

Department of

Computer Science & Engineering



Gordon Black, Department Chair

*Gordon Black, Scott Ercanbrack, Rex Fisher, James Helfrich, Ron Jones, Eric Karl, Rick Neff, Kevin Smith, Kevin Twitchell
Merlynn Price, Secretary (208) 496-1880
<http://www.byui.edu/CSE/>*

Department of Computer Science and Engineering

The curricula in the Computer Science and Engineering Department is designed to provide a broad background in the theory, development and application of computer hardware and software. Students learn how to combine scientific knowledge and engineering methods with practical technical skills to help prepare them for life-long learning and rewarding employment.

Three degree programs are offered:

- 1) B.S. in Computer Science (CS)
- 2) B.S. in Computer Engineering (CompE)
- 3) A.A.S. in Electronics Engineering Technology (EET)

The graduates of the Computer Science and Engineering Department:

- will have a thorough grounding in the fundamental principles and practices within their respective programs,
- will have an understanding of the contexts in which their respective program is applied,
- will be prepared for immediate employment in their respective programs
- will be ethical and responsible employees.

The Department of Computer Science and Engineering strives to evaluate, improve, and keep current its curricula and the learning and teaching environment.

Your advisor can help you determine the best sequence of courses to meet all graduation requirements within eight semesters.

To qualify for graduation students must achieve at least a C- grade in all major classes.

Computer Science

The Computer Science major provides a solid background in Computer Science by providing experience in algorithm development, procedural and object-oriented design and programming, software engineering practices, computer security, web engineering, technical communication, and theoretical foundations. Graduates are prepared for employment as software engineers or to continue their education at graduate school.

Computer Engineering

This curriculum focuses on preparing students to enter industry as computer engineers or continue their education at graduate school. Scientific and engineering theory is an important element of the program. Laboratory experiences are included in most courses to develop practical skills that working engineers must possess.

The Computer Engineering (BS) program at Brigham Young University-Idaho is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET) since October 1, 2004. Visit www.abet.org for more information about this accreditation.

Electronics Engineering Technology

Graduates are prepared for employment as Electronics Engineering Technicians or to transfer into B.S. programs in Electronics Engineering Technology at another university. Students gain knowledge and skills in analog circuits, digital circuits, semiconductors, linear integrated circuits, troubleshooting, RF communications, control systems, and microprocessors.

The Electronics Engineering Technology program at Brigham Young University-Idaho has been continuously accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET) since 1970. Call (410) 347-7700 or visit the web page at www.abet.org for more information about this accreditation.

AAS in Electronic Engineering Technology (350)

Take required Foundations courses

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

<p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>CS 124</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 224</td><td style="text-align: right;">3</td></tr> <tr><td>EET 150</td><td style="text-align: right;">4</td></tr> <tr><td>EET 153</td><td style="text-align: right;">4</td></tr> <tr><td>EET 250</td><td style="text-align: right;">3</td></tr> <tr><td>EET 251</td><td style="text-align: right;">3</td></tr> <tr><td>EET 252</td><td style="text-align: right;">3</td></tr> <tr><td>EET 253</td><td style="text-align: right;">3</td></tr> <tr><td>EET 255</td><td style="text-align: right;">3</td></tr> <tr><td>FDMAT 112</td><td style="text-align: right;">4</td></tr> <tr><td>MATH 111</td><td style="text-align: right;">2</td></tr> <tr><td>ME 172</td><td style="text-align: right;">3</td></tr> <tr><td>PH 121</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">41</td></tr> </table>	CS 124	3	COMPE 224	3	EET 150	4	EET 153	4	EET 250	3	EET 251	3	EET 252	3	EET 253	3	EET 255	3	FDMAT 112	4	MATH 111	2	ME 172	3	PH 121	3		41	<p><i>Take this course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>CHEM 105</td><td style="text-align: right;">4</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">4</td></tr> </table> <p style="text-align: center;">OR</p> <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>PH 123</td><td style="text-align: right;">3</td></tr> <tr><td>PH 150</td><td style="text-align: right;">1</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">4</td></tr> </table>	CHEM 105	4		4	PH 123	3	PH 150	1		4	<p><i>Program Notes:</i></p>
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Total Major Credits=45

