PURDUE UNIVERSITY

Computer Engineering
College of Engineering

Code-BSCmpE
125 Credits

Students must earn an overall graduation GPA of at least 2.000

Major Courses (49 credits) (https://engineering.purdue.edu/ECE/Academics/Undergraduates/UGO/pdf/bscmpe.pdf)

(An overall 2.000 cumulative GPA or better in these courses is required)

Required ECE Courses (47 cr.)

_____ (0) ECE 20000 ECE Sophomore Seminar
_____ (3) ECE 20100 Linear Circuit Analysis I
_____ (3) ECE 20200 Linear Circuit Analysis II
_____ (1) ECE 20700 Electronic Measurement Techniques
_____ (1) ECE 20800 Electronic Devices and Design Lab
_____ (3) ECE 25500 Electronic Circuit Analysis and Design
_____ (3) ECE 26400 Advanced C Programming
_____ (4) ECE 27000 Introduction to Digital System Design
_____ (4) ECE 46800 Intro to Compilers &Trans. Engr. OR ECE 46900 Operating Systems Engineering
_____ (4) ECE 47700 Digital Systems Senior Project
_____ (3) ECE 30100 Signals and Systems
_____ (3) ECE 30200 Probabilistic Methods in ECE
_____ (2) ECE 33700 ASIC Design Laboratory
_____ (4) ECE 36200 Microprocessor Systems and Interfacing
_____ (1) ECE 36400 Microprocessor Systems and Interfacing
_____ (3) ECE 36800 Data Structures
_____ (1) ECE 40000 Pro. Development and Career Guidance
_____ (4) ECE 43700 Computer Design and Prototyping

Computer Engineering Selective (2 cr.) (https://engineering.purdue.edu/ECE/Academics/Undergraduates/UGO/CourseInfo/coursesBSCmpEElectives)

_____ ( ) _____

Other Department/Program Course Requirements (70 credits)

General Engineering Requirement (10 cr.)

_____ (2) ENGR 13100 Transforming Ideas to Innovation I
_____ (2) ENGR 13200 Transforming Ideas to Innovation II
_____ (3) CS 15900 C Programming for Engineers
_____ (3) Engineering Breadth Selective (https://engineering.purdue.edu/ECE/Academics/Undergraduates/UGO/pdf/eng.pdf)

Mathematics Requirement (21 cr.)

_____ (4) MA 16500 Analytic Geometry and Calculus I (satisfies *Quantitative Reasoning Selective* for core)
_____ (4) MA 16600 Analytic Geometry and Calculus II
_____ (4) MA 26100 Multivariate Calculus
_____ (3) MA 26600 Ordinary Diff. Eqns
_____ (3) MA 26500 Linear Algebra
_____ (3) ECE 36900 Discrete Math

Science Requirement (15 cr.)

_____ (4) CHM 11500 General Chemistry *(satisfies Science Selective for core)*
_____ (4) PHYS 17200 Modern Mechanics *(satisfies Science Selective for core)*
_____ (4) PHYS 27200 Electric and Magnetic Interactions
_____ (3) ECE Science Selective (https://engineering.purdue.edu/ECE/Academics/Undergraduates/UGO/pdf/sci.pdf)

ECE General Education Requirement (24 cr.)

Foundational Core (http://www.purdue.edu/provost/initiatives/curriculum/course.html)

_____ (3) _____ *(satisfies Written Communication for core)*
_____ (3) _____ *(satisfies Oral Communication for core)*
_____ (3) _____ *(satisfies Human Cultures: Humanities for core)*
_____ (3) _____ (satisfies Human Cultures: Behavioral/Social Science for core)
_____ (3) _____ (satisfies Science, Technology & Society Selective for core)

ECE General Education Electives (https://engineering.purdue.edu/ECE/Academics/Undergraduates/UGO/CourseInfo/coursesGEE#LIST)

_____ ( ) _____ _____ ( ) _____ _____ ( ) _____ _____

Complimentary Electives (6 credits) (https://engineering.purdue.edu/ECE/Academics/Undergraduates/UGO/Curriculum_Resources/ECE_Compl_Electives)

_____ ( ) _____ _____ ( ) _____ _____ ( )

University Core Requirements (http://www.purdue.edu/provost/initiatives/curriculum/course.html)

Human Cultures Humanities ☐ _____
Human Cultures Behavioral/Social Science ☐ _____
Information Literacy ☐ _____
Science Selective ☐ _____
Science Selective ☐ _____
Science, Technology & Society Selective ☐ _____
Written Communication ☐ _____
Oral Communication ☐ _____
Quantitative Reasoning ☐ _____

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The student is ultimately responsible for knowing and completing all degree requirements.

