ELECTRICAL AND COMPUTER ENGINEERING MS

The MS in Electrical and Computer Engineering is designed to serve those students who wish to obtain advanced knowledge in the design of high-speed electronic systems or computer-based systems. This knowledge helps prepare students for a doctoral program or an intermediate level position in the industry.

Requirements for the MS in Electrical and Computer Engineering

Completion of all requirements as established by the department graduate committee, the graduate advisory committee, and Graduate Studies, to include:

- 1. Completion of an approved program consisting of 30 units of 400/500/600-level courses as follows:
 - a. Completion of at least 18 units of approved 600 level elective courses.
 - b. Completion of the remaining units with 400, 500, or 600-level courses.
 - c. At least 18 units, including a thesis, project, or culminating activity, must be in Electrical and Computer Engineering (EECE) courses; remaining units may be selected from electrical or computer engineering or in related areas with the approval of the Graduate Coordinator.
 - d. At least 18 of the units required for the degree must be 600level Electrical and Computer Engineering (EECE) courses.
- 2. Completion and final approval of one of the following three plans as specified by the graduate advisory committee:
 - a. Thesis Plan (Plan A). This plan includes 24 units of coursework and 6 units of thesis research (EECE 699T). Research may be theoretical or applied, but must reflect an individual in-depth study into an approved topic. This plan requires a formal research thesis which must be submitted to the Office of Graduate Studies for approval and accession to the library.
 - b. Project Plan (Plan B). Requirements for this plan consist of 27 units of coursework and 3 units of project preparation (EECE 699P). The project must show how analysis and design have been applied to a particular area of electronic or computer engineering. A written project description must be submitted to the Office of Graduate Studies for approval and accession to the library.
 - c. Culminating Activity (Plan C). Requirements for this plan consist of 27 units of coursework and 3 units of EECE 693 Research Methods in Electrical and Computer Engineering.
- 3. Approval by the Graduate Coordinator and the Graduate Council on behalf of the faculty of the University.

Course	Title	Units	
Core Requirement			
EECE 664	Machine Learning for Engineers	4	
Electives			
Select 14 units	14		
Select 12 units	12		
Total Units		30	

Graduate Grading Requirements

All courses in the major (with the exceptions of Comprehensive Examination - 696, Independent Study - 697, Master's Project - 699P, and Master's Thesis - 699T) must be taken for a letter grade, except those courses specified by the department as ABC/No Credit (400/500-level courses), AB/No Credit (600-level courses), or Credit/No Credit grading only. A maximum of 10 units combined of ABC/No Credit, AB/No Credit, and Credit/No Credit grades may be used on the approved program (including 696, 697, 699P, 699T and courses outside the major). While grading standards are determined by individual programs and instructors, it is also the policy of the University that unsatisfactory grades may be given when work fails to reflect achievement of the high standards, including high writing standards, expected of students pursuing graduate study.

Students must maintain a minimum 3.0 grade point average in each of the following three categories: all coursework taken at any accredited institution subsequent to admission to the master's program; all coursework taken at Chico State subsequent to admission to the program; and all courses in the approved master's degree program. Failure to maintain a 3.0 average in any category will result in academic notice in the master's program. Failure to remedy the deficiency within one semester with appropriate courses approved by the program coordinator may result in disqualification from the master's program. See Graduate Education Policies (https://catalog.csuchico.edu/graduaterequirements/graduate-education-policies/#academicstanding) for more information.

In addition, students may not count more than two courses in which they receive a grade of C toward the approved program.

Continuous enrollment is required. At the discretion of the academic program, a maximum of 30 percent of the units counted toward the degree requirements may be special session credit earned in nonmatriculated status combined with all transfer coursework. This applies to special session credit earned through Open University, or in courses offered for academic credit through Professional & Continuing Education. Correspondence courses and UC Extension coursework are not acceptable for transfer.

Graduate Time Limit

All requirements for the degree are to be completed within five years of the end of the semester of enrollment in the oldest course applied toward the degree. See Master's Degree Requirements (https:// catalog.csuchico.edu/graduate-requirements/masters-degreerequirements/) in the *University Catalog* for complete details on general degree requirements.

