

## 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
	104 فيز Phys 104	1	-	3	3	الديناميكا الحرارية وانتقال الحرارة Thermodynamics and Heat transfer	229 همك ME 229

### محتويات المقرر:

القانونين الأول والثاني للديناميكا الحرارية؛ خواص الغاز المثالي والأبخرة؛ دورات الهواء القياسية؛ دورات القوى البخارية؛ الدورات المعكوسة (التبريد)؛ انتقال الحرارة بالتوصيل والحمل

### Course Contents:

First and second law of thermodynamics; Properties of ideal gases and vapors; Air standard cycles; Vapor power and reversed cycles; Conduction and convection heat transfer

### Course Objectives:

- 1) To familiarize the students with basic concepts of the first and second laws of Thermodynamics and their applications in engineering problems.
- 2) To provide the student with a comprehensive treatment of classical Thermodynamics.
- 3) To prepare the student to effectively use thermodynamics in the practice of engineering.
- 4) To prepare the student to effectively analysis the basic thermodynamic power and refrigeration cycles.
- 5) To familiarize the students with basic concepts of the heat transfer.

### Evaluation Methods:

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

### Text Book and References:

Thermodynamics - An Engineering Approach, Y.A. Cengel and M.A. Boles, McGraw-Hill.