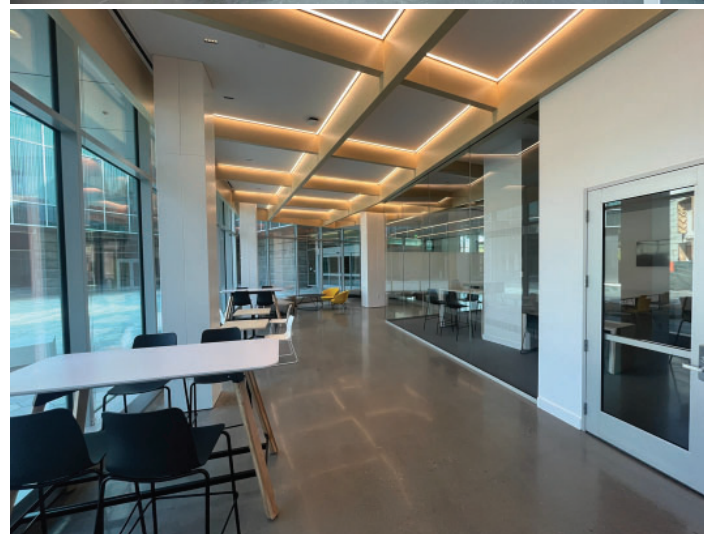
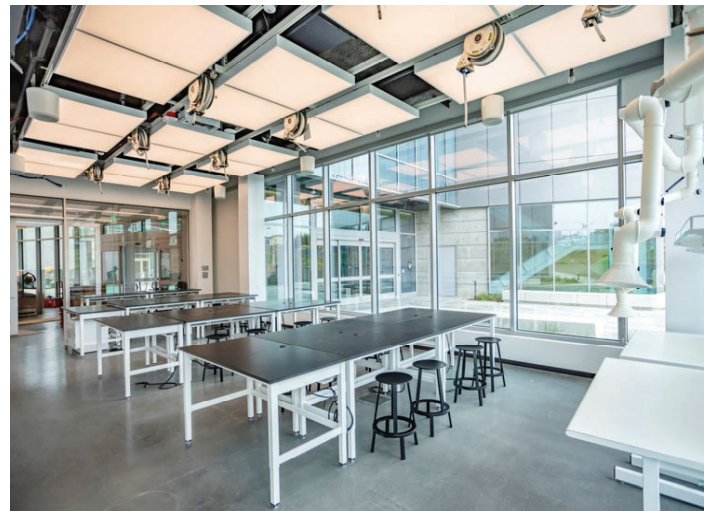




SAN FRANCISCO
STATE UNIVERSITY

Architecture and Engineering Science and Engineering Innovation Center

- The college of Science and Engineering is one of SFSU's highest performing colleges, yet the existing science building was deficient in meeting modern pedagogy and plagued by deferred maintenance. Also, there was no dedicated collaborative workspace, which limited informal mentoring opportunities and cross discipline engagement
- New 130,00 GSF state of the art Science and Engineering Innovation Center provides specialized labs and classrooms to support instruction and teaching-related research, including a large-scale engineering applied project space featuring a “strong wall/floor,” and maker space “garages.” The building fosters mentoring and collaboration by including a Student Success Center, Student Enrichment Program, and study/club meeting space at its heart space where the vertical and horizontal circulation patterns cross. The project also demolished additions to the existing science building and the remaining building is being seismically strengthened along with interior renovation to support chemistry and engineering functions.
- The new building has allowed faculty to re-invent and expand curriculum for chemistry, robotics, applied projects, and structural analysis. The campus wide programs and social spaces at its heart also increases the number of students who benefit from the new building, and created a radically welcoming feeling for all members of the campus community.



Energy Science and Engineering Innovation Center

- SFSU is committed to decarbonization, and meeting energy policy and code requirements of the State, City and County, and CSU.
- The project provides the first all-electric academic building for campus. It features a battery back-up system and rooftop PV array. To achieve the building's target EUI of 53, the project implemented strategies including a thermally robust exterior, and an innovative exhaust air energy recovery system with a heat recovery chiller for heating and cooling.
- The building's mechanical system is ventilation driven as the program is largely laboratory and classroom spaces. The high level of single use airflow in and out of the lab spaces is coupled with a need for continuous 24/7 ventilation due to fume hoods and min air change requirements. The innovative HVAC system captures the heat of the exhaust air and reuses it to heat the building. The heat recovered from the exhaust airstream is paired with a water-source heat pump in order to balance the building's heating and cooling demand.
- The microgrid created between the outdoor Battery Energy Storage System (BESS), emergency lighting inverter and 36kW photovoltaic (PV) array eliminate the need for a diesel emergency/standby generator.
- The building opened for classes in August 2024 and the project team is tracking energy performance, now that the building is fully operational. The new building replaces a 1960 era structure that was connected to the campus central gas-fired hot water plant. The decision to move from the hydronic system to an all-electric building takes pressure off the campus plant .

