

Undergraduate Research Programs at Moravian College



Honors Program

<http://www.moravian.edu/academicResearch/honors.htm>

Established in 1960, the Honors Program at Moravian College provides qualified seniors the opportunity to pursue a yearlong intensive study of a subject of special interest. To participate in Honors, students must have an overall QPA of 3.0, with 3.3 in the proposed field of study. Usually, but not always, the project is in the student's major. Applicants must propose the topic and secure the support of a faculty member (or members) to supervise the project. In the fall term of the senior year, Honors candidates carry out their research; in the spring, they prepare the Honors paper and defend their work before a panel of five faculty and staff members, one of whom may be from another institution.

Source of funding: Moravian College

SOAR Program (Student Opportunities for Academic Research)

<http://www.moravian.edu/academicResearch/soar.htm>

SOAR (Student Opportunities for Academic Research) provides stipends, travel allowances, and expenses for students engaged in research or creative activities through close interaction with a faculty mentor. The program helps Moravian students gain a better understanding of scholarship in their discipline, and fosters scholar-colleague relationships. SOAR stipends can be as high as \$3,000 for summer work.

This program was significantly enhanced in 2005 with the establishment of a \$1.5 million dollar endowment in honor of the outgoing president (The Rokke Endowment for Faculty-Student Research). The purpose of the expanded SOAR program is to create a summer research program with greater visibility and greater participation for students and faculty. The new SOAR program will provide a cohesive program of events during the summer to create a community of scholars.

Features

- All students involved in summer research will be part of the SOAR program, whether their stipend comes from an external source or from SOAR funds. All students will be eligible for on-campus housing regardless of the distance to their home and the source of their support. There will be a kickoff event for the summer program in the first week of June. Housing will begin for all students on a common date, although exceptions will be made for projects that have special time constraints.
- To be eligible for direct support from SOAR, a student must have completed at least one semester at Moravian College and have a minimum GPA of 3.0. Students receiving College support can earn weekly stipends of \$300/week up to a maximum of \$3000 for the entire summer. Students are expected to work full time each week during the duration of the project.
- Projects may involve one, two, or three students per faculty mentor; faculty stipends will be \$100/week, \$175/week, or \$225/week depending on the number of students. Projects conducted on campus will usually be six to ten weeks long. Projects may also be conducted off campus when appropriate; for such projects travel expenses for both faculty and students will be supported, and the timing and length of these projects will be more flexible. Funds for supplies and expenses in support of the project can also be requested.

- An undergraduate research project should have the potential to make “an original intellectual or creative contribution to the discipline.”* The idea for the investigation or creative work may be the product of a faculty member’s continuing scholarship, or it may be inspired by student interest or curiosity. In either case, the faculty mentor submits the proposal, and the mentor is expected to vouch for the originality of the project. The mentor is expected to guide the student and shape the project so that the student can make a contribution to the discipline, and is expected to help the student disseminate any results in a manner appropriate to that discipline.

Source of funding: Moravian College and The Rokke Endowment for Student-Faculty Research

The Rokke Endowment for Student-Faculty Research

The purpose of the fund (established in 2005) is to provide support for Moravian College student-faculty research. While exceptions may be made by the Academic Dean in consultation with the President, the expectation is that over time approximately two-thirds of the endowment proceeds will be devoted to research in the natural and mathematical sciences; the remaining one-third will be used in the social sciences and humanities. Allowable uses of the income include:

- a. Student wages
- b. Student attendance at conferences. Costs may include travel, lodging and meals.
- c. Faculty attendance at conferences when accompanying students. Costs may include travel, lodging and meals.
- d. Research supplies
- e. Faculty stipends. Total annual faculty stipends may not exceed 20% of the annual fund income.

Faculty Development and Research Committee

The Faculty Development and Research Committee advocates for funding and oversees the distribution of moneys to faculty members to support the improvement of teaching and research. The committee aims to encourage and enable disciplinary research, the dissemination of research results, participation at professional meetings and workshops, and pedagogical development, including efforts to improve existing courses and the development of new courses. Three faculty members are appointed to three-year staggered terms, one from each division of the Faculty, with the remaining members appointed annually. The chairperson is appointed by the associate dean of academic affairs in consultation with the academic dean.

Source of funding: Moravian College

Independent Study

The Independent Study program allows students to delve deeply into areas of personal interest with the support of senior-faculty members—an unusual opportunity at the undergraduate level. Independent Study provides students with a chance to undertake a program of supervised reading, research, or artistic production not provided within existing courses. The Independent Study option is available to students who have junior or senior standing with a cumulative QPA of at least 2.70. Transfer students must have completed one fall or spring term of study at Moravian College before taking on Independent Study. An Independent Study earns one course unit. Students may schedule no more than one Independent Study or Honors course unit a term to a maximum of four over the period of the junior and senior years. Independent Study may be taken in any term, including the summer.

Source of funding: Moravian College; typically individual department budgets

History Fellowship

<http://www.moravian.edu/academicResearch/fellowship.htm>

History Fellowship is a program for highly-motivated, successful history and history/education students of at least second-semester sophomore standing and a GPA of 3.5 or above in the major. Students who are accepted into the program will be History Fellows for one of the lower-level survey courses (previously taken by successful applicants with at least an A- grade) and will be expected to do the following:

1. Write a research paper of 10 to 15 pages on a topic that is included in the surveyed area or write a critical journal of the class and a short book report
2. Assist with the preparation of the class
3. Assist with or lead group discussions
4. Tutor
5. Moderate Blackboard discussions
6. Attend all class meetings, as well as individual meetings with the instructors

The Fellows will enjoy one-to-one interaction with the faculty members who will serve as their mentors, gain a sense of responsibility, learn to think strategically about pedagogical issues, and deepen their knowledge of the course material. Teaching Fellowships will be available to those who qualify and who succeed in a competitive process, including an interview with the chair of the department.