Degree Works is knowledge source for specific requirements and completion

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Revised 4/2016 (effective Fall 2013)

Computer Engineering

https://engineering.purdue.edu/ECE/Academics/Undergraduates/UGO/Curriculum_Resources/BSCmpE-Fall_2013/CmpE_Degree_Map.pdf

Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
2	ENGR 13100**	MA 16100/16500 (taken concurrently)	2	ENGR 13200**,#	ENGR 13100
4	MA 16500*,#		4	MA 16600**	MA 16100 or 16500 (Min grade of C-)
3	CS 15900**	ENGR 13100 (taken concurrently)	4	PHYS 17200*	MA 16100 or 16500 (taken concurrently)
4	CHM 11500*	MA 16100 or 16500 (taken concurrently)	3	Writ Com Fnd Outcome*	Depends on choice of course
3	Oral Com Fnd Outcome*	Depends on choice of course	3	Foundational Gen Ed*	Depends on choice of course
16			**16**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
0	ECE 20000	Soph Standing	3	ECE 20200#	ECE 20100 (Min Grade of C); MA 26200/26600 (taken concurrently)
3	ECE 20100#	ENGR 13100, PHYS 17200, MA 162 00/16600 (Min grade of C-)	4	ECE 27000#	ECE 20100 (taken concurrently)
1	ECE 20700	ECE 20100 (taken concurrently)	3	ECE 36800	ECE 26400 (Min grade of C)
3	ECE 26400#	CS 15900 (Min grade of C-)	3	MA 26600**	MA 26100 (Min grade of C-)
4	MA 26100**,#	MA 16200 or 16600 (Min grade of C-)	3	ECE Sci. Selective **	Depends on choice of course
4	PHYS 27200**	PHYS 17200, MA 16200 or 16600 (taken concurrently)			
15			**16**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
1	ECE 20800	ECE 20007, ECE 25500 (taken concurrently)	3	ECE 30200	MA 26200 or 26600, ECE 30100 (taken concurrently)
3	ECE 25500	ECE 20100 (Min grade of C), MA 26100	2	ECE 33700	ECE 27000 (Min grade of C)
3	ECE 30100	ECE 20200 (min grade of C), MA 26200 or 26600	1	ECE 36400	ECE 26400
4	ECE 36200	CS 15900, ECE 27000 (Min grade of C)	3	ECE 36900	ECE 27000
1	ECE 40000	ECE 20000, Class. Of 5 or higher	3	Foundational Gen Ed*	Depends on choice of course
3	Foundational Gen Ed*	Depends on choice of course	3	ECE Gen Ed Elective**	Depends on choice of course
15			**15**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
4	Adv. CmpE 43700/46800	ECE 33700 & 36200 OR ECE 36200 & 36800	2	Computer Engr. Elective	Depends on choice of course
4	ECE 47700	CmpE Core Curriculum	4	Adv. CmpE 43700/46900	ECE 33700 & 36200 OR ECE 36200 & 43700
3	MA 26500**	MA 16200 or 16600, MA 26100 (taken concurrently) (Min grade of C-)	3	Engr. Breadth Ele.**	Depends on choice of course
3	ECE Gen Ed Elective**	Depends on choice of course	3	ECE Gen Ed Elective**	Depends on choice of course
3	Complementary Ele.**	Depends on choice of course	3	Complementary Ele.**	Depends on choice of course
17			**15**		

*Satisfies a University Core Requirement
**Satisfies a Non-departmental Major Course Requirement
#Indicates Critical Course

125 semester credits required for Bachelor of Science degree.
2.0 ECE and Graduation GPA required for Bachelor of Science degree.

