Republic of Iraq

The Ministry Of Higher Education

& Scientific Research

بسم الله الرحمن الرحيم

University: Diyala

College: Engineering

Department: Chemical

Stage: Third

Lecturer name: Mustafa S. Mahdi

Qualification: M.Tech. thermal eng.

Place of work: University of Diyala

Ministry of Higher Education & Scientific Research

Flow up of implementation celli pass play

Course Instructor	Mustafa Sabah Mahdi Abd
E-mail	Mustafa.sabah@yahoo.com
Title	Heat Transfer
Course Coordinator	Annually
Course Objective	This course is intended to serve as an introduction to the heat transfer laws and the basic to design heat transfer equipment
Course Description	Illustrated in the attached tables
Textbook	P. Holman, "Heat Transfer", McGraw - Hill, ٨,th Ed., ١٩٩٧.

Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	٢٠٪	١٠٪	١٠٪	-	٦٠٪

General Notes	

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Course Weekly Outline

Week	Date	Topes Covered	Lab. Experiment Assignments	Notes
١	٢٢ and ٢٣, Sep. ٢٠١٤	Introduction		
٢	٢٩ and ٣٠ Sep. ٢٠١٤	General differential equation for heat conduction in Cartesian coordinates		
٣	٠٦ and ٧, Oct. ٢٠١٤	General differential equation for heat conduction in cylindrical and spherical coordinates		
٤	١٣ and ١٤, Oct. ٢٠١٤	One-dimensional steady state conduction		
٥	٢٠ and ٢١, Oct. ٢٠١٤	One-dimensional steady state conduction, radial systems (cylinder and sphere)		
٦	٢٧ and ٢٨, Oct. ٢٠١٤	Heat flow through composite slabs		
٧	٣ and ٤, Nov. ٢٠١٤	Overall heat transfer coefficient		
٨	١٠ and ١١, Nov. ٢٠١٤	Critical thickness of insulation		
٩	١٧ and ١٨, Nov. ٢٠١٤	One-dimensional, steady state heat conduction, with internal heat generation for plane slab		
١٠	٢٤ and ٢٥, Nov. ٢٠١٤	One-dimensional, steady state heat conduction, with internal heat generation for cylinder and sphere		
١١	٠١ and ٢, Dec. ٢٠١٤	Heat transfer from extended surfaces (fins)		
١٢	٠٨ and ٩, Dec. ٢٠١٤	Infinitely long fin. Fin of finite length		
١٣	١٥ and ١٦, Dec. ٢٠١٤	Performance of fins		
١٤	٢٢ and ٢٣, Dec. ٢٠١٤	Lumped-heat-capacity system		
١٥	٢٩ and ٣٠, Dec. ٢٠١٤	Transient conduction in large plane walls, long cylinders and spheres		
١٦	٠٥ and ٠٦, Jun. ٢٠١٤	Transient heat flow in a semi-infinite solid		

		Half – year break		
١٧	١٦ and ١٧, Feb. ٢٠١٥	Velocity and thermal boundary layer	Measurement of thermal conductance	
١٨	٢٣ and ٢٤, Feb. ٢٠١٥	Exact Solutions of Boundary Layer Equations	Heat transfer by force convection	
١٩	٠٢ and ٠٣, Mar. ٢٠١٥	Relation between the fluid friction and heat transfer coefficient in laminar flow for a flat plate.	Heat transfer by natural convection	
٢٠	٠٩ and ١٠, Mar. ٢٠١٥	Force convection	Heat exchanger	
٢١	٢٣ and ٢٤, Mar. ٢٠١٥	Force convection equations		
٢٢	٣٠ and ٣١ Mar. ٢٠١٥	natural convection		
٢٣	٠٦ and ٠٧, April ٢٠١٥	radiation		
٢٤	١٣ and ١٤, April ٢٠١٥	radiation		
٢٥	٢٠ and ٢١, April ٢٠١٥	boiling		
٢٦	٢٧ and ٢٨, April, ٢٠١٥	condensation		
٢٧	٠٤ and ٠٥, May, ٢٠١٥	Heat exchanger		
٢٨	١١ and ١٢, May, ٢٠١٥	LMTD and NTU		
٢٩	١٨ and ١٩, May, ٢٠١٥	Performance of Heat exchanger		
٣٠	٢٥ and ٢٦, May, ٢٠١٥	Heat exchanger design		

INSTRUCTOR Signature: **Dean Signature:**