rpi.edu/dyfd/
Welcome

Design Your Future Day is an exciting opportunity to explore academic degree programs and careers in which you can apply your interests and talents in math, science and technology. The program is designed to encourage you to explore new and existing technologies and to meet Rensselaer students and alumnae who have chosen a broad range of scientific and technological career paths. At Rensselaer our scientists, engineers and technologists collaborate on research and develop applications that solve real-world problems. Working together in an interdisciplinary fashion results in the development of breakthrough technologies and the creation of new academic disciplines, programs, and cutting-edge pedagogies for educating tomorrow’s technological leaders. Your hands-on sessions and interactions with our students and alumnae will provide you with a brief glimpse at what may be possible in your future and to meet young women who share similar interests and passions!

Barbara Ruel
Program Director, Design Your Future Day

Schedule of Events for Students

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>9:00 to 10:00 a.m.</td>
<td>Check-in and light breakfast</td>
<td>Darrin Communications Center, Great Hall</td>
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<tr>
<td>10:00 to 10:20 a.m.</td>
<td>Welcome and Keynote</td>
<td>Darrin Communications Center, Rm. 308</td>
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<tr>
<td></td>
<td>Dr. Alan W. Cramb, Dean of Engineering</td>
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<td>Danielle Desalu ‘01, Keynote Speaker</td>
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<tr>
<td>10:30 to 11:30 a.m.</td>
<td>Hands-on session I</td>
<td>See “Sessions” for location</td>
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<tr>
<td>Noon to 1:00 p.m.</td>
<td>Lunch and interactive panel discussion</td>
<td>Alumni Sports and Recreation Center</td>
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<tr>
<td>1:15 to 2:15 p.m.</td>
<td>Hands-on session II</td>
<td>See “Sessions” for location</td>
</tr>
<tr>
<td>2:30 to 3:00 p.m.</td>
<td>Closing</td>
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Meet Danielle Desalu, Mobility Systems Engineer for Cisco Systems’ Federal Channels Organization in Herndon, VA.

In 2001 Danielle graduated from Rensselaer with bachelor’s and master’s degrees in Computer & Systems Engineering and began working for Cisco Systems at their headquarters in San Jose, CA. As a global leader in the Communications and Information Technology industry, Cisco has provided Danielle with the opportunity to explore various engineering roles. In her current position, Danielle designs, validates, implements and trains customers on wireless technologies that provide business solutions for organizations worldwide.

Although Danielle’s academic degrees in engineering have prepared her well for her technological career, her education didn’t end after receipt of her master’s degree. Danielle continues to sharpen her skills in the wireless field by participating in company trainings, attending professional conferences, and networking with other professionals to stay informed about developing technologies. Since graduating from college, Danielle has received several industry certifications in the Wireless and Security arena.

As an advocate who encourages and challenges young women to investigate and pursue careers in science, engineering and technology, Danielle has assisted in the development of the “IT Rocks” campaign, a program launched in November 2007 by Cisco Systems to promote careers in engineering & science for high school and middle school students.

Mrs. Desalu serves on the Fairfax County Public Schools Business and Information Technology Advisory Board in Falls Church, VA and returns annually to RPI to help Cisco recruit students for internships and full-time jobs.

Join us as Danielle shares her personal aspirations and stories and the lessons she learned in college and since college about excellence, leadership and persistence.

Schedule of Events for Parents

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<td>10:30 to 11:30 a.m.</td>
<td>Student Leadership Panel</td>
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<td>Noon to 1:00 p.m.</td>
<td>Lunch and interactive panel discussion</td>
<td>Alumni Sports and Recreation Center</td>
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<tr>
<td>1:15 to 2:15 p.m.</td>
<td>Interactive discussion with Rensselaer representatives from Admissions and Financial Aid; Career Development Center; First Year Experience; Athletics and other student activities; Residence Life; and with students from the Mentor Program</td>
<td></td>
</tr>
<tr>
<td>2:15 to 3:00 p.m.</td>
<td>Closing</td>
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1. The Body Bag
With the help of interactive anatomy software and hands-on models, explore how medical devices, prosthetic limbs, tissues and organs are designed, manufactured and used. Students will learn how scientists and engineers can impact human health and quality of life.
Facilitator: David Corr
Room: Sage 2112

2. iCHAIR
Ever thought you might like to be an architect? Work in teams to brainstorm designs for a chair and then build a full-scale prototype! Prizes will be awarded!
Facilitator: Michael Oates
Room: Greene 204