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The student is ultimately responsible for knowing and completing all degree requirements.

Degree Works is knowledge source for specific requirements and completion

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Revised 4/2016 (effective Fall 2013)

BSCmpE Degree Minimum Requirements

Introduction

The Bachelor of Science in Computer Engineering degree requires a total of 125 credit hours and a minimum Graduation Index of 2.0. Students must qualify for admission into the School of Electrical and Computer Engineering by completion of the First-Year Engineering Program.

ECE Requirements (49 credit hours):

CmpE Core Curriculum (34 credit hours): ECE 20100, 20200, 20700, 20800, 25500, 26400, 27000, 30100, 30200, 33700, 36200, 36400, and 36800.

ECE Seminars (1 credit hour): ECE 20000 and 40000.

Advanced CmpE Requirement (8 credit hours): ECE 43700 and either 46800 or 46900.

Senior Design Requirement (3-4 credit hours): ECE 40200, 47700 (taken in one semester) or at least 3 credit hours of EPCS 41100/41200 (taken over 2 consecutive semesters). A prerequisite for all Senior Design courses is completion of the EE Core Curriculum. Some Senior Design Courses may have additional prerequisites.

CmpE Electives (2-3 credit hours): Additional approved *CmpE Electives* to bring total ECE credit hours to at least 49.

Major-Area GPA: A GPA of 2.0 or higher in the ECE courses taken to satisfy the ECE Requirements is required to qualify for graduation with the BSCmpE degree.

General Engineering (7-9 credit hours):

Introduction to Engineering (4-6 credit hours): ENGR 19500/13100 (Transforming Ideas to Innovation I) & ENGR 19500/13200 (Transforming Ideas to Innovation II) **OR** ENGR 19500 (Creativity & Innovation in Engineering I) & ENGR 19500 (Creativity & Innovation in Engineering II) **OR** ENGR 10000 (First-Year Engineering Lectures) & ENGR 12600 (Engineering Problem Solving and Computer Tools)

Engineering Breadth Requirement (3 credit hours): Choose one (1) course from the approved *Engineering Breadth Requirement* list.

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Mathematics Requirement (21-22 credit hours):

Choose one of the Math options below. If MA 16100 and/or MA 16200 are taken in place of MA 16500 and/or MA 16600, only 4 of the 5 credit hours for each course can be applied to degree requirements.

Option 1 (21 credits hours): MA 16500, 16600, 26100, 26600, 26500 and ECE 36900.

Option 2 (22 credit hours): MA 16500, 16600, 26100, 26200, ECE 36900, and one of: MA 30300, 30400, 35100, 36200, 38500, 42500, 51000, or CS 31400.

Science Requirement (18-19 credit hours):

CS 15900, CHM 11500/12300, PHYS 17200, and PHYS 27200 and one of the **Science Selectives**: BIOL 11000, BIOL 11100, CHM 11600/12400, PHYS 31000, PHYS 32200, PHYS 34200.

Liberal Arts Requirement (24-25 credit hours):

Communication Skills (6-7 credit hours): ENGL 10600 or 10800 and COM 11400.

General Education Program Requirement (18 credit hours): Students must satisfy the requirements of the *General Education Program.*

Complementary Electives (4-6 credit hours):

Additional courses to bring the total to at least 125 credit hours. These courses should be selected to enhance the students academic program. These courses may include ECE courses beyond those required to complete the ECE Requirements or additional mathematics, science, engineering, and liberal arts courses. See *Guidelines for Complementary Electives* for more information about the types of courses that are acceptable as Complementary Electives.

Sample Plans-of-Study:

The Sample BSCmpE Plan-of-Study is meant to be used as a guideline for creating a personalized plan-of-study. A student's personal plan-of-study may differ in the arrangement of courses, number of semesters, and other details depending upon the student's specific needs and interests.

