



Student Handbook

Welcome to R2R! R2R is a school liaison program put together by the admissions office geared towards current students sharing their story with perspective students. We at the Admissions office feel that our students are the best resource for others to learn first-hand about what Rensselaer has to offer. In this hand book you will find the duties, responsibilities, and expectations of R2R liaisons. Additionally, this handbook will serve as a resource of information for you to use pre and post visit. Thank you for joining the program and we look forward to working with you.

Warm Regards,

Rensselaer Office of Undergraduate Admissions

Guideline for Student Visits

Before the Visit:

1. The student should contact the college counseling office or a former teacher or administrator whom they are familiar with at their school to set up a visit.
2. The student should confirm their visit and share the name and contact information of the person at their school whom they have arranged the visit with, date and time of the visit on the confirmation form that is sent.
3. The student should make arrangements to pick up materials from Admissions before departing. Materials will be available at the front desk in the Admissions building the last week before campus closes for winter break.

Guideline for Student Visits

Day of Visit:

1. The student liaison should arrive on time and dressed in Rensselaer paraphernalia to their high school.
2. The student should provide the school representative with their folder which will contain an evaluation form that they will be asked to mail back.
3. At the conclusion of the visit, the student should fill out his/her visit evaluation form that is to be returned to the Admissions office.

Info Session Outline

- History of Troy/ RPI
- Dr. Jackson, 18th President, 16th year as president
 - Rensselaer Plan
 - CBIS, CCI, EMPAC, ECAV
 - New Polytechnic
- Overview of Academic
 - Student Body, Average Class size, Rankings
 - Average class schedule(4x4 curriculum, Wednesdays off)
 - No general curriculum(outside phys, calc , and HASS inquiry), No required minors
 - Low wall approach/new polytechnic
 - Summer Arch
 - Architecture
 - B. Arch vs B.S. B.S.
 - Study Abroad
 - Engineering
 - 11 majors (Bachelors, Masters, and Doctorates in each)
 - Professional Development/Archer Center For Leadership
 - Internships/Co-op's
 - HASS
 - Dual majoring/minoring
 - Integration of technology and arts
 - Lally
 - Entrepreneurship at Rensselaer
 - Co-terminal Degree
 - Science
 - Research
 - IDEA/Jefferson Project
- Student Life
 - Student Union
 - Clubs and Activities
 - CLASS
 - Office of First Year Experience, NRB, Student Orientation
 - Greek Life
 - On Campus living
- Application Process
 - Candidates Choice, Common Application, and Universal Application
 - Transcript, Test Scores, Letters of Rec, Extra Curricular, Essay
 - Deadlines

- Financial Aid/ Merit Scholarships

Key:

New Polytechnic:

- “New Polytechnic” – collaborating across disciplines and sectors to harness the power of these tools and technologies to address the key intersecting challenges and opportunities of our time: in energy security, health, food, water, and national security, as well as challenges of climate change and allocation of scarce resources so critical to our future. – U.S. News Article
- An interdisciplinary collaborative approach to addressing Urgent and Global Challenges in today’s society
- By using technologies along with the development of IDEA, Rensselaer students are making a global impact
- Students must learn to operate effectively, and ethically in virtual communities, immersive environments, and in blended worlds
- “Data is the new natural resource of the 21st century. As with all valuable resources, it is important how we generate it, how we mine it, how we manage it, how we preserve it, and how we connect it.” – U.S. News Article

Institute for Data Exploration and Applications (IDEA)

- Adaptation of data literacy across the curriculum – educating students on how to analyze and successfully apply data to global problem solving
- Students have access to data-intensive supercomputing, large-scale agent-based simulation, and cognitive computing technologies
- Integrating the predictive nature of data into the engineering processes of modeling and simulation – predication of “what if” and “why?”
- data-centric, interdisciplinary activities.
- Predictive power of data to tackle global issues
 - Food and clean water
 - Renewable energy
 - Disease
 - Data-driven Medical and Healthcare Applications
 - Business Analytics
 - Cybersecurity and Network Analysis

