The Hashemite University
Faculty of Engineering
Civil Engineering Program
Course Syllabus

Course Title:	Fluids and Hydraulics Lab	**Course Number:**	110401358
Designation:	Compulsory	**Prerequisite(s):**	
Instructor:	Eng. Suzan albataineh	**Instructor's e-mail:**	suzan@hu.edu.jo
Office Hours:	Refer to posted timetable.		
Class schedule:	1 lab per week		

Course Description (catalog): Fluids and hydraulics lab is a basic civil engineering practical course that enables CE students to conduct experiments related to confirming the theoretical aspects of water flow measurements, friction in pipes and open channel flow.
Textbook: Lab instructions.
Major Topics Covered:

Topic	No. of Weeks	Contact hours*
Introduction + Lab instructions	1	3
EX1: Hydrostatic pressure and center of pressure.	1	3
EX2: Orifice and jet flow.	1	3
EX3: Bernoulli theorem and Venture meter.	1	3
EX4: Impact of water jet.	1	3
EX5: Friction in pipes and energy loss.	1	3
EX6: Uniform flow and roughness coefficient.	1	3
EX7: Specific energy.	1	3
EX8: Hydraulic Jump.	1	3
EX9: Flow over sharp crested weirs.	1	3
EX10: Flow over broad crested weir.	1	3
EX 11: Design Exp. (Refer to the due date in the next page)	1	3
Midterm Exam	1	3
Final Exam	1	3
Total	**14**	**42**

*Contact hours include lectures, pre-exams office questions and exams time.

Specific Outcomes of Instruction (Course Learning Outcomes):
After completing the course, the student will be able to:
- design and conduct experiments, as well as analyze and interpret data (**Outcome 1**).
- acquire knowledge to identify and solve civil engineering water related problems **(outcome 1)**

Student Outcomes (SO) Addressed by the Course:

#	Outcome Description	Contribution
	General Engineering Student Outcomes	
1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	(H=100)
2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	
3	an ability to communicate effectively with a range of audiences	
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	
5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	

6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	
7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	
H=High, **M**= Medium, **L**=Low		

Grading Plan:

Midterm Exam	30 Points	
Lab Reports	30 Points	
Final Exam	40 Points	Will be announced by the registrar

General Notes: HU attendance rules will be applied.
Prepared by: Eng. Suzan albataineh