

Strategic Instructional Innovations Program

2023 Call for Proposals

The Grainger College of Engineering
University of Illinois Urbana-Champaign

[Goal](#)

[Who may submit proposals?](#)

[Budget guidelines and rules](#)

[Award process](#)

[Proposal Evaluation](#)

[Proposal Submission](#)

[SIIP renewals and close-outs for 2023-24](#)

[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 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, seventeen (17) teams—over 65 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:

<https://ae3.engineering.illinois.edu/siip-grants/>

We are open to your ideas for education innovation, including projects that intersect with other Grainger Engineering 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.

Entrepreneurial Mindset (EM): This track encourages the purposeful integration of Entrepreneurial Mindset (EM) across the curricula. This is central to the KEEN Framework and our membership in the KEEN network (more information is available [HERE](#)). Doing so should 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 best practices in course/curricular integration of the 3 C's; evaluation of current course outcomes to determine potential integration of 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.

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). It is anticipated that we will

be able to support a limited number of projects at budgetary levels like the Startup track (\$8,000-\$10,000) and are one-year, non-renewable. Future project funding may be available in the Implementation and Exploration track.

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; they may also continue as SIIP-supported projects in perpetuity without funding, with some additional consultation and assessment support.

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 will be funded by a grant from the Kern Family Foundation; to qualify for support from this grant, explicit project outcomes must be linked to the KEEN mission/EM Framework for full consideration. Funding from the College exists to support non-EM-related projects.

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 and EM: Startup and EM teams should have at least three faculty members. 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 members; we highly encourage representation of both tenure-line and specialized faculty.

SIIP administrative structure

1. SIIP teams will meet weekly as a community of practice. Faculty affiliates from AE3, our Education Innovation Fellows (EIFs) and Entrepreneurial Mindset Fellows (EMFs), 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
 - b. Mid-year appraisal (formal review and determination of continued funding)--December
 - c. Celebration of Teaching/SIIP digital poster session–April
 - d. At least one (1) SIIP community presentation/workshop/symposium each academic year–ongoing
3. SIIP teams (EM track and those with EM-related outcome) 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
4. 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.
5. 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

- The commitment for departmental matching funds and/or in-kind support (e.g., TA or RA support) will be factored into the funding decision and should be reflected in the overall budget. Please note: No departmental/in-kind support must be demonstrated for the EM track, though this is still encouraged.
- Typically requested budget items include student (TA, RA, undergrad) support, software/equipment, and travel funds to present project findings. Please note: EM track proposals may not contain faculty salary requests and, whenever appropriate, should consider hourly student employment (UG or GRAD) over assistantships.
- No more than \$5,000 for equipment.
- 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](#).

Award process

Project identification and Pre-Proposal Process (REQUIRED for Implementation & Exploration and EM proposals): By March 10, 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 28 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 jaymann@illinois.edu is sufficient). Proposals should consist of a project narrative (including work plan, at most 10 pages), list of references, biosketches of all participating faculty, and a one-year budget plan. Please indicate what form(s) of financial and 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, 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 and long-term impact

Proposal Submission

PRE-PROPOSALS may be submitted online [HERE](#) by **March 10, 2023**.

FINAL PROPOSALS may be submitted online [HERE](#) by **April 28, 2023**.

Approved teams will receive funding beginning on July 1, 2023, with anticipated award notification in May 2023.

Please address questions to Jay Mann, Director, AE3 (jaymann@illinois.edu).

SIIP renewals and close-outs for 2023-24

Teams in their **first or second year** are eligible to apply for further funding.

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 28th**:

	Current SIIP Year 1 or Year 2	Current SIIP Year 3
Planning to continue in SIIP	<ul style="list-style-type: none">• Summary of your progress this year• “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.)• Revised project objectives• Timeline for next year• Proposed budget 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).• Description of ways your department is supporting your project	<p>All of Year 1 / 2 requirements (to the left), PLUS:</p> <ul style="list-style-type: none">• Spend-down plan for remaining funds• End date of project/final expenditures

<p>Not planning to continue in SIIP</p>	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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. PIs (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:

<https://ae3.engineering.illinois.edu/siip-grants/>

[AE3 staff and Education Innovation Fellows](#) 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. PIs 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.