



Richard Barrett Research Scholarships: Promoting Undergraduate Expertise in Environmental Engineering

Student and Faculty Guidelines

1. Program Purpose

The purpose of this program is to provide prestigious, competitive awards to outstanding undergraduate engineers who wish to pursue research with environmental impacts under the mentorship of a faculty member. Students may propose projects within the general research area of the faculty mentor or, students may visit Votey 337 to select a project to apply for that has been submitted by a faculty member. In this way, undergraduates have the opportunity and resources to pursue independent research as well as work closely with active faculty members who are leading scholars in their fields. Students are required to submit a research plan describing a specific research project to be completed under the direction of a faculty mentor; applications are evaluated by a panel of UVM College of Engineering and Mathematical Sciences faculty, and the top ranked applications are elected for funding; awardees carry out the research during a semester and a summer, create and present a poster describing their work and their results, and submit a video diary, or photo story describing their outcomes. In many instances, results may be suitable for presentation at regional or national conferences and/or publication.

2. Eligibility

The *Richard Barrett Scholarships* are open to all full-time UVM Engineering undergraduates (graduating seniors are un-eligible to apply). Any UVM Engineering faculty member may act as a student's mentor or co-mentor. However, the research must be in the general area of Engineering related to the environment with a focus on interdisciplinary experiences. The scholarships are intended to facilitate undergraduate research experiences that are over and above research normally conducted in the context of courses taken for academic credit. Mentored independent student research projects that are not associated with a for-credit course, including summer research, are thus eligible for *Barrett Scholarships*. If the research is on the same topic of a student's honors thesis, the proposal must clearly state how this work is distinguished from the honors thesis work.

3. Application Process

Each student applicant is required to submit the following:

- 1) A *Richard Barrett Scholarships Cover Page* (see attached)
- 2) A *Project Description describing proposed research*:
 - a) The *Project Description* must be written by the student, not exceed 1 page (12 pt font), and express:
 - i) motivation for the project (demonstrate societal need in a technical context), and
 - ii) the student's interest and preparation for the project (e.g. specialized skills or knowledge).
 - b) A *budget* listing specific equipment, items, travel, etc. necessary to complete the project together with estimated costs.
- 3) A *resume* for the student proposer, not more than **1 page** including the student's current GPA as well as a list of specific courses relevant to conducting research in the proposed area. It is the responsibility of the student to demonstrate that they have the qualifications to successfully carry out the research.
- 4) A *short curriculum vitae* for the faculty mentor, not more than **2 pages (NSF style)**, indicating the faculty member's expertise in the research area and his/her experience supervising students.

4. Application Submission

All of the above documents must be submitted to Lauren Petrie at CEMSjobs@uvm.edu

- Students should save their application materials as one **.pdf or .doc file** titled “RBF-FirstLastName”
- **Applications become available on Monday, November 26, 2018. Submissions are due by 5:00PM on Friday, February 15, 2019.**

5. Timeline

- I. **Applications become available beginning Monday, November 26, 2018.** Applications must be submitted via email to CEMSjobs@uvm.edu (you will receive a confirmation email that it has been received).
- II. For early consideration, students can submit their application before **Monday, January 14, 2019.**
- III. For the regular deadline, students must submit their application electronically by 5:00PM on **Friday, February 15, 2019.**
- IV. Awards will be announced by **Friday, March 22, 2019.**
- V. Budget accounts will be available for use by student researchers by the end of **March 2019.**
- VI. All project funds must be used by **September 30, 2019.** Accounts will be closed and funds will not be accessible or reimbursable thereafter except in unusual cases with explicit prior approval.
- VII. A poster of the research is due by **September 30, 2019.** Although there is no specified format, it must contain an abstract that is accessible to an audience of non-specialists.
- VIII. Students will have the opportunity to present their work several times during the summer and fall, and will be encouraged to submit their abstract to the UVM student research conference in Spring 2018.

6. Award & Budget Information

- I. There will be a minimum of 5 awards given in the 2018-19 program.
- II. Each award will provide summer research funding in the amount of \$6,500 to the student applicant and \$1,500 for material and operation costs.
- III. The operating budget request may not exceed \$1,500 (over and above the scholarship award). Additional supplemental funding may not be requested at a later date. If the proposed research entails expenses and/or equipment that cannot be acquired within the \$1,500 limit, the proposer must specify the source of the other funds/equipment for the project to be deemed fundable.
- IV. Equipment or computers that should normally be part of a research facility where the project is to be carried out-or are readily available, may not be requested in the budget (although rental fees might be appropriate). All equipment purchased as part of the project accrues to the faculty supervisor's home department upon completion of the project.
- V. The faculty mentor, by signing the cover page, agrees to assume fiduciary responsibility for the project budget. Budget overages will accrue to the mentor's home department.
- VI. Student travel and living expenses to sites and/or conferences may be funded, including conferences where the student may present the research results. Support for faculty mentors (including travel, even if

with the student) is not allowable. "No cash advances for travel are permitted. Students must follow the University's Policies and Procedures for Travel and should contact the General Accounting Office at 656-1477 or email general.accounting@uvm.edu for more information prior to making any travel plans.

- VII. All operating expenses must be used to support the specific project funded-monies cannot be applied to or interchanged with other (departmental) expenses. Operating funds cannot be accumulated or rolled-over in anticipation of multiple-year funding.

7. Evaluation

Applications will be evaluated based on the quality of the proposed research, the relevance of research to Environmental Engineering in general, the value of research experience for the student, and the record of faculty members with regard to his/her ability to provide sound mentoring in the proposed research area. Consideration will be given to the content, grammatical correctness, and lucidity of the narrative in student writing. Evaluators will also consider whether student has made clear his/her qualifications to carry out the research, and whether the research can be successfully completed within the proposed budget and time and facilities constraints.

Each application must clearly document the student's original contribution to a research endeavor, especially if the project is part of a larger (faculty) research project. Applicants collaborating on a larger project must submit separate applications identifying their individual roles and expected contributions.

8. Evaluation Process

Each proposal will be evaluated by a review panel of CEE faculty. The review panel will make recommendations to the program director who shall make the final decision on the awards. Once the awards have been made, a letter will be sent to students and faculty mentors detailing how the awards will be implemented. Students must work with their faculty mentors to access the operating funds.

Questions? Contact Lauren Petrie, CEMS Career Readiness Program Coordinator in Votey 337 or by email: Lauren.Petrie@uvm.edu