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Electrical and Computer Engineering (https://engineering.purdue.edu/ECE)

ECE Course Descriptions

- ECE Undergrad Course Descriptions (coursesUndergrad)
- ECE Experimental Courses (coursesExperimental)
- BSEE Core Courses (coursesBSEECore)
- ECE Lab Courses (coursesLab)
- Special Content Courses (coursesSpecial)
- BSCmpE Core Courses (coursesBSCmpECore)
- BSCmpE Elective Courses (coursesBSCmpEElectives)
- ECE Graduate Courses (coursesGrad)
- ECE Graduate Experimental Courses (coursesExperimentalGrad)
- EPICS (Engineering Projects in Community Service) (http://epics.ecn.purdue.edu)

For the BSEE degree, up to 6 credit hours of VIP and EPICS can be used as EE Electives. ECE 37900 for 2 credits, ECE 47900 for 2 credits, EPCS 30200 and EPCS 40200 can be used as upper-level labs for 2 of the 3 required upper-level labs provided the student has completed 2 of the 3 ECE 20000 level lab courses ECE 20700, 20800, and 27000 and is concurrently enrolled in the third ECE 20000 level lab courses. EPICS and VIP credits beyond this can be used as Complementary Electives.

For the BSCmpE degree, up to 3 credit hours of VIP and EPICS can be used as CmpE Electives. VIP and EPICS credits beyond this can be used as Complementary Electives.

In addition to the above limitations, EPCS 41100 and 41200 can be used to satisfy the ECE Senior Design Requirement for both the BSEE and BSCmpE degrees.

Engineering Breadth Requirement

Both the BSEE and BSCmpE degrees require a 3 credit course in an engineering field other than electrical and computer engineering. The ECE Curriculum Committee has reviewed the course offerings in the various engineering schools and considers the following courses as appropriate for fulfilling this requirement.

AAE 20300	Aeromechanics I, 3 cr. Pre-requisite: PHYS 17200 Concurrent Pre-requisite: MA 26100
CHE 20500	Chemical Engineering Calculations, 3 cr. Pre-requisites: ENGR 19500 Trans Ideas to Innov II, PHYS 17200, MA 16500 (or MA 16100) Concurrent Pre-requisite: CHM 11600 (or CHM 12400)
CE 29700	Basic Mechanics I (Statics), 3 cr. Pre-requisite: PHYS 17200 Concurrent Pre-requisite: MA 26100
CE 35300	Physico-Chemical Principles of Environmental Eng., 3 cr. Pre-requisite: completion of freshman engineering requirements
CE 35500	Engineering Environmental Sustainability Pre-requisite: Sophomore Standing
EEE 35500	Engineering Environmental Sustainability Pre-requisite: Sophomore Standing
IE 33500	Operations Research - Optimization, 3 cr. Pre-requisite: MA 26500 Concurrent Pre-requisite: IE 33200 (C programming skills and ECE 30200 will suffice)
IE 33600	Operations Research - Stochastic Models, 3 cr. Pre-requisites: MA 26500, IE 23000 (C programming skills and ECE 30200 will suffice) Concurrent Pre-requisite: MA 26600 (or MA 26200)
MSE 23000	Structure and Properties of Materials, 3 cr. Pre-requisites: MA 16500 (or MA 16100), CHM 11500
ME 20000	Thermodynamics, 3 cr. Pre-requisite: CHM 11500 (or CHM 12300) Concurrent Pre-requisite: MA 26100
ME 27000	Basic Mechanics I, 3 cr. Pre-requisite: PHYS 17200 Concurrent Pre-requisite: MA 26100
ME 41300	Noise Control, 3 cr. Pre-requisites: MA 26600, PHYS 17200
NUCL 20000	Introduction to Nuclear Engineering I, 3 cr. Pre-requisites: PHYS 17200, MA 16600 (or MA 16200)

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Electrical and Computer Engineering (https://engineering.purdue.edu/ECE)

Guidelines for ECE Complementary Electives

Both the BSEE and BSCmpE degrees require students to choose additional coursework to bring their total credits to the minimum required for their chosen degree (124 credits for the BSEE and 125 credits for the BSCmpE). Students should carefully choose these courses to complement their personal interests and their academic record. If in doubt as to whether or not a specific course qualifies as a Complementary Elective, please consult with an ECE Academic Advisor.

