ABET Course Syllabi for IND E 101: Introduction to Industrial Engineering

1. **Course number and name:** IND E 101: Introduction to Industrial Engineering

2. **Credits and contact hours:** 1 credit hour, 1 hour per week

3. **Instructor’s name:** Joseph Heim

4. **Text book, title, author, and year**
   
   None

   4a. **Other supplemental materials:** None

5. **Specific course information**
   
   5a. **Brief description of the content of the course (catalog description):**
   Examines the basic concepts and methods of industrial engineering through team-based hands-on activities. Explores the profession of industrial engineering. Discusses resources available to Industrial Engineering students at the University of Washington.

   5b. **Prerequisites or co-requisites:** NONE

   5c. **Required, elective, or selected elective (as per Table 5-1) course in the program:**
   Elective

6. **Specific goals for the course**
   
   The objective of this course is to introduce students to the industrial engineering profession through a series of hands-on projects, activities and presentations.

   6a. **Specific outcomes of instruction**
   This is an introduction and overview of course. Students are exposed to the concepts of modeling of processes and flow, simulation, improving system performance, the changing nature of product quality, lean thinking and industrial engineering careers.

   6b. **explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.**
   
   a. An ability to apply knowledge of mathematics, science and engineering.
   b. An ability to design and conduct experiments, as well as to analyze and interpret data.
   c. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
   l. An understanding of the integrated, interdisciplinary nature of the discipline.

7. **Brief list of topics to be covered**
   
   - Modeling process and flow
   - Simulating to understand
- Improving system performance
- Changing nature of product quality
- Quantifying quality
- Guest speakers discuss their careers as industrial engineers
- Lean thinking