

## 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*
  - b. Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition, 2017.
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 bench marking 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 %