Applicable Complementary Electives

- Any course that would otherwise satisfy a specific degree requirement (i.e., ECE Requirements, General Engineering, Mathematics Requirement, Science Requirement, and General Education Requirement), but is in excess of the minimum credits for that requirement, can be used as a Complementary Elective.
- ECE 19000 taken prior to acceptance into ECE.
- Courses taken to satisfy a minor requirement (unless that course is excluded below).
- One (1) credit per semester of ROTC, up to a maximum of six (6) credit hours.
- One (1) credit per semester of BAND, up to a maximum of six (6) credit hours.
- 2 credits of CGT taken while enrolled in FYE.
- Exploratory FYE (ENGR) courses.
- Seminar courses, including FYE seminars (limited to 3 credit hours)
- Leadership FYE (ENGR) courses/seminars (only a single instance of the course is applicable).
- Up to 2 credits total in two different PES courses (no more than 1 credit per course is applicable)
- Courses explicitly approved by the ECE Curriculum Committee.

Exclusions

- pre-calculus Mathematics (MA) courses.
- Statistics (STAT) courses without a calculus prerequisite.
- CS courses not intended for engineering students - for example, CS 11000.
- General Studies (GS) courses.
- Courses from the College of Technology that have not been specifically approved by the ECE Curriculum Committee.
- Courses from the College of Health and Human Sciences that have not been specifically approved by the ECE Curriculum Committee.

- Courses from the College of Education that have not been specifically approved by the ECE Curriculum Committee.

  [Note: UCC approves courses will still satisfy the Foundational Outcomes, but the credit hours are not applicable to BSEE/BSCmpE degree requirements]

Excluded Courses

Some courses specifically excluded as complementary electives (not a comprehensive list):

- CS 11000
- CS 17700
- ECE 19000 taken after admission int ECE
- MGMT 20010
- STAT 11300 (IL Foundational Outcome satisfied, but credit hours are not applied to degree requirements)
- STAT 30100 (IL Foundational Outcome satisfied, but credit hours are not applied to degree requirements)

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Electrical and Computer Engineering (https://engineering.purdue.edu/ECE)

Approved Computer Engineering Electives for the BSCmpE

CS 42200 - Computer Networks (courseInfo?courseid=276&show=true&type=undergrad)
ECE 27900 - Sophomore Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=526&show=true&type=undergrad)
ECE 30834 - Fundamentals of Computer Graphics (courseInfo?courseid=584&show=true&type=undergrad)
ECE 30862 - Object-Oriented Programming in C++ and Java (courseInfo?courseid=579&show=true&type=undergrad)
ECE 37900 - Junior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=535&show=true&type=undergrad)
ECE 40400 - Introduction to Computer Security (courseInfo?courseid=515&show=true&type=undergrad)
ECE 46100 - Software Engineering (courseInfo?courseid=402&show=true&type=undergrad)
ECE 46300 - Introduction to Computer Communication Networks (courseInfo?courseid=604&show=true&type=undergrad)
ECE 47300 - Introduction to Artificial Intelligence (courseInfo?courseid=64&show=true&type=undergrad)
ECE 47700 - Digital Systems Senior Project (courseInfo?courseid=397&show=true&type=undergrad)
ECE 47900 - Senior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=485&show=true&type=undergrad)
ECE 49595 - ASIC Fabrication and Test I (courseInfo?courseid=470&show=true&type=undergrad) - *Fall 2008, Fall 2009, Fall 2010, Fall 2011, Spring 2012*
ECE 495B - Information Extraction, Retrieval and Security (courseInfo?courseid=130&show=true&type=undergrad) - *Fall 2000, Fall 2001, Fall 2002*
ECE 495C - Digital Systems Senior Project (courseInfo?courseid=406&show=true&type=undergrad) - *Fall 2007, Spring 2008*
ECE 495E - Fundamentals of Computer Graphics (courseInfo?courseid=262&show=true&type=undergrad) - *Spring 2004, Fall 2004*
ECE 495E - Fundamentals of Computer Graphics (courseInfo?courseid=238&show=true&type=undergrad) - *Fall 2003*
ECE 495E - Fundamentals of Computer Graphics (courseInfo?courseid=224&show=true&type=undergrad) - *Spring 2003*

