Course Online

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, Assistant Professor
   
   Course coordinator: Hao Jiang, Assistant Professor

4. **Text book, title, author, and year**
   

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, 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 circuit simulator
      • To enable students to conduct circuit analysis using a PSPICE circuit simulator

   b. *Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.*
      
      • Student understands what is PSPICE and its use in industrial applications
      • Student knows how to simulate a circuit using a PSPICE simulator.
      • Student can demonstrate how to simulate an actual circuit using a PSPICE in laboratory setting

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