The Consortium for Research in the Plant Sciences (CROPS)

<http://ww2.lafayette.edu/~husicd/CROPS/>

This consortium of 7 institutions in NY and PA represents one of the original pilots funded under the new NSF-Undergraduate Research Centers grant program. First and second year students at the participating institutions engage in collaborative research related to plant sciences throughout the year as well as other activities including seminars, field trips and a summer symposia for all CROPS participants.

Source of funding: NSF and the Camille and Henry Dreyfus Foundation

Defining Student-Faculty Collaborative Scholarship

What is Undergraduate Research?

In spring 2005, a task force on Undergraduate Research and Creative Endeavors (UGRACE) was formed to talk about ways to promote and expand opportunities for students and faculty to engage in collaborative scholarship at Moravian College. The committee ascribes to the definition of undergraduate research put forth by the Council on Undergraduate Research (CUR)¹:

Undergraduate research is an inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to a discipline. CUR programs emphasize the importance of a mentor, usually a faculty member, in guiding an undergraduate to achieve the most from an undergraduate research experience.

In some fields, new experimental data and peer-reviewed publications may be the outcomes of the scholarly endeavor. In other disciplines, original interpretation, synthesis, and application of theories or approaches might qualify as the “original intellectual contribution”. At times, research may be quantitative or qualitative, empirical or theoretical, or may have immediate applications beyond academe. The results of marketing research, for example, can lead to policies and procedures used by organizations (profit, not-profit, governmental). Thus, academics (including students) work closely with businesses and other organizations to not only determine the problems that they face, but help to test out theories and ideas that might help improve the value-creation process. Clinical researchers might develop new methods of patient care or study the effectiveness of new drugs. In fields that are more aesthetic, the development or reinterpretation of and performance or display of new works of fine art may be the end products of the scholarly experience.

What are the Steps Involved in Doing Scholarly Research?

Scholarship is all about asking and answering a question. Scholarly research is often characterized by a series of steps that lead to answers:

1. Formulate an answerable question or testable hypothesis -- that is, a question whose answer is based on your interpretation of data, fact and information.
2. Research the question by reading literature found in journals, periodicals and other publications that relate to the question.
3. In the scientific fields, participants design and conduct experiments to test their hypotheses.
4. Synthesize the learning provided by the research – summarize the information acquired research and extract themes of commonality, difference or interest that are observed. Analyze the results.
5. Think about how the learning contributes to answering the question – apply what you learned from your synthesis of the research to generate an answer (not the only answer) to the question. Determine if the experimental results support or refute the original hypothesis.
6. In some fields, experiments might need to be repeated or redesigned the hypothesis may need to be revised.
7. Write a feasible and appropriate answer based on the learning – formalize in writing the answer you arrived in the previous steps.

Students engaged in creative work at an advanced level also conduct research; for students of creative writing, this might mean reading works that are related (perhaps by theme, genre, period, element(s) of craft) to their own creative endeavors as a means toward honing their own craft. One significant difference, though, is that a poet, playwright, or writer of fiction or creative nonfiction, rather

¹ See www.cur.org for more information on this organization.

than *beginning* with a question, often arrives at, or *discovers*, the question through the process of crafting the work. The goal, then, is to take others along on the journey to that same luminous, haunting, probably ultimately *unanswerable* question.

Why is Student Scholarship Important?

Student engagement in scholarship is important because:

- it is student-centered and individually-oriented, but at the same time, draws students into a community of learners;
- it creates meaningful and supported opportunities for students to challenge themselves intellectually and creatively;
- it encourages initiative and accountability, which is of value for all sorts of future undertakings;
- it extends and expands upon the notion of education and learning, encouraging students to make meaningful connections between the classroom and the world, to transfer/apply classroom learning to solving 'real world' problems;
- it emphasizes both content and process; students learn not only 'material,' but perhaps more importantly, practice critical thinking, analysis, evaluation of evidence, problem-solving skills, and other methods that promote intellectual development.

From a faculty perspective, engagement in scholarship keeps individuals connected to the passion they have for their particular discipline and serves as a way to remain vital and relevant throughout their career. In a CUR white paper², Ramirez and Hoagland state that faculty and students should be encouraged to

"...collaborate as partners in their explorations of uncharted intellectual terrain. The symbiosis established between the faculty member and undergraduate collaborator energizes and informs the faculty member's teaching and research while simultaneously introduces the student to the joys of discovery as well as to lessons in persistence, problem-solving and critical thinking."

Bringing one's research or other forms of scholarship into the classroom is a way to show students why the field is so exciting and why a faculty chose to pursue that field of study. Involving students in one's scholarship IS a form of teaching and can often engage students in ways that other methods simply can not accomplish. John W. Gardner³ once said:

"Much education today is monumentally ineffective. All too often we are giving young people cut flowers when we should be teaching them to grow their own plants."

Through the dedication of faculty and administrators, the creative spirit of students, and the generous support of many, especially Ms. Priscilla Hurd who established the Rokke Endowment for Faculty-Student Research, Moravian College is allowing students to grow their own plants.

Thoughts on student-faculty scholarship contributed by:

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²J. Ramirez and E. Hoagland (2003) "Faculty-Undergraduate Collaborative Research and Publishing", a CUR White Paper, <http://www.cur.org/wp_respub.html>; accessed 12/22/04.

³ John W. Gardner, former Secretary of Health, Education and Welfare, was a 20th century visionary who spent most of his life studying leadership and community.