TEXAS ENGINEERING STUDENT SUCCESS CENTER

Texas Engineering Student Success Center Strategic Plan

Cultivating confidence and courage, the ESSC provides a welcoming space in which students develop the skills needed to achieve their academic and personal goals.

Through focused programming facilitated by the Equal Opportunity in Engineering (EOE) program, the Women in Engineering (WEP) program, and the 80+ engineering student organizations guided by Engineering Student Life (ESL), ESSC provides opportunities for growth and achievement while enriching students' academic experience and encouraging student development.

People

Our people — faculty, staff, students, and alumni — represent the key to becoming the highest impact public engineering school. They build and maintain the communities we rely on.

PATHWAYS TO IMPACT:

- Create a culture of innovation and creativity, calculated risk taking and impactful work
  - The ESL unit facilitates the LeaderShape Institute program in which participants explore personal values and develop leadership skills. Through self-awareness and reflection, participants identify the ways social positionality informs perspective, reaction, and interactions amongst groups. - Happening now
  - The EOE unit will facilitate Summer Bridge Program. The Engineering Summer Bridge Program is a three-week program that will be facilitated in the summer 2 session that helps acclimate incoming engineering students to the rigors of engineering coursework. – Happening by Summer 2025
- Create direct lines of feedback to ESSC staff that empower students to help steer the future of the Cockrell School
  - WEP facilitates student mentor programs like PEERs and WISE. Students that participate in these programs gain a sense of community and provide WEP professional staff feedback on the issues facing women in Engineering in Cockrell. – Happening now
  - The ESL unit supports Engineering Student Organization Presidents at monthly President's meetings and in one-on-one advising. At President Meetings, student leaders engage in impactful dialogue and provide feedback on their experience as student leaders. One-on-one advising provides organization leaders dedicated time to share their needs, challenges, and goals with ESL staff.
- Invest in our people through increased options for professional development
  - ESSC provides professional development funds for each staff member that they can use with the approval of the Director to increase their Higher Education competencies in a variety of areas- Happening now

Place

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Within the emerging tech hub of Austin, the Cockrell School will be the place where companies develop new technology, governments solve the biggest problems, and the worldwide research community converges. We are committed to improving our engineering campus, making it welcoming to all communities and partners who want to be involved in world-changing innovation.

PATHWAYS TO IMPACT:

- Create community around core research that fosters commercialization efforts
  - EOE facilitates the SRA program, a state of Texas research exchange program that empower Texas Engineering undergraduates to discover research opportunities and learn about graduate school- Happening now
  - WEP will facilitate the GLUE program, a research program for undergraduate females that emphasizes the importance of women in research in STEM - Happening by Spring 2026
  - The ESSC office helps create a space within the EER that is welcoming and aides in the creating community through student interactions, programs and initiatives and intentional conversations – Happening now
- Simplify processes for external partnerships and incentivize community-based work
  - The ESL unit created a Travel Request process to streamline travel request from student organizations. The process is designed to simplify and reduce the number of requests to individual Department chairs within Cockrell. – Happening now

Pursuits

Our Pursuits are the interconnected efforts of Experiences, Education and Research that will propel us to achieve our goals as a school and develop courageous engineers.

PATHWAYS TO IMPACT:

- Support a variety of extracurricular programs that offer students opportunities to collectively grow their teamwork, leadership, and entrepreneurial skills.
  - ESSC FIGs are designed for students to acclimate to the university and ease the transition from high school to college. Additionally, students learn skills to thrive academically, socially, and professionally. - Happening now
  - Engineering Student Organization leaders demonstrate understanding of engineering policies, resources, and essential leadership skills to successfully operate as a recognized Engineering Student Organization.
  - Gone to Engineering, facilitated by the ESL unit, enables students to identify and explore student organizations and engineering-specific resources. By attending this event, students will demonstrate an increased understanding of CSE resources and report a stronger sense of belonging within the engineering community.

    - The Student Leadership Conference, led by the ESL unit, is designed to equip Student Organization Leaders with essential leadership skills for success. - Happening by Fall 2025
- Establish a culture of service that encourages us to confront and solve societal challenge
    - Teaching Engineering Across Mexico (TEAM) – Oaxaca aims to provide college students with cultural opportunities and the ability to engage in hands-on teaching experiences with middle school students abroad. Through interactive workshops and activities, engineering students introduce fundamental engineering concepts to middle school students, inspiring them to explore and consider future careers in engineering. – Happening now
    - The Wellness Speaker Series, overseen by the ESL unit. Aims to foster community, collaboration, and resilience within the Cockrell School. Through engaging talks and interactive discussions, students will gain practical tools to enhance their physical, mental, and emotional wellness, empowering them to navigate their college experience confidently. - Happening now
- Build industry and alumni relationships to offer meaningful internship experiences, mentorship and support for innovation
    - ESSC Hospitality provides students a unique opportunity to interact with industry partners on a more intimate level around students' career development. – Happening now
    - Industry Super Bowl empowers students to make connections with professionals in their field and learn about future career opportunities. - Happening now
    - EOE and WEP Lunch and learns empower students to grow within their professional field as they make connections to corporate representatives and learn about job opportunities. - Happening now
- Increase support for study abroad programs that create an appreciation of other cultures and global engineering
    - Global leaders' week, which is facilitated by the EOE unit provides a leadership and cultural experience for students to travel abroad- Happening now

