



ESC Research Grant Application Instructions

General information

The Ecosystem Science Center (ESC) announces the availability of research grants for undergraduate and graduate students. The grants are intended to give students an opportunity to gain experience in writing competitive grants, and to gain experience in science by conducting their own research project. Allowable costs include lab supplies, sample analysis fees, field equipment, personnel and travel to research sites. The research involved should be related to the interests of the ESC advance our understanding of how ecosystems function and how human activities influence ecosystem processes.

Application Deadlines

Fall: First Friday of December

Spring: Fourth Friday of March

Funding Amounts

- Undergraduate students: up to \$750
- Graduate students: up to \$1000

Requirements

- Funds are to be expended within one year of an award.
- A student is eligible to receive a maximum of one research grant per academic year and must be working with an ESC member. Students who apply in December and are declined funding may re-apply in the spring. Students who have received funding in Spring may apply for funding in the following fall as that is the next academic year.
- Publications resulting from ESC supported research should formally acknowledge the ESC and posters and presentations of supported research should display the ESC logo (see ESC website).

Review Process

ESC undergraduate research grants are competitive. The grants will be judged by a panel of 3-4 ESC members on the following criteria. Feedback will be given for all proposals that are reviewed.

The reviews will be based on the following criteria:

Scientific Merit: The proposed work should make a novel contribution to knowledge or understanding and its scientific merit should be clear to the reviewer, who may not have expertise in your field. Careful attention to the required elements described below for each proposal section will help achieve this goal.

Quality of Writing: The proposals should be clearly written, well organized, concise, with proper grammar and spelling.

Completeness: The proposals should include and address the guidance given for all of the sections listed in the detailed instructions below.

Detailed Instructions

Cover letter

The first page of the proposal should be a completed the ESC Research Grant form with appropriate signatures.

Proposal

Include all of the proposal sections listed in the detailed instructions below and address the guidance given for each.

Page Limit: 2 page max, 11 pt font with 1 inch margins. You are allowed one major figure or table beyond the two page limit. This could be used to show a conceptual model, provide preliminary data, or illustrate a sample design or experimental setup. Other smaller figures and tables are permitted but would have to be within the 2 page limit. References should be placed last and use the same font and page margins as the main text. References do not count against the two page limit.

Title: The title should reflect the subject of the proposal.

Background: The background section should provide the larger scientific context of the proposed work. It should also be clear how the proposed work fits into this scientific context. Assume your audience is intelligent, but has little direct knowledge about your research topic and why it is important. Introduce your study from a broad context then into a narrower context that will link to the specific questions to be asked or hypotheses to be addressed.

Objectives: If the work is part of a larger project, summarize the broader objectives of that project. Also state the specific objectives for the work to be carried out by the funds requested in your proposal. It should be clear that your request is for important additional work. These objectives should clearly arise from the background provided.

Hypotheses/questions: The hypotheses or questions to be addressed in this proposal should be clearly stated, and testable or answerable. They should be clearly in line with the background and objectives.

Methods: The link between hypotheses/questions and methods should be clear. The proposed methods should be appropriate for testing the hypotheses or answering the questions defined above. They should briefly but clearly define the study sites, sampling and analytical techniques to be used.

If there are important measurements or analyses related to your research request that are being addressed by a larger project, please briefly describe them and the fact that they are being supported by the larger project. Otherwise, you risk reviewers asking "Why isn't XXX measured?" It is understood that \$1,000 will only fund a small amount of work, but it needs to be clear how it fits in to the larger scheme of some

projects. Your methods should primarily describe what you will use the ESC funds for, but background on other activities occurring at the study location can help reviewers as they assess your specific request.

The methods should include a timeline for field measurement, lab and data analysis, and writing/presentation activities.

Budget and specification of how ESC funds will be used: The budget should be appropriate for the costs of the proposed work. If the proposed work will require more funds than available from the ESC grant, state other sources of funding available, or how the work will be scaled back if other funding is not obtained.

Allowable costs include lab supplies, sample analysis fees, field equipment, personnel and travel to research sites.

Relatedness to ESC mission: This should be made clear in the Background section of the proposal. Any proposal deemed inappropriate for the ESC will not be reviewed. The ESC mission statement is: "To promote understanding of ecosystem function through education and research at MTU." The ESC is designed to advance our understanding of how ecosystems function and how human activities influence ecosystem processes.

Summary Report for Previous Grants (if applicable)

If you've been awarded an ESC research grant in the past year or have an open project from any year, you must fill out a Progress Report before you can be granted any monies for this year. See web- awards and activities page for form. This form must be submitted before the current application. Proposals lacking a summary report will not be reviewed.

Submission

Submit an electronic copy of the above to the ESC Director or Manager.