



To: Randy Smith, Vice Provost for Academic Programs, Office of Academic Affairs
From: Cory Matyas, Assistant Dean for Curriculum and Assessment
Date: September 1, 2026

The Department of Electrical and Computer Engineering requests adding ECE 5024, Introduction to Hardware Security, to the approved technical electives in the Electronic Circuits domain for Electrical Engineering and the Cybersecurity domain for Computer Engineering. The department requests that the option apply both to students following the Autumn 2026 curriculum and to students on earlier curricula, providing an additional elective choice without changing degree requirements.

The Engineering College Committee on Academic Affairs met on September 1, 2026 and reviewed this proposal as an informational item. There were no questions or concerns and a College-level record of support for this proposal was created.

Please find details attached.

Electrical and Computer Engineering Program Update

For Consideration by the CCAA

Dr. Betty Lise Anderson, Associate Chair, ECE

7/10/2026

1) Program curricula change request detail

The Department of Electrical and Computer Engineering department is requesting a curriculum update to our Technical Electives for the Electrical Program of Study and Computer Engineering Program of Study. The request is to add our brand new course ECE 5024, Introduction to Hardware Security to our Circuits domain for our Electrical Engineering Program of Study and to our Cybersecurity domain for our Computer Engineering Program of Study. We would like to add ECE 5024 to the list of approved technical electives for students following the Autumn 2026 curriculum, as well as for students who began their studies under the previous curriculum (prior to Autumn 2026).

Rationale for the update

The ECE department introduced a new course.

2) Effective Semester: As soon as possible

3) We are requesting that this change apply to all Electrical and Computer Engineering students since this request allows for more options.

College / Degree Requirements ^{a, b}		
Requirement	Course Options	Hours
MATH 1151*, 1172*, (Math & Quantitative Reasoning / Data Analysis)		10
PHYSICS 1250* (Nat Sci)		5
ENGR 1181.0x, 1182.0x		4
ENGR 1100.01		1
	Total	20

Bachelor of Science Electrical and Computer Engineering - *Specialization: Computer Engineering*

Students in this major will complete a minimum of 128 hours outlined as follows.

General Education Requirements		
Requirement	Course Options	Hours
GE Launch Seminar	ACADAFF 1201	1
Foundations: Writing and Information Literacy	<i>Student Choice</i>	3
Foundations: Mathematical & Quantitative Reasoning/Data Analysis	<i>Student Choice*</i>	0-5
Foundations: Literary, Visual and Performing Arts	<i>Student Choice</i>	3
Foundations: Historical & Cultural Studies	<i>Student Choice</i>	0-3
Foundations: Natural Science	<i>Student Choice*</i>	0-5
Foundations: Social & Behavioral Sciences	<i>Student Choice</i>	3
Foundations: Race, Ethnic and Gender Diversity	<i>Student Choice</i>	3
Theme: Citizenship for a Diverse & Just World	<i>Student Choice*</i>	4
Theme: Student Choice	<i>Student Choice</i>	4
GE Reflection	Capstone**	Embedded into Major Core Capstone
Total		21-34

Major Coursework ^{a, b}		
Course	Title	Hours
Major Core		
ECE 2060	Digital Logic	3
ECE 2020	Analog Systems & Circuits	3
ECE 2050	Discrete Time Signals & Systems	3
ECE 2560	Microcontrollers	2
CSE 2221	Software Development I	4
ECE 3020	Intro to Electronics	3
CSE 2321	Foundations I	3
CSE 2231	Software Development II	4
ECE 3027	Electronics Lab	1
ECE 3561	Advanced Digital Design	3
ECE 5362	Computer Architecture Design	3
ECE 3567	Microcontrollers Lab	1
ECE 3906	Capstone Design I	4
ECE 4905**	Capstone Design II	3
Total		40
Required Non-Major General Courses		
PHYSICS 1251	E&M, Waves, Optics, Modern Physics	5
CSE 1222	Introduction to Computer Programming in C++ for Engineers and Scientists	3
ISE 2040	Engineering Economics	2
MATH 2173	Engineering Math B	3
MATH 2174	Linear Algebra and Differential Equations	3
STAT 3470	Introduction to Probability and Statistics for Engineers	3
PHIL 1332, 2338, 2332.01 or 2332.02	Ethics in the Professions: Introduction to Engineering Ethics / Computing Ethics for a Just and Diverse World	3-4
Total		22-23
Required Technical / Directed / Targeted Electives; Career Courses		
Technical	List of courses organized by domains.	12
Directed	List of courses	13
Total		25

Here is a copy of our current technical elective list for computer engineering students, highlighted you will find the course we are trying to add:

Major Technical Electives (choose at least 12 hours)
Humans & Justice: ECE 5050 (3), ECE 5550 (3)
VLSI & Computer Aided Design: ECE 5530 (3), ECE 3030 (3), ECE 4021 (3), ECE 5020 (3), ECE 5021 (3), ECE 5025 (3), ECE 5560 (3)
Cyber Security: ECE 5024 (3) , ECE 5555 (3), ECE 5561 (3), ECE 5567.01 (3), ECE 5567.02 (3)
Machine Learning: ECE 5500 (3), ECE 5307 (4), ECE 5460 (3)
Signal Processing and Application: ECE 3050 (3), ECE 5200 (3), ECE 5206 (3), ECE 5013 (3), ECE 5000 (3)
Robotics & Control: ECE 3050 (3), ECE 3551 (3), ECE 5200 (3), ECE 5307 (4), ECE 5463 (3), ECE 5500 (3),
Computer Networking: CSE 3461 (3), ECE 5101 (3), ECE 4567 (4)
Computer Architecture & Embedded Systems: ECE 5560 (3), ECE 5465 (3), CSE 2431 (3), ECE 4567 (4), ECE 5466 (3), CSE 5441 (3)
Operating Systems & Databases: CSE 2451 (2), CSE 2421 (4), CSE 2431 (3), CSE 3241 (3), CSE 3430 (3)
Additional Breadth: Any ECE course not on this list (except ECE 2300 and ECE 2360)

Bachelor of Science Electrical and Computer Engineering [Specialization: Electrical Engineering]

Students in this major will complete a minimum of 128 hours outlined as follows.