- Jefferson Project is a good example of IDEA

Rensselaer Plan and Renaissance at Rensselaer

Rensselaer Plan: was implemented to reach our overall goal for Rensselaer

- To achieve prominence in the 21st century as a top-tier world class technological research university, with global reach and global impact
- **AMOS – CCI** – (Center for Computational Innovations) -the Most Powerful University-Based Supercomputer in New York State and the Northeast--one quadrillion (10¹⁵) calculations per second
 - among the most powerful in the world
 - will enable Rensselaer and its partners to better tackle highly complex, data-rich research challenges ranging from personalized health care, to smart grids, to economic modeling
 - IBM provided a Watson cognitive computing system to Rensselaer, first university to receive such a system
- **CBIS: (Center for Biotechnology and Interdisciplinary Studies)**
 - 218,000 square foot facility, opened in 2004
 - over half of that is lab space, 400 office spaces and conference rooms
 - Interweaves life sciences, physical sciences and engineering into the field of biotechnology and medicine, opening new pathways to innovation and discovery
 - Facility is set up to encourage interdisciplinary collaboration for problem solving, both in the lab and in the office spaces
 - Research Fields in:
 - Biologics, Bio-imaging, Bio-manufacturing, Bio-molecular Science and Engr, Biophysics and Structural Biology, Micro-biomics, and Neuroscience
- **ECAV: (East Campus Athletic Village)**
 - Opened in 2009, this is a \$92 million complex
 - 5,200 multi-purpose stadium, 2 additional artificial turf fields, outdoor track, 1,200 seat basketball arena, auxiliary gym, sports medicine suite, strength and conditioning room, coaching suite
- **EMPAC:**
 - 220,000 square foot center with 4 main venues
 - Includes 1,200 seat concert hall, 2 black box theater's, and a Broadway style theater

- EMPAC is a research and production center that allows for collaboration between the arts and science
- Main concert hall has convex walls, fabric ceiling, and ac that radiates from the floor to make the acoustics in the space superior.
- The concert hall, Theater, and studios are designed as immersive, high definition environment, equipped with cutting edge audio, video and computer technology

Clustered Learning and Advocacy Support for Students (CLASS)

- comprehensive approach to the student experience at Rensselaer
 - ongoing support
 - guidance
 - co-curricular activities
 - connects students to a network of faculty, staff and other students, ensuring that they are part of a strong community of learners
 - **Class Deans** –challenge students to achieve their potential by cultivating and encouraging self-exploration and formulating an authentic identity while achieving education goals
 - Class dean progresses with the class they are assigned them with, to build relationships and consistency throughout the 4 years
- Time Clustering & Residence Clustering
 - A 4 year model to ensure support of students (time clustering)
 - **First Year Experience (FYE)**
 - Focused on a seamless transition into Rensselaer through programs such as NRB and SO
 - Simplest terms is hand holding to ensure success and development of first year students
 - **Navigating Rensselaer and Beyond:** a five day program full of skill building opportunities, interest of specific activities, and interactive ways to connect our newest members of the Rensselaer Community with each other and with the Troy community
 - **Student Orientation** : highly interactive day and a half experience in which they are introduced to the university, interact with faculty, staff and fellow classmates, meet with an advisor, and register for classes
 - **Sophomore Career Experience**
 - Affirm academic choices
 - Explore transformative opportunities
 - Engage in co-curricular experience and leadership positions
 - Focus on academic and career goal setting
 - Summer Arch- Summer here, the world away.
 - **Junior Year Experience**

- Focus on experience matters
- Encouraged to utilize a co-op, internship, or study abroad
- Connect with a mentor
- Reflect on post graduate aspiration as well as review graduation requirements
- Transfer: transfer orientation, 1 on 1 class dean meetings, transfer socials to help network with Rensselaer community
- **Senior Year Experience**
 - Integration into alumni community, reflection of the past 4 years, and transition into the real world
- **Residential Clustering**: clusters of freshman and sophomore housing
 - Includes theme housing:
 - Ground Zero: community for arts, music and culture
 - Vasudha: earth, energy, and environment
 - Leadership House: leadership development, partnered with ALAC
 - Design and the Arts: students interested in the intersection of design, art, media and technology
 - Greek Houses

