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## About the REU program

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This is the student application for the Research Experience for Undergraduates (REU) program in Coastal Infrastructure Resilience Research (CIRR) at the University of Miami. The 10-week summer program provides opportunities for motivated undergraduates to conduct supervised research on a broad range of topics related to infrastructure resiliency. If you have questions, please contact the program administrators: Dr. Ali Ghahremaninezhad ([a.ghahremani@miami.edu](mailto:a.ghahremani@miami.edu)) and Dr. James Giancaspro ([jwgiancaspro@miami.edu](mailto:jwgiancaspro@miami.edu)).

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## Name and contact information

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Provide your name and contact information:

First name:

Last name:

Email address:

Phone number, including area code and country code (if applicable):

Type your permanent address:

Address

Address 2

City

State

Postal code

Country/Region

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Type your current address (if different from permanent address):

Address

Address 2

City

State

Postal code

Country/Region

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## Eligibility Confirmation

Please select each eligibility requirement to confirm that you meet the requirement.

I certify that I am a US citizen, a US national, or a Permanent Resident of the United States.

I certify that, at the start of the REU program on June 1, I will be at least 18 years old.

I certify that, at the start of the REU program on June 1: I will be enrolled as an undergraduate student at a university in the United States or its territories; OR: I am currently a high school senior and I can provide proof that I will be enrolled as an undergraduate student at a university in the United States or its territories in the Fall.

I certify that, at the start of the REU program on June 1: I will be enrolled in a part-time or full-time degree program leading to a baccalaureate or associate degree; OR: I am currently a high school senior and I can provide proof that I will be enrolled in a part-time or full-time degree program leading to a baccalaureate or associate degree in the Fall.

I certify that, at the start of the REU program on June 1, I will NOT have completed a baccalaureate (bachelor's) degree.

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## Demographics

Type your birth month and year, such as "January 2001":

What is your current age?

17

18

19

20

21

Older than 21

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Type your country of citizenship:

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What gender do you identify as?

Male

Female

Other or Prefer Not to Answer

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Please specify your ethnicity:

Alaskan Native

American Indian

Asian American

Black or African American

Filipino

Foreign National

Hawaiian

Hispanic/Latino

Pacific Islander

White

Two or more

Other/unknown

Where is your permanent home located?

North America

South America

Europe

Africa

Middle East

Asia

Australia

Caribbean Islands

Pacific Islands

Prefer not to say

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What is your family's annual household income?

Less than \$25,000

\$25,000 - \$50,000

\$50,000 - \$100,000

\$100,000 - \$200,000

\$200,000 - \$300,000

More than \$300,000

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If you applied for financial aid as an undergraduate student, what was your family's Expected Family Contribution (EFC)?

I don't have financial aid

I have financial aid, but I don't know my EFC

\$0 - \$1000

\$1000 - \$2000

\$2000 - \$3000

\$3000 - \$4000

\$4000 - \$6000

\$6000 - \$8000

\$8000 - \$10000

\$10000 - \$15000

\$15000 - \$20000

\$20000 - \$30000

more than \$30000

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Considering your parent(s) or guardian(s), what is the highest level of education that either of them completed?

Neither completed high school

High school diploma

Post-secondary school other than college

Some college or associate's degree

Bachelor's degree

Master's degree

Medical degree

Law degree

Doctorate degree

Not applicable / Prefer not to answer

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## Academic Background

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What is your undergraduate major?

Architectural Engineering

Biology

Chemical Engineering

Chemistry or Biochemistry

Civil Engineering

Coastal Ecosystem Sciences

Computer Engineering or Computer Science

Electrical Engineering

Environmental Engineering

Industrial Engineering

Mechanical Engineering

Marine and Atmospheric Sciences

Materials Engineering or Materials Science

Ocean Sciences

Public Health

Other (please specify):

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What is your current academic status?

Senior in *High School*

Freshman in college

Sophomore in college

Junior in college

Senior in college

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Type the names of all universities/colleges you've attended, as well as the corresponding dates, majors, degrees awarded (if any), and GPAs.

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Type the cumulative GPA (such as "3.12") that appears on your current college transcript for the undergraduate major you specified above. [Limit your response to 3 digits.]

Current high school students: specify your approximate GPA either in numerical or letter grade form.

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Select the college-level courses that you have completed or are currently taking.

Current high school students: choose "Completed" if your AP exam score was 4 or 5.

Choose "Currently Taking" if you are enrolled in an AP course with the intention of taking the AP exam this year.

	Completed	Currently Taking
General Chemistry I	<input type="checkbox"/>	<input type="checkbox"/>
General Chemistry II	<input type="checkbox"/>	<input type="checkbox"/>
Organic Chemistry	<input type="checkbox"/>	<input type="checkbox"/>
General Physics I	<input type="checkbox"/>	<input type="checkbox"/>
General Physics II	<input type="checkbox"/>	<input type="checkbox"/>
General Biology I	<input type="checkbox"/>	<input type="checkbox"/>
General Biology II	<input type="checkbox"/>	<input type="checkbox"/>
Calculus I	<input type="checkbox"/>	<input type="checkbox"/>
Calculus II	<input type="checkbox"/>	<input type="checkbox"/>

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What are your plans after you complete your undergraduate college degree?

