Miami University
Doctoral-Undergraduate Opportunities for Scholarship (DUOS) 2011-2012

Application Deadline 5:00 p.m. October 17, 2011.

I. PROGRAM OVERVIEW

The DUOS program aims to heighten the synergy between graduate and undergraduate research at Miami University. The undergraduate student and graduate student will work together on a research project under the supervision of a faculty member in a Ph.D. granting department. Either the undergraduate or graduate student may initiate the application, but the undergraduate student is to have primary authorship of the project. DUOS Program is open to any undergraduate student and any post-master's doctoral student in good standing who agree to abide by program requirements.

Fall Submission Deadline: The selection committee may provide funding for up to 10 awards. Each award will be eligible for up to $1,000 for supplies, services and travel to be used in direct support of the joint research project and dissemination of its results. All applications are due by 5:00 pm. October 17, 2011. Selected awardees will be notified via email in late November.

Submission requires a two-step process:

- **Step 1** E-mail your application as a pdf file to: weberme@muohio.edu and
- **Step 2** Submit the signed original DUOS application form and your proposal to: Martha Weber in the Office for the Advancement of Research and Scholarship (OARS) in 102 Roudebush Hall.

A. Program Features

- a focus on undergraduates learning the processes of research and scholarship under the supervision of graduate student mentors
- a project/travel allowance of $400, each, for the graduate and undergraduate partners
- an additional project/travel allowance of $100 for each partner, contingent upon their participation in training offered by the program for their roles as mentor and mentee in a research partnership
- undergraduate student may earn independent study credit, if appropriate

B. Program Benefits

- adds a distinctive experience, shown to increase student intellectual maturity, to undergraduate education
- increases availability of graduate students as role models for undergraduate students
- enhances graduate student research programs by the participation of talented undergraduates
- enables doctoral students to enhance their skills as mentors of undergraduate scholars, and become more reflective about the role that they play in undergraduate education
- creates the basis for future job application materials documenting graduate students' experiences/achievements in their role as research mentors

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Applications available: www.muohio.edu/undergradresearch from the DUOS link

- publicly recognizes graduate students who are making an effort to enhance their performance as research mentors
- enhance the university community's awareness and appreciation of the synergy between graduate and undergraduate programs
- clearly links scholarship and teaching at the University
- serves as a model program that other graduate schools may emulate

C. Award Distribution/ Proposal Evaluation Criteria

Dr. Gary A. Lorigan, Professor of Chemistry serves as chair of the DUOS and will convene a review panel for academic year 2011-2012.

In developing its award recommendations, the review panel will consider the following:

- readability/clarity of the proposal and its conformity to the required format
- quality of experiences proposed by applications; including significance of the problem to be addressed, the clarity of linkage between problem and method/creative process, the feasibility of the project in terms of the partners' skills, time, and budget, and educational value to the undergraduate student.
- quality and appropriateness of the mentorship supervision and interactions proposed
- distribution of awards across disciplinary areas

II. ELIGIBILITY

A. Graduate Mentor Eligibility

The program is open to all Miami University full-time post-masters' doctoral students. If the graduate student's program does not offer a master's, students must be in at least their second year of graduate study. Preference will be given to graduate students who can document prior research collaboration with a faculty member. Each graduate/ undergraduate pair should create an application as described below. A single graduate student can be listed as a prospective mentor on up to two applications only. In addition, the graduate student's faculty advisor must be willing to oversee the project as described in these guidelines.

To participate:

- a graduate student must be willing and able to provide appropriate supervision and mentorship of the undergraduate with whom she or he has elected to be paired.
- the graduate student's faculty advisor must be willing to oversee the project as described below.

B. Undergraduate Student Eligibility

Application to the program is open to any Miami University undergraduate student who holds a minimum 2.75 GPA and is otherwise in good standing (not on probation, etc.). The student must also be willing to collaborate with the graduate student to complete the project and communicate the results of that work to the scholarly community.

III. ROLES AND RESPONSIBILITIES

Responsibility for a successful program will rest with the undergraduate student scholar and her or his graduate mentor.

