

# RENSSELAER | ARCHITECTURE

## UNDERGRADUATE ACADEMIC PROGRAMS INFORMATION



### PROGRAMS AND INFORMATION

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- CASE NEW YORK PROGRAM
- STUDY ABROAD
- BEDFORD INITIATIVE
- APPLICATION PORTFOLIO REQUIREMENTS
- HIGH SCHOOL SUMMER CAREER DISCOVERY PROGRAM

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# RENSSELAER | ARCHITECTURE

## BACHELOR OF ARCHITECTURE



The five-year undergraduate program seeks applicants curious about the acquisition of knowledge, the creative and scientific aspects of buildings, the importance of ecological design, the power of learning, the value of hard work, and the transformative opportunities afforded the next generation of architects committed to changing the world. Conceived as a supportive and inspiring environment for the beginning student of architecture, the program offers a comprehensive curriculum comprised of architectural design, history/theory, and technology courses as preparation for our graduates to become future leaders in the profession.

The School has an extensive international study abroad program enabling students to spend one full semester in Italy, India, China or Argentina and Chile. In addition, the School also offers a semester-long program in New York City for undergraduate students to study at the Center for Architecture Science and Ecology (CASE), a unique educational and research consortium between Rensselaer and a broad set of industry partnerships, as an opportunity to pursue research on next-generation sustainable architecture.

The Bachelor of Architecture from Rensselaer is a professional degree fully accredited by the National Architectural Accreditation Board. Graduates of the School are distinguished by being creatively independent, technologically astute, progressive, professionally ambitious with a strong sense of social responsibility, and prepared for career advancement at any level.

The program concludes with a year-long individually developed and comprehensive final project in the context of optional research studio and thematic contexts provided by faculty. The final project is an opportunity to reimagine the world and the invaluable role architecture plays to contribute to the built environment.

**Early decision 1 deadline is November 1.**

**Early decision 2 deadline is December 15.**

**Early action – apply by December 1 and receive decision by late January (non-binding)**

**Deadline to apply is January 15.**

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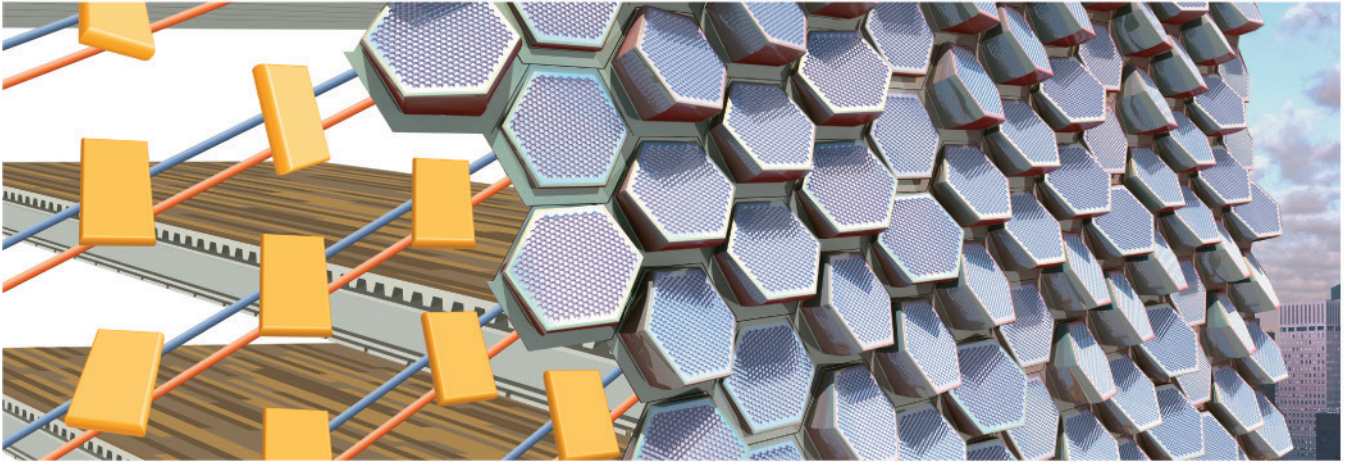
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# RENSSELAER | ARCHITECTURE

## BACHELOR OF SCIENCE IN BUILDING SCIENCE



The study of Building Science focuses on phenomena that inform the design of next-generation buildings. As the complexity of building systems, design and analysis tools increase to match ever-expanding performance expectations in a sustainability-minded world, a foundational understanding of first-principles is increasingly vital to diverse sectors of the design and construction industry. Using a holistic approach, students in the Building Science program develop an understanding of buildings as a set of interconnected systems that can be built, modified, and adapted to meet requirements for functionality, energy optimization and human comfort.

