INSTRUCTOR: Dr. Dennis Walsh  OFFICE: KOM 203 D
PHONE: 615-898-2224  E-MAIL: dwalsh@mtsu.edu
DEPT. FAX: 615-898-5422

OFFICE HRS: Mon & Wed, : 10:00 – 12:00, 2:00-5:00
            Tue & Thr: 1:00 – 2:30
            Fri: 10:00 – 12:00 [other hours by appointment]

           Sheldon M. Ross, Academic Press, San Diego, CA.

Prerequisites: Two semesters of calculus and STAT 3150 (or MATH 2050) or consent of instructor.
Theoretical basis for stochastic processes and their use as models of real-world phenomena. Topics
include Markov chains, Poisson processes, Brownian motion and stationary processes. Applications
include Gambler's Ruin, birth and death models, hitting times, stock option pricing, and the Black-
Scholes model.

Topics:    Chapters 1-3: Review of Probability, Random Variables, and Expectation
           (subject to revision) Chapter 4: Markov Chains
           Chapter 5: The Poisson Process
           Chapter 10: Brownian Motion and Stationary Processes
            * Further topics (if time permits) might include
              queueing theory, renewal theory, and reliability theory

Attendance: Attend every class. Prompt notification of an absence is required. If a student misses a
test for a legitimate reason that is promptly reported, the instructor will either give a
make-up test or reweigh the final exam. A grade of W or I will be given only in
accordance with the University policy. The highest score possible on an assignment/test
that is turned in late is the lowest score of the students who were not late. If a student
misses a class, it is the student's responsibility to obtain class notes from a classmate.

Evaluation: The semester grade will be based on attendance & assignments (20%), tests (60%),
and the final exam (20%). Letter grades will be assigned according to the scale:
A for [90,100], B for [80, 89], C for [70, 79], D for [60, 69], F for [0, 59]

Graduate Students must prepare a report or do a project on a topic picked in conjunction
with the instructor.
**Reasonable Accommodation for Students with Disabilities:**
Reasonable Accommodations for Students with Disabilities: Middle Tennessee State University is committed to campus access in accordance with Title II of the Americans with Disabilities Act and Section 504 of the Vocational Rehabilitation Act of 1973. Any student interested in reasonable accommodations can consult the Disability & Access Center (DAC) website and/or contact the DAC for assistance at 615-898-2783 or dacemail@mtsu.edu.

**Lottery Scholarship**
Do you have a lottery scholarship? To retain the Tennessee Education Lottery Scholarship eligibility, you must earn a cumulative TELS GPA of 2.75 after 24 and 48 attempted hours and a cumulative TELS GPA of 3.0 thereafter. A grade of C, D, F, FA, or I in this class may negatively impact TELS eligibility. If you drop this class, withdraw, or if you stop attending this class you may lose eligibility for your lottery scholarship, and you will not be able to regain eligibility at a later time. For additional Lottery rules, please refer to your Lottery Statement of Understanding form (http://www.mtsu.edu/financial-aid/forms/LOTFEV.pdf) or contact your MT One Stop Enrollment Coordinator (http://www.mtsu.edu/one-stop/counselor.php).

**Academic Misconduct**
Middle Tennessee State University takes a strong stance against academic misconduct. Academic Misconduct includes, but is not limited to, plagiarism, cheating, and fabrication. For purposes of this section, the following definitions apply:

1. **Plagiarism**: The adoption or reproduction of ideas, words, statements, images, or works of another person as one's own without proper attribution. This includes self-plagiarism, which occurs when an author submits material or research from a previous academic exercise to satisfy the requirements of another exercise and uses it without proper citation of its reuse.

2. **Cheating**: Using or attempting to use unauthorized materials, information, or study aids in any academic exercise. This includes unapproved collaboration, which occurs when a student works with others on an academic exercise without the express permission of the professor. The term academic exercise includes all forms of work submitted for credit or hours.

3. **Fabrication**: Unauthorized falsification or invention of any information or citation in an academic exercise. To be clear: going online and taking information without proper citations, copying parts of other student's work, creating information for the purposes of making your paper seem more official, or anything involving taking someone else's thoughts or ideas without proper attribution is academic misconduct. If you work together on an assignment when it is not allowed, it is academic misconduct. If you have a question about an assignment, please come see me to clarify. Any cases of academic misconduct will be reported to the Office of Academic Affairs for violating the academic honesty requirements in the student handbook.

**Important Dates:**

- **January 19**  ...  Classes begin
- **February 1**  ...  Last day to drop or withdraw without a grade
- **March 27**  ...  Last day to drop or withdraw with a grade of “W”
- **March 7-12**  ...  Spring Break
- **April 28**  ...  Study Day
- **May 2**  ...  Final Exam (12:30)