A. Graduate and Undergraduate Roles and Responsibilities

1. Joint Applications. Graduate students will collaborate with specific undergraduate students in developing and submitting applications for the DUOS Scholar Partners program. Either graduates or undergraduates may initiate the application, but the undergraduate student is to have primary authorship of the project. The program is not intended to support graduate student supervision of undergraduates who are doing menial tasks in service of the graduate student's research project. Instead, graduate students should strive to provide a meaningful and appropriate undergraduate student experiences. The graduate student should assist the undergraduate to develop a proposed project that qualifies as research or other creative endeavor that will add to the sum of human knowledge and contribute to the growth of the scholarly or creative capability of the undergraduate scholar.

In preparing the application, the graduate student mentor should assist the undergraduate to generate a well-written proposal that can be understood by an educated person who is not a specialist in the field. The graduate student mentor and undergraduate scholar should jointly complete the application so that it conforms fully to the instructions provided, including all the requisite information and the specified number of application copies.

2. Participation in collaborative scholarly project. If selected for an appointment, the undergraduate and graduate student partners are expected to work collaboratively to complete the project during spring semester (mid January – mid April) and to present the results to the scholarly community.

3. Invention Disclosure/Intellectual Property – Invention Disclosure/Intellectual Property – Inventions and intellectual property developed during the research will be owned by Miami University; by signing below all participants agree they will not be entitled to any compensation or royalties for the intellectual property developed through this research. Disclosure of inventions and intellectual property must be made during the research process, using a Miami University Invention Disclosure form. Contact OARS 529-3600.

4. Participation in training for mentor-mentee relationships in a scholarly context. Each of the two partners who participate in training for mentoring undergraduate scholars offered by Miami's Preparing Future Faculty initiative will receive an additional project/travel budget of $100.

5. Presentation of the project. It is expected that the undergraduate and graduate students will produce a product (paper, oral presentation, poster, artwork, portfolio, model, etc.) as a result of their joint project. The undergraduate student and graduate mentor at the beginning of the student's participation should agree as to the purpose and form of this product. Undergraduate students will be expected to present this product, if appropriate, at the Undergraduate Research Poster Session planned for April 11, 2012. In addition, it is strongly encouraged that partners aim toward regional/national/international presentation/performance/dissemination of their work.

6. Project Final Report. A final report and summary is due in April to OARS. Awardees may be asked to complete several questionnaires relating to their educational experiences and activities.

B. Faculty Advisor Roles and Responsibilities

The graduate student's advisor must endorse the project (i.e., provide a statement concerning the quality of the proposed project, and certify the undergraduate's authorship of the project and the capability of the graduate student to mentor the undergraduate) and be willing to oversee the project as described below:

1. Need to Comply with University and Federal Research Regulations. It is the responsibility of the graduate student's faculty advisor to assure that all required regulatory committee approvals (human subjects, vertebrate animals, radioisotopes or recombinant DNA) are obtained prior to the start of the project.

2. Oversight of the Project/Travel Allowances. Each project may receive up to $1000 total for supplies, services and travel to be used in direct support of the project and dissemination of its results. This amount includes $100 per awardee after completing the training. This award is NOT scholarship for tuition or a cash award. It may NOT be used for entertainment. The graduate student's faculty advisor will supervise spending from this account using standard university ordering and accounting procedures. All charges must be made against this allowance by end of the fiscal year (June 30). This allowance account will be cleared and closed by the University Accounting Office on June 30. The faculty advisor is responsible for any charges made to that account above the $1,000 allotted or after June 30.

3. Independent study credit, if appropriate. The faculty member may determine that it is appropriate for the undergraduate student to receive independent study credit for his/her conduct of the project. If so, the faculty member will serve as the instructor of record for that independent study.