In addition to establishing a solid grounding in fundamentals relating to materials, structure, energy, heat transfer, enclosure and management, students also gain an awareness and critical perspective of the design process before selecting an area of concentration such as construction management, structural engineering, sustainability, lighting or architectural acoustics.

Rensselaer's four-year Bachelor of Science in Building Sciences degree provides an exceptional preparation for direct entry into one of the building industry's many sectors ranging from real estate development to construction management, specialty consulting in environmental systems, sustainability, façade design, building performance consulting, architectural acoustics or lighting, to working with manufacturers and suppliers in the development and delivery of new products and systems. It also serves as an excellent foundation for advanced degrees in architecture, engineering, construction management or business, to name just a few. High-performing students may also choose from several dual degree or co-terminal (5-year Bachelor and Masters of Science) options while at Rensselaer.

As a polytechnic with a long and substantial history of 'applying science to the common purposes of life' the Rensselaer education and research setting is uniquely situated for a progressive Building Science Degree program.

Rensselaer's focus on the integration of theoretical and practical knowledge in the Building Science program prepares students for leadership in response to existing and emerging global challenges in the design and construction of the built environment.

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## SEMESTER AWAY: CO-OPS AND INTERNSHIPS



Rensselaer's all-institute ARCH program is a critical part of its mission to educate the next generation of practitioners, entrepreneurs and innovators. Learning in the field allows our students to apply the skills and technology that they acquire in the classroom within a professional setting through an internship or co-op anywhere in the world. The program provides a professional pathway for students to experience how different cultures and societies define and shape the practice of architecture worldwide.

Arch is a degree requirement for all BArch and BSArch students entering in the Fall of 2017 and optional for students who entered prior to the Fall of 2017. The program is designed to provide maximum flexibility between the international study-abroad programs, CASE NY, the studio sequence and the World Away experience.

Drawing upon the professional network of our faculty, and RPI alumni, our academic advisors work with students to identify professional offices, institutions and/or programs that the students see as significant to their professional development, design skills, and/or research interests.

**ARCH:** The Arch experience begins in the summer after the third year. It is a full 12 week, 17 cu academic semester, running from the 3rd week of May to August, drawing upon the cultural resources of the region to engage in project-based learning. Design studios will focus on sites and cultural institutions that can be visited during the summer months. As part of the studio experience, BS and BArch students will also participate in a workshop setting with visiting critics and specialists from outside the region who are not available to our students during the academic year. Arch will offer: group site visits to noteworthy buildings, a visit to the studio project site, guest lecture series, architectural design & technology workshop, pop-up courses, expanded reviews and design juries, access to additional resources / woodshop & robot as well as the opportunity for the BS and BArch students to collaborate. Research waivers will allow qualifying students to participate in a design studio at CASE NY during the summer.

**WORLD AWAY:** The World Away experience provides a window of 3 to 8 months for students to pursue a co-op or internship anywhere in the world. It is a unique opportunity for students to pursue architecture, or a related design, engineering, or artistic practice that they are passionate about. Co-ops are paid internships that last 4-8 months. Internships are paid and typically last 2-3 months. Depending upon your course of study, the away semester may be in the fall or spring of the junior year. Students will work with their advisors to establish a specific plan during their sophomore year.

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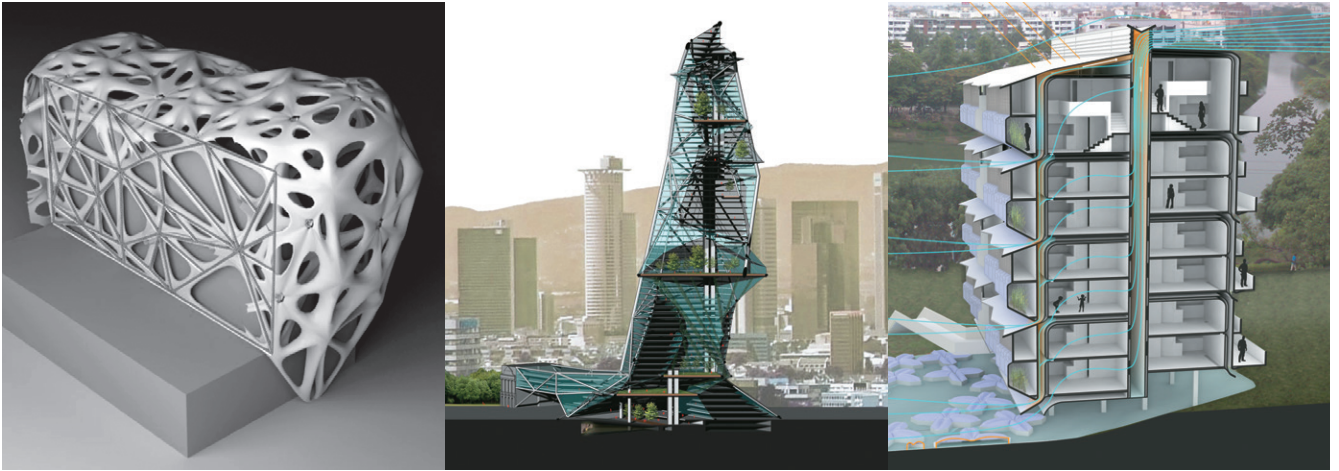
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# RENSSELAER | ARCHITECTURE CASE - BUILT ECOLOGIES PROGRAM



