# Strategic Instructional Innovations Program (SIIP)

2025 Call for Proposals

The Grainger College of Engineering University of Illinois Urbana-Champaign

#### <u>Goal</u>

Who may submit proposals?

Budget guidelines and rules

Award process

**Proposal Evaluation** 

**Proposal Submission** 

SIIP renewals and close-outs for 2025-26

APPENDIX A. Adaptation track

Description

Developing the proposal

Adaptation proposal submission and award process

#### Goal

To accelerate the spread of best practices for teaching, to develop new best practices, and to reimagine what it means to educate our students, including but not limited to the integration of Entrepreneurial Mindset (EM) across our programs, in association with our partnership with the Kern Entrepreneurial Engineering Network (KEEN). These efforts are successful when we teach like we do research: with a scientific approach, bold action, constant reflection, and peer engagement.

# Synopsis of program

The Strategic Instructional Innovations Program (SIIP) is an effort within The Grainger College of Engineering and supported by external partners like the Kern Family Foundation (KFF) and Kern Entrepreneurial Engineering Network (KEEN), to establish communities of practice and increase the impact of our educational initiatives. These communities of practice are led by engineering faculty and involve collaboration to advance excellence in teaching methods and

technologies. The projects take an engineering approach to education innovation centered around prototyping, evidence-based decision making, learning from failures, and iteration.

This year, twenty-one (21) teams—over 92 College faculty and staff—are participating in SIIP. They connect with each other to exchange and to develop ideas, and new teams will benefit (and benefit from) the larger SIIP community. See recent projects here: <a href="https://ae3.grainger.illinois.edu/programs/siip-grants">https://ae3.grainger.illinois.edu/programs/siip-grants</a>

Awards from the SIIP program are highly competitive as interest in the program grows and resources remain limited. As such, successful proposals must explicitly reflect the broader goals of the program: development and/or acceleration of best practices in teaching; research-driven approaches to teaching and learning; potential for impact, at scale; and transfer of ideas across the College and to the broader engineering education community. If your project is related to entrepreneurial mindset (EM), it is also critical that such alignment is explicit and directly connected to the mission and vision of the Kern Entrepreneurial Engineering Network (KEEN).

We are open to your ideas for education innovation, including projects that intersect with other College initiatives, such as the Siebel Center for Design, the IDEA Institute, and our partnership in the KEEN Network. Specific funding is available from KEEN and Kern Family Foundation grants to advance our goals of bringing Entrepreneurial Mindset (EM) to all undergraduate students across the College.

## **Description of SIIP funding tracks**

Startup: The Startup track is focused on bringing new ideas and faculty into the SIIP community and enabling current SIIP teams to create capacity for new efforts. The primary outcome of startup projects must be the creation of a faculty community that is invested in solving a problem in engineering education. Sample projects include pilots or proof-of-concept studies for new innovations, creating working groups to study certain challenges or opportunities, or creating a workshop/seminar series with external speakers to generate and sustain interest in a relevant problem, opportunity, or innovation (e.g., best practices in teaching diverse students). Past SIIP Start-up projects include a pilot course for teaching assistants and a study of student writing needs. Startup proposals are for one-year, non-renewable funding, but may evolve into an Implementation and Exploration project. Historically, the typical funding range for Startup proposals has been less than \$8,000.

Implementation and Exploration: This track brings research and design elements to high-impact educational initiatives. I&E proposals are for one year of funding and may be renewed for up to two additional years; successful teams may also continue as SIIP-supported projects in perpetuity without funding, with some additional consultation and assessment support.

I&E proposals may relate to any engineering education effort, but we highly encourage potential teams to consider the relationship between their projects and the goals of the Kern Entrepreneurial Engineering Network (KEEN), in which Illinois is a partner school.

I&E projects that support the purposeful integration of Entrepreneurial Mindset (EM) across the curricula may be funded by an external grant from the Kern Family Foundation (KFF) (see important note below). Student development of an Entrepreneurial Mindset is central to the KEEN Framework and our membership in the KEEN network (more information is available HERE). Successful project proposals should promote EM as an approach to promote greater authenticity of learning experiences and the empowerment of students to envision the impact of their learning on future professional endeavors. Successful project proposals will demonstrate a commitment to interdisciplinary efforts to foster *curiosity*, *connections*, *and creating value* (3 C's) in student learning experiences. Projects might include efforts related to: research in best practices in course/curricular integration of the 3 C's; redesign of current course outcomes to integrate the 3 C's in future course iterations; a course pilot of specific EM-teaching practices to measure impact on student learning; or a study of faculty perceptions and/or integration of the 3 C's in their instruction.

