

## Course Description وصف مقرر دراسي

متطلب متزامن Co-Req.	متطلب سابق Pre-Req	تمارين TU	عملي LB	نظري LT	الساعات CR	اسم المقرر Course Title	رقم ورمز المقرر Course Code
-	203 رياض، 202 هعم	1	-	3	3	ميكانيكا الموائع Fluid Mechanics	230 همد CE 230
-	Math203,GE202						

### محتويات المقرر:

خواص الموائع ، إستاتيكا الموائع ، الكينما تيك ، ديناميكا الموائع المثالية ، تدفق الموائع الحقيقية ، تأثير اللزوجة على مقاومة المائع ، قياسات الموائع ، المضخات .

### Course Contents:

Fluid properties. Fluid statics. Kinematics. Dynamics of an ideal fluid. Flow of real fluids. Viscous effect and fluid resistance. Pumps. Fluid measurements.

### Course Objectives:

1. Recognize the essential parameters describing a fluid system and speak the language used in fluid mechanics courses.
2. Understand the common instruments used in measuring pressures and flow rates.
3. Be able to calculate pressures, forces and stability in static fluid systems.
4. Be able to identify whether a flow is steady or unsteady, uniform or non-uniform , laminar or turbulent.
5. Be able to select appropriate control volumes for solving the equations of fluid mechanics.
6. Be able to calculate pressures, forces and stability in dynamic fluid systems.
7. Be able to select suitable pump.

### Evaluation Methods:

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| 1. Midterm exams | 4. Final exam | <b>Note:</b> |
| 2. Assignments   |               |              |
| 3. Quizzes       |               |              |

### Text Book and References:

- Fluid Mechanics by Douglas, J.F. , Csiorek, J.M. & Swaffield, J. A.
- Fluid Mechanics by Victor L. Streeter , Benjamin. Wylie and Keith Bedford