

UPWARDS Summer Intensive Program 2026– Information Sheet

Host University	Rensselaer Polytechnic Institute (RPI)
Program Title	UPWARDS Summer Intensive Program in Microelectronics
Program Period (Dates)	August 2-15
Location & Venue	Rensselaer Polytechnic Institute’s main campus in Troy, NY
Maximum Enrollment from Partner Universities	18
Program Fee	\$2700
Requirements	<p>Undergraduate and graduate students from UPWARDS universities with English proficiency who have completed foundational coursework in electrical engineering, applied physics, information sciences, or computer science.</p> <p>We will welcome students from any Science or Engineering major/program.</p>
Application Method & Deadline	<p>Students should apply to their university for selection.</p> <ul style="list-style-type: none"> • February: First call for applications (open to students from all 11 universities) • April 15: First round nomination deadline • After April 22: Second call for nominations (if needed) <p>RPI will reserve two slots for each of the Japanese partner universities (10 total) and one slot for each of the US partner universities (6 total) in the first call for applications. Additional slots will be opened in the second call for applications.</p>
Curriculum Overview	<p>The curriculum will focus on three semiconductor application areas: computational materials discovery, optical metrology, and device fabrication. Students will work hands-on in RPI’s cleanroom facility to learn the basic steps of deposition, lithography, etching, and metrology. Students will also work hands-on with professors in their research labs in on topics of computational materials research and machine learning (including with our own quantum computer!), quantum optoelectronics, and ultrawide bandgap devices. Students will also experience cultural activities, opportunities to understand diversity, equity, and inclusion, for collaboration and teamwork, and to improve their communication and leadership skills.</p>
Acquirable Competencies (Multiple selections allowed)	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Competency 1 - Foundational Knowledge in Semiconductor Engineering <input type="checkbox"/> Competency 2 - Foundational Knowledge in Semiconductor Industry and Business <input checked="" type="checkbox"/> Competency 3 - Ability to Manage/Understand Diversity, Equity and Inclusion <input checked="" type="checkbox"/> Competency 4 - Gain Global/Inter-Cultural Competencies including International Mindset, Inter- Cultural Competence, Collaboration and Teamwork, Communication Skills, and Leadership <input checked="" type="checkbox"/> Competency 5 - Hands-on Experiences of Semiconductor Industry Operations <input checked="" type="checkbox"/> Competency 6 - Research Application Skills

Study Hours	6 hours per day
Information about Accommodation	RPI will provide accommodation in dormitories at our main campus in Troy, NY. Students will also be provided with a meal card and access to on-campus dining facilities.
Program Coordinator	Sarah Niemann, Assistant Vice President for Research
Contact Information	Niemas2@rpi.edu
Program Website & Other Information	https://rpi.box.com/s/c69i1q17a0w3z9z3wz774g7gk9s8v68h



UPWARDS Summer Intensive Program in Microelectronics At Rensselaer Polytechnic Institute (RPI)



RPI will offer a two-week summer intensive program in Troy, NY, USA, focused on computational materials discovery, optical metrology, and device fabrication. Students will have the opportunity to:

- Conduct experiments with RPI professors in their research laboratories (including with our own quantum computer!) and participate in lab and facilities tours
- Work hands-on in RPI's cleanroom facility to learn the basic steps of deposition, lithography, etching, and metrology
- Experience cultural activities and opportunities to collaborate with students from diverse backgrounds



Date: Sunday, August 2nd to Saturday, August 15th

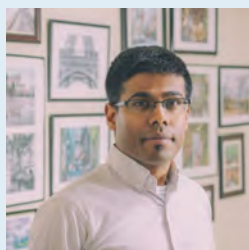
Location: Rensselaer Polytechnic Institute, Troy, New York, USA



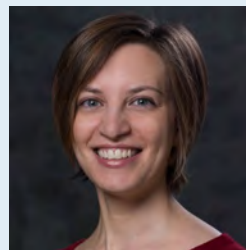
Schedule (subject to change)

		9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00
August 2	Sunday	Arrival at Albany International Airport, transit to hotel										
August 3	Monday	Bus to campus, dormitory check-in and orientation			Lunch		Tour		Free time		Welcome Dinner	
August 4	Tuesday	Research activities in assigned laboratories			Lunch		Research activities in assigned laboratories					
August 5	Wednesday	Research activities in assigned laboratories			Lunch		Cultural Experience					
August 6	Thursday	Research activities in assigned laboratories			Lunch		Research activities in assigned laboratories					
August 7	Friday	Fab Tour and Field Trip										
August 8	Saturday	Troy Farmer's Market				Free Time						
August 9	Sunday	Free Day										
August 10	Monday	Research activities in assigned laboratories			Lunch		Research activities in assigned laboratories					
August 11	Tuesday	Research activities in assigned laboratories			Lunch		Field Trip					
August 12	Wednesday	Tour of Albany NanoTech Complex										
August 13	Thursday	Research activities in assigned laboratories			Lunch		Career Talk					
August 14	Friday	Presentation Preparation			Lunch		Presentations and Closing Ceremony				Farewell Dinner	
August 15	Saturday	Shuttle bus to airport (scheduled based on flights)										

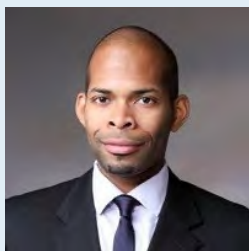
Faculty Advisors



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