Three Rivers COMMUNITY COLLEGE

Fall 2019

Engineering Thermodynamics I

EGR*K215, CRN-33553

Class Hours: Monday & Wednesday from 10:30 am – 12:10 pm

Class Location: D212

Class Textbook: Fundamentals of Engineering Thermodynamics, 9th Edition, by Michael Moran, Howard Shapiro

Instructor:

Name:	Mark Vesligaj
Office:	C128
Office Hours:	Monday from 12:30 – 1:30 pm **AND** 5:00 – 6:00 pm Wednesday from 4:15 – 5:15 pm … …or by appointment. **Please set appointments in advance.**
Phone:	860 215 9442 (office)
Email:	mvesligaj@trcc.commnet.edu (preferred contact method)

Course Description: This course is an introduction to the First and Second Laws of Thermodynamics. Topics included are: energy concepts and balances, thermodynamic properties of pure substances and ideal gases, analysis of ideal and real processes including turbines, pumps, heat exchangers, and compressors.

Course Objectives: Upon completion of the course, the student will be able to:

- Demonstrate an understanding of the First and Second Laws of Thermodynamics;
- Demonstrate an understanding of the thermodynamic properties of pure substances and ideal gases;
- Recognize, analyze, and solve problems of the thermodynamic properties of pure substances and ideal gases;
- Recognize, analyze, and solve problems involving ideal and real processes such as turbines, pumps, heat exchangers, and compressors.

Special Needs: Any student in the class who may have special needs should feel free to contact me. I am interested in any situation which may impact your ability to be successful in this course. If you are a student with a disability and you believe you will need accommodations for this class, it is your responsibility to please contact one of the college's Disability Service

Providers (DSP) as soon as possible. Please note that accommodations cannot be provided until you provide written authorization from a DSP.

For more information, contact Advising and Counseling Center at 860-215-9017

Digication: All students are required to maintain an online learning portfolio in Digication that uses the college template. Through this electronic tool students will have the opportunity to monitor their own growth in college-wide learning. The student will keep his/her learning portfolio and may continue to use the Digication account after graduation. A Three Rivers General Education Assessment Team will select and review random works to improve the college experience for all. Student work reviewed for assessment purposes will not include names and all student work will remain private and anonymous for college improvement purposes. Students will have the ability to integrate learning from the classroom, college, and life in general, which will provide additional learning opportunities. If desired, students will have the option to create multiple portfolios.

Class Cancellation: In case of inclement weather, check the college website for class cancellations or call 860-215-9000 for recorded message.

MyCommNet Alert: *MyCommNet* is a system that sends text messages and emails to anyone signed up in the event of a campus emergency. Additionally, TRCC sends messages when the college is delayed or closed due to weather. All students are encouraged to sign up for *MyCommNet* Alert. A tutorial is available on the Educational Technology and Distance Learning Students page of the web site.
http://www.trcc.commnet.edu/div_it/educationaltechnology/Tutorials/myCommNetAlert/MIR3.html

BOARD OF REGENTS FOR HIGHTER EDUCATION AND CONNECTICUT STATE COLLEGES AND UNIVERSITIES POLICY REGARDING SEXUAL MISCONDUCT REPORTING, SUPPORT SERVICES AND PROCESSES POLICY

Statement of Policy for Public Act No. 14-11: An Act Concerning Sexual Assault, Stalking and Intimate Partner Violence on Campus:
"The Board of Regents for Higher Education (BOR) in conjunction with the Connecticut State Colleges and Universities (CSCU) is committed to insuring that each member of every BOR governed college and university community has the opportunity to participate fully in the process of education free from acts of sexual misconduct, intimate partner violence and stalking. It is the intent of the BOR and each of its colleges or universities to provide safety, privacy and support to victims of sexual misconduct and intimate partner violence."

United States Department of Education and Office of Civil Rights Title IX Statement of Policy:
"Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination based on sex in education programs and activities in federally funded schools at all levels. If any part of a school district or college receives any Federal funds for any purpose, all of the operations of the district or college are covered by Title IX.

Title IX protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination, including discrimination based on gender identity or failure to conform to stereotypical notions of masculinity or femininity. All students (as well as other persons) at recipient institutions are protected by Title IX – regardless of their sex, sexual orientation, gender identity, part-or full-time status, disability, race, or national origin-in all aspects of a recipient's educational programs and activities."

If any student experiences sexual misconduct or harassment, and/or racial or ethnic discrimination on Three Rivers Community College Campus, or fears for their safety from a threat while on campus, please contact:

Maria Krug, Title IX Coordinator OR Ken Saad, Equity & Diversity Officer
Three Rivers Community College
574 New London Turnpike, Norwich CT 06360
(860) 215-9208, MKrug@trcc.commnet.edu

OR

(860) 215-9319, KSaad@trcc.commnet.edu

Academic Integrity: Academic integrity is essential to a useful education. Failure to act with academic integrity severely limits a person's ability to success in the classroom and beyond. Furthermore, academic dishonesty erodes the legitimacy of every degree awarded by the College. In this class and in the course of your academic career, present only your own best work; clearly document the sources of the material you use from others; and act at all times with honor.

Withdrawal: A student who finds it necessary to discontinue a course must complete a "Withdrawal Request Form" available in the Registrar's office within the time limits of the semester calendar. Students who do not withdraw, but stop attending will be assigned an "UF" which may impact their financial aid status. The last day to withdraw from classes can be found on the Academic Calendar the college website.

Homework: There will be regular homework assignments for this course. However, the homework will not be collected and graded. It is up to the student to keep up with the assignments and ask questions regarding the homework at the beginning of the following class.

Attendance: Attendance is required to succeed in this course. If you miss class on the day of a quiz or exam you will not be allowed to make it up. Attendance will be taken for all classes.

Grading Policy:

Quizzes:
There will be short quizzes throughout the semester. Quizzes will be administered at the beginning of class or will be take home from the end of lecture. Those students arriving late will not be allowed extra time to complete the quiz or make it up.

Exams:
There will be three scheduled exams throughout the semester.

Final Exam:
There will be a cumulative final exam.

Your final grade in this course is determined by weighting the above three components in the following manner:

Quizzes	20%
Exams (3 Total)	60%
Final Exam	20%
TOTAL	**100%**

Grading Equivalents:

Your final letter grade will be determined according to the following equivalents:

A: 93 – 100, A-: 90 – 92
B+: 87 – 89, B: 83 – 86, B-: 80 – 82
C+: 77 – 79, C: 73 – 76, C-: 70 – 72
D+: 67 – 69, D: 63 – 66, D-: 60 – 62
F: below 60

CHAPTERS & EXAM SCHEDULE:

Chapter 1 – Introductory Concepts and Definitions

Chapter 2 – Energy and the First Law of Thermodynamics

Chapter 3 – Evaluating Properties EXAM 1

Chapter 4 – Control Volume Analysis Using Energy

Chapter 5 – The Second Law of Thermodynamics

Chapter 6 – Using Entropy EXAM 2

Chapter 7 – Exergy (Availability) Analysis

Chapter 8 – Vapor Power Systems EXAM 3