Student Development Theory

Maslow's Hierarchy of Needs

Maslow's hierarchy of needs is a theory of motivation which states that five categories of human needs dictate an individual's behavior. Those needs are physiological needs, safety needs, love and belonging needs, esteem needs, and self-actualization needs

1. Physiological needs - these are biological requirements for Human survival, e.g. air, food, drink, shelter, clothing, warmth, sex, sleep. If these needs are not satisfied the human body cannot function optimally. Maslow considered physiological needs the most important as all the other needs become secondary until these needs are met.
2. Safety needs - protection from elements, security, order, law, stability, freedom from fear.
3. Love and belongingness needs - after physiological and safety needs have been fulfilled, the third level of human needs is social and involves feelings of belongingness. The need for interpersonal relationships motivates behavior Examples include friendship, intimacy, trust, and acceptance, receiving and giving affection and love. Affiliating, being part of a group (family, friends, work).
4. Esteem needs - which Maslow classified into two categories: (i) esteem for oneself (dignity, achievement, mastery, independence) and (ii) the desire for reputation or respect from others (e.g., status, prestige). Maslow indicated that the need for respect or reputation is most important for children and adolescents and precedes real self-esteem or dignity.
5. Self-actualization needs - realizing personal potential, self-fulfillment, seeking personal growth and peak experiences. A desire “to become everything one is capable of becoming”

Astin’s Student Involvement

Alexander Astin's theory of Student Involvement explains how desirable outcomes for institutions of higher education are viewed in relation to how students change and develop as a result of being involved co-curricular. The core concepts of the theory are composed of three elements. The first, a student's "inputs" such as their demographics, their background, and any previous experiences. The second is the student's "environment", which accounts for all of the experiences a student would have during college. Lastly, there are "outcomes" which cover a student's characteristics, knowledge, attitudes, beliefs, and values that exist after a student has graduated college. Astin also created five basic assumptions about involvement.

1. Involvement requires an investment of psychosocial and physical energy.
2. Involvement is continuous, and that the amount of energy invested varies from student to student.
3. Aspects of involvement may be qualitative and quantitative.
4. What a student gains from being involved (or their development) is directly proportional to the extent to which they were involved (in both aspects of quality and quantity).
5. Academic performance is correlated with the student involvement.

Baxter-Magolda’s Self-Authorship & Learning Partnerships

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From Kegan's (1994) work, Baxter Magolda (2001) defined self-authorship as "the internal capacity to define one's beliefs, identity and social relations" (p.269). This requires people to collect, interpret, analyze, and reflect to form their own perspectives (Baxter Magolda, 2001) and subsequent interactions and decisions. Identified developmental tasks people in their 20's face:

- Values exploration
- Making sense of information gained about the world
- Determining the path one will take
- Taking steps along that path

Values of ESSC

- Communication- Effective workplace communication is crucial for building positive relationships, collaborating on projects, and achieving organizational goals. It involves a two-way exchange of information, including verbal, non-verbal, and written communication. Open communication, characterized by transparency, trust, and active listening, is vital for productivity and efficiency

- Collaboration- Collaboration in the workplace means multiple individuals working together to achieve a common goal, leveraging their diverse skills and perspectives. This approach fosters innovation, improves productivity, and enhances employee engagement and satisfaction. It involves clear communication, open-mindedness, and a willingness to share knowledge and ideas.

- Student Centered- Student-centered learning **is** a pedagogical approach where students are actively involved in their learning process, making decisions about what, when, and how they learn**.** It emphasizes student agency, promotes deeper learning, and fosters critical thinking skills.

- Kindness- Kindness in the workplace fosters a positive, productive environment by increasing job satisfaction, engagement, and loyalty. It also improves team morale, reduces stress, and enhances overall work culture. Practicing kindness at work involves showing appreciation, listening actively, offering help, and being inclusive, among other actions

Programs

Engineering Student Life - ESL

- Student Org leadership
- Student Leaders Conference
- LeaderShape

- Leadership development seminars, workshops, trainings
- Wellness
- Student Leadership Awards
- Welcome Event

Equal Opportunity in Engineering - EOE

- Recruitment programs and events
- Welcome events
- Research initiatives
- Living Learning community
- FIGS
- Orientation programs
- Industry meet and greet events
- Academic support
- Graduate School preparation
- Study Abroad Program