This major is available on the following tracks:

Fall-Winter---- YES Winter-Spring---- NO Spring-Fall---- NO

BS in Computer Engineering (450)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

<p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>CHEM 105</td><td style="text-align: right;">4</td></tr> <tr><td>COMPE 150</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 224</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 250</td><td style="text-align: right;">4</td></tr> <tr><td>COMPE 324</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 340</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 350</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 360</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 398</td><td style="text-align: right;">1-7</td></tr> <tr><td>COMPE 499</td><td style="text-align: right;">3</td></tr> <tr><td>CS 124</td><td style="text-align: right;">3</td></tr> <tr><td>CS 165</td><td style="text-align: right;">3</td></tr> <tr><td>CS 235</td><td style="text-align: right;">3</td></tr> <tr><td>CS 237</td><td style="text-align: right;">3</td></tr> <tr><td>CS 308</td><td style="text-align: right;">2</td></tr> <tr><td>MATH 215</td><td style="text-align: right;">4</td></tr> <tr><td>MATH 316</td><td style="text-align: right;">4</td></tr> <tr><td>MATH 321</td><td style="text-align: right;">3</td></tr> <tr><td>PH 121</td><td style="text-align: right;">3</td></tr> <tr><td>PH 220</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">61</td></tr> </table>	CHEM 105	4	COMPE 150	3	COMPE 224	3	COMPE 250	4	COMPE 324	3	COMPE 340	3	COMPE 350	3	COMPE 360	3	COMPE 398	1-7	COMPE 499	3	CS 124	3	CS 165	3	CS 235	3	CS 237	3	CS 308	2	MATH 215	4	MATH 316	4	MATH 321	3	PH 121	3	PH 220	3		61	<p><i>Take 5 courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>COMPE 440</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 450</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 460</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 470</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 480</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 490</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">15</td></tr> </table> <p style="text-align: center;">OR</p> <p><i>Take 4 courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>COMPE 440</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 450</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 460</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 470</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 480</td><td style="text-align: right;">3</td></tr> <tr><td>COMPE 490</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">12</td></tr> </table> <p style="text-align: center;">AND</p> <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>CS 306</td><td style="text-align: right;">3</td></tr> <tr><td>CS 345</td><td style="text-align: right;">3</td></tr> <tr><td>CS 460</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">3</td></tr> </table>	COMPE 440	3	COMPE 450	3	COMPE 460	3	COMPE 470	3	COMPE 480	3	COMPE 490	3		15	COMPE 440	3	COMPE 450	3	COMPE 460	3	COMPE 470	3	COMPE 480	3	COMPE 490	3		12	CS 306	3	CS 345	3	CS 460	3		3	<p><i>Program Notes:</i></p>
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Total Major Credits=76

This major is available on the following tracks:

Fall-Winter---- YES Winter-Spring---- YES Spring-Fall---- YES

BS in Computer Science (440)

Take required Foundations courses

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

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Total Major Credits=80

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Minor in Computer Science (147)