General Education Requirements		
Requirement	Course Options	Hours
GE Launch Seminar	GENED 1201	1
Foundations: Writing and Information Literacy ^a	<i>Student Choice</i>	3
Foundations: Mathematical & Quantitative Reasoning/Data Analysis ^a	<i>Student Choice*</i>	0-5
Foundations: Literary, Visual and Performing Arts ^a	<i>Student Choice</i>	3
Foundations: Historical & Cultural Studies ^a	<i>Student Choice</i>	0-3
Foundations: Natural Science ^a	<i>Student Choice*</i>	0-5
Foundations: Social & Behavioral Sciences ^a	<i>Student Choice</i>	3
Foundations: Race, Ethnic and Gender Diversity ^a	<i>Student Choice</i>	3
Theme: Citizenship for a Diverse & Just World ^b	<i>Student Choice*</i>	4
Theme: Student Choice ^b	<i>Student Choice</i>	4
GE Reflection	Capstone**	Embedded into Major Core Capstone
Total		21-34

College / Degree Requirements ^{a, b}		
Requirement	Course Options	Hours
MATH 1151*, 1172*, (Math & Quantitative Reasoning / Data Analysis)		10
PHYSICS 1250* (Nat Sci)		5
ENGR 1181.0x, 1182.0x		4
ENGR 1100.01		1
Total		20

Major Coursework ^{a, b}		
Course	Title	Hours
Major Core		
ECE 2060	Digital Logic	3
ECE 2020	Analog Systems & Circuits	3
ECE 2050	Discrete Time Signals & Systems	3
ECE 2560	Microcontrollers	2
ECE 3010	RF & Optical Engineering	3
ECE 3020	Intro to Electronics	3
ECE 3030	Semiconductors and Electronic Devices	3
ECE 3040	Energy & Power Systems	3
ECE 3050	Signals & Systems	3
ECE 3027	Electronics Lab	1
ECE 3906	Capstone Design I	4
ECE 4905**	Capstone Design II	3
Total		34
Required Non-Major General Courses		
PHYSICS 1251	E & M, Waves, Optics, Modern Physics	5
CHEM 1250	General Chemistry for Engineers	4
CSE 1222	Introduction to Computer Programming in C/C++ for Engineers and Scientists	3
ISE 2040	Engineering Economics	2
MATH 2173	Engineering Math B	3
MATH 2174	Linear Algebra and Differential Equations	3
STAT 3470	Introduction to Probability and Statistics for Engineers	3
PHIL 1332, 2338, 2332.01, 2332.02	Ethics in the Professions: Introduction to Engineering Ethics / Computing Ethics for a Just and Diverse World	3-4
Total		26-27
Required Technical / Directed / Targeted Electives; Career Courses		
Technical Electives	List of courses	16
Directed Electives	List of courses	11
Total		27

General Education	21-34
College / Degree	20
Major Core	34
Required Non-Major	26-27
Technical, Directed, Targeted Electives; Career Courses	27
Minimum Total Credit Hours for Degree	128

Here is a copy of our current technical elective list for electrical engineering students,
highlighted you will find the course we are trying to add:

Major Technical Electives (choose at least 16 hours)
Communication and Digital Signal Processing Domain: ECE 5000 (3), ECE 5101 (3), ECE 5200 (3), ECE 5206, ECE 5400 Labs: ECE 5307 (4)
Computer Domain: ECE 3561 (3), ECE 5362 (3), ECE 5460 (3), ECE 5463 (3), ECE 5466 (3), ECE 5560 (3), ECE 5561 (3), ECE 5567.01 (3), ECE 5567.02 (3) Labs: ECE 3567 (1), ECE 4567 (4)
Control Systems Domain: ECE 3551 (3), ECE 5050 (3), ECE 5500 (3), ECE 5551 (3), ECE 5553 (3), ECE 5554 (3), ECE 5555 (3)
Electronic Circuits Domain: ECE 4021 (3), ECE 5020 (3), ECE 5021 (3), ECE 5022 (3), ECE 5023 (3), ECE 5024 (3) ECE 5120 (3) Labs: ECE 5027 (4), ECE 5227 (4)
Electromagnetics, Microwaves, and Electro-optics Domain: ECE 5010 (3), ECE 5011 (3), ECE 5012 (3), ECE 5013 (3), ECE 5510 (3) Labs: ECE 5017 (4)
Sustainable Energy and Power Systems Domain: ECE 5025 (3), ECE 5041 (3), ECE 5042 (3), ECE 5043 (3), ECE 5244 (3) Labs: ECE 3047 (1), ECE 5127 (1), ECE 5047 (3)
Solid State, Electronics, and Photonics Domain: ECE 5031 (3), ECE 5033 (3), ECE 5131 (3) ECE 5132 (3), ECE 5530 (3), ECE 5832 (3), ECE 5833 (3) Labs: ECE 5037 (4) ECE 5537 (4)
Humans & Justice: ECE 5050 (3), ECE 5550 (3)