

MS and PhD Positions in Pharmaceutical Crystallization

We are inviting applications 1-2 fully funded Research Assistant positions (MS and PhD fellowships) in Chemical Engineering, with flexible start dates to choose between January 2026, July 2026, or September 2026. The successful applicants will become part of a rapidly growing research group within the Henry M. Rowan College of Engineering at Rowan University (NJ, USA), and receive full support for tuition, fees, visa sponsorship, and living stipend.

Research will be conducted at the Crystallization Science & Pharmaceutical Engineering (CSPE) laboratory (go.rowan.edu/capellades), in close collaboration with industrial partners from major pharmaceutical companies in the US. The research conducted at CSPE falls at the intersection of crystallization science and process development, with particular focus on pharmaceutical manufacturing. We work on highly collaborative projects that include fundamentals of nucleation and crystal growth, design and characterization of organic solid solutions, purification of pharmaceuticals by crystallization, and process design strategies based on high-throughput screening and digital tools. Our work is primarily experimental, but we use digital tools and mathematical modeling (population balances, crystallization kinetics) for many of our projects. For a list of publications, itemized by topic, see <https://capelladeslab.com/publications/>.



CSPE's work is highly integrated with Rowan University's Engineering Clinics program (https://engineering.rowan.edu/programs/chemical/engineering_clinics/), where teams of undergraduate students engage in research projects often led by a graduate student and by the faculty member. This is an excellent opportunity to build mentorship and process management skills, while also building a close community of highly motivated individuals with a broad range of expertise and interests.

The Henry M. Rowan College of Engineering is growing rapidly with a new building (Engineering Hall), a renovated building (Rowan Hall), and office and laboratory space at the South Jersey Technology Park. The department of Chemical Engineering is a highly connected community hosting multiple research groups in the broader areas of materials science, systems engineering, sustainability, catalysis, and separations. We are also located near major cities like Philadelphia, New York City, and Washington D.C, in one of the world's largest pharmaceutical hubs.

Minimum Qualifications:

- Bachelor's degree in Chemical Engineering, Chemistry, Pharmacy, or a related field.
- Excellent coursework performance, especially in separations, materials science, transport phenomena, organic chemistry, and mathematical modeling.
- Scientific curiosity, drive for professional growth, and independent thought.
- Strong interest in teaching and mentoring undergraduate students.
- Excellent oral and written communication skills.

Preferred Qualifications:

- Prior research experience in solution crystallization, particulate processes, materials science, continuous pharmaceutical manufacturing, or a closely related field.
- Familiarity with relevant analytical techniques including XRD, HPLC, DSC, SEM, and Process Analytical Technologies (PATs) including in situ particle characterization probes.
- Experience with modeling software tools including Python and gPROMS.
- Record of published research articles or presentations at international conferences.
- Demonstrated motivation for research communication (please provide evidence in your cover letter or CV if available) beyond basic degree requirements. This could include conference posters/presentations, seminars, teaching and communication certificates, etc.
- Prior experience completing a research project, small or large. Please provide evidence in your cover letter if this is the case, describing the project, your role, and why the work is considered complete after your departure. Indicate whether the work is published and justify if it is not.
- Track record of reading research papers and textbooks relevant to the field. You can provide evidence of this as well as critical thought in your cover letter, by identifying a gap or contradiction in existing literature, and generating an alternative hypothesis rooted in existing theory.

How to apply:

Use the following link to apply (form takes 30 min to complete): [CSPE Graduate School Application](#)

As part of your application, you will have to submit a single pdf document (< 10 MB) with the following:

1. Cover letter detailing your background and interest in this position.
2. Academic CV, including list of peer-reviewed publications (if any).
3. Academic transcripts for your bachelor's degree.
4. Academic transcripts for your master's degree (if applicable).
5. List of three professional references, including (1) names, (2) contact information, (3) professional relationship, and (4) duration of that professional relationship.

Applications will be reviewed on an ongoing basis until the positions are filled. Priority will be given to candidates who apply before September 20, 2026, and interviews will begin shortly after that date.