



# EMPOWER:

EDUCATION MODEL PROGRAM ON WATER-ENERGY RESEARCH

**EMPOWER** is an interdisciplinary graduate education program focused on research at the interface of water and energy cycles. The program provides students with the technical knowledge and professional skills needed to compete for careers in energy, environmental consulting, government, nonprofits, academia, and beyond.

**Syracuse University**

VISIT ONLINE AT: [empower.syr.edu](http://empower.syr.edu)







## COLLEGE OF ARTS AND SCIENCES

[thecollege.syr.edu](http://thecollege.syr.edu)

**Department of Earth Sciences**  
[earthsciences.syr.edu/](http://earthsciences.syr.edu/)

**Department of Chemistry**  
[chemistry.syr.edu/](http://chemistry.syr.edu/)

## COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

[eng-cs.syr.edu](http://eng-cs.syr.edu)

**Civil & Environmental Engineering**  
[eng-cs.syr.edu/our-departments/civil-and-environmental-engineering/](http://eng-cs.syr.edu/our-departments/civil-and-environmental-engineering/)

## MAXWELL SCHOOL OF CITIZENSHIP AND PUBLIC AFFAIRS

[maxwell.syr.edu/](http://maxwell.syr.edu/)

## S.I. NEWHOUSE SCHOOL OF PUBLIC COMMUNICATIONS

[newhouse.syr.edu/](http://newhouse.syr.edu/)

## EMPOWER PROGRAM DIRECTOR

Laura K. Lautz  
[llautz@syr.edu](mailto:llautz@syr.edu)  
315.443.1196

## EMPOWER PROGRAM MANAGER

Deanna H. McCay  
[dhmccay@syr.edu](mailto:dhmccay@syr.edu)  
315.443.5529



Syracuse University

**EMPOWER**  
Education Model Program on Water-Energy Research

## Participating Departments

This interdisciplinary program draws on faculty from the Departments of Earth Sciences and Chemistry (both housed in the College of Arts and Sciences), the Department of Civil & Environmental Engineering in the College of Engineering and Computer Science, the Maxwell School of Citizenship and Public Affairs, and the S.I. Newhouse School of Public Communications.

## Research Themes

Water and energy are essential resources for human prosperity, but as populations and economies grow and climate changes, increasing global demands amplify their interdependency and vulnerability. The “water-energy nexus,” which describes the interrelationship between human needs for water and energy, is a priority research area nationally.

Students in this program conduct research at the interface of the full energy cycle and the water cycle. This program blends interdisciplinary research at the water-energy interface with professional development needed for careers in business, government, and nonprofits.

## Training Elements

This educational program combines broad training across management, policy, communication, and law with in-depth training in a self-designed focus area most applicable to the student’s career objectives. Specific training opportunities include:

**Water-Energy Nexus Seminar:** The 1-credit hour seminar is offered every semester and integrated with a visiting lecture series. The seminar emphasizes integration of research with policy, science communication and outreach, law, and business. This provides students broad exposure to all thematic areas over the course of their first two years in the program, with training in relevance and impacts beyond the specific discipline and/or the institution.

**Professional Development Specialization Area:** Students complete 12 credit hours of study designed in consultation with their advisory committee to provide training for a chosen career path. The remaining coursework, from a list of electives, is tailored to the student’s professional interests in communication, policy or law, business and project management, and/or entrepreneurship.

**Science Communication Course:** All students take a 3-credit class in Science Communication, offered through the world-renowned S.I. Newhouse School of Public Communications. In this course the principles, practices, and processes of journalism, documentary, and new media are taught in the context of public understanding of science and technology.

**Seed Grant Program:** After the first year in the program, students are eligible to apply for small grants to support specific lines of emerging research and professional development activities not supported by traditional research grants or assistantships. Awards can include travel, supplies, or other direct costs.

**Career Pathway Experience:** These experiences facilitate integration of research activities with professional development in support of student’s career goals. A significant portion of the student’s time will be dedicated to an internship, study at a field site abroad, a national research lab, a nonprofit agency, another university, or other location where students can directly collaborate with professionals to develop a specific line of research.

**Summer Field Experiences:** Field research conducted by an interdisciplinary team under challenging conditions is a unifying capstone experience, an especially useful preparation for careers requiring intensive collaboration. EMPOWER includes a two-course field program in the Northeastern United States and Rwanda that weaves together all the EMPOWER research themes. During the field experiences, students execute small, tractable group research projects that build on existing instrumentation and research activities.

## Financial Support

All EMPOWER participants will be considered for a National Science Foundation Research Traineeship Program (NRT) stipend package to be awarded for one academic year during the course of their graduate program. The NRT packages include a one-year \$32,000 stipend and full tuition waiver. During other years of graduate study, NRT recipients are supported through graduate fellowship programs, teaching assistantships, and research assistantships.

## Application Process

Students interested in pursuing graduate study and professional training within the water-energy nexus are encouraged to explore the EMPOWER website at [empower.syr.edu](http://empower.syr.edu) for details on how to apply. Applicants to the EMPOWER program must apply to and be admitted by a participating department. A list of participating departments and faculty can be found on the program website. Graduate school applications are submitted electronically to the University’s Graduate School. More information is available at [gradsch.syr.edu](http://gradsch.syr.edu). In addition to the standard application materials required by the home departments, applicants submit a letter of interest directly to the program through the EMPOWER website.

**Application Deadline:** Review of applications for the EMPOWER program will begin January 15 of each year. Applications submitted after January 15 will be considered on a space-available basis.



VISIT US ONLINE AT [EMPOWER.SYR.EDU](http://EMPOWER.SYR.EDU)