The Severino Center for Technological Entrepreneurship

- Foster new generations of budding and successful entrepreneurs through outreach programs, education, and support systems
- A broad based platform for entrepreneurs to make the transition from concept to company
 - **Startup Tech Valley**: is a monthly meetup for first-time entrepreneurs, experienced entrepreneurs, aspiring entrepreneurs, investors, mentors, employees of startups, service providers to startups, and anyone else who wants to be involved
 - Hear words of wisdom from experienced entrepreneurs.
 - Launch their new venture to the public.
 - Provide new product demos/pitches and obtain feedback (and potentially initial customers).
 - **RPI Hub**: web based system and process for helping campus and community entrepreneurs connect to the right people, places, programs and funding needed to help their business ventures grow from concept to commercial viability
 - Begins with a faculty, student, alumni or community entrepreneur is accepted into EVE 2.0 Business Incubation Program
 - Tech Park is for more mature businesses with potential for engaging campus researchers and creating valuable student internship opportunities

- Campus Resources and Community Resources
- **Emerging Ventures Ecosystem (EVE):**
 - Accelerates the growth of new businesses and boosts the transfer of scientific and technological breakthroughs from laboratory and classroom to the marketplace, for social and economic impact
 - A 7 stage business development program, that empowers entrepreneurs and provides them proper resources
- **Idea2Business** – a business matching event – allows people with great idea to find good business partners , and people seeking great ideas to find good technical partners
- **Competitions:**
 - Rensselaer Business Model Competition - \$15,000 cash prizes and in-kind services – prepare students for bigger competitions
 - Rensselaer Change the World Challenge – biannual contest to develop innovative technological ideas with the potential of changing the world - \$10,00 cash prize
 - Class of '51 Entrepreneurship Fund
 - NY State Business Plan Competition

Archer Center for Leadership

- Offers programs and activities the teach transformational leadership
- Leadership is a critical life skill that can be taught through combination of role playing, group problem solving, and other activities to build capabilities and confidence
- **Professional development courses offered in the School of Engineering and Lally**
- **Professional Leadership Program:** taught by corporate executives to juniors and seniors – selective yearlong training program
 - Give students the opportunity to practice becoming strong, resilient people of great character who can translate that to a professional workplace
- **Emerging Leaders Series:** co-facilitated with the office of first year experience
- **Leadership House/Leadership 2.0:** residential theme community – open to first year students seeking the opportunity to explore leadership topics through hands-on activities and interactive workshops

Advising and Learning Assistance Center (ALAC)

- Provides strategies to students for effective time management, textbook study, note-taking, test taking, exam preparation
- Academic counseling
- **Teaching and Learning Assistants:**
 - Grad students trained to act as outreach—assists students with tutoring, advising, and mentoring sessions
 - Hold office hours

- Learning Assistants: live in first year residence halls and conduct a variety of workshops
- **Peer-to-Peer tutoring:**
 - Drop-in tutoring available to all registered undergraduate students
- **Supplemental Instruction:** weekly sessions providing effective ways to learn difficult material

The Jefferson Project:

- Make Lake George a global model for ecosystem understanding and protection
- Stopping the present decline of water quality and achieving sustained protection of Lake George for the next generation
- Using monitoring, modeling, simulation, forecasting and experimentation. This powerful combination of tools will inform and compel smart decision-making to secure ecosystem resilience in the face of long-term pressures from climate change and intensifying human use
- Showing how a complex natural system can be deliberately studied for the purpose of sustaining protection.

Emergent Reality Lab (ERL)

- The ERL is a platform for research in virtual reality and mixed reality, combining the real world with immersive virtual environments and the immersion of storytelling and gameplay
- a CAVE(tm)-like virtual reality system that can be reconfigured for different project needs
- Example: **The Mandarin Project** uses a mixture of narrative, game design, and augmented and virtual reality to teach Mandarin Chinese

Architecture

- Bachelor of Architecture vs. Bachelor of Science in Building Science
 - Bachelor of Architecture – 5 year accredited pre-professional program
 - For students interested in design and being a professional architect
 - Our Architecture program has a combined focus on Art + Science
 - Creative portfolio required
 - Focuses on next generation building technology as opposed to current research
 - Well-respected for their leadership role among U.S. Schools regarding
 - Bachelor of Science in Building Science – 4 year non-accredited program
 - For students interested in building structures and technology

