

Academic Unit Planning (AUP) Lay Summary

Timeline

Launch Semester: Winter 2024

Action Plan Approval: Winter 2026

1. Self-Study Process

The ECE AUP process started from a comprehensive self-study, which involved broad participation from faculty members, staff, undergraduate and graduate students, industry partners and alumni. In particular, the following faculty members focused on four major aspects: (1) Dr. Sarah Power and Dr. Jonathan Anderson: undergraduate education, (2) Dr. Thumeera Wanasingihe, Dr. Mohsen Jamil and Dr. Stephen Czarnuch: graduate education, (3) Dr. Ashraf Khan: research and scholarship, (4) Dr. Lihong Zhang and Dr. Vlastimil Masek: community outreach and administration management. The process included program and curriculum review, analysis of enrollment, graduation, and research data, surveys and consultations. This process not only enabled the department to assess its performance in teaching, research, and service, but also helped identify opportunities for improvement.

The key findings from the self-study process include our strengths and opportunities, including strong undergraduate and graduate programs aligned with industry needs, active and diverse research portfolio (e.g., telecommunications, remote sensing, electronics and electrical), growth in emerging areas (e.g., artificial intelligence, renewable energy, and quantum technology). The main priority highlighted in the self-study document falls into the significant reduction of the faculty complement in ECE in recent years due to many retirements and budget cuts.

2. External Panel Review

An external review panel, which included internal and external experts from electrical engineering, computer engineering, and mechatronics engineering, was chaired by Dr. Ting Zou (Department of Mechanical and Mechatronics Engineering). The panel visited the department in Oct. 2024 and met with faculty, students, staff, and leadership. The panel recognized the department's strengths in teaching quality, research productivity, and industry relevance, and provided constructive recommendations to support future growth and sustainability. They concluded that the ECE Department was well-managed, and exhibited excellent performance in teaching effectiveness, providing support to students, increasing research impact and exploration in novel research directions, establishing collaborations and partnerships, and community engagement.

The panel expressed one concern on the reduced teaching capacity due to faculty member retirements and budget cuts, which led to hiring sessional instructors to deliver certain courses. They recommended that the department should address this issue as the first priority, agreeing that the ongoing searches for new faculty positions would be an effective remedy in the near future.

3. Unit Response and Action Plan

ECE welcomed the panel's recommendations and viewed them as a timely and invaluable accelerator to the departmental strategic objectives towards thriving undergraduate and graduate education, impactful research, and vivid public engagement. The Department submitted their response to the panel report in October 2025. The Department noted its agreement with the panel's

core recommendations, and drafted an action plan to address them, as submitted in December 2025. The plan outlines specific action items, which include continuing to pursue tenure-track, regular and/or teaching-term faculty position searches, reinforcing diversity in the hiring of new faculty members, implementing junior faculty members (or new instructors) mentoring system, more effectively supporting the research endeavor of the faculty members, continuing and extending ongoing projects on public engagement. Responsibility for implementing these action items is assigned to the Department Head, the Deputy Head, and the Department as a whole. As of Winter 2026, several of these action items have been in progress.