EXCELSIOR UNIVERSITY

TRANSPARENCY AT EXCELSIOR

FY 2022 ENROLLMENT:211; GRADUATES: 83

Bachelor of Science in Electrical Engineering Technology

Program Educational Objectives

Program Educational Objectives (PEOs) are broad statements that describe what graduates are expected to attain within a few years of graduation. Program Educational Objectives are based on the needs of the program's constituencies.

PEO 1: Apply general and discipline-specific concepts and methodologies to identify, analyze and solve technical problems in the electrical discipline.
PEO 2: Demonstrate an individual desire and commitment to remain technically current with, and adaptive to, changing technologies through continuous learning and self-improvement.
PEO 3: Demonstrate independent thinking, function effectively in team-oriented settings, and maintain a high level of performance in a professional/industrial environment.
PEO 4: Communicate effectively in written and oral forms in a professional/industrial environment.
PEO 5: Perform ethically and professionally in business, industry, and society.
PEO 6: Demonstrate and utilize leadership principles in the field of electrical engineering technology.

Program / Student Learning Outcomes: What Will I Learn?

Select an outcome statement to see the related measures and results.

Graduates of the Bachelor of Science in Electrical Engineering Technology will be able to:

1. Apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the EET discipline.
2. Demonstrate an ability to design systems, components, or processes meeting specified needs for broadly defined engineering problems appropriate to the EET discipline.
3. Apply written, oral, and graphical communication in broadly defined technical and non-technical environments; and be able to identify and use appropriate technical literature.
4. Conduct standard tests, measurements, and experiments and be able to analyze and interpret the results to improve processes.
5. Function effectively as a member as well as a leader on technical teams, and apply project management techniques in team project activities.

Assessment Methodology

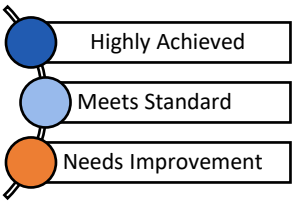
Metrics, Assessments, and Levels of Achievement

The table below provides a brief overview of the measures selected to assess program outcomes for the Bachelor of Science in Electrical Engineering Technology program. Assessment of program outcomes includes both direct and indirect measures. Benchmarks have been established to differentiate between three levels of program outcome achievement (highly achieved, meets standard, and needs improvement). These three levels of achievement are color coded and used in the section below to indicate the level of achievement for each measure, for each learning outcome.

Metric Type	Direct Measures		Indirect Measures	
Assessments	Integrated Technology Assessment Portfolio	Course-Embedded	Exit Alumni Survey	One-Year Post-graduation Alumni Survey*
Metrics	The percentage of the ELEC 495 students who receive a satisfactory rating or higher on the given rubric criteria for the learning statements and supporting evidence for the related student outcome.	The percentage of the students who receive a grade of B or higher on two selected course embedded assessments.	The mean of the graduates' perceptions of their achievement of the related program outcomes (on a 6-pt Likert-type scale).	The mean of the graduates' perceptions of their achievement of the related program outcomes (on a 6-pt Likert-type scale).
Highly Achieved	≥ 85%		Mean ≥ 5%	
Meets Standard	70 - 84%		4.0 - 4.99	
Needs Improvement	< 70%		Mean < 4	

Note: The results of the one-year post-graduation survey are used as a reference to provide a longitudinal perspective on students' attainment of program (student) outcomes.

Key:



Program (Student) Outcome Achievement Results

May 2021 Term through March 2022 Term

Program (Student) Outcome		Direct Measure(s)			Indirect Measures	
1	Apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the EET discipline.	ELEC 495 Capstone: M3A1 Portfolio	ELEC 152 M1A1 Textbook Assignment	ELEC 345 M1A1 Textbook Assignment	Exit Survey	One-Year Survey
		90%	100%	100%	*	*
		n = 57	n = 46	n = 14		
2	Demonstrate an ability to design systems, components, or processes meeting specified needs for broadly defined engineering problems appropriate to the EET discipline.	ELEC 495 Capstone: M3A3 Portfolio	ELEC 370 M6A2 Lab	ELEC 331 M8A3 Design Project Report	Exit Survey	One-Year Survey
		94%	92%	78%	*	*
		n = 57	n = 36	n = 18		
3	Apply written, oral, and graphical communication in broadly defined technical and non-technical environments; and be able to identify and use appropriate technical literature.	ELEC 495 Capstone: M4A1 Portfolio	ELEC 307 M8A2 Report	ELEC 345 M7A3 Term Paper Part 3	Exit Survey	One-Year Survey
		91%	89%	86%	*	*
		n = 56	n = 28	n = 14		
4	Conduct standard tests, measurements, and experiments and be able to analyze and interpret the results to improve processes.	ELEC 495 Capstone: M4A3 Portfolio	ELEC 160 M6A2 Lab	ELEC 360 M3A2 Lab	Exit Survey	One-Year Survey
		95%	96%	88%	*	*
		n = 57	n = 47	n = 17		
5	Function effectively as a member as well as a leader on technical teams, and apply project management techniques in team project activities.	ELEC 495 Capstone: M5A1 Portfolio	ELEC 161 M8A5 Team Project	ELEC 306 M8A3 Team Project	Exit Survey	One-Year Survey
		91%	98%	95%	*	*
		n = 58	n = 40	n = 22		

**An insufficient number of responses (i.e., less than 5) were received so no data is reported.*

Capstone Exam Results

A comprehensive capstone examination has been administered to all baccalaureate degree students enrolled in ELEC 495 Integrated Technology Assessment since September 2010. The capstone examination consists of 118 objective questions that assess the most common and most important topics and skills in the six core content areas and the student's respective concentration within the College's baccalaureate degree electrical engineering technology curriculum.

From May 2021 term through March 2022 term, the total number of students who took the capstone exam was 74. The mean score on each of the program's core content areas is shown below:

- 94.1% - Basic Concepts of Electricity
- 94.8% - Alternating Current Circuit Concepts
- 96.5% - Basic Circuit Analysis Methods
- 94.4% - Digital Electronics
- 87.4% - Analog Electronics
- 92.5% - Microcontrollers and Microprocessors