Prerequisite:
> **Calculus III** (MAC 2313 or equivalence)

Instructor:
> **Dr. H. Zahedi** (**Office:** DM 403C, **Phone:** (305)348-2927, **Fax:** (305)348-6895, **Email:** zahedih@fiu.edu**,**
> **WebPage:** http://faculty.fiu.edu/~zahedih , **Blackboard login:** http://online.fiu.edu/login_uts.html

Formal Office hours:
> **Tuesday and Thursdays :** 10:30 - 11:45 AM & 3:30 - 4:30 PM (no appointments are necessary)
> **Other Times:** by appointments.
> **Feel free to consult with me as often as you need and whenever problems arise.**

Office hours:
> **Tuesday and Thursdays :** 10:30 - 11:45 AM & 3:30 - 4:30 PM (no appointments are necessary)
> **Other Times:** by appointments.
> **Feel free to consult with me as often as you need and whenever problems arise.**

Text Book:
> "An Introduction to Probability and Statistics" by V.K. Rohatgi and A.K. Md. Ehsanes Saleh, Third Edition, 2015, John Wiley & Sons

Coverage:
> Topics from chapters 1- 6, plus some supplementary class notes. **See page 2 for the SYLLABUS**.

References:
> a. "Modern Probability Theory and Its Applications" by E. Parzen.
> b. "An Intro. to Prob. Theory and Its Applications"; by W. Feller; Vol. I.
> c. "Statistical Inference" second edition, by George Casella and Roger L. Berger
> d. " Graduate Course in Probability", by H.G. Tucker.
> Please consult the instructor for further references.

Assignments:
> Weekly Assignments (8 -15 Problems each, TBA)

Tentative Exams:
> **Possible Review Quizzes:**   **TBA**
> **Midterm Exam:**   **Tuesday, October 3**
> **Final Exam*:**   **TBA**
> *** You should not register for courses that have examinations conflict with this course.**

Grading:
> **30%** class assignments & Possible Review Quizzes; **30%** Midterm Exam, **40%** Final Exam

Approximate Grade Scaling:

[90 - 100] A	[85 - 89] A-	[80- 84] B+	[75 - 79] B	[70 - 74] B-	[65 - 69] C+	[60 - 64] C
[50 - 59] D	[less than 50] F					

Policies & Remarks:

1. This is a **Web Assisted Course**. The students enrolled in this course are expected to have an FIU email account and to be familiar with basics of internet use. The purpose of web-based materials in this course is to enhance and compliment the classroom and book materials and to facilitate the learning of the concepts. **They are not intended to substitute classroom lectures and you are expected to attend classes regularly.**

2. Exams are based on all the materials covered and assigned in the classroom, in the homework assignments, and in the web-based projects. So students are strongly advised to attend all the lectures and to be on time.

3. Anyone who misses any exam/ or quiz will receive an F for that exam/ or quiz. Anyone who misses the final exam will receive an F for the course.

4. Failure to hand in any possible homework assignment on time may result in the reduction of points from the overall grade. Failure to complete any web-based project on time may result an F grade for that project.

5. A make up exam will be given only if the student misses an exam due to those emergency cases which meet all the university's requirements, such as student illness, or loss of an immediate family member.

6. No active beepers or cellular phones are allowed in the classroom. If you carry them with you, make sure they are switched off.

7. Any failing student who has missed 60% of the classes will receive F0 instead of F. Since it may not be feasible to take attendance all the time, any student who does not take at least 2 of the 3 main exams (Exam I, Exam II, & Final Exam) will also receive an F0 instead of F for the course

8. Academic Misconduct: Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas, and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly to demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook.

9. The Following Statement is Required by the University: Plagiarism and cheating are serious offensive punishable by expulsion from the university.

Some Important Dates:

August 21 Monday:	**Classes Begin**
August 25 Friday:	Last day to add courses; last day to drop courses or withdraw from the University without incurring financial liability for Tuition and Fees.
September 4 Monday:	Labor Day Holiday (University Closed)**.**
September 15 Friday:	**Last day to withdraw from the University with a 25% refund of Tuition.**
October 30 Monday:	**Deadline to drop a course with a DR grade. Deadline to withdraw from the university with a WI grade.**
November 10 Friday:	Veterans Day Holiday (University Closed)
November 23 & 24:	Thanksgiving Holiday (University Closed)
December 4 - 9:	**Final week of the semester-modified class schedule: Final exams and other course assessment activities are scheduled during this week.**
December 14 Thursday:	Complete grade report available to students by web
For Complete FIU Academic Calendar please visit:	**http://onestop.fiu.edu/academic-calendar**

Note*:** **This course outline is subject to possible changes. *In case of any possible changes you will be notified in advance.

STA 6326
Mathematical Statistics I
Course Syllabus

Prerequisites:

        MAC 2313

Terms Offered:

        Fall

Current Text Book:

        "An Introduction to Probability and Statistics" by V.K. Rohatgi and A.K. Md. Ehsanes Saleh, Third Edition, 2015, John Wiley & Sons

Coverage:

    Chapter 1.

        Probability

            Introduction, Sample Space, Probability Axioms, Combinatorics: Probability on Finite Sample Spaces, Conditional Probability and Bayes Theorem, Independence of Events

    Chapter 2.

        Random Variables and Their Probability Distributions

            Introduction, Random Variables, Probability Distribution of a Random Variable, Discrete and Continuous Random Variables, Functions of a Random Variable.

    Chapter 3.

        Moments and Moment Generating Functions

            Introduction, Moments of a Distribution Function, Generating Functions, Some Moment Inequalities.

    Chapter 4.

        Multiple Random Variables

            Introduction, Multiple Random Variables, Independent Random variables, Functions of Several Random Variables, Covariance, Correlation and Moments, Conditional Expectation, Order Statistics and Their Distributions

    Chapter 5.

        Some Special Distributions

            Introduction, Some Discrete Distributions, Some Continuous Distributions, Bivariate and Multivariate Normal Distributions, Exponential Family of Distributions

    Chapter 6.

        Sample Statistics and Their Distributions

            Introduction, Random Sampling, Sample Characteristics and Their Distributions, Chi-Square, t-, F- Distributions (Exact Sampling Distributions), Distribution of $(\overline{X}, S^2)$ in Sampling from a Normal Population, Sampling from a Bivariate Normal Distribution

    *Chapter 7.

        Basic Asymptotics: Large Sample Theory

            Introduction, Modes of Convergence, Weak Law of Large Numbers, Strong Law of Large Numbers, Limiting Moment Generating Functions, Central Limit Theorem, Large Sample Theory
            *partial coverage (as much as time permits)