Minor Requirements

<p><i>Take these courses:</i></p> <table> <tr><td>CS 124</td><td>3</td></tr> <tr><td>CS 165</td><td>3</td></tr> <tr><td>CS 235</td><td>3</td></tr> <tr><td>CS 246</td><td>3</td></tr> <tr><td></td><td><u>3</u></td></tr> <tr><td></td><td>12</td></tr> </table>	CS 124	3	CS 165	3	CS 235	3	CS 246	3		<u>3</u>		12	<p><i>Take 12 credits:</i></p> <table> <tr><td>COMPE 224</td><td>3</td></tr> <tr><td>COMPE 324</td><td>3</td></tr> <tr><td>CS 213</td><td>3</td></tr> <tr><td>CS 237</td><td>3</td></tr> <tr><td>CS 238</td><td>3</td></tr> <tr><td>CS 306</td><td>3</td></tr> <tr><td>CS 313</td><td>3</td></tr> <tr><td>CS 345</td><td>3</td></tr> <tr><td>CS 364</td><td>4</td></tr> <tr><td>CS 371</td><td>3</td></tr> <tr><td>CS 416</td><td>2</td></tr> <tr><td>CS 432</td><td>3</td></tr> <tr><td>CS 460</td><td>3</td></tr> <tr><td>CS 470</td><td>3</td></tr> <tr><td>CS 480</td><td>3</td></tr> <tr><td>CS 490</td><td>3</td></tr> <tr><td></td><td><u>3</u></td></tr> <tr><td></td><td>12</td></tr> </table>	COMPE 224	3	COMPE 324	3	CS 213	3	CS 237	3	CS 238	3	CS 306	3	CS 313	3	CS 345	3	CS 364	4	CS 371	3	CS 416	2	CS 432	3	CS 460	3	CS 470	3	CS 480	3	CS 490	3		<u>3</u>		12	<p><i>Program Notes:</i></p>
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Total Minor Credits=24

This minor is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Computer Science & Engineering

Brigham Young University-Idaho 2008-2009

Computer Science and Engineering Pre-approved Clusters

Computer Science

Take these courses:

CS 124	Introduction to Software Development	3
CS 165	Object-oriented Software Development	3

Take 2 courses:

COMPE 224	Fundamentals of Digital Systems	3
COMPE 324	Computer Architecture	3
CS 213	Web Engineering I	3
CS 235	Data Structures	3
CS 237	Discrete Mathematics I	3
CS 238	Discrete Mathematics II	3
CS 246	Software Design and Development	3
CS 371	Human-Computer Interaction	3
CS 460	Computer Communication & Networks	<u>3</u>
	Total Credits	12

Computer Engineering

Take these courses:

COMPE 150	Electric Circuit Analysis I	3
COMPE 224	Fundamentals of Digital Systems	3
COMPE 250	Electric Circuit Analysis II	4
COMPE 324	Computer Architecture	<u>3</u>
	Total Credits	13

Course Descriptions

Credits*

COMPE 150 Electric Circuit Analysis I (3:2:2)
Introduction to engineering. Analysis and design of DC and AC circuits. Resistors, capacitors, inductors, transformers, and batteries. Ohms Law, power and network theorems. Steady state and frequency domain analysis. Laboratory exercises are included. (Fall, Winter, Spring)

COMPE 224 Fundamentals of Digital Systems (3:2:2)
Theory, design, and implementation of combinational and sequential logic. Students must design and build a project that uses sequential logic and a programmable logic device. A student presentation is required. Laboratory exercises are included. (Fall, Winter, Spring)

COMPE 250 Electric Circuit Analysis II (4:3:2)
Prerequisite: COMPE 150, Co-req: Math 316
Analysis and design of DC and AC circuits. Transient analysis using differential equations. Laboratory exercises are included. (Fall, Winter, Spring)

COMPE 305 Principles of Electrical Engineering (3:3:1)
Prerequisite: Math 215 and PH 220
Introduction to DC and AC circuits, motors, semiconductor devices and circuits, and digital logic circuits. Lab experiments are included. Intended for mechanical engineering majors. (Fall, Winter, Spring)

COMPE 324 Computer Architecture (3:2:2)
Prerequisite: CompE 224 and CS 235
Instruction sets, control unit and data path design, memory hierarchy, pipelining, and I/O. A student presentation is required. Laboratory exercises are included. (Fall, Winter, Spring)

COMPE 340 Digital Systems Design (3:2:2)
Prerequisite: CompE 224; CS 124
Advanced topics in combinational logic, state machine design, and control structures. VHDL and FPGAs. A student presentation is required. Laboratory exercises are included. (Fall, Spring)