3. Engineering at Rensselaer is Sweet
Do you have a sweet tooth? Come learn how to assemble a box of candy in the Advanced Manufacturing Lab and learn different manufacturing processes including robotics and automation, plastic injection molding, 3-D printing, and water-jet cutting. This is a sweet chocolate factory you’ll never forget!
Facilitators: Sam Chiappone and Larry Ruff
Room: CII 1027, Advanced Manufacturing Laboratory

4. Fast and the Furious!
Think microprocessors are just in your PC? Learn about how embedded controllers are everywhere in your everyday life. Get the chance to remote control a blimp!
Facilitator: Lesli Rontondo
Room: AS&RC Basketball Courts

5. The Guy-Girl Translator
Interested about overcoming the illusion of one language and translating between male speak and female speak? Discuss the basic issues between men and women by collecting key words, phrases, and interactions that ignite gender issues and contribute to building a gender translation website already in the works!
Facilitator: Ralph Noble
Room: CII 4034

6. Going Nano
Explore the exciting field of nano-materials and see how and why size matters. Experience color-changing nano-particles, structures that self-construct and fluids that don’t know if they’re liquid or solid.
Facilitator: Renée Duncan
Room: Walker Lab 6213

7. Lights, Camera, Action
Ever wonder how a flash camera works? Make your own circuit to control the flash of a camera to discover how the system detects the absence of light.
Facilitator: William Mielke
Room: JEC 5107
8 Shake, Shake Shake…
See how Civil Engineers obtain information about the soil and earthquakes by spinning dirt at 200 mph. Make your own soil models and test them using a centrifuge and mini-shake table.
Facilitator: Victoria Bennett
Room: JEC 1042B

9 From iPods to Guitars
Rock out with us and see how a guitar can maneuver a robot! Build an electronic circuit and discover how circuits operate inside iPods, cell phones and robots! One raffle winner from each session will take home a $150 circuit board to turn your computer at home into a full electronics laboratory.
Facilitator: Don Millard
Location: JEC 4201, Embedded Controls Studio

10 What’s in YOUR Water?
Study the bacterium Vibrio cholerae, the agent of the disease cholera, and learn how these bacteria spread from aquatic environments to the human population.
Facilitator: Blanca Barquera
Room: CBIS 2005, Bruggerman Room

11 Planes, Trains and Molecules
Using Newton’s Laws and computer simulation models see how scientists can accurately predict the behavior of complex systems in every part of life from molecular interactions to spacecraft. Then build your own model and learn how your perceptions can be deceived.
Facilitator: Kurt Anderson
Room: JEC 3232 (Multi-Disciplinary Design Laboratory)

12 Put the Pedal to the Metal!
Operate cutting-edge tools like a plasma cutter and learn how to create designs just like today’s manufacturing engineers. Explore the equipment in this machine shop and bring home something you create from metal!
Facilitator: John Szczesniak
Room: JEC 1010

13 It’s Hot Being Nano!
Did you hear the buzz about nanoscience? Come and find out what it’s all about. We’ll talk about heat at the nanoscale level and what supercomputers and cancer have in common. Heat up particles of different sizes and determine which are the hottest!
Facilitator: Diana Borca-Tasciuc
Room: Sage 4101
Margaret Bray ’09 is pursuing a degree in Mathematics of Operations Research. As an undergraduate, Margaret participated in a Biology research project on In Situ Hybridization during which she participated in weekly laboratory meetings, delivered presentations on papers related to her lab research and assisted other lab members in problem-solving. Margaret has also been an undergraduate Teaching Assistant in Math, has participated in mathematical contests in modeling, is Vice President of the RPI Fitness Club and is a certified lifeguard and Water Safety Instructor.

Karen Kraft ’08 will graduate with a degree in Architecture this May. In June, she will attend Officer Candidate School for commissioning as a United States naval officer in the Civil Engineering Corps. As an undergraduate, Karen played varsity soccer, was a Teaching Assistant for two Architecture courses, and participated in a Study Abroad program in Rome, Italy. For several years, Karen held a full-time internship with Kimmerle Architects in Morristown, NJ. As a corporate architect, she was involved in material selection, development planning, surveying, Computer-aided Drawing and 3-D modeling.

Himani Suhag ’06 received a dual degree from RPI in Electrical and Computer Systems Engineering and is a Graduate Research Assistant at the University of Albany’s College of Nanoscale Science and Engineering, where she is pursuing a doctorate.

Thank you

Special thanks to our sponsors, General Motors, Lockheed Martin, and the Gene Haas Foundation for their generous support and to the many faculty, students and staff who have volunteered their time and energy to deliver this program to our talented high school guests and their parents.

