

MSECE Curriculum Guide

Thesis Option A Degree Requirements

- A minimum of 45 credits is required.
- Required Core Courses (15 credits). Students select 3 courses (15 credits) from the courses listed under Core Courses.
- Required Depth/Elective Courses (15 credits). Students select 3 courses (15 credits) from the courses listed under Commonly Offered Depth/Elective Courses.
- Optional Courses (5 credits maximum). Non-TECE coded courses, 4XX or above.

Required Thesis Credits (15 credits). TECE 700. Students cannot begin taking thesis credits until the Required Core Courses are completed. Students can expect to take these credits over their last 2 - 3 quarters in the program.

Thesis Option A Sample Schedule

AUTUMN '24	WINTER '25	SPRING '25	AUTUMN '25	WINTER '26
TECE Core (5 credits)	TECE Core (5 credits)	TECE Elective (5 credits)	TECE 700 (10 credits)	TECE 700 (5 credits)
TECE Core (5 credits)	TECE Elective (5 credits)	TECE Elective (5 credits)		

Thesis Option B Degree Requirements

- A minimum of 45 credits is required.
- Required Core Courses (15 credits). Students select 3 courses (15 credits) from the courses listed under Core Courses.
- Required Depth/Elective Courses (20 credits). Students select 4 courses (20 credits) from the courses listed under Commonly Offered Depth/Elective Courses.
- Optional Courses (5 credits maximum). Non-TECE coded courses, 4XX or above.

Required Thesis Credits (10 credits). TECE 700. Students cannot begin taking thesis credits until the Required Core Courses are completed. Students can expect to take these credits over their last 2 - 3 quarters in the program.

Thesis Option B Sample Schedule

AUTUMN '24	WINTER '25	SPRING '25	AUTUMN '25	WINTER '26
TECE Core (5 credits)	TECE Core (5 credits)	TECE Elective (5 credits)	TECE Elective (5 credits)	TECE 700 (5 credits)
TECE Core (5 credits)	TECE Elective (5 credits)	TECE Elective (5 credits)	TECE 700 (5 credits)	

Capstone Project Option Degree Requirements

- A minimum of 45 credits is required.
- Required Core Courses (15 credits). Students select 3 courses (15 credits) from the courses listed under Core Courses.
- Required Depth/Elective Courses (25 credits). Students select 5 courses (25 credits) from the courses listed under Commonly Offered Depth/Elective Courses.
- Optional Courses (5 credits maximum). Non-TECE coded courses, 4XX or above.

Required Capstone Credits (5 credits). TECE 599. Students cannot begin taking capstone credits until the Required Core Courses are completed. Students can expect to take these credits over their last 1 - 2 quarters in the program.

Capstone Project Sample Schedule

AUTUMN '24	WINTER '25	SPRING '25	AUTUMN '25	WINTER '26
TECE Core (5 credits)	TECE Core (5 credits)	TECE Elective (5 credits)	TECE Elective (5 credits)	TECE 599 (5 credits)
TECE Core (5 credits)	TECE Elective (5 credits)	TECE Elective (5 credits)	TECE Elective (5 credits)	

For detailed Course Descriptions, please visit the UW Tacoma Course Catalog:

<https://washington.edu/students/crscatt>

Core Courses: All students take at least 3 (15 credits) of these courses regardless of the degree-completion option.

TECE 510: Advanced Computer Architecture TECE 512: Advanced Embedded Systems
TECE 521: Advanced VLSI Communication TECE 531: Advanced Power System Operation
TECE 539: Advanced Power Electronics TECE 551: Control Systems Design
TECE 555: Machine Learning for ECE TECE 563: Modern Signal Processing
TECE 565: Advanced Random Signal Processing

Commonly Offered Depth/Elective Courses: Thesis students take at least 4 (20 credits) of these courses. Capstone project students take at least 5 (25 credits) of these courses.

TECE 510: Advanced Computer Architecture TECE 512: Advanced Embedded Systems

TECE 514: Distributed Systems for ECE

TECE 516: Graphics Processing Unit Architecture

**Prerequisite: Minimum grade of 2.70 in TECE 510*

TECE 521: Advanced VLSI Communication TECE 523: Wireless IC Design

TECE 531: Advanced Power System Operation TECE 533: Renewable Energy Systems

TECE 537: Generalized Theory of Electrical Machines and Drives TECE 539: Advanced Power Electronics

TECE 551: Control Systems Design TECE 553: Digital Control Systems TECE 556: Nonlinear Systems

TECE 557: Optimal and Robust Control TECE 563: Modern Signal Processing

TECE 565: Advanced Random Signal Processing TECE 567: Digital Communications

TECE 569: Wireless Communications TECE 572: Microwave Electronics TECE 573:

Advanced Electromagnetics TECE 590: Special Topics in ECE

TECE 600: Independent Study or Research (1 - 5 credits)

Variable credits. Can count up to 5 credits maximum towards Depth/Elective Course credit requirements. Requires a Graduate Faculty Advisor and submitted [Independent Registration Form](#) prior to registration.

TECE 601: Internship (1 - 5 credits).

Variable credits. Credits do not count towards degree requirements. Requires a Graduate Faculty Advisor, Internship Sponsor, and submitted [Internship Registration Form](#) prior to registration.

Required Thesis Credits

TECE 700: Master's Thesis (1 - 15, maximum 15).

Variable credits. Requires a Master's Supervisory Committee and a submitted [Thesis Registration Form](#) prior to registration.

Required Capstone Credits

TECE 599: Capstone (1 - 10, maximum 10).

Variable credits. Requires a Master's Supervisory Committee and a submitted [Capstone Registration Form](#) prior to registration.