EM-related project teams are expected to engage within the KEEN network, both to develop their curricular revisions and instructional tools/strategies and to share their work through opportunities for publication and presentation with KEEN and beyond (e.g., ASEE). Teams will also be asked to engage with Kern Family Foundation program officers periodically to report on their work.

Historically, there is considerable variation in funding for I&E proposals (typically between \$20K-\$80K). Final funding is based upon the scope of the project and overall annual funding allotment.

Please note: EM-related projects in the I&E track, funded by the grant from the Kern Family Foundation, will receive funding which must be utilized by May 31, 2026, at which time the external KFF grant ends; to qualify for support from this grant, explicit project outcomes must be linked to the KEEN mission/EM Framework and be appropriate in scope for the funding period. Subsequent awards for EM-aligned projects beyond the grant period will be dependent on merit of the project and available funding from the College.

#### I&E projects may be either:

**Implementation-oriented** proposals are focused on improving student outcomes such as increased learning, satisfaction, or retention. Highly competitive proposals will demonstrate the potential for impact on a significant number of students. Successful proposals will demonstrate an awareness of evidence-based teaching methods or curriculum designs and will focus on translating those best practices to new/revised courses and to additional faculty.

**Exploration-oriented** proposals are focused on pioneering new, potentially wide-reaching instructional methods, technologies, programs, or policies and sharing what is learned with other faculty. Successful proposals will seek to expand or revolutionize what it means to provide a world-class education to our students and conduct thoughtful evaluations of the innovation.

Adaptation: The SIIP Adaptation track is for faculty wishing to collaborate with a current or former SIIP team to replicate an innovation in their own course setting. Past SIIP Adaptation projects have included exam revision (with the Computer-Based Testing team) and student communication skill development (with the Engineers SPEAK team). Historically, the typical funding range for Adaptation track proposals has been less than \$5,000. See **Appendix A** below for more on this track.

## Who may submit proposals?

Principal Innovators (PIs) for all proposals must be Grainger College of Engineering faculty members (tenure-track or specialized). Team members may be from any unit on campus.

- Startup: Startup teams should have at least three members, two of whom should be faculty. If needed, AE3 can help PIs who are new to SIIP assemble a team during the pre-proposal phase.
- Implementation & Exploration pre-proposals and full proposals must have at least three faculty members; we highly encourage representation of both tenure-line and specialized faculty.

#### SIIP administrative structure

- SIIP teams should meet regularly, weekly/biweekly, based on team need, as a community of practice. Faculty affiliates from AE3, our Education Innovation Fellows (EIFs), will attend these meetings to provide advice and to connect teams to relevant resources.
- 2. All SIIP teams (PI and/or team members) will be expected to participate in the following:
  - a. Fall semester community kick-off event-September
  - Mid-year appraisal (formal review and determination of continued funding)--December
  - c. Celebration of Teaching-April
- 3. SIIP teams with EM-related outcomes will also be expected to participate in KEEN programming which may include:
  - a. KEEN National Conference–January/February
  - b. KEEN Faculty Development Workshops-summertime
  - c. KEEN Card publication-ongoing

- d. Meetings w/ Kern Family Foundation program staff—as requested (1-2 times per year)
- 4. Each SIIP team will be expected to submit a proposed dissemination plan for sharing the work of the project with an internal audience at least once during the funding period; any cost associated with that dissemination plan may be assumed by AE3 and should be discussed with AE3 staff before the final proposal is submitted.
- AE3 and the consulting Fellows will work with teams to develop and to enact plans to sustain the outcomes of the projects after SIIP funding has ended; projects seeking renewal should demonstrate evidence of sustainability for full consideration of continued funding.
- 6. When relevant, AE3 will help interested teams identify opportunities to obtain external funding to supplement and extend SIIP funding, multiplying the college's investment.

