ABET course syllabus (Water Reuse Engineering)

1. Course number and name
   0901574: Water Reuse Engineering

2. Credits and contact hours
   3 Credit Hours

3. Instructor’s or course coordinator’s name
   Instructor: Bashar Al Smadi, Associate Professor of Civil Engineering
   Course Coordinator: Bashar Al Smadi, Associate Professor of Civil Engineering

4. Text book, title, author, and year
   - Selected chapters and articles from different references will be used
     1. other supplemental materials
        - “Wastewater Reclamation and Reuse”, Takashi Asano, (1998), TECHNOMIC PUBLISHING CO., INC.

5. Specific course information
   1. brief description of the content of the course (catalog description)
   2. prerequisites or co-requisites
      Prerequisite: Drinking Water Engineering (0901371)
   3. indicate whether a required, elective, or selected elective course in the program
      Elective for Civil Engineering

6. Specific goals for the course
   1. specific outcomes of instruction, ex. The student will be able to explain the significance of current research about a particular topic.
      - The student will be able to understand the water reuse concept and it’s importance.
      - Student will study different reclaimed wastewater uses.
      - Student will be able to understand the different impacts of water reuse.
      - Student will be able to understand the different water reuse projects in different countries.
      - Student will be able to evaluate different water reuse applications
      - Student will be able to understand different components of water reuse projects.
   2. 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, and e
7. **Brief list of topics to be covered**

- Wastewater reclamation and reuse: An introduction
- Public health and environmental health issues in water reuse
- Introduction to risk assistant
- Water reclamation technologies
- Storage of reclaimed water
- Agricultural and landscape irrigation
- Industrial water reuse
- Groundwater recharge with reclaimed water
- Planning for wastewater reclamation and reuse
- Case studies of water reuse