

Creative Activity and Undergraduate Research across the Disciplines

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Wooster seeks a liberal education that will truly liberate our undergraduates for a lifetime's intellectual adventure, one that will help meet new situations as they arise, one that will allow them to develop harmoniously and independently.

—Howard F. Lowry, the College of Wooster's seventh president, in a 1945 speech

In the College of Wooster's Summer 2005 issue of the *Wooster* magazine, you can read about the passions of six recent graduates, and how those were translated into personalized and challenging independent study projects. The independent study is far more than a senior thesis; faculty at Wooster know, because they have witnessed it, that independent study is a transformative experience. As English major Amanda Phillips puts it, "Working on each chapter of [my independent study] was like walking down a hallway of mirrors—and not always the flattering kind." Instead of the planned outcome of his independent study, a light-emitting compound, chemistry major Dan Skully found the scientific pathway to discovery illuminated—a pathway that often presents unpredictable results that lead to meaningful new knowledge. Denise Bostdorff, associate professor of communication, watched as her mentee, senior Emily Moore, became a more inquisitive and engaged student during her project looking at nurses' communication strategies. From the ordinary to the extraordinary—this is the independent study experience.

For the last fifty-eight years, the College of Wooster, an independent, privately endowed liberal arts college with approximately 1,800 students and

150 faculty members, has required that all students design and complete an independent research and/or creative project—the independent study. For Wooster faculty, when the independent study process is in full swing, it is hard to remember that independent study is more than just a capstone experience: it is, at its core, a philosophy of education that sets Wooster apart from most other colleges. The independent study program was initiated by former Wooster President Howard Lowry, who passionately believed that all students should be challenged to come to their very best work in order to achieve creative and independent thought. The program is challenging and rewarding, intense in its resource demands and, ultimately, the culminating experience of an education that lays the foundation for lifelong creativity, learning, and reflection.

The Independent Study

What three components combine to make Wooster's independent study program unique? Independent study is a requirement for all graduates of the college, the program for most majors involves three semesters of independent work, and the curriculum is designed to support student development toward

the independent study experience. The Wooster independent study program provides students with transferable skills, including the ability to formulate questions, to propose strategies to answer those questions, to independently pursue their quests with a tangible result or performance, and to explain their work to a larger audience. Given the level of effort, it is no surprise that Wooster ranks fourteenth in the baccalaureate origins of PhD degrees from 1920 to 1998. As many Wooster alumni have commented, independent study gave them a head start in preparation for graduate work.

For most majors at Wooster, independent study begins with a one-credit class, taken during either the fall or spring semester, representing one-eighth of the typical student load during the junior year. The junior-year independent study varies by department, as each discipline uses its own pedagogical approach to introduce students to research in the field. Some departments bring juniors together in a seminar or methodology course with an independent project component. In other departments or programs, students work on a topic of their choice and meet weekly with their advisers, with their project culminating in a paper or senior independent study proposal and sometimes a departmental presentation.

Senior independent study represents one-fourth of a student's load during the senior year. The key distinctive aspect of the senior independent study is the weekly one-on-one meeting between faculty mentors and their students; the

yearlong mentoring is perhaps even more intensive than what many graduate students receive. While projects officially begin in the fall, students often prepare during the summer by reading and doing background research (e.g., in the library, field, or laboratory—developing their topics so that they begin their senior year with the beginnings of a project). A perusal of departmental independent study handbooks on Wooster's Web site shows the repeated warning to students that success in senior independent study is often predicated on summer preparation.

The independent study is due the Monday following Wooster's two-week spring break and is celebrated campus-wide. The jubilation of the Independent Study Monday event far surpasses that of graduation, just six weeks later. Faculty read the independent study theses and the students endure the dreaded oral exams and sometimes written critiques of their work. The final grade for the independent study takes in various components of the yearlong project, including the student's process, performance on the oral exam, and the written and/or creative piece. For their efforts, students who pass independent study are awarded grades of Honors, Good, or Satisfactory.

