Template for ABET course syllabi (new format)

1. **Course number and name**  
   ENGR 357: Basic Digital Lab

2. **Credits and contact hours**  
   1 Credit; One 3-hour lab session/week

3. **Instructor’s or course coordinator’s name**  
   Instructor: Di Lan & Hamid Shahnasser  
   Course coordinator: Hamid Shahnasser, Professor of Engineering

4. **Text book, title, author, and year**  
   Hu, S. C. *Computer Logic Experiments*. Will be provided to you.
   
   a. **other supplemental materials**  
      *Schematic Design Entry and Functional Simulation* (28-page booklet available from the Stockroom, SCI-140)

5. **Specific course information**  
   a. **brief description of the content of the course (catalog description)**  
      Circuit construction and troubleshooting techniques. EDA tools and simulation. Combinational and sequential circuits. Semiconductor memory.
   
   b. **prerequisites or co-requisites**  
      ENGR 356 (may be taken concurrently).
   
   c. **indicate whether a required, elective, or selected elective course in the program**  
      Required for Electrical 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.**
      
      - The student will demonstrate an ability to analyze simple combinational and sequential circuits.
      - The student will demonstrate an ability to design simple combinational and sequential circuits.
      - The student will demonstrate a skill of implementing digital circuit using SSI and MSIICs.
      - The student will demonstrate a skill in troubleshooting a digital circuit.
      - The student will demonstrate a skill in schematic capture and simulation.
   
   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): [a, b, c, k].
7. **Brief list of topics to be covered**
   - Design, construction, verification, and troubleshooting of digital circuits.
   - Schematic entry and computer-based simulation.