

وصف مقرر دراسي Course Description

متطلب متزامن Co-Req.	متطلب سابق Pre-Req	تأريخ TU	عملي LB	نظري LT	الساعات CR	اسم المقرر Course Title	رقم ورمز المقرر Course Code
	230 همد CE 230	1	0	3	3	الهيدروليكا Hydraulic Engineering	456 همد CE 456

محتويات المقرر:

الجريان المستقر في القنوات المغلقة والمكشوفة، المضخات، شبكات المواسير، التحليل البعدي، التناظر، تجارب معملية على قياسات الموائع والسريان في الأنابيب وفي القنوات المكشوفة وعلى المضخات الطاردة.

Course Contents:

Steady flow in closed conduits and open channels. Pumps. Networks of pipes. Dimensional analysis and similitude. Laboratory experiments covering fluid measurements, flow through pipes, open channel, centrifugal pump.

Course Objectives:

1. Recognize the essential parameters describing steady flow in pipes and open channels.
 2. Understand the common instruments used in measuring depth of water and flow velocity in open channels.
 3. Be able to calculate flows in network of pipes.
 4. Be able to deal with different types of pump.
 5. Be able to design weirs.
 6. To solve a range of problems in steady open channel flow using energy and momentum concepts.
- To understand the concepts of dynamic similarity and be able to use dimensional analysis to design and interpret laboratory experiments

Evaluation Methods:

1. Midterm exams
2. Assignments
3. Quizzes
4. Lab. Reports
5. Final exam

Text Book and References:

R.S. Gupta, "Hydrology and Hydraulic Systems", 2001, Waveland Press, Inc. ISBN 1577660307.