



65% students of color  
61% first-generation  
87% receiving aid  
54% women

## Science Technician: Advancing Minnesota's Workforce

This ATE project comprises four basic elements:

- (1) revision of the AS degree curriculum, renamed from Science Technician to Science and Engineering Technology (SET);
  - *Progress:* The revised SET AAS program was approved with three focus options: chemistry, biology, and engineering. The revisions provide a potential dual major with other STEM AS degrees and direct path to employment.
- (2) incorporation of authentic research experiences in collaboration with local industry partners;
- (3) provision of services to broaden participation in program;
  - *Progress:* Momentum on (2) and (3) hampered by COVID-19 forcing an inability to offer required courses that include an on-campus research component. Enrollment currently at 9, but enrollment is increasing in other STEM programs.
- (4) educational research on changes in the scientific identity and educational and career goals of students.
  - *Progress:* We collected baseline survey data from students in Principles of Chemistry 1, common to all three focus areas, during 2019-20. Preliminary highlights are shown (n = 121).

70% overall interest in Health/Medical Career, significant regression models: URMs 4.7x more likely to indicate interest, men 0.1x as likely to indicate interest, 1<sup>st</sup> generation status not significant

The program has an emphasis on industry-related internships or research experience and getting hands-on experience using high-tech instrumentation. The Science and Engineering Technology pathway leads to employment in a science laboratory or industry experience leading to a four-year transfer degree.

### learn more

Travis Mills, Chemistry Instructor  
651.403.4453  
travis.mills@saintpaul.edu

Kristyn VanderWaal Mills, Biology Instructor  
651.846.1696  
kristyn.vanderwaalmills@saintpaul.edu

**General Chemistry students' attitudes towards science:** Baseline data using scales from literature:

Intrinsic motivation toward science	33%
Positive attitude toward science	30%
Self-efficacy in science	29%
High level of science identity	13%