Women in Engineering - WEP

- Recruitment programs and events
- Welcome events
- Research initiatives
- FIGS
- First Year Programs
- Second Year programs
- Orientation programs
- Industry meet and greet events
- Academic support
- Graduate School preparation
- Service-Learning Programs
- Awards

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Program Outcomes

Program Name	Student Learning Outcome
WEP Peer Mentor Program	Students who engage with the mentor peer program will gain a sense of community. Students will be able to make connections academically, socially and personally with other students within Cockrell.
WISE Mentor Program	Students who engage with the WISE mentoring program will gain a sense of community and develop their career planning. Students will be able to make connections academically, socially and professionally with students within Cockrell.
WEP FIGs	Students will be able to acclimate to the university and ease the transition from high school to college They will learn skills to thrive academically, socially, and professionally.
WEP Lunch and Learns	Students will be empowered to grow within their professional field as they make connections to corporate representatives and learn about job opportunities.
EOE Lunch and Learns	Students will be empowered to grow within their professional field as they make connections to corporate representatives and learn about job opportunities.
SRA Program	Students will be empowered to discover research opportunities and learn about graduate school.
Industry Superbowl	Students will be able to be empowered to make connections with professionals in their field and learn about future career opportunities.
EOE FIGs	Students will be able to acclimate to the university and ease the transition from high school to college They will learn skills to thrive academically, socially, and professionally.
EOE Tutoring Program	Engineering tutees (students seeking tutoring) will be empowered by their assigned tutors to learn certain subjects and courses through EOE's tutoring program
Engineering Student	Engineering Student organization leaders will be able to demonstrate an understanding of engineering policies and use the resources provided by Student Life to successfully

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Organizations	operate as an official engineering student organization.
Leader Shape Institute	Participants will be able to define and develop personal values and leadership skills.
Gone to Engineering	New students will be able to identify student organizations and engineering resources and have an increased sense of belonging.
You Belong Here Weekend	Participants will be able to understand the many resources the ESSC office offers while they are enrolled in Cockrell School of Engineering.
Wellness Program	Students will be able to identify and explore various wellness strategies (mental, physical, emotional) through participation in the speaker series, yoga workshops, and wellness fair activities.
Student Leaders Conference	Students will gain knowledge of university resources, policies, and procedures necessary for effectively managing their student organizations.
The Graduate Mini School Series	EOE's Graduate School Miniseries will prepare undergraduates with the knowledge and resources to navigate the process of applying to graduate school.
Teaching Engineering Across Mexico	Students who participate in this program will engage in community projects that foster critical thinking and innovative problem-solving skills.
E3 Living Learning Community	Students will be able to develop skills to be more successful in college and identify resources that aid them in their college experience
Global Leaders Week	Students will be exposed to regional global cultures, markets and engineering challenges that give them a better understanding of global Engineering
ESSC Hospitality	Students will be empowered to grow within their professional field as they make intimate connections to corporate representatives and learn about job opportunities.
Summer Bridge	Students will be able to acclimate to the university and get a head start from their transition from high school to college. They will learn skills to thrive academically, socially, and professionally.

Hispanic Heritage Celebration	Students will be able to foster respect and open- mindedness for the contributions of Hispanic American Engineers as part of Hispanic Heritage month
Black Excellence in Engineering	Students will be able to foster respect and open- mindedness for the contributions of African American Engineers as part of Black History month

Assessment of Learning Outcomes

An assessment plan articulates a program's intended process and timeline for conducting program assessment activities, including collecting, analyzing, and using program assessment data. Assessment plans also help communicate the various roles and responsibilities of program leadership in the assessment process.

Value of Assessment Plan

The ESSC Program assessment plan supports efficient, effective, and sustainable assessment efforts as they can:

- Provide a reasonable scope, scale, and timeline for assessment efforts each year
- Contribute to regular documentation practices
- Support succession planning and continuity through expected and unexpected transitions

Assessment Action

Each learning outcome will have five to seven questions pertaining to the program. There will be three standard questions to assess each learning outcomes. Those standard questions are as follows:

- This Program positively contributes to my experience within the Cockrell School of Engineering
- This program fostered a stronger sense of community and support within the Cockrell School of Engineering
- I would recommend this program to a friend in the future

In addition, each program will have two additional questions that is specific to that individual program. There is also an option to have up to two additional open-ended questions that are specific per program outcome.

Formative Assessment for Improvement:

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Formative assessment is a continuous process of evaluating student learning throughout the course or program. It's used to provide feedback to students and instructors, identifying areas for improvement and guiding adjustments

Identifying Gaps and Weaknesses:

By analyzing assessment data, educators can pinpoint specific areas where students are struggling or where the overall program is not meeting its goals.

The goal of this assessment is improvement, but using assessment data for improvement is arguably the most difficult part of the assessment process. It is much easier to identify learning outcomes, plan for assessment, and collect data. Staff must be intentional in analyzing data to improve best practices to better serve our academically talented student population.