**PROGRAM DESCRIPTION:** A semester in New York City at Rensselaer's Center for Architecture Science and Ecology (CASE) allows both undergraduates and graduates to work in a collaborative interdisciplinary research environment focused on the development of advances in sustainable technologies.

The design studios at the Center for Architecture Science and Ecology (CASE) work to generate meaningful dialogue between the interdisciplinary research of the Graduate Programs in Built Ecologies (BE) at CASE and the design studios of the School's professional programs. By teaming these two groups, research students who are innovating technologies to advance the built environment, with professional studies students who are learning to design the next generation of buildings, ideas are cross-pollinated, informing new modes of thought on how the built environment can be technically and spatially sculpted.

The CASE research agenda follows the belief that the next generation of buildings will transition from the mitigation of energy flows through barrier technology to the capture, transformation, storage, and redirection of energetic resources through advanced building design and technology. Meanwhile, the design studios embrace the study of the dynamic phenomena surrounding a project as primary concerns in the formation of the built condition—a radically different characterization of the problem. The core of this exploration involves the introduction of new digital simulation techniques through a variety of platforms and techniques that are capable of simulating dynamic and energetic flows at multiple scales. Emphasis is placed on designing architectural systems that work and respond with dynamic energetic flows rather than resisting or blocking them.

The CASE / NY Program is optional for the undergraduates and offered as a required course for the M.Arch Students. The belief is that this studio will better prepare the next generation of architects to radically advance a new era of next generation building systems for the built environment.

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## INTERNATIONAL STUDY ABROAD PROGRAMS



**PROGRAM DESCRIPTION:** International study is a defining aspect of Rensselaer's architectural education. The School of Architecture offers international semester long programs in Italy, India, Latin America, and China that are fully integrated into the requirements of the undergraduate degree. They have been established in four world cities that will challenge and help to define the future of architecture. Each of these programs is open by competitive application to students in their fifth semester and above. Students (B.Arch) are selected to participate in each program on the basis of academic accomplishment. Members of the Rensselaer architectural faculty direct these students and additional instruction is provided by the faculty of our partner educational institutions or adjunct faculty in the host city. There is a program fee and field trip fee for participation in each of these programs.

**ITALY (ALTERNATE FALL SEMESTERS):** The Italian studies program includes a design studio based in Rome, an examination of the architectural and urban development of Rome, courses in Italian language and culture, and travel throughout Italy. The program seeks to deepen appreciation of historic cities and the layers of culture that have played a seminal role in the development of Western culture and architecture.

**LATIN AMERICA (ALTERNATE FALL SEMESTERS):** The semester in Latin America aims to actively engage students with the various architectural scenes in Latin America by establishing different itineraries for each edition. The program will include academic residencies at the architectural school of the Universidad Nacional de Chile (Santiago, Chile) and at the Universidad Nacional de Cordoba (Argentina) where joint-studios, seminars and other activities will be developed together with local students and faculty.

**CHINA (ALTERNATE SPRING SEMESTERS):** The semester in Shanghai is based at the School of Architecture at Tongji University, considered one of the premier architecture programs throughout Asia. The program offers joint studios in design with Chinese faculty and students, and travel to world heritage sites and internationally renowned contemporary buildings throughout China.

**INDIA (ALTERNATE SPRING SEMESTERS):** The India program at Rensselaer's School of Architecture is located in Ahmedabad, India, a vibrant metropolis of 5 million inhabitants located in the northwestern part of India. UNESCO has recently named Ahmedabad a World Heritage City. Facilities for this program are situated in the Millowners Building, an architectural masterpiece designed by Le Corbusier, who is widely considered one of the most important architects of the 20th century. Students benefit from instruction by several of the most knowledgeable and capable architects and scholars in contemporary India.

