



TUEE Collaboratory

*Transforming Undergraduate Education
in Engineering (TUEE)*

University College of Engineering and Computer Science Student-Centered Professional Practice Learning (SCPPL) Initiative Founding Strategic Corporate Partner Investment Guidelines

Demonstration Model Proposed Draft as of September 9, 2025

University College of Engineering and Computer Science (UCECS) cordially invites (Name of Company) to participate as a Strategic Corporate Partner (SCP) in a two-year national pilot initiative aimed at transforming undergraduate education in engineering and computing. As an SCP, your organization will have the opportunity to contribute to the development of future curricula and cocurricular programs, gain early access to emerging talent, and play an integral role in guiding the transformation process.

UCECS is currently considering an invitation from the [TUEE Collaboratory](#) to assume a leadership position in both national and regional transformation efforts. By mid-November 2025, UCECS and its SCPs will conclude the Start-up Phase and determine whether to launch a limited demonstration pilot during the balance of the 2025-2026 academic year, while concurrently preparing for the implementation of the full comprehensive pilot throughout 2026-2027.

Four primary transformative features of the TUEE Collaboratory include:

- The initiative is designed to address the persistent "skills gap" by expediting the progression of engineering and computing students into practicing professionals before they graduate. It fosters a student-centered, interdisciplinary team-based project and programs active learning environment throughout undergraduate education.
- The model addresses the significant faculty shortage impacting the delivery of student-centered active learning. Large universities currently lack sufficient faculty to effectively coach, mentor, and provide domain expertise to student teams engaged in design projects and professional development initiatives throughout the undergraduate experience.
- Establishing informal alumni chapters with local SCPs in fall 2025 will enable UCECS alumni to provide critical mentoring and technical expertise. This initiative allows faculty to concentrate on instructional responsibilities and research activities. Additionally, alumni financial support, often matched by corporate matching programs, helps secure sustainable funding to advance engineering and computer science education.
- Alongside merit scholarships, the Enriched Learning Program (ELP) and Transfer Scholars Program (TSP) provide advanced learning opportunities and alumni mentoring for high-potential, low-income, underserved, and first-generation students.
- Another key aspect of the initiative is its financial self-sustainability from the start, without the need for start-up NSF or other Federal grants, through the small demonstration pilot (AY 2025-2026), full comprehensive pilot implementation (AY 2026-2027), and beyond.

The American Society for Engineering Education (ASEE) conducted a five-year, four-phase NSF-funded study [ASEE TUEE](#), focused on transforming undergraduate engineering education with final findings and recommendations published in 2018. The TUEE Collaboratory, a non-profit established in November 2024, is the first proposed national transformation model, with no other comprehensive models expected soon.

Founding Strategic Corporate Partners (SCPs) are asked to invest at least \$49,000 in the UCECS Startup Phase and Demonstration Pilot through June 2026. The two-year pilot ends at the close of AY 2026-2027. The SCP minimal investment for AY 2025-2026 is \$29,000 and includes:

- **Student-Centered Professional Practice Learning (SCPPL)** – \$12,000 is allocated for general support as a founding Strategic Corporate Partner (SCP) through June 2026. Up to 50% of these funds may be used for stipends for student leaders involved in developing the leadership

components of SCPPL and the Student Professional Practice Council. Additional funding may be provided at each SCP's discretion.

- **Four-year Team-based Project Design Experience** – A key element of the proposed TUEE Collaboratory transformational model is the implementation of a comprehensive four-year design experience, the first “design spine” ever implemented at a large university. During the UCECS demonstration model (2025-2026), \$6,000 will be allocated for a third-year industry sponsored one semester design project introduced in the Spring of 2026 for CS, EE and ME students. Introduction of second-year design projects at UCECS and partner community colleges will be carried out during implementation of the comprehensive plot throughout the 2026-2027 academic year. During the academic year 2026-2027, the anticipated best practice sponsored senior design (capstone) project fee will be \$22,000 per project.
- **Transfer Scholars Program (TSP)** – \$5,000 allocated toward first-year tuition and fees of a full scholarship lasting up to 2½ years. Includes paid summer internships in 2026 before fall enrollment, and interview opportunities for finalists. Starting fall 2026, scholars will establish action teams with peers and professional SCP alumni mentors involving professional development activities.
- **Enriched Learning Program (ELP)** – \$2,000 allocated – combined with TSP, UCECS alums provide coaching and mentoring of high-potential, low-income underserved and first-generation students.
- **Innovations in Career Development and Employment** with the UCECS Career Center - \$2,000 plus additional funding at the discretion of the sponsor.
- **Day on Campus with Strategic Corporate Partners (DCSCP)** –\$2,000 allocated to the February 2026 DCSCP event that will be organized by the three Action Councils and their respective Action Teams. Sponsorship levels will be determined prior to the event.

While funding is encouraged, fees are waived for the following program elements during the Start-up Phase and 2025-2026 Demonstration Model:

- **SCPPL Governance Action Councils** – Funding may be provided to the Student Professional Practice Council (SPPC), Faculty Professional Practice Council (FPPC), Professional Practice Executive Council (PPEC), and student chapters of professional societies and organizations such as ACM, ASEE, ASME, IEEE,, NSBE, , SHPE, and SWE at UCECS.
- **Student Professional Practice Scholars (SPPS)** – About 50 third-year CS, EE, and ME students will participate in industry sponsored third-year design projects in the spring 2026 semester. Students will need a 3.0+ GPA that is typically required for scholarships and internships. First and second-year students will join the SPPS cohort in spring 2026.
- **Intrapreneurial Program (IP)** – would promote entrepreneurial mindset and design thinking within organizations. The Intrapreneurial Action Team (IAT), created by PPEC and FPPC in fall 2025, includes members from faculty, students, SCPs and their alumni, and alumni at local professional chapters of national professional societies. The goal is to equip engineering and computer science majors, pursuing a minor or certificate in intrapreneurship, with skills for new product design, development, and research careers. Funding will be determined by the SCPs.
- **Team Internship Program (TIP)** begins in summer 2026. TIP is similar to UC San Diego's summer [Team Internship Program](#), TIP will feature teams of four or five rising seniors working as paid interns on real customer problems for 10-12 weeks, preparing them for best practice industry sponsored senior design capstone projects in AY2026-2027.
- **Student Organizations** – SPPS students at UCECS are members of seven national professional societies and diversity organizations: ACM, ASEE, ASME IEEE, NSBE, SHPE and SWE. Each SCP is encouraged to support these groups.
- **Alumni Chapters** – During fall 2025, each SCP will establish an informal UCECS alumni chapter to facilitate alumni coaching and mentoring of undergraduates in various projects and programs.

The [TUEE Collaboratory](#) model offers a flexible framework that enables students, alumni, and employers to collaborate with UCECS faculty and administration to enhance undergraduate education in engineering. Comprehensive pilots should be implemented across regions of the country by June 2030.