

PROBLEM-SOLVING THROUGH RESEARCH IN SCIENCE AND ENGINEERING, MICROCREDENTIAL

The Problem Solving Through Research in Science and Engineering microcredential recognizes School of Science and Engineering students who develop advanced critical thinking and problem-solving skills through sustained participation in interdisciplinary research experiences. Students must enroll in SE 3870 Foundational Interdisciplinary Research Experience (FIRE) - Lab (1 cr) or SE 4870 Foundational Interdisciplinary Research Experience (FIRE) - Lab (1 cr) for a minimum of three semesters, engage in supervised research, deliver formal presentations, and submit key deliverables including a reflection report, a technical report, and a detailed lab notebook. This SLU digital badge signifies the student's ability to analyze and solve complex problems in collaborative and diverse research settings, equipping them for success in STEM careers.

Admission Requirements

For current, active Saint Louis University students wishing to declare a microcredential, complete the Update for Student Curriculum Record form (<https://ask.slu.edu/TDClient/30/Portal/Requests/ServiceDet/?ID=160>).

For non-Saint Louis University students, click here to apply as a Visiting/ Non-Degree Seeking Student. (<https://www.slu.edu/admission/visiting-students.php>)

Requirements

Course Requirements:

- Enrollment in SE 3870 Foundational Interdisciplinary Research Experience (FIRE) - Lab (1 cr) or SE 4870 Foundational Interdisciplinary Research Experience (FIRE) - Lab (1 cr) (1 credit per semester) for a minimum of three semesters.

Non-Course Requirements:

- **Research Engagement:** A minimum of five research hours per week on an interdisciplinary project.
- **Safety and Compliance:** Completion of all required safety and research training.
- **Formative Deliverables (due each semester):**
 - A **Reflection Report** emphasizing critical thinking and interdisciplinary problem-solving.
 - A **Technical Report** detailing research findings and their implications.
 - A **Lab Notebook** documenting research activities, data, and analyses.
 - Delivery of a formal presentation to an audience outside of the lab group (e.g. at a departmental seminar, Sigma Xi Research Symposium, etc.)
- **Summative Deliverables (due at the conclusion of the credential):**
 - At least one presentation at the SSE Senior Showcase or equivalent public event.

Final reflection paper synthesizing the entire research experience and the critical thinking skills gained.

Contact Us

For more information about this microcredential, please contact:

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