## **Budget guidelines and rules**

- Project proposals should include two (2) separate and distinct budgets:
  - A preferred, itemized budget that reflects total funding necessary to achieve preferred and likely attainable outcomes for the award period; and
  - A minimum itemized budget with a reduced scope of outcomes as a condition to accept the award for the upcoming funding period.
- If funded, project teams will submit brief updates twice annually (October and March), via email, to inform AE3 of current general expenditures. In addition, teams will discuss the project budget during the mid-year appraisal in December and in any renewal proposal each April. The goal of these check-ins are to determine the relationship between proposed and actual expenses and to consider any revisions that might be necessary.
- The commitment for departmental matching funds and/or in-kind support will be factored into the funding decision and should be reflected in the overall budget. In-kind support of student funding to support projects (e.g. assistantships, hourly appointments) is highly encouraged as a demonstration of department commitment to the proposed project and likely sustainability of the project beyond SIIP funding. Project Pls should consult with their departments on any requirements for hiring students. Teams and departments may also wish to consider work study or other funding sources in hiring students on projects.
- Typically requested budget items include student (TA, RA, undergrad) support, software/equipment, and travel funds to present project findings.
- No more than \$5,000 for equipment.
- Travel funding should be minimized for each team, limiting the number of participants
  who will present related work, and should reflect the readiness of the team to
  disseminate significant results of their work as the team achieves project outcomes.
- Requests for summer salary should be avoided; if not, they must demonstrate compelling need and include explicit descriptions of intended activities.
- Overhead should not be included in the budget.
- There is no explicit cap to proposals, but PIs should be mindful of the overall budget of SIIP and the number of projects we expect to fund.

 A budget template and information about assistantship and hourly rates are available here. [We will update these documents for 25-26 as soon as possible. Please use current files for estimation purposes only.]

### **Award process**

Project identification and Pre-Proposal Process (REQUIRED for NEW Implementation & Exploration): By March 14, interested faculty teams meet to generate project ideas and submit preliminary proposals. Potential PIs are encouraged to consult with AE3 staff, current SIIP teams, Fellows and others for ideas and direction. Proposals should describe, in approximately two pages, the problem, the proposed solution, and the potential impact of the innovation. After submission, faculty teams will meet regularly with affiliates from AE3, for up to six weeks, to craft their pre-proposals into high-quality full proposals that are likely to be funded. This work will include identifying literature, local resources, and evaluation measures that will inform the proposed project. The goal is to refine the preliminary proposals such that potential pitfalls in implementation can be avoided (by clarifying expectations, ensuring team functionality, etc.). The role of the affiliates is to provide feedback on the proposal and connect the team with relevant resources.

Final proposal submission (all tracks): Full proposals must be submitted by April 30 under the signature of the department head of the PI who will confirm support for the work and that the project supports/aligns with broader goals/initiatives within the department. (separate email to <a href="mailto:jaymann@illinois.edu">jaymann@illinois.edu</a> is sufficient). Proposals should consist of a project narrative (including work plan, at most 10 pages), plan for internal dissemination of work during the funding period, list of references, biosketches of all participating faculty, and one-year budget plans (preferred and minimum). Please indicate what form(s) of financial and/or in-kind support the department will provide for the proposed project (not required for EM track). Please also indicate whether the project has other funding (e.g., an external grant).

## **Proposal Evaluation**

Proposals will be evaluated broadly on their timeliness, strategic value, sustainability, appropriateness of budget, and scholarly rigor – as well as the team's demonstrated commitment to creating a community of practice to implement and sustain efforts. Specifically, proposals will be evaluated on the following criteria:

- Required elements of proposal (see above)
- Alignment of requested funding to track
- Evidence of administrative/departmental support
- Collaborative development and ownership
- Clear and measurable faculty and/or student outcomes
- Relationship to KEEN Framework/Entrepreneurial Mindset (EM) [if applicable]

Potential for sustainability beyond the period of SIIP funding and long-term impact

Priority for funding will be given to 1) Projects that have demonstrated success within their 3-year period of eligible funding; and 2) New projects that propose unique contributions to engineering education through the SIIP community that have not been previously supported.

## **Proposal Submission**

PRE-PROPOSALS may be submitted online HERE by March 14, 2025.

FINAL PROPOSALS may be submitted online **HERE** by April 30, 2025.

Approved teams will receive funding beginning on July 1, 2025, with anticipated award notification in May 2025.