COMPE 350 Electronic Devices and Circuits (3:2:2)
Prerequisite: CompE 250
Theory, design, and implementation of circuits using diodes, bipolar junction transistors, and field effect transistors. A student presentation is required. Laboratory exercises are included. (Fall, Winter)

COMPE 360 Computer Input/Output (3:2:2)
Prerequisite: CompE 324
Applications, architecture, programming and interfacing of commercial microprocessors and microcontrollers. Laboratory exercises are included. (Fall, Winter)

COMPE 398 Internship (1-7:0:0)
Prerequisite: Consent of Advisor and Department Internship Coordinator.
Full-time employment as a computer engineering intern for one semester or more. (Fall, Winter, Spring)

COMPE 440 Data and Computer Communications (3:2:2)
Prerequisite: CompE 250, CompE 324
Fundamentals of data and computer communications focusing on the physical and data link layers of the OSI architecture. Laboratory exercises are included. (Fall, Spring)

COMPE 450 Advanced Digital Design and VLSI (3:2:2)
Prerequisite: CompE 340 and CompE 350
Advanced digital design concepts including multi-clock domain designs, meta-stability, signal integrity and functional verification of HDL models. VLSI concepts including the translation of HDL to gates to transistors and then to functional silicon. CMOS transistor concepts with special attention to the digital CMOS silicon manufacturing process. Formal validation of silicon components. (Fall)

COMPE 460 Real-Time and Embedded Systems (3:2:2)
Prerequisite: COMPE 360
Hardware/software interface, real-time kernel internals, implementation of high-level language constructs, issues in real-time application software development. (Fall, Spring)

COMPE 470 Feedback Control of Dynamic Systems (3:2:2)
Prerequisite: MATH 316
Dynamic modeling, dynamic response, analysis and design of feedback control. (Fall, Winter)

COMPE 480 Digital Signal Processing (3:2:2)
Prerequisite: CompE 324, Math 316
Time and frequency domain analysis of discrete time systems subjected to periodic or non-periodic input signals. Digital signal processing, fast Fourier transforms, digital filter design, spectrum analysis and applications. Laboratory exercises are included. (Winter, Spring)

COMPE 490 Special Topics (3:2:2)
Prerequisite: Instructor Permission
In-depth study of a topic in computer engineering that interests students and faculty. Laboratory exercises are included where appropriate. (Offered as Needed)

COMPE 499 Senior Project (3:2:2)
Prerequisite: Completion of at least 2 COMPE Senior-level courses.
Culminating design experience based on skills learned in advanced technical courses. Students work in teams to plan, design, test and demonstrate a major project. (Fall, Winter, Spring)

CS 124 Introduction to Software Development (3:3:0)
Prerequisite: High School Algebra
Algorithmic thinking and problem solving. Programming basics including fundamental data types, flow of control, functions, and arrays. Structured programming. Procedural paradigm of software development. (Fall, Winter, Spring)

CS 165 Object-Oriented Software Development (3:3:0)
Prerequisite: CS 124
Software design and development using the object-oriented paradigm. Algorithm formulation and object-oriented programming. (Fall, Winter, Spring)

CS 202 Ethics (1:1:0)
Prerequisite: CS 165
Survey of issues regarding ethics in Computer Science. Overview of intellectual property rights relative to computing including copyright, patents, trademarks, and piracy. Discussion of current social issues related to computing. (Fall, Winter)

CS 213 Web Engineering I (3:3:0)
Prerequisite: CS 165
Internet and Web basics. Web fundamentals - web terminology, web browsers and web servers. This course teaches the concepts behind the fundamental tools used for building client-side web applications. It emphasizes client side programming standards and programming tools used to create dynamic web applications. (Fall, Winter)

CS 235 Data Structures (3:3:0)
Prerequisite: CS 165
Builds on the foundation of CS 124 and CS 165 to introduce the fundamental concepts of data structures and the algorithms that proceed from them. (Fall, Winter, Spring)

