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, Associate Professor
   Course coordinator: Hao Jiang, Associate 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 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.**
      - 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

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