

**College of Engineering  
College of Science**  
Minor: Circuits and Electronics (MCEL)  
For students graduating in 2013

**APPROVED**  
COMMISSION ON UNDERGRADUATE  
STUDIES AND POLICIES

Offered By:  
The Bradley Department of Electrical and Computer Engineering

The minor in Circuits and Electronics requires 21 credit hours and is open to all students in the College of Engineering, except students who are enrolled in the Electrical or Computer Engineering degree program. Students may "double count" courses in the Minor with those required for graduation in their Major degree provided the Major has no restrictions to the contrary. For successful completion of the Minor, students must maintain a 2.0 in-Minor GPA with a minimum grade of C- or better in all courses that will be counted towards the minor.

Students shall complete one of the following courses:

ENGE 1104 Engineering Your Digital Future (2) Pre: 1024  
ENGE Digital Future Transition (1) Pre: 1114

1. Students shall complete either:

ECE 2004: Electric Circuit Analysis (2) Requires a C- or better in  
ENGE 1104 or 1204, Pre:  
ENGE 1104 or ENGE 1204,  
Co: 2074, MATH 2214  
and  
ECE 2074: Electric Circuit Analysis Lab (1) Pre: 1114  
or  
ECE 2054: Applied Electrical Theory (3) Pre: PHYS 2306. Co: MATH  
2214  
or  
ECE 3054: Electrical Theory (3) Pre: PHYS 2306. Co: MATH  
2214  
and  
ECE 2074: Electric Circuit Analysis Lab (1) Pre: 1114

2. Students shall complete the following lower division courses:

ECE 2204: Electronics (3) Pre: 2004. Co: 2274  
ECE 2274: Electronic Networks Lab I (1) Pre: 2074. Co: 2204

3. Students shall perform a capstone design project by completing at least three (3) credits from the following courses. Note that several of these courses have prerequisites that must be completed before a student can enroll in the course.<sup>1</sup>

ECE 4206: Electronic Circuit Design (3)  
ECE 4244: Intermediate Semiconductor Processing (3)  
Laboratory

<sup>1</sup> Research and thesis projects must be approved by the Minor Curriculum Committee prior to beginning the research. In addition, a 4994 course must be pre-approved by the ECE Department as a capstone design course that includes significant writing and oral components and may be used by course substitution for any approved ECE capstone course.

