



Major Map: BS Electrical & Computer Engineering

Catalog Year: 2012-2013

The following is a sample course of study. It is the Student's responsibility to ensure that all program requirements are met. This guide is not a substitute for academic advisement. For more information you may go to our website at www.sce.umkc.edu or the catalog at <http://www.umkc.edu/catalog>

Your path to graduation may vary slightly based on factors such as college credit you earned while in high school, transfer work from other institutions of higher learning and placement in Mathematics. You are responsible for checking prerequisites to any courses.

Course Subject and Title	Hrs.	Pre-req met	Transfer Course Info	Transfer Course	Min Grade if Req'd	Date Completed	Final Grade	Satisfy	Additional Critical Tracking Notes
Fall Semester Year 1: 15 hours									
ComSt 110, Fun Effect Speaking & List	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
Constitution Requirement ¹	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 110, Intro to ECE	1	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 216, Engineering Computation	4	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
Engl 110, English I ²	0	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
Math 210, Calculus I ³	4	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
Spring Semester Year 1: 15 hours									
Math 220, Calculus II	4	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
Phys 240, Physics for Sci & Engr I	5	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ME 130 or Hum & Fine Arts elective ⁴	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ME 130 or Hum & Fine Arts elective ⁴	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
Summer Semester Year 1 3 hours									
May use summer semester to lighten fall and spring course loads when courses are offered, such as English 110 or 225.									
Fall Semester Year 2: 15 hours									
ECE 226, Logic Design	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	Complete WEPT ²
ECE 227, Logic Design Lab	1	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 241, Applied Engr Analysis I	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ENGL 225, English Composition II ²	3	<input type="checkbox"/>		<input type="checkbox"/>				<input type="checkbox"/>	
Phys 250, Physics for Sci & Engr II	5	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
Spring Semester Year 2: 17 hours									
CE 211, Engineering Enterprise ⁵	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 228, Intro to Computer Design	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 229, Intro to Computer Design Lab	1	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 250, Engr Mechanics/Thermo	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 276, Circuit Theory I	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 277, Circuit Theory I Lab	1	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 341R, Applied Engr Analysis II	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
Summer Semester Year 2: hours									
May use summer semester to lighten fall and spring course loads when courses are offered.									
Fall Semester Year 3: 15 hours									
CS 394R, Applied Probability	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 376, Circuit Theory II	2	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 377, Circuit Theory II Lab	1	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 380, Signals and Systems	4	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 381, Signals and Systems Lab	1	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 426, Microcomputer Arch	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 427, Microcomputer Arch Lab	1	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
Spring Semester Year 3: 15 hours									
ECE 302, EM Waves & Fields	4	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 330, Electronic Circuits	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 331, Electronic Circuits Lab	1	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 428R, Embedded Systems	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 429, Embedded Systems Lab	1	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 466, Power Systems I	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	



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Fall Semester Year 4: 17 hours									
ECE 358/474, Intro Control Sys/Intro Communication Systems ⁶	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	Apply for graduation
ECE 402WI, Senior Design I ²	2	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 420, Advanced Engr Comp	2	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 430, Microelectronic Circuits	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 431, Microelectronic Circuits Lab	1	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 4XX, Senior Area Elective ⁷	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 4XX, Senior Area Elective ⁷	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
Spring Semester Year 4: 16 hours									
BIOL 102, Biology and Living w/lab ⁸	4	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
CE 311 or SBS, Social Behavioral Science elective ⁹	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 403, Senior Design II	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 4XX, Senior Area Elective (can be waived if admitted into Fastrack) ^{7,10}	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
ECE 4XX, Senior Area Elective (can be waived if admitted into Fastrack) ^{7,10}	3	<input type="checkbox"/>		<input type="checkbox"/>	C			<input type="checkbox"/>	
Total: 125 hours									

¹Constitution requirement may be satisfied by taking either HIST 101 or 102 or 306 or POLSC 210

²ENGL 110 requirements may be waived if student has an ACT English score of 30; or SAT verbal score of 630; or AP English Lang/Com score of 4.2. Students may take ENGL 225 during the summer to offset a regular semester course load. WEPT or Written English Proficiency Test should be taken following the successful completion of ENGL 225, but must be taken the semester before enrolling in ECE 402WI. <http://cas.umkc.edu/writingcenter/StudentResources/WEPT.asp>

³Students must have successfully passed (with a "C" or better) Pre-calculus or a combination of a College Algebra and Trigonometry or have taken four (4) units of high school mathematics including trigonometry. Note: Enrollment is restricted. Students must pass the online Math Entrance Test prior to enrolling. See <http://cas.umkc.edu/math/> for more details.

⁴Students may take two Humanities and Fine Arts (HFA) electives or one HFA and one ME 130 course. HFA electives include Art, Communication Studies, Conservatory, English Literature (not composition), Foreign Language (not native to student), Philosophy or Theater

⁵Students may select to take either ECON 201 or ECON 202 in place of CE 211.

⁶Students need to select between ECE 358, Intro to Control Systems or ECE 474, Intro to Communications Systems, but only need to take one can take both.

⁷Three of the four senior electives must be from either the Electrical Engineering or Computer Engineering track. Students may take an additional four courses beyond the bachelor's degree for a special concentration area. Other courses, such as special topics courses, might fall in a concentration area as determined by the ECE - undergraduate curriculum committee. These are a special area grouping of the courses known to be taught on a regular basis. Other courses are available when there is sufficient demand.

⁸Biology 102 may be taken anytime during the student's course of study and is not restricted to the senior year. With permission, students may choose to take Chemistry 211 with its lab instead of Biology 102.

⁹Students may chose to take a Social and Behavioral Science Elective instead of CE 311. SBS electives include: Criminal Justice, Geography, Economics, History, Political Science, Psychology, or Sociology

¹⁰Qualified students with a 3.0 gpa or above might be able to participate in the Fast-Track Program taking graduate level courses-see graduate advisor.

Non-course requirements

Written English Proficiency Test (WEPT)

Measure of Academic Proficiency and Progress (MAPP)

Senior Exit Survey and Interview

Met

The School reserves the right to make changes in courses, degree requirements, and course schedules without notice.

Students are expected to maintain a quality of achievement significantly above minimum UMKC standards for degree work. Individual student progress will be monitored throughout the program. Satisfactory progress is required of all students for retention in the program. Students are expected to maintain academic standards, perform satisfactorily in courses, refrain from academic dishonesty, comply with the established University and teacher education timetables and requirements, and refrain from unethical or unprofessional behavior or behaviors that obstruct the training process or threaten the welfare of the student or others. Other circumstances involving student behavior will be addressed by the faculty on an individual basis.

Graduation Requirements Summary:

Total Hours (125 minimum)	Totals Hrs at UMKC (30 hours min)	Major GPA (2.0 min)	UMKC GPA (2.0 min)

Academic Advisor: _____ Date: _____

Faculty Advisor: _____ Date: _____