1. **Course number and name**  
   ENGR : 120 Introduction to Computer Engineering

2. **Credits and contact hours**  
   3 credit hours; Two 50-minute lecture/discuss sessions per week and a two-hour activity session per week

3. **Instructor’s or course coordinator’s name**  
   Instructor: Sung Hu, Ph.D.  
   Course coordinator: Sung Hu, Ph.D.

4. **Text book, title, author, and year**  
   Boe-Bot Robot Kit – USB Version  
   a. other supplemental materials  

5. **Specific course information**  
   a. **brief description of the content of the course (catalog description)**  
      Introduction to the profession, areas of study, university rules and regulations, curriculum requirements, time management and study skills, critical thinking, problem solving skills, ethics, introduction to computers and basic computer skills including graphics, spreadsheet, Internet, and web page design.

   b. **prerequisites or co-requisites**  
      High school algebra and trigonometry.

   c. **indicate whether a required, elective, or selected elective course in the program**  
      Required for 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.**  
      • learn various job functions of a computer engineer as well as professionalism and ethics.  
      • learn university policies, program requirements, and general education requirements.  
      • develop a basic understanding of computer systems, including both hardware and software and their interactions with each other.
Template for ABET course syllabi (new format)

- learn “soft” skills needed to succeed academically and professionally, including study skills, time management skills, stress management skills, communication skills, problem solving skills, and team work skills.
- develop basic computer skills including word processing, spreadsheet, presentation, online research, and other applications programs.
- develop basic hands-on skills including working with electronic components and programming.

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): d, e, f, g, h, I, j, k

7. Brief list of topics to be covered
   - Course organization and requirements; iLearn
   - Activities: overview and self-introduction.
   - Form groups; purchase Boe-Bot; download Boe-Bot manual
   - Introduction to the engineering profession
   - Activities: electronic components and assembling
   - Introduction to computer systems
   - Introduction to programming
   - Introduction to Matlab
   - Basic electricity
   - Basic electronics
   - Basic digital logic
   - Digital information representation
   - Engineering ethics and professionalism
   - Technology, society and life-long learning