

MET 3711 - Heat and Power Cycles

Fall 2026 Syllabus, Section 01, CRN 40849,

Credit hours: 4

Instructor

Michael Costarell

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Public Instructor Information

Instructor Title: Professor, MET Program Coordinator, Vice Chair of Academic Senate

Instructor Professional Qualifications:

Bachelor of Engineering in Civil Engineering, Youngstown State University 1989

Master of Science in Mechanical Engineering, Carnegie Mellon University, 2000

Instructor Office Location: Moser 4138

Instructor Office Phone: 330.941.3741

Course Description

3711. Heat and Power Cycles. A continuation of MET 3705, including the study of heat transfer, the Rankine cycle, the Otto cycle, the Diesel cycle, and the performance of pumps and heat exchangers. Prereq.: 'C' or better in MET 3714, 'C' or better in MET 3705. 4 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Fundamentals of Thermal-Fluid Sciences	Yunus A. Cengel	1266360190

E books will not be used on exams.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Day	Date	Reading(s)	Proposed Topic	Due/To Prepare for Class
Mon	8/24	Chapter 8	Entropy	
Mon	9/7	Chapter 9	Power and Refrigeration	
Mon	9/21	Chapter 16	Mechanisms of Heat Transfer	
Mon	10/5	Chapter 17	Steady Conduction	
Mon	10/12	Chapter 18	Transient Heat Conduction	
Mon	10/26	Chapter 19	Forced Convection	
Mon	11/9	Chapter 21	Radiation	
Wed	11/25	Chapter 22	Heat Exchangers	
Mon	12/7	Finals		

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.