ECE 495F - Introduction to Computer Security (courseInfo?courseid=355&show=true&type=undergrad) - *Spring 2006*

ECE 495F - Introduction to Computer Security (courseInfo?courseid=286&show=true&type=undergrad) - *Spring 2005*

ECE 495F - Introduction to Computer Security (courseInfo?courseid=278&show=true&type=undergrad) - *Fall 2004 (cancelled)*

ECE 495F - Introduction to Computer Security (courseInfo?courseid=232&show=true&type=undergrad) - *Fall 2003*

ECE 495G - ASIC Fabrication and Test II (courseInfo?courseid=445&show=true&type=undergrad) - *Spring 2008*

ECE 495G - ASIC Fabrication and Test I (courseInfo?courseid=427&show=true&type=undergrad) - *Fall 2007*

ECE 495G - ASIC Fabrication and Test I (courseInfo?courseid=365&show=true&type=undergrad) - *Fall 2006*

ECE 495K - Object-Oriented Scripting and Object-Oriented Design (courseInfo?courseid=287&show=true&type=undergrad) - *Spring 2005, Spring 2006*

ECE 495K - Object-Oriented Scripting and Object-Oriented Design (courseInfo?courseid=264&show=true&type=undergrad) - *Spring 2004*

ECE 495K - Object-Oriented Design Using C++ and Java (courseInfo?courseid=136&show=true&type=undergrad) - *Spring 2001, Spring 2002, Spring 2003*

ECE 495M - Mobile Communications Project (courseInfo?courseid=289&show=true&type=undergrad) - *Spring 2005*

ECE 495M - Mobile Communications Project (courseInfo?courseid=270&show=true&type=undergrad) - *Spring 2004, Fall 2004*

ECE 495M - Mobile Communications Project (courseInfo?courseid=222&show=true&type=undergrad) - *Fall 2002, Spring 2003, Fall 2003*

ECE 495O - ASIC Fabrication and Test II (courseInfo?courseid=388&show=true&type=undergrad) - *Spring 2007*

ECE 495R - Introduction to Computer Communication Networks (courseInfo?courseid=132&show=true&type=undergrad) - *Fall 2001, Fall 2002, Fall 2003, Fall 2004*

ECE 495S - Introduction to Compilers and Translation Engineering (courseInfo?courseid=314&show=true&type=undergrad) - *Fall 2006*

ECE 495T - Sophomore Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=482&show=true&type=undergrad) - *Fall 2008, Spring 2009*

ECE 495U - Junior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=369&show=true&type=undergrad) - *Fall 2006, Spring 2007, Spring 2008*

ECE 495V - Senior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=370&show=true&type=undergrad) - *Fall 2006, Spring 2007, Spring 2008*

ECE 495V - Senior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=328&show=true&type=undergrad) - *Fall 2005, Spring 2006*

ECE 59500 - Computer Network Systems (courseInfo?courseid=476&show=true&type=undergrad) - *Spring 2011, Spring 2013, Spring 2014, Spring 2015, Spring 2016*

ECE 595E - Visualization Techniques (courseInfo?courseid=133&show=true&type=undergrad) - *Fall 2006*

ECE 595T - Psychophysics for Interface Engineering (courseInfo?courseid=68&show=true&type=undergrad) - *Fall 2000, Fall 2001, Fall 2002*

ECE 595Z - Digital Logic Synthesis (courseInfo?courseid=245&show=true&type=undergrad) - *Fall 2003, Fall 2004*

ECE 595Z - Digital Logic Synthesis (courseInfo?courseid=223&show=true&type=undergrad) - *Fall 2002*

EPCS 30100 - Junior Participation in EPICS (courseInfo?courseid=596&show=true&type=undergrad)

EPCS 30200 - Junior Participation in EPICS (courseInfo?courseid=412&show=true&type=undergrad)