Please address questions to Jay Mann, Director, AE3 (jaymann@illinois.edu). AE3 staff and Education Innovation Fellows [click link for full list] are available to help with project ideation and proposal development.

Teams in their **first or second year** are eligible to apply for further funding. Note: Any projects funded by the Kern Family Foundation (KFF) grant must spend down any remaining or newly awarded funds by May 31, 2026, at which time the grant ends.

SIIP teams in their **third year** are welcome and encouraged to continue as a part of the SIIP community in perpetuity without funding; AE3 will provide consultant and assessment support. Current **Start-up teams** are eligible to submit a full proposal for Implementation & Exploration funding (no pre-proposal is required).

Based on your future plans, please submit the following by April 30th:

	Current SIIP Year 1 or Year 2	Current SIIP Year 3
Planning to continue in SIIP	<ul> <li>Summary of your progress this year</li> <li>"Best of" short paragraph, photo, or link that highlights a particularly positive outcome of your project</li> <li>List of any ways you have publicized your project (papers, faculty meetings, websites, etc.)</li> <li>Revised project objectives</li> <li>Timeline for next year</li> <li>Proposed budgets (preferred and minimum; please see budget guidelines and rules above) with justification and a statement of any remaining funds from this year. Please also indicate whether the project has other funding (e.g., an external grant).</li> <li>Description of ways your department is supporting your project</li> </ul>	All of Year 1 / 2 requirements (to the left), <b>PLUS:</b> • Spend-down plan for remaining funds • End date of project/final expenditures

Not planning		
to continue		
in SIIP		

- Final report (goals met, outcomes achieved, total expenditures and remaining funds)
- "Best of" short paragraph, photo, or link that highlights a particularly positive outcome of your project
- List of any ways you have publicized your project (papers, faculty meetings, websites, etc.)
- Description of ways your department has supported your project

- Final report (goals met, outcomes achieved, total expenditures and remaining funds)
- "Best of" short paragraph, photo, or link that highlights a particularly positive outcome of your project
- List of any ways you have publicized your project (papers, faculty meetings, websites, etc.)
- Description of ways your department has supported your project

Note: It is the practice of the College to pull back any remaining funds from concluded/discontinued projects without an approved and active spend-down proposal.

### **APPENDIX A. Adaptation track**

#### **Description**

The SIIP Adaptation track is focused on increasing college-wide interconnectedness and collaboration in instructional excellence. It offers a way for faculty to reproduce and/or adapt best practices from SIIP teams whose innovations are applicable to other instructional contexts. Pls (principal Innovators) will work closely with a member of a current or past SIIP team to learn about the innovation. Undergraduate or graduate hourly workers will be available to help with implementation.

SIIP Adaptation PIs will meet regularly with a member of a recent SIIP team who will provide advice and help connect teams to relevant resources.

#### **Developing the proposal**

PIs for all proposals must be Grainger College of Engineering faculty members (tenure-track or specialized). The PI may assemble a small team, but a team is not required. Team members may be faculty, academic staff, and/or students from any department on campus. Preference will be given to teams with faculty participants previously not involved in a SIIP project.

The PI must secure a commitment of collaboration from a current or previous SIIP team. A listing of recent SIIP teams, by year of engagement, can be found here: <a href="https://ae3.grainger.illinois.edu/programs/siip-grants">https://ae3.grainger.illinois.edu/programs/siip-grants</a>

<u>AE3 staff and Education Innovation Fellows</u> are available to help make contacts and connections:

#### Adaptation proposal submission and award process

- 1. Proposals should include:
  - a. A statement of the purpose of the project (the problem, the rationale for the SIIP team collaboration, and the intended outcomes).
  - b. A timeline and description of the work to be accomplished, the plan for interacting with the "source" SIIP team, and the need for student workers. Pls should recruit their own student workers.
  - c. An indication of any financial and in-kind support the department will provide for the proposed project. Such support is not required but may strengthen the proposal. Examples of previous support include faculty teaching release time, additional TA support, and equipment and space resources.

- d. A list of the team members (if any).
- 2. Proposal evaluation: Proposals will be evaluated based on their strategic value, as well as evidence of a demonstrated commitment to implementing and sustaining efforts.
- 3. Awardees receiving SIIP Adaptation funding will submit a final report on their projects and share their results at a poster session at AE3's Celebration of Teaching in April.