- Enroll in graduate studies
  - Secure a job in the private or government sector
  - Undecided
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**Disciplinary actions**

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Have you ever been disciplined by a student or faculty judicial board for misconduct, academic dishonesty, etc., or have you ever been convicted of a crime (other than for a traffic offense)?

- Yes
  - No
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Explain the circumstances surrounding the disciplinary action and/or crime.

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### Extracurricular activities, skills, etc.

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Please list any relevant extracurricular and professional activities (not research) that you have participated in. Specify the organization name, leadership role (if any), and dates. (For example: "*Treasurer for the American Society of Civil Engineers student chapter at the University of XYZ; 2020-2021*").

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Please identify your proficiency with the following **computer programs**. Leave blank if you do not have experience with it.

	Beginner	Proficient	Expert
Adobe Creative Cloud	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Autodesk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drawing software (any)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MAPLE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Matlab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MS Excel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MS Teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MS Word	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Photo editing software (any)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



	Beginner	Proficient	Expert
Statistical software (any)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wolfram Mathematica	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zoom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Please list any other relevant software or computer programming skills not mentioned above.

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## Research projects

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Rank up to 3 of the following coastal infrastructure resilience research projects (1 = first choice, 2 = second choice, 3 = third choice).

- Project 1: A bio-inspired self-healing approach for infrastructure cementitious materials
- Project 2 : A genetically-engineered approach for sustainable cement-based materials
- Project 3: Understanding chemo-mechanical mechanisms of damage by the attack of salts on cement materials
- Project 4: Structural morphogenesis of artificial coral reefs for shoreline protection
- Project 5: Investigation of 'coralphilic' cementitious materials
- Project 6: Retrofitting coastal bridges using innovative methodologies
- Project 7: Transport and growth of bacteria at recreational beaches
- Project 8: Smart earth and water networks: use of smart sensing technology and citizen collaboration
- Project 9: Simulation framework for grid resiliency in disaster recovery in smart and connected communities

## File uploads

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Upload your unofficial undergraduate transcripts combined into a single **PDF file**. (High school students should upload their high school transcripts.) A screenshot of your transcript is acceptable for this initial application.

Name the file: "Your Last Name - Transcripts.PDF".

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Prepare a ~500-word essay. Use standard letter size (8.5×11 inches) with 1" margins on all sides, single-spaced paragraphs, page numbers, 12-point Times New Roman font, and your name in the footer of each page. Save it as a PDF file.

The essay must address the following items:

- a. Your motivation to pursue research in coastal resilience
- b. How the CIRR REU program aligns (fits) with your career goal
- c. Examples of your ability to work in a team environment
- d. Prior research opportunities, publications, presentations, etc. (if applicable)

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Upload your personal essay in **PDF format only**. Name the file: "Your Last Name - CIRR REU Essay.PDF".

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*Optional:* Upload a 1-page resumé in **PDF format only**. Name the file: "Your Last Name - Resume.PDF".

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## References

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Provide the contact information for the person providing your first letter of reference. He/she will be contacted by the REU program administrators when your application is submitted.

Name	<input type="text"/>
Title	<input type="text"/>
Name of university, college, etc.	<input type="text"/>
State	<input type="text"/>
Country/Region	<input type="text"/>
Email address	<input type="text"/>
Phone number	<input type="text"/>

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Provide the contact information for the person providing your second letter of reference. He/she will be contacted by the REU program administrators when your application is submitted.

Name	<input type="text"/>
Title	<input type="text"/>
Name of university, college, etc.	<input type="text"/>
State	<input type="text"/>
Country/Region	<input type="text"/>
Email address	<input type="text"/>
Phone number	<input type="text"/>

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*Optional:* Provide the contact information for the person providing your third letter of reference. He/she will be contacted by the REU program administrators when your application is submitted.

Name	<input type="text"/>
Title	<input type="text"/>
Name of university, college, etc.	<input type="text"/>
State	<input type="text"/>
Country/Region	<input type="text"/>

Email address

Phone number

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## Feedback

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How did you learn about the CIRR REU program at the University of Miami?

Search engine (Google, etc.)

Social media (LinkedIn, Instagram, etc.)

Recommended by a student

Recommended by a faculty member at the University of Miami

Recommended by a faculty member at my current school

Conference, seminar, or networking event

Other (please specify):

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## Acknowledgement with signature

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Sign below with your mouse, stylus, or finger to certify that you agree with the following statements:

"I certify that my answers on this application are true, accurate, and complete to the best of my knowledge."

"I meet the eligibility requirements of the CIRR REU program."

"I have not falsified any information on any part of the application (questions, transcripts, resume, essay, references, etc.)."

"I understand that inaccurate information may lead to my disqualification and/or termination from the CIRR REU program."

SIGN HERE

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clear

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## Records

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Would you like a copy of your application responses sent to your email?  
(Please check your spam folder later.)

Yes

No

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