EPCS 40100 - Senior Participation in EPICS (courseInfo?courseid=415&show=true&type=undergrad)

EPCS 40200 - Senior Participation in EPICS (courseInfo?courseid=597&show=true&type=undergrad)

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Electrical and Computer Engineering (https://engineering.purdue.edu/ECE)

Current ECE Laboratory Course Descriptions

- ECE 20700 - Electronic Measurement Techniques (courseInfo?courseid=29&show=true&type=undergrad)
- ECE 20800 - Electronic Devices and Design Laboratory (courseInfo?courseid=30&show=true&type=undergrad)
- ECE 27000 - Introduction to Digital System Design (courseInfo?courseid=607&show=true&type=undergrad)
- ECE 27900 - Sophomore Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=526&show=true&type=undergrad)
- EPCS 30200 - Junior Participation in EPICS (courseInfo?courseid=412&show=true&type=undergrad)
- ECE 30600 - Electronic Circuits and Systems Laboratory (courseInfo?courseid=84&show=true&type=undergrad)
- ECE 30700 - Electromagnetic Fields and Waves Laboratory (courseInfo?courseid=85&show=true&type=undergrad)
- ECE 30800 - Systems Simulation and Control Laboratory (courseInfo?courseid=86&show=true&type=undergrad)
- ECE 32300 - Electromechanical Motion Devices and Systems Laboratory (courseInfo?courseid=45&show=true&type=undergrad)
- ECE 33700 - ASIC Design Laboratory (courseInfo?courseid=613&show=true&type=undergrad)
- ECE 36200 - Microprocessor Systems and Interfacing (courseInfo?courseid=612&show=true&type=undergrad)
- ECE 36400 - Software Engineering Tools Laboratory (courseInfo?courseid=624&show=true&type=undergrad)
- ECE 37900 - Junior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=535&show=true&type=undergrad)
- ECE 39600 - Industrial Practice Seminar (courseInfo?courseid=311&show=true&type=undergrad)
- EPCS 40200 - Senior Participation in EPICS (courseInfo?courseid=597&show=true&type=undergrad)
- ECE 41300 - Introduction to Optics Laboratory (courseInfo?courseid=88&show=true&type=undergrad)
- ECE 41500 - Electro- And Fiber Optics Laboratory (courseInfo?courseid=89&show=true&type=undergrad)
- ECE 43700 - Computer Design and Prototyping (courseInfo?courseid=143&show=true&type=undergrad)

ECE 43800 - Digital Signal Processing with Applications (courseInfo?courseid=62&show=true&type=undergrad)
ECE 44000 - Transmission of Information (courseInfo?courseid=75&show=true&type=undergrad)
ECE 45700 - Electronic Design Laboratory (courseInfo?courseid=98&show=true&type=undergrad)
ECE 46800 - Introduction to Compilers and Translation Engineering (courseInfo?courseid=530&show=true&type=undergrad)
ECE 46900 - Operating Systems Engineering (courseInfo?courseid=56&show=true&type=undergrad)
ECE 47700 - Digital Systems Senior Project (courseInfo?courseid=397&show=true&type=undergrad)
ECE 47900 - Senior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=485&show=true&type=undergrad)
ECE 49595 - Electrical Engineering Senior Design Projects (courseInfo?courseid=641&show=true&type=undergrad)
ECE 55700 - Integrated Circuit/MEMS Fabrication Laboratory (courseInfo?courseid=375&show=true&type=undergrad)

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Electrical and Computer Engineering (https://engineering.purdue.edu/ECE)

Special Content Courses for the BSEE

Students are limited to no more than 6 credit hours of *Special Content Courses* towards the 47 credit hours of ECE courses required for the BSEE. Credits in excess of this may be used as Complementary Electives. In general, seminars (excluding ECE 20000 and ECE 40000), survey courses, project courses, and informal laboratory courses are considered to be Special Content Courses. A complete list of these courses, as approved by the ECE Curriculum Committee, is given below.

