



## Major Map: BS Electrical & Computer Engineering

Catalog Year: 2008-2009

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.

*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.	Upper Division	Transfer Course	Minimum Grade if Required	Date Completed	Final Grade	Pre-requisites met	Additional Critical Tracking Notes
<b>Fall Semester Year 1: 15 hours</b>								
ME 111, Essentials of Engineering	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
Math 210, Calculus I	4	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
Chem 211, General Chemistry w/lab <sup>1</sup>	5	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
Constitution Requirement <sup>2</sup>	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
<b>Spring Semester Year 1: 15 hours</b>								
Math 220, Calculus II	4	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
Phys 240, Physics for Sci & Engr I	5	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ComSt 110, Public Speaking	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
CS 211, Engineering Enterprise	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
<b>Summer Semester Year 1</b>								
May use summer semester to lighten fall and spring course loads.								
<b>Fall Semester Year 2: 17 hours</b>								
Math 250, Calculus III	4	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
Phys 250, Physics for Sci & Engr II	5	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 216, Engineering Computation	4	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 226, Logic Design	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 227, Logic Design Lab	1	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
<b>Spring Semester Year 2: 16 hours</b>								
ECE 276, Circuit Theory	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	Complete WEPT
ECE 341, Engineering Math	4	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
CS 291, Discrete Structures II	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
Engl 225, English Comp II <sup>3</sup>	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
Phil 222, Found of Logic & Sci Method	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
<b>Summer Semester Year 2: 3 hours</b>								
Econ 201 or 202, Intro to Econ I or II	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
CS 352, Data Structures & Algorithm	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
<b>Fall Semester Year: 14 hours</b>								
CS 394R, Applied Probability	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 378, Systems Lab	2	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 380, Signals and Systems	4	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 381, Signals and Systems Lab	1	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 426, Microcomputer Arch	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 427, Microcomputer Arch Lab	1	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
<b>Spring Semester Year 3: 14 hours</b>								
ECE 302, Traveling Waves & Fields	4	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 303, Traveling Waves & Fields Lab	1	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 330, Electronic Circuits	4	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 331, Electronic Circuits Lab	1	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 428R, Embedded Systems	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
ECE 429, Embedded Systems Lab	1	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	



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Summer Semester Year 3: ___ hours							
		<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
Fall Semester Year 4: 14 hours							
CE 311, Technical Entrepreneur	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
CS 431, Intro to Operating Systems	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
ECE 402WI, Senior Design I <sup>4</sup>	2	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
ECE 4XX, Senior Area Elective <sup>5</sup>	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
ECE 4XX, Senior Area Elective <sup>5</sup>	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
Spring Semester Year 4: 14 hours							
ECE 403WI, Senior Design II	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
ECE 4XX, Senior Area Elective (can be waived if doing Fastrack) <sup>5</sup>	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
ECE 4XX, Senior Area Elective (can be waived if doing Fastrack) <sup>5</sup>	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
HFA, Humanities and Fine Arts elective <sup>6</sup>	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
SBS, Social Behavioral Science elective <sup>7</sup>	2	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>

Apply for graduation.

<sup>1</sup>Students with high school chemistry may petition to substitute BIOL 108/108L  
<sup>2</sup>Constitution requirement may be satisfied by taking either HIST 101 or 102 or 306 or POLSC 210  
<sup>3</sup>Prerequisite: ENGL 110; or ACT English score of 30; or SAT verbal score of 630; or AP English Lang/Comp score of 4  
<sup>4</sup>WEPT or Written English Proficiency Test must be taken before enrolling in ECE 402WI  
<sup>5</sup>Three of the four senior electives must have the ECE curricular designation and at least two courses must be from one of the four concentration areas:

- |                               |  |
|-------------------------------|--|
| Communications and Networking | Choose two from (ECE 412, ECE 474, ECE 476, CS 420, CS 421, or CS 423) |
| Computer and VLSI Systems     | or choose two from (ECE 416, ECE 424, CS 457)                          |
| Control and Power             | or choose two from (ECE 458R, ECE 460, ECE 461, ECE 466)               |
| Signal and Image Processing   | or choose two from (ECE 416, ECE 480, ECE 484, ECE 486)                |

Other courses such as a special topics course, 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.

Furthermore, qualified students might be able to participate in the Fast-Track Program taking graduate level courses-see graduate advisor.

<sup>6</sup>Humanities and Fine Arts Electives include: Art/Art History, Conservator or Theater.  
<sup>7</sup>Social and Behavioral Science Electives include: Criminal Justice, Geography, Economics, History, Political Science, Psychology, or Sociology

<b>Non-course requirements</b>	<b>Met</b>
Written English Proficiency Test (WEPT)	<input type="checkbox"/>

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 minimum)	Major GPA (2.0 Minimum)	UMKC GPA

**Academic Advisor:**

**Faculty Advisor:**