

EVELYN GALLEGOS

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| TEXT | Excursions in Modern Mathematics by Peter Tannenbaum, 9 th Edition Publisher: Pearson, ISBN: 9780134468372 (required) |
| COURSE DESCRIPTION | The course covers areas which combine mathematics in a real world interface. Main focus will be placed on topics of social choice with applications in politics, social science, and government, growth of biological and human populations, personal finance and consumer debt, and explorations of shape and form. |
| MEASUREMENTS | Chapter Tests – 60%, Final project – 30%, Attendance – 10% Grade Equivalents: A (93-100), A- (90-92.99), B+ (87-89.99), B (83-86.99), B- (80-82.99), C+ (77-79.99), C (73-76.99), C- (70-72.99), D+ (67-69.99), D (63-66.99), D- (60-62.99), F (below 60) |
| SUPPORT DEVICES | Tutoring and Academic Support Center, peer tutoring, help by appointment available |
| OFFICE HOURS | By appointment or email: egallegos@trcc.commnet.edu |
| CLASS CANCELLATIONS | Check the college website for weather related cancellations or call 860-215-9000 for recorded message. Follow Blackboard announcements for class-specific cancellations. |
| PLAGIARISM AND ACADEMIC HONESTY | Academic integrity is essential in all aspects of college coursework and learning. I have zero tolerance for academic dishonesty. It is expected that YOU complete all your assigned work. Communication or collaboration of ANY sort is ABSOLUTELY PROHIBITED during any exam. Academic Misconduct is punishable in a number of ways, including a score of a zero on the assignment where the cheating took place, a grade of an F in the course and/or possible censure on your permanent record. All cases of academic dishonesty will be referred to the Academic Dean. |
| 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 sign up for MyCommNet Alert. A tutorial is available on the Educational Technology and Distance Learning Students page of the website at: http://www.trcc.commnet.edu/div_it/educationaltechnology/Tutorials/myCommNetAlert/MIR3.html |
| DISABILITIES | If you have a disability that may affect your progress in this course, please meet with a Disability Service Provider (DSP) as soon as possible. Please note that accommodations cannot be provided until you provide a written authorization from a DSP. TRCC Disabilities Service Providers Counseling & Advising Office – Room A119 Matt Liscum (860-215-9265) – Physical disabilities, sensory disabilities, medical disabilities, mental health disabilities Chris Scarborough (860-215-9289) – Learning disabilities, ADD/ADHD, autism spectrum |

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DIGICATION

All students are required to maintain an online learning portfolio in Digication that uses the college template.

SEXUAL MISCONDUCT

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.”

TITLE IX

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 Vicki Baker, the Diversity Officer and Title IX Coordinator: 860-215-9208 (vbaker@trcc.commnet.edu)

ACCEPTANCE POLICY

After reading this syllabus, choosing to stay registered for this course exemplifies your acceptance of the syllabus and all policies and consequences outlined in the syllabus. If you do not agree with any of the terms in the syllabus, you are free to withdraw.

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DISCLAIMER The instructor has the right to change/modify this syllabus at any time with proper notification to the class.

COURSE CONTENT

- JAN 18 Chapter 1 – The Mathematics of Elections
- JAN 25 Chapter 2 – The Mathematics of Power
- FEB 1 Chapter 3 – The Mathematics of Sharing
- FEB 8 Chapter 4 – The Mathematics of Apportionment
- FEB 15 Part 1 – Social Choice – Test
- FEB 22 Chapter 9 – Population Growth Models
- MAR 1 Chapter 10 – Financial Mathematics
- MAR 8 Part 3 – Growth – Test
- MAR 22 Chapter 11 – The Mathematics of Symmetry
- MAR 29 Chapter 12 – Fractal Geometry
- APR 5 Chapter 13 – Fibonacci Numbers and the Golden Ratio
- APR 12 Part 4 – Shape and Form – Test
- APR 19 Project Presentations
- APR 26 Project Presentations
- MAY 3 Project Presentations
- MAY 10 Make-up day. Class in session only if a previous class was canceled

COURSE OBJECTIVES

- Upon the completion of this course students will be able to:
1. Determine the basic elements of an election, calculate winners of elections based on selected voting methods, and discuss the fairness of voting systems.
 2. Calculate the voting powers using appropriate indexes and calculate numbers of subsets and permutations.
 3. Determine the division of assets using multiple sharing methods.
 4. Solve apportionment problems using multiple methods and determine quota rules and apportionment paradoxes.
 5. Determine sequences and population sequences and calculate projected growth

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- using linear, exponential, and logistic growth models.
6. Solve problems involving personal finance topics, including percentages, simple interest, compound interest, and consumer debt.
 7. Practice the mathematics of symmetry: rigid motions, reflections, rotations, translations, glide reflections, symmetry, and patterns.
 8. Explore the geometry of nature through the examples of the Koch snowflake, self-similarity, Sierpinski gasket and the chaos game, as well as the Mandelbrot set.
 9. Work with the Fibonacci sequence, the golden ratio, gnomons, and spiral growth in nature.