- Building Science = Science + Technology
 - No portfolio required
 - Interdisciplinary collaboration in the classroom
- Famous Alum: Peter Bohlin designed the 1st Apple Store for the late Steve Jobs, and 10,000 since!
- The SoA has the most robust Study Abroad Program of all the schools. Up to 6 countries to choose from. (China, India, Italy, NY/CASE, Bedford Seminar)
 - The Bedford Seminar: promote interdisciplinary discourse between the Schools of Engineering and Architecture, international workshops available
 - include seminars in the offices of accomplished architecture and engineering practices, visits to acclaimed architectural projects, construction site visits led by the project’s architects and/or engineers, and a collaborative design exercise structured to catalyze interdisciplinary discourse
- **Center for Architecture, Science, and Ecology (CASE):**
 - A multi-institutional and professional research collaboration co-hosted by Rensselaer Polytechnic Institute and Skidmore, Owings & Merrill LLP
 - CASE is pushing the boundaries of environmental performance in urban building systems on a global scale, through actual building projects as research test beds.
 - focused on next generation building technologies for a sustainable built environment
 - EXAMPLE: CBIS Wall is an “Active Hydroponic Systems for Air Purification and Energy Reduction in Building Systems”

Engineering

- 11 majors
- Professional development curriculum
 - **Introduction to Engineering Design** – co taught with Engineering Professor and Archer Center
 - emphasizes creativity, teamwork, communication, and work across engineering disciplines
 - Senior Capstone Projects – are often open-ended, technically challenging design problems that encompass a broad array of important contemporary issues
 - Students will be challenged with real world industry problems a
 - Often work alongside industry professionals and/or mentors
 - Check Design Lab Portfolio for examples
- 16 Engineering focused research centers, and 2 National Science Foundation Engineering Research Centers (smart lighting research center, and the Center for Earthquake Engineering Simulation/Centrifuge)

HASS

- Offers degree programs that are rigorous, innovative, and responsive to contemporary problems and prospects
- 5 academic departments with 11 different majors – ranging from traditional liberal arts and 21st century liberal arts – can tie back to the new polytechnic
- Students rethink the nature of humanities, arts, and social sciences by having Rensselaer’s technological resources
- Nationally ranked game design program
- All students required to take 24 credit hours – leads to dual majors or minors
- Real world problem solving (D.I.S example of solving pollution from plastic water bottles by creating a collapsible water bottle)
- New Music major

Lally School of Management

“Small school atmosphere, with big school opportunities”

- *Nationally ranked business school for the past 10 years
- Extremely interdisciplinary, most student dual major or major minor
- More focused on quantitative data, and business analytics as compared to other business schools
- 8 Concentrations: Accounting, Business Analytics, Entrepreneurship, Finance, International Management, Management Information Systems, Marketing, and Supply Chain Management
- Average starting salary: \$64,591
- International Management Exchange Program: upper level management courses abroad
 - 9 different countries: (Australia, The Netherlands, Spain, Hong Kong, Germany, etc.)
- Top Employers: Deloitte, Apple, Cisco, Target, Travelers

Science

- 13 different majors
- Different avenues for research
 - “Essence of science, as we see it, is learning by doing”
- More than 700 students participate in the Undergraduate Research Program (URP)
 - Under the URP, students may pursue research for academic credit, as a paid assistant in a research project, or for the experience of working in the labs of world-leading Rensselaer faculty researchers.
 - Research Fields in:

- Biologics, Bio-imaging, Bio-manufacturing, Bio-molecular Science and Engr, Biophysics and Structural Biology, Micro-biomics, and Neuroscience
- Darren Fresh Water Institute/ The Jefferson Project
 - Make Lake George a global model for ecosystem understanding and protection
 - Stopping the present decline of water quality and achieving sustained protection of Lake George for the next generation
- Information Technology and Web Science
 - Explore the World Wide Web and other IT technologies from the algorithmic, engineering, and social perspective
 - Students will learn about physical science underlying the Web and the social sciences of its impact, the skills involved in running large-scale information systems, developing Web applications, or dealing with social and policy implications of IT and Web deployments
 - Available as a concentration with any of the 5 schools
- BS/MD Programs
 - Albany Medical College and Mount Sinai

HIGH SCHOOL VISIT REPORT

School Name:

School Location:

Date of Visit:

Time of Visit:

Number of students present at visit:

Comments about the visit:

Your Name and RIN:

Date form is completed: