ABET Course Syllabus

1. **Course number and name**
   0901472: Environmental Engineering Laboratory

2. **Credits and contact hours**
   1 Credit Hour

3. **Instructor’s or course coordinator’s name**
   Instructor: Shadi Moqbel, Ghada Kasab, Husam Abu Hajar, Assistant Professors of Civil Engineering
   Course Coordinator: Shadi Moqbel, Assistant Professor of Civil Engineering

4. **Text book, title, author, and year**
   - “Environmental Engineering Laboratory Manual”, (Prepared only for the civil engineering department/UOJ)

   a. **other supplemental materials**

5. **Specific course information**
   a. **brief description of the content of the course (catalog description)**
   Water and Wastewater analysis: acidity, alkalinity, chloride, hardness, Ammonia, dissolved oxygen; biochemical oxygen demand, chemical oxygen demand, coliform bacteria, solids determination, coagulation, and softening

   b. **prerequisites or co-requisites**
   Prerequisite/Co-requisite: Wastewater Engineering (0901471)

   c. **indicate whether a required, elective, or selected elective course in the program**
   Required for Civil 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 students will be able to understand and follow procedures for constituent’s concentration determination.
   - The students will be able to work in teams, as experiments are conducted in groups.
   - The students will be able to prepare a technical report, as the findings of experiments have to be reported in well-structured format.
   - The students will be able to critically evaluate their results, by benchmarking them with related published information.
   - The students will be able to appreciate how the theoretical concepts are applied in practice.
   - The students will be able to understand how results of a practical are influenced by the status of the apparatus.
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): b, g

7. Brief list of topics to be covered
   - Acidity
   - Alkalinity
   - Chloride
   - Ammonia
   - Hardness
   - Softening
   - Solids determination
   - DO/BOD
   - COD

8. Evaluation
   - Lab. Work 35%
   - Midterm Exam 25%
   - Final Exam 40%