IV.DETAILED PROGRAM SCHEDULE

DATE(S)	DEADLINE or SCHEDULED EVENT
August 1	Announcement and Program Guidelines and Application posted to web www.muohio.edu/undergradresearch See DUOS link
Sep – mid Oct	Graduate and Undergraduate students arrange appropriate collaborations and complete joint graduate/ undergraduate application
October 17 (5:00 p.m.)	DUOS application submission Deadline (Submit 1 original signed application to OARS 102 Roudebush) and e-mail a pdf file of the signed application and proposal to weberme@muohio.edu
November, 2011	Panel reviews applications, selects awardees; OARS support staff notifies awardees)
December, 2011	Awardees attend training session on mentoring in a scholarly context
April 11, 2012	Undergrads participate in the Undergraduate Research Forum
April, 30, 2012	Final report and evaluations due to OARS
June 30, 2012	DUOS accounts closed and cleared

Questions not answered in the guideline materials should be directed to:
Dr. Gary A. Lorigan, Chemistry and Biochemistry, garylorigan@muohio.edu 529-3338.

Application Process: Submit the above cover page and attach a project description (**MAXIMUM of 5 pages** single-spaced, minimum 10 point font, 1-inch margins) that addresses each of the following six issues. Be sure to write for a generally educated audience who are NOT specialists in your discipline. The cover page and references are NOT included in the 5-page maximum. Tables and figures ARE included in the 5 page maximum.

1. Background and goals for the project. Clearly state what you intend to accomplish, achieve, or determine by completing your project. What work have you or others already done on this problem? You should include a statement of hypothesis or of the creative question at issue.

2. Creative processes or methodology. Describe the materials you will utilize, the manner in which you will approach your project and the major steps involved in completing your effort. Explain how your intended creative techniques or research methods are appropriate for accomplishing your stated goals.

3. Expected Accomplishments or Results. Discuss how you will analyze your results and interpret them or how you will present and critique your final product. Explain the significance of the intended achievements or results to the original project goals.

4. Educational value of the project for the undergraduate student. What preparation does the undergraduate bring to this project? What skills/knowledge will the undergraduate gain by conducting the project, and how does this fit into the overall educational/career goals of the student?

5. Mentoring plan. What experience/preparation does the graduate student mentor have for supervising this project? Preference will be given to graduate students who can document prior research collaboration with a faculty member. Describe the expected manner, form, and frequency of the interactions between the undergraduate scholar and graduate mentor for the duration of the project.

6. Feasibility of the project. Provide a detailed budget and explain why these items are needed for your project. Why is it realistic for you to complete this project given the time-frame and funding limits of this program?

Doctoral-Undergraduate Opportunities for Scholarship

Application Deadline: 5:00 p.m. October 17, 2011

Undergraduate Student	Graduate Student
Name:	Name:
Email, local address, phone:	Email, local address, phone:
Class/Year:	Department:
Major, GPA:	Date you entered Miami: Have your completed an MA/MS? If so, when?
Have you previously been funded by Undergraduate Research Award program, Summer Scholars or DUOS? If yes, which?	Faculty Advisor:
Proposed DUOS Project Title:	

Investigator assurances:

I certify that the proposed project will add to the sum of human knowledge and is of educational value to the undergraduate scholar. I agree to: abide by the program guidelines, obtain appropriate approvals by regulatory bodies as necessary, conduct the project in an ethical manner, spend the funds in direct support of the project and its dissemination, present the project at the university Undergraduate Scholar poster session, and complete a final report and evaluation of the program. I understand that an additional project/travel allowance will be made if I attend training for mentor/mentee relationships conducted by the DUOS program.

Signature of undergraduate	**Signature of graduate student**

Graduate faculty advisor certification and agreement to oversee the project:

I agree to ensure that the project complies with university and federal research regulations, as appropriate and to ensure submission of the appropriate IRB or IACUC protocols if applicable. I agree to oversee the spending of the project/ travel allowances by the graduate and undergraduate student. If it is appropriate for the undergraduate student to receive credit for conducting the project, I will serve as the instructor of record for that independent study.

Faculty advisor's signature:

In order for the project to be funded, the faculty advisor must comment on:

--the quality of the proposed project

--the undergraduate's intellectual ownership of the project

--the capability of the graduate student to mentor the undergraduate