

THREE RIVERS COMMUNITY COLLEGE
COURSE OUTLINE
CRN-10290&CRN-11288 W 8:00 - 9:40a B111&D122 & W 10:00-11:40a B108/B111
Robert Lantz (rlantz@trcc.comnet.edu)

Course Number/Title: MEC K275 Thermal Science Lab

Lecture 0 hrs Laboratory 2 hrs Credit 1 hrs Contact 2 hrs

Course Description: Selected labs from the fields of fluid mechanics, thermodynamics, and heat transfer

Method / Grading: Laboratory experiments & Reports

Text: None

Prerequisites: MAT-K254 Co-Requisites: MEC-K241 or MEC-K270 or MEC-K272

COURSE TOPICS/CONTENT		HOURS
1. Laboratory Introduction		2
2. Venturi Meter		2
3. Orifice Meter		2
4. Pressure Drop in Lines		2
5. Pressure Drop Across Valves		2
6. Pressure Drop Around Corners		2
7. Friction Factor Versus Reynold's Number		2
8. Diesel Engine Dynamometer Test		2
9. Tank Flow		2
10. Heat Transfer		2
11. Steam Turbine		2
12. Steady State Conduction		2
13. Pump Lab		2
14. Pump Efficiency		2
15. Flow Calibration		2
	TOTAL HOURS	30

Date: Jan 20, 2011

Prepared By: Robert Lantz

Program Coordinator: Robert Lantz

Department Chairperson: Tony Benoit

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Measurable Objectives

By performing successful experiments from the enclosed list, competency will be demonstrated.