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## THE BEDFORD PROGRAM

### BEDFORD PROGRAM



**PROGRAM DESCRIPTION:** The Bedford Program links the School of Architecture and the Department of Civil and Environmental Engineering to advance the principles of integrated design and collaboration between disciplines. Since 2005, a world-renowned practicing structural engineer is appointed to a three-year position to lead the program. The program is designed to bring emerging forms of practice, technologies, and interdisciplinary thinking to both student groups. The program is open to all architecture and structural engineering students.

**THE BEDFORD SEMINAR:** Taught by the Visiting Bedford Chair Professor, this small and hands-on seminar is made up of an equal number of architecture and engineering students focusing on advanced structural typologies and form finding using parametric modeling tools for both design and structural analytics.

**THE BEDFORD STUDIO:** The Bedford Studio is integrated into Integrated Design Development Architecture Studio. Teams of architects and engineers work together on a studio design project to develop a comprehensive project under the tutelage of the Visiting Bedford Chair Professor and the School of Architecture Faculty. Students design and develop projects from conceptual design to structural drawings and enclosure details together in a studio setting using sketching, physical model making, and Building Information Modeling (BIM) software.

**THE BEDFORD TRAVELING WORKSHOP:** A 9-day international workshop for 6 architecture and 6 engineering students, to investigate progressive architecture and engineering projects and practices and the various emerging interdisciplinary approaches to design. Past trips have included; Zürich-Stuttgart-Berlin, London, Paris, Barcelona-Madrid, Tokyo, and Melbourne. Open to students who have completed the first two parts of the program, the Traveling Workshop offers a unique experience to tour some of the world's most innovative firms and best projects.

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# RENSSELAER | ARCHITECTURE PORTFOLIO REQUIREMENTS

## ONLINE PORTFOLIO SUBMISSION

The School of Architecture at Rensselaer requires that every applicant to the B.Arch professional program submit a portfolio, using our online portfolio system to upload your portfolio with digital files. A digital submission should make it easier for all candidates to format their material, as well as accelerate the application evaluation process. Due to unforeseen circumstances, in which you cannot submit your portfolio online, a written request must be submitted to Lecia O'Dell at [odell@rpi.edu](mailto:odell@rpi.edu). The request will be reviewed by the Dean's office, and then you will be notified if you are approved to submit a hard copy portfolio.

## PORTFOLIO CONTENT

The priority of the portfolio is to enable our admissions department here at Rensselaer to evaluate each student's creative potential and achievement in the context of being considered for acceptance into our internationally renowned architecture program. The work included within the portfolio may consist of a range of media: pencil, charcoal, oil stick, and water color drawings; acrylic or oil paintings; paper, chipboard, wood, metal, ceramic or mixed media models; measured drawings or digital renderings; and black and white and color photographs, music scores, video, and other examples of creative production.

Although we encourage prospective students to acquire a range of software skills prior to their enrollment in our program in order to become digitally savvy early in their young careers, we would prefer that you do not include architectural drafted drawings in the portfolio. Prior experience with architectural software is not an application requirement.

We are committed to building a community of students who are creatively and intellectually inspired. Therefore, a portfolio comprised of a range of mixed media that is emblematic of the prospective student's imagination and creative vision will be deemed most important during the evaluation process.

## ONLINE UPLOADING REQUIREMENTS

Please go to our online portfolio submission site at <http://rpi.slideroom.com> to submit your work. The system allows you to create an inventory of your portfolio projects. Each image should include the following information: title, date, medium, dimensions, and a brief description. You may upload jpeg images or video works. It is recommended that each portfolio consist (on average) of 10-20 images of work. As a reminder, the greater the range of work prospective candidates include in their portfolio, the easier it will be for the admissions department to evaluate their breadth of creative potential.

Once your portfolio is uploaded, it can be viewed and rearranged until the final submission is made. No changes can be made following the final submission of your portfolio. There is a \$10 fee for each portfolio submission you make through Slideroom. Be sure to submit your portfolio to the correct degree level and program (undergraduate or transfer). If you experience technical difficulties while uploading your portfolio, you may send an e-mail to [support@slideroom.com](mailto:support@slideroom.com) for technical support.

