

## USDA Research and Extension Experiences for Undergraduates (REEU) Recruiting Form

Jan 29, 2025

The primary objective of this form is to solicit student applications for evaluation by the USDA REEU program. Successful applicants will be awarded stipends of \$4,000 each, travel support of \$500 each, subsistence of \$600 each, and lodging support of \$1,000 each (in total \$6,100 each).

\* All fields are required and need to be completed.

**Research Modules\***: Which research activity or activities are you applying for (M1, M2, M3, M4 and/or M5). Note that applicants from each institution are only eligible for certain research activities as listed below the activity descriptions. \*

*Specific activities for M1 include:* (1) compositional analysis of biomass; (2) conducting pretreatment in various parr, sand baths, and oil bath reactors; (3) characterization of raw and pretreated biomass; and (4) providing insights into pretreatment mechanisms. Mentor: Dr. [Michael Persans](#) (UTRGV students are eligible to apply for this activity).

*Specific activities for M2 include:* (1) enzymatic hydrolysis of biomass; (2) bacterium and yeast cultivation; (3) product separation, purification, and analysis by using GC and HPLC; and (4) kinetic modeling of SHF and SSF processes. Mentors: Dr. [Jikai Zhao](#) and Dr. [Juhee Lee](#) (Dodge City Community College and UTRGV students are eligible to apply for this activity).

*Specific activities for M3 include:* (1) cell culturing; (2) molecular cloning; (3) metabolic pathway and strain design; (4) enzyme kinetics; and/or (5) genome engineering. Mentor: Dr. [Cong Trinh](#) (Southern Adventist University students are eligible to apply for this activity).

*Specific activities for M4 include:* (1) cell growth kinetics; (2) basics of bioreactor design; (3) dimensional analysis; (4) general scale-up rules and theories; and (5) mixing systems. Mentor: Dr. [Hyun-Seob Song](#) (UTRGV students are eligible to apply for this activity).

*Specific activities for M5 include:* (1) process simulation using SuperPro Designer; (2) conduct technoeconomic analysis and life-cycle assessment. Mentors: Dr. [Jikai Zhao](#) and Dr. [Juhee Lee](#) (Dodge City Community College and UTRGV students are eligible to apply for this activity).

## **Personal information**

1. What is your student ID number \*
2. Student first name \*
3. Student last name \*
4. Student university email address \*
5. What was your cumulative academic GPA at the end of the Fall 2024 semester? \*

Greater than 3.5

Between 3.0 and 3.5

Less than 3.0

6. What is your Gender? \*

Female

Male

Other (Specify)

7. Which of the following best describes your racial/ethnic background? (Check all that apply) \*

American Indian or Alaska Native

Asian

Black or African American

Hispanic or Latino

Native Hawaiian or Other Pacific Islander

Two or More Races

White

Other (Specify)

8. Primary telephone number \*

9. What is your student classification? \*

Freshman

Sophomore

Junior

Senior

Other specify

10. What is your major? \*

11. On a scale of 0 to 3, please rate your level of familiarity and experience with the following subjects, considering both coursework and research experience. 0 is none, 1 is some, 2 is moderate, 3 is extensive. \*

Scale	0	1	2	3
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Biomass pretreatment

Hydrolysis and fermentation

Metabolic engineering

Process modeling

Economics and environmental assessment

### **Academic background**

Please complete this section before you submit the form.

1. Please describe your research interests and professional goals in up to 250 words \*

2. Will you be able to participate in the seminar series in the spring and fall semesters? \*

3. Will you be able to participate in the summer research activities for 8 weeks? \* (June 9<sup>th</sup> to August 1<sup>st</sup> 2025).

4. Please email this application form and your unofficial transcript, including the courses you completed in the Fall 2024 \* (PDF file or MS word file). To Dr. Michael Persans ([michael.persans@utrgv.edu](mailto:michael.persans@utrgv.edu)).

5. When submitting this survey, you confirm you are aware of the following conditions:

All personal and private information filled in this survey will not be externally shared with anyone outside the recruitment committee and assessment committee.

Submitting this application form will not guarantee acceptance into the program. Acceptance is based on an evaluation of candidate qualifications and an assessment by the recruitment committee.

Contact and Academic information will be shared with the recruitment committee as part of the evaluation and selection process.

17. I've read the above information and would like to continue and submit my application \*

Agree, please submit my application.

Disagree, please delete my application.