Jordan University of Science and Technology

Faculty of Engineering

Civil Engineering Department

CE354 Fluid Mechanics And Hydraulics Lab

Summer Semester 2019-2020

Course Catalog
1 Credit Hours. (3 h lecture). . This laboratory course is designed to provide insight and experience into the fundamental principles taught in fluid mechanics and hydraulics courses. These principles include: Fluid properties: density, specific gravity, viscosity; fluid characteristics; continuity; conservation of energy; fluid behavior; center of pressure; pipe flow; open channel flow; and pump performance.

Text Book	
Title	Fluid Mechanics and Hydraulics Laboratory Manual
Author(s)	Mohanned S. El-Sheriadeh and Husam Ahmed Fakhouri
Edition	1st Edition
Short Name	1
Other Information	

Instructor	
Name	**Dr. Aslam Alomari**
Office Location	C2L1
Office Hours	Sun : 13:00 - 14:30 Mon : 08:30 - 10:00 Tue : 13:00 - 14:30 Wed : 13:00 - 14:30
Email	aaalomari3@just.edu.jo

Class Schedule & Room
Section 2: Lecture Time: Sat, Thu : 14:30 - 17:30 Room: LAB

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
233520	CE352 Hydraulics	Pre./Con.
233510	CE351 Fluid Mechanics	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Week 1	Introduction and Report Writing	
Week 2	Measurement of Density, Specific Gravity, Viscosity of Liquids	
Week 3	Center of Pressure on a Plane Surface	
Week 4	Impact of a Jet	
Week 5	Osborne Reynolds Apparatus	
Week 6	Bernoulli's Theorem Demonstration Apparatus	
Week 7	Head Losses	
Week 8	Discharge over weirs	
Week 9	Hydraulic Jump	
Week 10	Sluice Gate	
Week 11	Two Stage Centrifugal Pumps	

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Learn experimental and theoretical procedures for measurement the fluid properties and characteristics. [1SLO1, 1SLO2, 1SLO3, 1SLO4, 1SLO7]	20%	
Learn experimental and theoretical procedures for measurement the center of pressure on a plane surface. [1SLO1, 1SLO2, 1SLO3, 1SLO4, 1SLO7]	20%	
Learn experimental and theoretical procedures for producing mechanical work by fluid. [1SLO1, 1SLO2, 1SLO3, 1SLO4, 1SLO7]	20%	
Learn experimental and theoretical procedures for fluid behavior in open channel [1SLO1, 1SLO2, 1SLO3, 1SLO4, 1SLO5, 1SLO7]	20%	
Learn experimental and theoretical procedures for the connection of pumps and the performance of pump [1SLO1, 1SLO2, 1SLO3, 1SLO4, 1SLO7]	20%	

Relationship to Program Student Outcomes (Out of 100%)						
SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	SLO7
19.33	19.33	19.33	19.33	3.33		19.33

Evaluation	
Assessment Tool	**Weight**
Final Exam	100%

Policy	
Policy 1	purpose of a report: A key thing to keep in mind right through your report writing process is that a report is written to be read, by someone else.
Policy 2	Reports are to be submitted at the beginning of class typically one week after experiments are conducted.
Policy 3	Late report will not be accepted and the student will get zero grades for that report.
Policy 4	Copying the report from another student is not acceptable and will not be tolerated. "Copying another person's laboratory report and presenting it, either wholly or with only minor changes, as if it were the student's own work".
Policy 5	In accordance with the University Regulations, it is the student?s responsibility to be punctual and to attend all classes. Failure to attend classes without prior approval for whatever reason is considered as part of the percentage missed. Students bear full responsibility for checking their own attendance record. Attendance records are kept, and if a student is absent for more than 10% of the total contact hours without an excuse accepted by the faculty dean, he will fail

Date Printed: 2020-09-24