RSRC 4033 – UNDERGRADUATE RESEARCH SYLLABUS

CLASS MEETING TIMES

1. Research hours are by arrangement with faculty mentor prior to enrollment. A minimum commitment of 6 hours per week via signed faculty-student contract is required for enrollment. Maximum commitment cannot exceed 19 hours/week.
2. Optional COURI training: 4-5 workshops per semester held on Saturdays in Spring / Fall and regular weekdays or Saturdays in the Summer. Each workshop lasts 3-5 hours (see below).
3. ~1.5 hours to complete an online assessment of learning gains at the end of each semester.

COURSE DESCRIPTION

Undergraduate course to (a) provide students with an official record of participation in authentic undergraduate research, scholarship, or creative inquiry activities under the direction of faculty members in participating departments, which:

- make an original intellectual or creative contribution to the discipline,
- provide students with optional professional development training (see below) facilitated by COURI,
- track participation in authentic research, scholarly, or creative activities beyond degree requirements.

This course is for enrolled pre-baccalaureate students only. Faculty research mentor approval required.

Number of research hours must be by arrangement with faculty (mentoring agreement encouraged). A minimum of a 3- credit course co-enrollment required in Spring and Fall - waived in summer sessions. Proof of enrollment needed to participate in optional COURI sponsored workshops and URSCI Honors recognition. Number of optional workshop hours 4-12 per semester.

COURSE OBJECTIVES

THE PRIMARY GOALS OF THIS COURSE ARE:

1. To enrich the undergraduate student experience by engaging in research, scholarship, or creative inquiry activities.
2. To provide a practical means of professional training beyond regular course work needed for competitive participation in the workforce.

BY TAKING THIS COURSE, STUDENTS WILL

- learn research, scholarly and creative methodologies appropriate to their field and how new knowledge is produced
- be better informed about salient and current issues
- sharpen analytical thinking and problem-solving skills
- acquire skills for independent and life-long learning
- connect their research, scholarly, or creative work with that of others in their own discipline and in other fields
- acquire and practice technical/professional written and verbal communication skills
- develop professional values, standards and practices for the responsible conduct of research
- begin the process of networking and integrate into a community of experts in their field
- learn to function within a team of research scholars and how research, scholarly and creative projects are managed

EDGE ADVANTAGES

This course is designed to equip students with essential Edge Advantages that contribute to their professional and personal development. Through the completion of project objectives and assignments, students will develop the following Edge Advantages:

	Problem-Solving	Projects will challenge students to identify and address complex issues using innovative and analytical approaches.
	Communication	Team discussions and written assignments will improve students' skills in articulating ideas clearly and persuasively in both oral and written forms.
	Confidence	By actively participating and successfully completing assignments, students will build self-assurance in their abilities to tackle academic and real-world challenges.
	Critical Thinking	The course's emphasis on analysis and synthesis of information will strengthen students' abilities to think critically and make informed decisions.

REQUIRED WORK

In addition to active participation in the assigned project(s) within the hours agreed upon with the faculty mentor and the end-of-semester 1.5 hours for completion of an online assessment tool, students will have an opportunity to participate in the following optional workshops – note that different workshops are offered in the Fall & Spring semesters. Most workshops are offered in the summer.

1. *Optional professional development workshops* –
    a. *Keeping a record of your URSCI project*: In the first part of this workshop, students learn what a research notebook is and what it is not; the do's and don'ts of maintaining one; why it is important to keep accurate records; and what are the fundamentals of data management. In the second part of the workshop, students learn about the most common elements required in research reports and how to extract information from the research notebook to write effective reports.
    b. *Ethical standards and procedures in URSCI*: Students learn about research integrity and the difference between research misconduct and questionable research practices. Participants work in groups to discuss and reflect on very relevant case studies based on specific topics of current interest. All materials are provided.
    c. *Crafting an abstract/artist statement*: This workshop is intended to further enhance students' technical writing skills. Important elements of a good abstract, best practices and common mistakes are discussed. Participants have ample opportunity to review, critique and revise samples as well as write and edit their own.
    d. *Preparing and Delivering Technical/Field Specific Presentations*: I) To Peers in same Field; II) To Non-Experts or Lay Audiences: In the first part of this workshop, participants learn about what constitutes a good technical poster and make a draft from their own research report. In the second part, students learn the basics of presenting their posters to technical and non-expert/lay audiences. Details about a competition held the week of the COURI symposium are discussed during the workshop.
    e. *Mapping your Professional Path:* The guiding theme for the workshop is "What do you want to be when you grow up: Mapping the road for success, driving on the road, shifting gears, and what to do when you get there (or not)".
        i. Topics of discussion include:
            1. Defining success, & habits of successful people
            2. Reflection on reasons for choosing area of study
            3. How to set concrete and SMART career goals
            4. What is an advance degree and what does it take to get one? Is it for me?
            5. Why, how, where, and when to apply to graduate school
            6. How to succeed in graduate school: Ins and outs
            7. What to do after you get the degree
            8. Do I want a career in academia, the government/public sector, non-profit, or the private sector?
    f. Other workshops may be added to the list above
2. *Last week of the semester* - Students will complete an online evaluation instrument to assess their learning gains (~1.5 hours)

ASSIGNMENTS & GRADING

Grading Scale: S/U.

COURSE WITHDRAWAL:

Students who drop from the course prior to the official census date of any term or part of term will have the course deleted from their semester record. If the course is dropped after the official census date but prior to the course drop deadline (“automatic W”), a grade of “W” will be assigned. If the course is dropped after the course drop deadline, a grade of “W” can be assigned under exceptional circumstances and only with the instructor’s and department chair’s approval. You may petition for a “W” grade in writing and must provide supporting documentation to the instructor.