1. **Course number and name**  
**ENGR 290: Introduction to PSPICE**

2. **Credits and contact hours**  
1 credit hours

3. **Instructor’s or course coordinator’s name**  
Instructor: Hao Jiang, Associate Professor  
Course coordinator: Hao Jiang, Associate Professor

4. **Text book, title, author, and year**  
Web: [http://www.linear.com/design/tools/software/#LTspice](http://www.linear.com/design/tools/software/#LTspice)

5. **Specific course information**  
   a. **brief description of the content of the course (catalog description)**  
      Introduce students to a simple computer-aided-design (CAD) circuit design tool, PSPICE or LTSPICE, to support electronic circuit analysis.
   
   b. **prerequisites or co-requisites**  
      ENGR 205
   
   c. **indicate whether a required, elective, or selected elective course in the program**  
      Elective for Electrical Engineering and Computer Engineering

6. **Specific goals for the course**  
   a. **Specific outcomes of instruction, ex. The student will be able to explain the significance of current research about a particular topic.**  
      - To do dc, transient domain, frequency domain, noise and Monte Carlo analysis of circuits with LC, diode, BJT and MOSFETs using a PSPICE or LTSPICE circuit simulator  
      - To enable students to conduct circuit analysis using a PSPICE or LTSPICE circuit simulator
   
   b. **Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course**  
      Course addresses ABET Student Outcome(s): b, c, k  
      - Student understands what is PSPICE or LTSPICE and its use in industrial applications  
      - Student knows how to simulate a circuit using a PSPICE or LTSPICE simulator.  
      - Student can demonstrate how to simulate an actual circuit using a PSPICE or LTSPICE in laboratory setting
      
      Course addresses ABET Student Outcome(s): b, c, k

7. **Brief list of topics to be covered**  
   - Dc analysis  
   - Time domain analysis
• Frequency domain analysis
• Analysis on Diode circuits
• Analysis on BJT circuits
• Analysis on MOSFET circuits