

Course Code	ME 303
Course Title	Applied Thermodynamics II
No. of Credits	3
Pre-requisites	ME 207
Compulsory / Optional	Compulsory for mechanical engineering
Aim(s) : This is the second part of the applied thermodynamics course designed to provide a background of fundamental principles of steam power cycle, heat transfer, refrigeration and air-conditioning. The sections covers here are not restricted to fundamentals; they also discuss the history, developments and applications. This covers, steam properties, refrigerant properties, air-properties and their applications.	
Intended Learning Outcomes : On successful completion of the course, the students should be able to; <div><div>1.</div><div>Conduct steady state heat transfer analysis in simple objects and heat exchangers.</div></div> <div><div>2.</div><div>Perform calculations in refrigeration cycles using charts/tables.</div></div> <div><div>3.</div><div>Analyze air conditioning processes with or without psychometric charts.</div></div> <div><div>4.</div><div>Analyze steam cycles with using charts/tables.</div></div> <div><div>5.</div><div>work in a groups, take experiment readings, analyze and writing reports</div></div>	
Time Allocation (Hours) : Lectures 35 , PBL 10, Assignments 10	
Course content / Course description : <div><div>•</div><div>Heat transfer (general/conduction/convection)</div></div> <div><div>•</div><div>Refrigeration and heat pump technology</div></div> <div><div>•</div><div>Gas mixtures psychometric and air-conditioning</div></div> <div><div>•</div><div>Steam power cycles</div></div>	
Recommended Texts (if any) : <div><div>•</div><div>A text book “Course book thermodynamics I and II” prepared by Dr. Primal Fernando, university of Peradeniya, Sri Lanka is used as the main text book for this course.</div></div> <div><div>•</div><div>Class room notes and course book printed chapters are provided.</div></div> <div><div>•</div><div>Additional books are recommended</div></div>	
Evaluation	Percentage Mark
Mid-semester examination	20
Labs	10
Assignments	20
End-semester examination	60