

## Course Description وصف مقرر دراسي

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
-	371 همك	1	-	3	3	الديناميكا الحرارية - 2	372 همك
-	ME 371					Thermodynamics - 2	ME 372

### محتويات المقرر :

العلاقة الديناميكية الحرارية المعممة، الإتاحة ؛ مخاليط الغازات المثالية ؛ مخاليط الغاز والبخار ؛ الديناميكا الحرارية للضواغط الترددية ؛ الاحتراق ؛ مدخل إلى آلات الاحتراق الداخلي

### Course Contents:

Thermodynamic relations; Availability; Ideal gas mixtures; Gas-vapor mixtures; Thermodynamics of reciprocating gas compressors; Combustion; Introduction to internal combustion engines.

### Course Objectives:

To provide a comprehensive study of power and refrigeration cycles and systems, gas and water vapor mixtures, psychrometrics, Thermodynamic relations for simple compressible substances, fuels and combustion processes in the field of thermal sciences as well as applications of the first and second laws of Thermodynamics to such thermal systems and processes.

### Evaluation Methods:

1. Midterm exams
2. Assignments
3. Quizzes
4. Final exam

### Text Book and References:

Thermodynamics An Engineering Approach, Yunus Cengel and Michael Boles, Mc Graw Hill  
Applied Thermodynamics for Engineering Technologists,  
T.D. Eastop and A. McConkey, Longman Scientific & Technical, Ch. 12 and 13.