

ME 234 – Thermo Fluids

CREDIT HOURS

3 Hours

CONTACT HOURS (Hours/week)

Lecture: 2; Tutorial: 2

COURSE COORDINATOR

Dr Mohammed Qatary

TEXT BOOK:

C Marquand & Craft, Thermofluids, Wiley.

COURSE DESCRIPTION:

Heat Engine Cycle- Steam Cycles- Positive Displacement Machine- Gas Turbine- Fluid Properties- Manometers- Hydrostatic Forces- Flow Characteristics- Continuity Equation- Bernoulli's Equation.

PREREQUISITE:

(BA114) Physics II

RELATION OF COURSE TO PROGRAM:

Required

COURSE INSTRUCTION OUTCOMES:

The student gains knowledge on elementary subject of thermodynamics and fluid mechanics.

TOPICS COVERED:

- Heat Engine Cycles
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- Steam Cycles.
- Positive Displacement Machine.
- Gas Turbine
- Fluid Properties
- Manometers
- Hydrostatic Forces
- Flow Characteristics
- Continuity Equation
- Bernoulli's Equation

CONTRIBUTION OF COURSE TO MEET THE REQUIREMENTS OF CRITERION 5:

Professional Component Content			
Math and Basic Sciences	Engineering Topics	General Education	Engineering Design
✓	✓		

RELATIONSHIP OF COURSE TO STUDENT OUTCOMES:

Student Outcomes		Course Outcomes
a.	An ability to apply knowledge of mathematics, science, and engineering.	✓
b.	An ability to design and conduct experiments, analyze and interpret data.	✓
c.	An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	
d.	An ability to function on multi-disciplinary teams.	
e.	An ability to identify, formulate, and solve engineering problems.	✓
f.	An understanding of professional and ethical responsibility.	
g.	An ability to communicate effectively.	
h.	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal content	
i.	A recognition of the need for, and an ability to engage in life-long learning.	
j.	A knowledge of contemporary issues within and outside the electrical engineering profession.	
k.	An ability to use the techniques, skills, and modern engineering tools necessary for electrical engineering practice.	