The Hashemite University
Faculty of Engineering
Civil Engineering Program
Course Syllabus

Course Title:	Hydraulics	**Course Number:**	110401356
Designation:	Compulsory	**Prerequisite(s):**	
Instructor:	Dr. Zeyad Tarawneh	**Instructor's e-mail:**	zeyadt@hu.edu.jo
Office Hours:	Refer to posted time table.		
Class schedule:	3 hours per week		

Course Description (catalog): hydraulics is a basic civil engineering course that enables CE students to analyze and design various hydraulic systems related to water like open channels, pressurized pipes and pumping stations. Topics related to uniform and non-uniform flow characteristics, best hydraulic section, energy applications, flow under varying head, pumps and pumping stations will be covered.

Textbook: Understanding Hydraulics: Hamill L. 2001, Second Edition, Polgrave.

Major Topics Covered:

Topic	No. of Weeks	Contact hours*
Ch. 1 - 5: Review on Fluids	1	3
Ch. 8: Flow in Open Channels.	7	21
Ch. 6: Flow in Closed Conduits (pressurized pipes)	3	9
Ch. 7: Flow under Varying Head	1	3
Ch. 11: Hydraulic Machines	2	6
Exams	1 (1st+2nd+final)	3
Total	**15**	**45**

*Contact hours include: lectures and exams.

Specific Outcomes of Instruction (Course Learning Outcomes):

After completing the course, the student will be able to:

- Understand and solve civil engineering problems related to flow in open channel and pressurized systems; flow under varying head and pumping stations (**Outcome 1**).
- Design of open channels, pressurized conduits and pumping stations (**Outcome 2**).

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 (70)
(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	L (30)
H=High, **M**= Medium, **L**=Low		

Grading Plan:	1st Exam	30 Points	
	2nd Exam	30 Points	
	Final Exam	40 Points	Will be announced by the registrar

General Notes: **HU attendance rules will be applied.**
Prepared by: **Dr. Zeyad Tarawneh**