Welcome and Check-in

Sehrish Khan, Chair
Monica Amin
Devan Ball
Liz Brule
Andrea Chambers
Andrea Dalton
Shreya Desai
Amelia Dosio
Tori Fitz
Marissa Goldblatt
Kimberly Gomboz
Erika Hango
Tammy Hines
Chelsey Hochmuth
Tiffany Hu
Laura Jamison
Tricia Kent
Zarin Mirza
Kim Mohs
Katherine Murdock
Andrea Nordberg

Jasmine Patel
Kiersten Purinton
Danielle Reid
Amanda Santos
Shari Sledge
Myrian Smith
Melanie Tibbetts
Sharon Vuong
Lesley Wu
Vicki Wu
Sarah Zaremski
in Silicon Photonics. During the summers preceding and following her senior year in college, Himani interned at IBM in Burlington, VT, where she was employed as a development engineer in the Application Specific Integrated Circuit (ASIC) Division. As an undergraduate, she was a Teaching Assistant for Physics I and a dormitory Resident Assistant.

Laila Tabatabai ’06 was admitted to the 7-year accelerated Physician-Scientist Program and received her bachelor’s degree in biology with a minor in psychology in May 2006. She’s now in her third year of medical school at Albany Medical College and expects to receive her M.D. with Distinction in Research in May 2009. Laila was awarded a seed grant by the American Medical Association in support of her cardiovascular disease research and by her second year of Medical School had already co-authored a book chapter on vascular trauma.

Kristen Weiss ’08 will be attending Bryn Mawr in Pennsylvania upon graduation this May to pursue a post-baccalaureate program in pre-medicine. While pursuing her bachelor’s in Management and Technology, Kristen played varsity tennis, was a Teaching Assistant and grader and a patient care technician at Albany Memorial Hospital. Kristen also interned at Bank of America Securities in New York City as Global Credit Investment Banking Summer Analyst and at Pitney Bowes MapInfo Corporation in Troy, New York as a Legal Intern.
Lunch Leaders
Kristen Weiss, Chair
Christina Acocella
Devan Ball
Elizabeth Brule
Kate Chany
Alexis Curry
Grace DiCinti
Amelia Dosio
Tori Fitz
Alexandra Gambarov
Katherine Gisin
Heather Hall
Erika Hango
Chelsea Hochmuth
Laura Jamison
Leeanne Johnson
Tricia Kent
Erika Lam
Sara Laprade
Aileen Lennon
Stephanie Livesey
Michelle MacFarland
Stacie Manning
Mary McAfoose
Zarin Mirza
Alicia Murai
Katherine Murdock
Elizabeth Muscatiello
Katie Nault
Andrea Nordberg
Jasmine Patel
Danielle Reid
Nicole Ross
Mia Ross
Amanda Santos
Valerie Shank
Myrian Smith
Michele Viani
Sharon Vuong
Jessica Wiggs
Michelle Woeste
Amanda Woodcock
Anastasia Yapchanyk

Administrative Panel
Anne McDonough
Admissions
Jim Stevenson
Financial Aid
Melissa Termine-Goetz
Student Union
Scott Adams
Archer Center
Mark Smith
Dean of Students
Mark Diodato
Residence Life
Janelle Fayette
First Year Experience
Tom Tarantelli
Career Development Center
Jeannie Steigler
Learning and Advising Center

Admissions Office
Sharon Beaudoin
Anne Flynn
Student Ambassador Tour Guides

Graphics, Marketing, Photography, Website
Lauri Baram
Panarama Design
Deborah Iler
RPI, Strategic Communications and External Relations
Kris Qua
Photography
Jill Evans
RPI, School of Engineering

School of Engineering
Alan W. Cramb, Dean
Christina D’Anjou
Ginny DeRusso

Student Organizations
Women at Rensselaer
Mentor Program
Society of Women Engineers

Technical Support
Sylvia Monaco-DuPont

Student Leadership Panel
Elizabeth Brule
Biomedical Engineering
Kaitlyn Calaluca,
Materials Engineering
Kara Chesal
Economics and Science and Technology Studies
Christina D’Anjou
Biomedical Engineering
Sehrish Khan
Industrial and Management Engineering
Julia Leusner, Chemistry
Lisa Muscanell
Environmental Engineering
Carolyn Rudak
Electrical Engineering
Erik Swanson
Biomedical Engineering
Kristen Weiss
Management
Laura Wontrop
Mechanical Engineering
Jodie Wright
Applied Math

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