- ECE 27900 - Sophomore Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=526&show=true&type=undergrad)
- ECE 29600 - Electrical and Computer Engineering Projects (courseInfo?courseid=633&show=true&type=undergrad)
- ECE 30010 - Introduction to Machine Learning and Pattern Recognition (courseInfo?courseid=583&show=true&type=undergrad)
- ECE 37900 - Junior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=535&show=true&type=undergrad)
- ECE 39595 - Introduction to Machine Learning and Pattern Recognition (courseInfo?courseid=544&show=true&type=undergrad) - *Maymester 2011*
- ECE 47900 - Senior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=485&show=true&type=undergrad)
- ECE 495M - Sound Reinforcement System Design (courseInfo?courseid=407&show=true&type=undergrad) - *Fall 2007*
- ECE 495M - Mobile Communications Project (courseInfo?courseid=289&show=true&type=undergrad) - *Spring 2005*
- ECE 495M - Mobile Communications Project (courseInfo?courseid=270&show=true&type=undergrad) - *Spring 2004, Fall 2004*
- ECE 495M - Mobile Communications Project (courseInfo?courseid=222&show=true&type=undergrad) - *Fall 2002, Spring 2003, Fall 2003*
- ECE 495T - Sophomore Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=482&show=true&type=undergrad) - *Fall 2008, Spring 2009*
- ECE 495T - Sophomore Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=326&show=true&type=undergrad) - *Fall 2005, Spring 2006*
- ECE 495U - Junior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=369&show=true&type=undergrad) - *Fall 2006, Spring 2007, Spring 2008*

ECE 495U - Junior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=327&show=true&type=undergrad) - *Fall 2005, Spring 2006*

ECE 495V - Senior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=370&show=true&type=undergrad) - *Fall 2006, Spring 2007, Spring 2008*

ECE 495V - Senior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering (courseInfo?courseid=328&show=true&type=undergrad) - *Fall 2005, Spring 2006*

ECE 495W - The Wireless Revolution (courseInfo?courseid=272&show=true&type=undergrad) - *Spring 2004, Fall 2004*

ECE 49600 - Electrical and Computer Engineering Projects (courseInfo?courseid=632&show=true&type=undergrad)

ECE 51100 - Psychophysics (courseInfo?courseid=337&show=true&type=undergrad)

ECE 595C - Biologically Inspired Engineering (courseInfo?courseid=277&show=true&type=undergrad) - *Fall 2004*

ECE 595M - Modeling and Simulation of Multidisciplinary Systems (courseInfo?courseid=386&show=true&type=undergrad) - *Spring 2007*

ECE 595T - Engineering in Medicine: Neural Systems (courseInfo?courseid=137&show=true&type=undergrad) - *Spring 2002, Spring 2003*

ECE 595T - Psychophysics for Interface Engineering (courseInfo?courseid=68&show=true&type=undergrad) - *Fall 2000, Fall 2001, Fall 2002*

EPCS 20100 - Sophomore Participation in EPICS (courseInfo?courseid=595&show=true&type=undergrad)

EPCS 20200 - Sophomore Participation in EPICS (courseInfo?courseid=410&show=true&type=undergrad)

EPCS 30100 - Junior Participation in EPICS (courseInfo?courseid=596&show=true&type=undergrad)

EPCS 30200 - Junior Participation in EPICS (courseInfo?courseid=412&show=true&type=undergrad)

EPCS 40100 - Senior Participation in EPICS (courseInfo?courseid=415&show=true&type=undergrad)

EPCS 40200 - Senior Participation in EPICS (courseInfo?courseid=597&show=true&type=undergrad)

The following restrictions apply to all Special Content courses:

- No more than a combined total of 6 credit hours of these special content courses may be used to satisfy the ECE course requirement of 47 credit hours for the BSEE degree. Excess hours can be used as Complementary Electives.
- Three (3) credits of EE490 used to satisfy the BSEE Senior Design requirement are excluded from the above limit.
- No more than two (2) credit hours of "Informal Laboratories" may be used to satisfy the ECE Laboratory Requirement for the BSEE degree. By definition, the courses with laboratory credit listed above are "Informal Laboratories".