

College of Science & Engineering Technology

SHSU Strategy in Action
FY 2027 Planning and Budget Presentation

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Science and Engineering Technology

Academic Departments

- School of Agricultural Sciences
- Departments
 - Biological Sciences
 - Chemistry
 - Computer Science
 - Engineering Technology
 - Environmental and Geosciences
 - Mathematics and Statistics
 - Physics and Astronomy

Centers and Facilities

- STEM Center
- Cyber Forensics Intelligence Center
- Gibbs Ranch
- Dominey Observatory
- Pinewoods Experimental Research Laboratory (PERL)
- Natural History Collections

Part 1. Execution Accountability

FY25 Funded Initiative Outcomes

Assistant Professor of Cybersecurity

- **Original Allocation Overview** — New faculty member to support growing cybersecurity enrollment
- **Implementation Status** — Fully implemented (Welcomed Dr. Qixuan Zhu in Fall 2025)
- **Measurable Outcomes**— The BS in Cybersecurity grew 266% between Fall 2020 (68) and Fall 2023 (181), leading to this request. The program grew by an additional 28% to 231 in Fall 2025. Undergraduate and graduate admissions for Fall 2026 are up 11% and 250%, respectively, for Fall 2026.

Service Contracts for Biological Sciences Equipment

- **Original Allocation Overview** — Increased O&M budget for SEM, TEM, Confocal and Autoclaves service
- **Implementation Status** — Fully implemented
- **Measurable Outcomes or Early Indicators** — The warranties had expired, so service contracts were needed for labs to remain functional. Biology spends ~98% of their budget annually, so they could not have maintained the equipment. The funding supports over 1200 SCH annually across 7 courses, as well as 7 research labs.

Part 1. Execution Accountability

FY25 Funded Initiative Outcomes

Data Science Laboratory (HEF)

- **Original Allocation Overview** — Conversion of a standard classroom into a computer classroom laboratory
- **Implementation Status** — Partially implemented
- **Measurable Outcomes**— The laboratory was completed just before Spring 2026. Software is still coming online. It will be fully scheduled in Fall 2026. It will support the BS in Data Science, MS in Statistics and Data Science, and student support for > 580 students in STAT 3379 Statistical Methods in Practice.

New Faculty Start-Up (HEF)

- **Original Allocation Overview** — Research equipment start-up for faculty hired for Fall 2024.
- **Implementation Status** — Fully implemented
- **Early Indicators** — Equipment was purchased to support research for 5 faculty hired to fill vacant lines. These faculty taught 45 courses Fall 2024 – Fall 2025, received \$106,000 in external funding, submitted \$5.5 million in external funding, published at least 11 articles.

Part 1. Execution Accountability FY25 Keep–Stop–Start (KSS) Initiative Progress

Initiative	Status	Impacts
<u>Keep</u> Institutionalize the STEM Center	Completed	-Student support programming -\$1 million in NSF funding
<u>Keep</u> Marketing Specialist	Completed	-Updated and improved websites -Improved recruitment, student engagement, and external relations
<u>Stop</u> Blinn Partnership	Completed	-Increased enrollment through a new HCC partnership -USDA grant funding
<u>Stop</u> MS GIS	Completed	-New, industry aligned degree in Engineering Technology Management
<u>Stop</u> Graduate Student Bonus Scholarships	Completed	-Improvement in recruitment and retention
<u>Start</u> Security Operations Center (SOC)	Completed	-Increased cyber security for SHSU -Valuable student career development

Part 1. Execution Accountability

FY 26 Funded Initiative

Environmental & Geosciences Laboratory Equipment Updates (HEF)

- **Original Allocation Overview** — Replace outdated classroom laboratory chairs
- **Implementation Status** — Department is currently purchasing chairs for introductory laboratory classrooms
- **Early Indicators** — Chairs are expected in May 2026 and will serve > 700 students per semester.

Chemistry Water Purification System Replacement (HEF)

- **Original Allocation Overview** — Replace failing, 15-year-old equipment
- **Implementation Status** — System has been purchased and is currently being installed
- **Measurable Outcomes** — Functioning water purification system, serving > 200 students and 700 – 800 SCH per semester. It also serves all research labs and > \$1.5 million in external funding.

New Faculty Start-Up (HEF)

- **Original Allocation Overview** — Research equipment start-up for faculty hired in Spring 2025 for Fall 2025.
- **Implementation Status** — Still onboarding 5 new faculty, each with an active research agenda.
- **Early Indicators** — Some have purchased equipment and some have not. We are still addressing IT licenses and permission issues. Available research data includes only Fall 2025 before most equipment was purchased.

Part 1. Execution Accountability

FY26 Keep–Stop–Start (KSS) Initiative Progress

Initiative	Status	Impact
<u>Keep</u> Assessing degree plans	Ongoing	-Improved alignment to workforce demands
<u>Keep</u> Expanding STEM Center	Ongoing	-Expanded student engagement and retention initiatives -Increased grant submissions
<u>Stop</u> Under-supporting grant active faculty	Ongoing	-Reallocation of resources to improve operational agility
<u>Stop</u> Digital Marketing Campaigns	Completed	-Additional undergraduate and graduate scholarships to expand student access and improve retention
<u>Stop</u> Operating with out-of-date equipment	Ongoing	-Improved student access and retention
<u>Start</u> Expanding the SOC into a DSOC or RSOC	Ongoing	-\$2.5 million in federal funding to create a DSOC, further expanding student opportunities and community service



Part 2. Strategic Resource Alignment

Priority 1 Undergraduate Student Wages (\$123,850)

Purpose: To continue paying undergraduate student workers to support significant enrollment increase Fall 2025 cohort.

Strategic Goal: To recruit, retain, graduate, and empower students to drive sustainable growth

Pillars: Enrollment and Retention

Anticipated Impacts: Retain a 20% larger incoming Fall 2025 cohort. Maintain 70% Fall-to-Fall retention and 89% Fall-to-Spring persistence. Enroll a 5% larger incoming Fall 2026 cohort.

Part 2. Strategic Resource Alignment

Priority 2 O & M Increases (\$65,000)

Purpose: To provide basic funding for Chemistry, Engineering Technology, and Mathematics & Statistics. Each of these departments spends more than 98% of their allocated O & M, plus \$20,000 from COSET DLF, and endowment funds to meet basic teaching needs.

Strategic Goal: To recruit, retain, graduate, and empower students to drive sustainable growth

Pillars: Enrollment and Retention

Anticipated Impacts: Retain a 20% larger incoming Fall 2025 cohort. Maintain 70% Fall-to-Fall retention and 89% Fall-to-Spring persistence. Enroll a 5% larger incoming Fall 2026 cohort.

Part 2. Strategic Resource Alignment

Priority 3 Travel Support (\$21,000)

Purpose: Increase department travel funds for new faculty lines that did not come with travel funds.

Strategic Goal: Academic excellence

Pillars: Retention

Anticipated Impacts: Increases in published research and external grant submissions and student professional development opportunities

Part 3. Institutional Listening

Category

Summary

Ideas Submitted

5 distinct ideas, including 2 that were cross-divisional

Key Themes

- Student academic support through the COSET STEM Center (and the ASC)
- Department chair workload
- Community outreach through Dominey Observatory

Actions Taken

- COSET is investing in
- STEM Center
 - Department chair support and stipends, and
 - Dominey Observatory viewings

Status

Ongoing

Estimated Budget Impact

\$150,000 - \$170,000 annually