A sampling of some independent study titles from the Class of 2005 displays the range of topics:

- Jonathan Bell, biology: "Far from Sterile: The Microbial Contamination and Food-Borne Disease Potential of Mung Bean (*Vigna Radiata*) Seeds"

- Andrea Danielson, sociology/anthropology: "God Didn't Create Adam, Eve and Dr. Steve: A Comprehensive Study of Mennonite and Non-Anabaptist Midwives' Beliefs and Practices"
- Dan Utley, physics: "Measuring the Reflectivity of Semiconductor Mirrors Using Light Intensity Ring-Down in a Half-Symmetric Resonator"
- Julie Tiffit, art: "The Human Landscape"
- April Guarnera, economics: "Can Bankruptcy Be Predicted? The Creation of New Bankruptcy Prediction Model"

Supporting Independent Study

In the face of the demands of independent study, in terms of student skills and ability, the time-intensive nature of one-on-one faculty-student mentoring, and the costs associated with particular projects, Wooster has developed a support network that begins with the curriculum.

How is Wooster's curriculum designed to prepare students for independent study?

While Wooster's curriculum has much in common with that of many other selective liberal arts colleges, it differs from them in the focused progression of work leading toward the independent study experience. A Wooster education begins with a required first-year seminar in critical inquiry, which consists of small seminars (average fifteen students) with topics chosen by the faculty. These writing-intensive courses require students to analyze and synthesize material from a variety of

sources, to formulate questions, to articulate arguments supported by evidence, and to evaluate different kinds of evidence. All students continue to build their writing and analysis skills through a required writing-intensive course that must be completed after their first-year seminar but before they take junior independent study. At Wooster, students often take more than one of these tagged “W” courses during their four years at the college. In the major, courses are designed to develop the critical thinking, writing, and speaking skills that are necessary for independent study. The complete picture, from beginning to the completion of the junior independent study, sets the foundation for the rigors of senior independent study.

How are faculty supported as independent study mentors?

Independent study is a demanding process, for students *and* faculty. While President Lowry may not have recognized this when the program was originally instituted, he did acknowledge that the program would require significant resources to support a faculty of engaged teacher-scholars. To that end, the college established one of the most generous sabbatical leave programs in the country, providing both research and study leaves for tenured faculty, who are eligible for a full-year, fully paid leave after eight semesters of teaching. Equally as important is the recognition of time engaged during the semester mentoring student independent study projects. Faculty are awarded teaching credit for

independent study (five students for the year equals one course), and independent study advising is a component of evaluation for promotion and tenure.

What financial resources are available to support independent study projects?

Recognizing the need for financial support for student independent study projects, the trustees of the college established an endowment for independent study in the honor of Henry J. Copeland, Wooster’s ninth president. The fund is in its eleventh year of operation and awards approximately \$90,000 annually. Student applications are invited in the fall to support students enrolled in a senior-level course, and in the spring, juniors may apply for summer support. The scope and type of grants are not limited, but preference is given to projects that have unusual distinction and promise and have related expenses that are above what might normally be expected in undertaking independent study. Some departments have endowed funds to support independent study projects, particularly those requiring fieldwork or analyses (e.g., geology). Just as the curriculum progresses towards independent study, so too does the ladder of support for student research. Research experiences are supported by the college’s internally funded Sophomore Research Program, and a variety of external grants support additional research experiences for sophomores and juniors. In addition, the college has a student travel benefit to support conference presentations.

How are the independent study projects assessed?

Shortly after it was instituted, a thorough assessment of independent study revealed that while faculty and students embraced the independent study program, there were challenges to address. Faculty were not uniform in their responses to how much effort students put into independent study and felt that the program, for some, breeds procrastination. Some students were frustrated by the lack of uniformity in standards across the departments and others felt valuable courses were replaced by the experience. In response to the national movement toward outcomes assessment, the college is currently designing a comprehensive analysis of the success of independent study, which will provide useful feedback for the next decade of the program. During the most recent curriculum revision discussions, students and faculty strongly agreed that the independent study program is an enriching educational experience. After almost sixty years, the independent study program remains at the heart of a Wooster education. ■

Reference

Philips, A. 2005. Losing my self in I.S. *Wooster Magazine* 119 (4): 10-13.