CS 237 Discrete Mathematics I (3:3:0)
Prerequisite: CS 165 and Math 112
Introduces the mathematical topics needed to provide a solid theoretical foundation for computer science and computer engineering. (Fall, Winter, Spring)

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<p>CS 238 Discrete Mathematics II (3:3:0) Prerequisite: CS 237 Continues the mathematical topics needed to provide a solid theoretical foundation for computer science. (Fall, Winter)</p> <p>CS 246 Software Design and Development (3:3:0) Prerequisite: CS 235 Advanced object-oriented design and software development. (Fall, Winter, Spring)</p> <p>CS 290 Special Topics (1-3:0:0) Prerequisite: Consent of Instructor. Faculty/Student consultation will determine an area of study/research that will give an advanced student greater appreciation and experience in this field. Terms of enrollment, credit, etc., will be determined by the instructor. (Fall, Winter, Spring)</p> <p>CS 306 Algorithms and Complexity (3:3:0) Prerequisite: CS 235 and CS 238 Introduces formal techniques to support the design and analysis of algorithms, focusing on both the underlying mathematical theory and practical considerations of efficiency. Topics include asymptotic complexity bounds, techniques of analysis, and algorithmic strategies. (Fall, Spring)</p> <p>CS 308 Technical Communication (2:2:0) Prerequisite: CS 235, ENG 316/316C or Foundations Professional Communication Technical research. Technical writing and presentation to technical audiences. Review classics of Computer Science literature. (Fall, Winter, Spring)</p> <p>CS 313 Web Engineering II (3:3:0) Prerequisite: CS 213, CS 246 This course builds upon Web Engineering I allowing students to create more advanced web applications and services. The emphasis of this course will be on server-side technologies and n-tier applications using relational database technology. Different server-side technologies will be used for creating dynamic n-tier web applications. Client-side technologies will be enhanced and combined with server-side technologies to create rich web applications. (Winter, Spring)</p> <p>CS 345 Operating Systems (3:3:0) Prerequisite: COMPE 324 Analysis of methods used by operating systems to perform typical system services, including: process control, memory management, scheduling, I/O, file management, and concurrency. (Winter, Spring)</p> <p>CS 364 Software Engineering I (4:4:1) Prerequisite: CS 246 and CS 308 Software engineering overview. Software requirements engineering including elicitation and specification. Software design. (Fall, Spring)</p> <p>CS 371 Human-Computer Interaction (3:3:0) Prerequisite: CS 246 This class will follow the development lifecycle of a single user interface (UI) intensive project building a new UI for the windows media player. During this process, we will:</p> <ol style="list-style-type: none"> 1. Identify a target user 2. Build a scenario in which this user will interact with the product. 3. Create a paper prototype of the UI 4. Develop a functional specification 5. Build the project into a workable media player skin 6. Conduct a usability study with people matching the target user (and a few not . . .) 7. Redesign and rebuild the project to account for findings of the study (Fall, Spring) <p>CS 398 Internship (1-4:0:0) Prerequisite: CS 246 and consent of Department Internship Coordinator. Planned and supervised practical experience in vocational or educational settings. Interns acquire practical skills while applying classroom theory and principles. (Fall, Winter, Spring)</p>	<p>CS 416 Software Engineering II (2:2:0) Prerequisite: CS 364 Software quality engineering including testing and verification and validation. Software metrics. Software cost estimation. (Fall, Winter)</p> <p>CS 432 Software Engineering III (3:3:0) Prerequisite: CS 364 Software process and project management. (Winter, Spring)</p> <p>CS 460 Computer Communication & Networks (3:3:0) Prerequisite: CS 246 Introduction to computer networking with an Internet focus, including: applications, protocols, transport services, IP, routing, LANs, and security. (Winter, Spring)</p> <p>CS 470 Computer Security (3:3:0) Prerequisite: CS 308, CS 237 Security in multi-user and distributed computer systems, cryptography, identification and authentication, message and software protection. (Winter, Spring)</p> <p>CS 480 Computational Theory (3:3:0) Prerequisite: CS 306 Finite automata, regular expressions, grammars, languages, Turing machines, computability, complexity, P and NP problems. (Winter, Spring)</p> <p>CS 490 Special Topics (3:3:0) Prerequisite: Consent of Instructor Current topics in Computer Science. (Taught as needed)</p> <p>CS 498R Internship (1-4:0:0) Prerequisite: CS 246 and consent of Department Internship Coordinator. Planned and supervised practical experience in vocational or educational settings. Interns acquire practical skills while applying classroom theory and principles. (Fall, Winter, Spring)</p> <p>CS 499 Senior Project (3:1:2) Prerequisite: CS 364 Directed individual or group research and study of a topic in computer science not covered by the curriculum. The topic shall be such that the student shall apply material covered by the curriculum to understand a new topic. (Fall, Winter, Spring)</p> <p>EET 150 DC/AC Circuits (4:2:4) Introduction to Direct Current Circuits and Ohm's Law. In-depth coverage of series, parallel, and series-parallel circuits. AC characteristics of inductors and capacitors. Network theorems are applied to complex DC and AC circuits. Computer simulation used to analyze circuitry. Laboratory exercises are included. (Fall, Winter, Spring)</p> <p>EET 151 Digital Circuits (3:2:2) Prerequisite: High School Algebra Introduction to digital electronics. Number systems, truth tables, Boolean algebra, and Karnaugh maps. Covers soldering and basic construction skills. Students must design and build a project that uses sequential logic and a programmable logic device. Laboratory exercises are included. (Fall, Winter, Spring)</p> <p>EET 153 Semiconductors (4:4:2) Prerequisite: EET 150 Introduction to semiconductor devices. Principles of rectifiers, zener diodes, and other pn junction devices. Students must design, build, and demonstrate a linear power supply that meets given specifications. Laboratory exercises are included. (Winter)</p>
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- EET 250 Troubleshooting (3:2:2)**
Prerequisite: EET 150 and EET 153
Identify and repair trouble-symptoms in TVs, radios, tape recorders, VCRs, and CD players. Students use proper instrumentation to isolate the malfunction to a particular component. Defective components are replaced to restore normal operation. Student presentations are required. Laboratory exercises are included.
(Fall, Winter)
- EET 251 Industrial Circuits (3:2:2)**
Prerequisite: EET 150, EET 151, EET 153; Corequisite: Math 112
Introduction to electronic control systems, feedback control theory, and programmable logic controllers. Computers are used to program PLCs. Laboratory exercises are included.
(Winter)
- EET 252 Communications Circuits (3:2:2)**
Prerequisite: EET 150 and EET 153
Introduction to analog and digital electronic communication. Theory of amplitude modulation, frequency modulation, pulse modulation, antennas and transmission lines. Transmitters, receivers, oscillators, and antennas are built and tested. Student presentations are required. Laboratory exercises are included.
(Winter)
- EET 253 Linear Integrated Circuits (3:2:2)**
Prerequisite: EET 150, EET 151, EET 153
Operational amplifiers, comparators, and active filters. Programmable timers, DACs and ADCs. Laboratory exercises are included.
(Fall)
- EET 255 Microprocessors & Microcontrollers (3:2:2)**
Prerequisite: EET 151
Microprocessor and computer architecture and operation. Programming, interfacing, software and hardware of microprocessor based systems. Troubleshooting with an emulator. Students must design, build, and present to the class an approved project that uses a microcontroller. Laboratory exercises included.
(Fall, Winter)
- EET 298R Work Experience (1-4:0:0)**
Prerequisite: Consent of Advisor and Department Internship Coordinator.
Work experience with selected electronics and computer firms. Work period may be arranged during any semester or Spring term.
(Fall, Winter, Spring)