Graduate Requirement in Writing Proficiency

All students must demonstrate competency in writing skills as a requirement for graduation. Electrical engineering students demonstrate writing competence by successfully completing EECE 699T, EECE 699P, or EECE 693.

Prerequisites for Admission to Conditionally Classified Status

1. Satisfactory grade point average as specified in Graduate and Postbaccalaureate Admission Requirements (https:// catalog.csuchico.edu/graduate-requirements/graduate-postbaccalaureate-admission-requirements/).

- 2. Approval by the department and Graduate Studies.
- 3. A professionally accredited baccalaureate in electrical or computer engineering, or an equivalent approved by Graduate Studies.

Prerequisites for Admission to Classified Status

In addition to any requirements listed above students must have completed background preparation courses equivalent to EECE 315, EECE 344, EECE 365, and MATH 260.

All required undergraduate Electrical and Computer Engineering (EECE) courses must be taken for a letter grade, and a grade of C or higher must be earned in each course. Students are required to complete the background courses, if needed, immediately as a matter of reasonable progress toward the master's degree.

Advancement to Candidacy

In addition to any requirements listed above:

- 1. Formation of the graduate advisory committee in consultation with the Graduate Coordinator.
- 2. Development of an approved program, including a thesis or project proposal if the thesis or project plan is chosen, in consultation with the Graduate Coordinator.
- 3. Classified graduate standing and completion at the University of at least nine units of the proposed program with a minimum 3.00 grade point average.

Definition of Blended Programs

A blended bachelor's and master's degree program combines an existing Chico State bachelor's degree with an existing Chico State master's degree; the blended program allows up to 12 units of the graduate program units to be double-counted at the undergraduate level, for a minimum of 138 units to receive both degrees. Students who complete a blended program will receive both a bachelor's and master's degree. Upon completion of 120 semester units and with the completion of all requirements for the bachelor's degree, students in blended programs will be awarded the bachelor's degree. Upon completion of the requirements for the master's degree, students will be awarded the master's degree.

Students interested in applying to a blended program must be enrolled in a bachelor's degree program at Chico State and must meet and maintain the minimum GPA of the existing master's degree entrance requirements for all bachelor's coursework completed at the time of the application to the blended program, or show promise to reach this level as determined by the program. Once admitted to the blended program, students shall not be required to apply for admission to the master's program.

Blended BS + Electrical and Computer Engineering MS Eligibility

The blended BS + MS is for highly motivated, well-qualified students. The program allows a student to apply after completing at least 90 units toward their bachelor's degree with a minimum GPA of 2.5

Application Procedure

Application deadlines: April 1 for fall start, November 1 for spring start.

Students who meet the eligibility criteria may submit an application for admission to the blended program (https://csuchico.my.site.com/ BlendedProgram/s/). Formal application through Cal State Apply is not necessary and the student is not required to pay an application fee. GRE scores are not required. Students must meet the requirements outlined below to change to blended graduate status and continue toward the master's degree.

Grading Requirement

Once in the blended program, students must maintain a minimum 3.0 GPA during their remaining undergraduate and graduate semesters.

Transition to Graduate Status

Students can transition to the graduate program after completing all undergraduate degree requirements with a minimum 2.5 GPA in all coursework. The Office of Graduate Studies and the Graduate Coordinator will verify graduate program eligibility at the end of the semester in which the bachelor's degree is completed. Qualified students change to graduate status effective the following semester.

Requirements for the Blended Computer Engineering BS + Electrical and Computer Engineering MS

The blended program allows these courses to count toward both degrees.

Course	Title	Units
EECE 490AW	Engineering Profession and Design (W)	4
EECE 490B	Engineering Economics and Project Implementation	4
EECE 525	High-Performance Computer Architecture	4
Total Units		12

Requirements for the Blended Electrical/Electronic Engineering BS + Electrical and Computer Engineering MS

The blended program allows these courses to count toward both degrees.

Course	Title	Units
EECE 465	Digital Signal Processing	4
EECE 490AW	Engineering Profession and Design (W)	4
EECE 490B	Engineering Economics and Project Implementation	4
T		10

Total Units

12