Portfolio submission website: <http://rpi.slideroom.com>

Portfolio technical support: [support@slideroom.com](mailto:support@slideroom.com)

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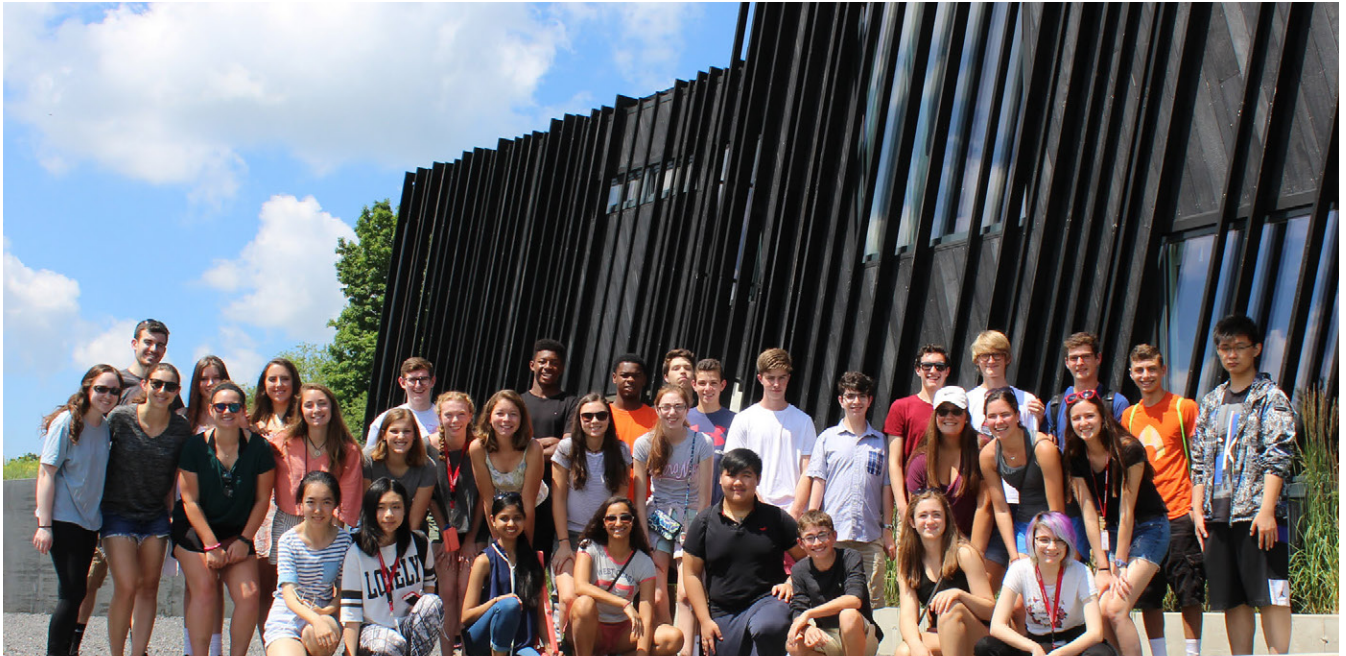
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# RENSSELAER | ARCHITECTURE ARCHITECTURE CAREER DISCOVERY PROGRAM



The Architecture Career Discovery Program is a two-week overnight residential program that introduces high school students to architecture at Rensselaer Polytechnic Institute in Troy, New York. The core of this course is studio work. In studio, students are immersed in a rigorous creative process that starts with an idea, the development of abstract models, and ultimately leads to the design of an exciting and innovative architectural building proposal. Critique and evaluation of studio work is continuous, occurring in one-on-one discussions with the instructor and in larger group reviews with invited architectural critics. Studio work is complemented by a series of lectures and field trips. Lectures discuss the broader context of architectural practice, contemporary projects and practitioners, as well as more technical concerns such as drawing and model making. Field trips visit museums, where students learn about other types of creative practices, and significant works of contemporary architecture. High school students entering 10th, 11th and 12th grade in the fall, who are interested in future careers in architecture or design related fields and have a curiosity about the world, are encouraged to apply. This exciting immersive workshop will not only open your eyes about architecture as a future career but provide you with an impressive portfolio essential to be accepted into a premier program like Rensselaer.

**Program dates: Session 1, July 5-16 2021; Session 2, July 9-30 2021 (TBC)**

**Program cost: commuter/remote, \$1300; residential, \$3270 (TBC)**

**Registration will be on a first-come first-served basis. Applications available January 1-March 31.**

## REGISTRATION PROCESS

Students may download registration from the Summer Web site <http://summer.rpi.edu>. Registrations must include a non-refundable deposit and the complete program cost must be paid prior to the first day of the program or as indicated by Rensselaer.

## CONTACT INFORMATION

**Summer, Outreach, & Advanced  
Professional Services**  
(518) 276-6809

**Explore and Discover -  
Summer@Rensselaer!**  
<http://summer.rpi.edu>

### Adam Dayem

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