

# Summer Scholars Program

## I. Executive Summary

Missouri S&T prides itself on offering undergraduate students experiential learning opportunities from the Student Design Center and OURE to allow them to gain hands-on experience. Furthermore, research has shown that students involved in high-impact practices typically have better retention rates and persistence rates to graduation. These opportunities are not experienced by all students, especially first-generation and underrepresented (UR) students due to various factors such as opportunity costs, family responsibilities, financial burdens, and lack of knowledge regarding available support.

At S&T, a review of the current retention rates shows that first-generation and UR students are retained at lower rates between the first and second year, which impedes the institution's retention and graduation goals. To retain these students, program interventions must be designed to address four key elements:

- a) provide students with a sense of belonging,
- b) establish mentoring relationships with faculty,
- c) engage students in experiential learning, applying their knowledge to real world applications,
- d) minimize the opportunity cost for participation in such activities.

To address these concerns, an OURE Summer Scholars Program (SSP) is proposed to provide students with an intensive 10-week undergraduate research experience based on the National Science Foundation's Research Experience for Undergraduate Program (REU).

## II. Program Mission

The mission of the Summer Scholars Program is to provide a 10-week research-intensive experience for rising sophomores and juniors with a faculty mentor and professional development opportunities. The program will be primarily targeted to UR and first-generation students.

## III. Key Student Outcomes

- Participation in 250 hours of research
- Development of mentoring relationship with faculty member
- Research paper and reflection piece
- Professional development opportunities (resume development, research process, etc.)
- Establish pipeline for prestigious awards and fellowships

#### IV. Program Overview

The SSP is designed to provide students with a 10-week research-intensive experience under the guidance of a faculty mentor. The program will be conducted in three phases: (a) pre-program, (b), SSP, and (c) post-program.

##### i) Pre-Program

- 1) Faculty
  - a) Call for research projects (FS2022)
  - b) Review and selection process (January 2023)
  - c) Required mentoring training (April/May 2023)
- 2) Student
  - a) Call for applications (February 2023)
  - b) Review and selection process (March 2023)
  - c) Matching with programs (April 2023)
- 3) Program Administration
  - a) Work with campus partners for program implementation (Residential Life; Dining; Student Financial Assistance)

##### ii) SSP

The SSP will be a 10-week program with an eight-week residence requirement and two weeks for remote work. During the program, students will be required to meet weekly for an hour-long professional development seminar, enroll in one course of at least 3 credit hours, and conduct 25 hours of research per week. Students will receive \$4,000 during week 1 and final \$4,000 after final report/reflection is accepted.

**Professional Development Schedule**

Week	Activity	Objective	Campus Resources
Week 1	Orientation & Welcome Activities	Students and mentors will participate in an orientation	Undergraduate Education
Week 2	Research Literacy	Student will learn how to utilize the library to find relevant articles	Library
Week 3	Research Reflection	How to utilize a reflective journal with your research journey	
Week 4	Research Brand & Resumes	How to utilize LinkedIn to develop your professional brand and resumes	COER
Week 5	Research Writing	How to write a scientific article or blog	Writing Center
Week 6	Graduate School	How to apply for graduate school and obtain funding	Graduate Studies & Fellowships
Week 7	Intellectual Property & Startups	Learn about IP and services provided	Sponsored Programs

Week 8	Research Communication	How to make a research poster	Undergraduate Education
Week 9	Research in the Community.	How does research impact local communities	Faculty or Community Partners
Week 10	Final Report/Reflection Due		

**iii) Post-Program**

Students are required to present their findings at the spring undergraduate research conference hosted by Undergraduate Education.

**V. Staffing**

This program should not require additional resources for staffing. Undergraduate Education will provide the logistical and administrative support for the program.

**VI. Budget**

Items	Item Amount	Unit Cost	Total Cost
20 Student Scholarships	Undergraduate Education	\$4,000	\$90,000
	Deans/Faculty	\$4,000	\$90,000
Activities	Social events bi-weekly (20)	\$250	\$1,000
Welcome Lunch	Students/Advisors (40)	\$12.50	\$500
Program Supplies			\$100
<b>TOTAL</b>			<b>\$181,600</b>

**VII. Key Performance Indicators**

- Retention rates of student participants
- Utilization of Undergraduate Research Student Self-Assessment (URSSA) for benchmarking and pre/post testing.
- Faculty feedback
- Students' participation in spring symposium
- Tracking students' 6-year graduation rate and number of applications to prestigious awards and graduate programs

**VIII. Campus Stakeholders**

Undergraduate Education, Office of the Provost, CASE, CEC, Kummer College, Residential Life, Dining, Faculty, Library, COER, Graduate Studies, Student Financial Assistance, Writing Center, Sponsored Programs, Student Success Center, Hit the Ground Running Program.