STA 6326, Section U01, (Class Ref # 81367)
(Advance) Mathematical Statistics, I
(Semester: Fall 2022;   Time: 11:00AM - 12:15 PM; Days: M & W;   Room: PC322;   Credit Hours: 3)
Course Outlines & Policies

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

Instructor:
>   **H. Zahedi, Ph.D.**
>   **Office:**   DM 405
>   **Phone:**   (305)348-2927,
>   **Fax:**   (305)348-6158
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>   **Webpage:** http://faculty.fiu.edu/~zahedih

Canvas login:
>   http://online.fiu.edu/login_uts.html

Office hours:
>   **Mondays &Wednesdays:** 10:00 - 10:50 AM & 4:4:50 PM or by appointments
>   **Feel free to consult with me as often as you need and whenever problems arise.**

Textbook:
>   "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- 7, plus some supplementary related class notes. **See page 2 for the SYLLABUS**.

Recommended References if Needed:
>   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
>   Please consult the instructor for further references.

Assignments:
>   Weekly Assignments (8 -12 Problems Each, TBA)

Tentative Exams:
>   **Possible Review Quizzes:**   **TBA**
>   **Midterm Exam:**   **Wednesday, October 12, 11:00 AM - 12:15 PM, PC322**
>   **Final Exam*:**   **Wednesday, December 7, 9:45 AM – 11:45 AM**
>   *** You should not register for courses that have examinations conflict with this course.**

Grading:
>   **35%** class assignments & Possible Review Quizzes; **30%** Midterm Exam, **35%** Final Exam

Approximate Grade Scaling:
>   [90 - 100] A   [85 -90) A-   [80- 85) B+   [75 - 80)] B   [70 - 75) B-   [65 - 70) C+
>   [60 - 65)] 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 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. Hence, 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 makeup exam will be given only if the student misses an exam due to those emergency cases which meet all the university' requirements, such as a verified 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 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 22 Monday:	**Classes Begin**
August 29, Monday:	Last day to add courses; last day to drop courses or withdraw from the University without incurring financial liability for Tuition and Fees.
September 5, Monday:	Labor Day Holiday (University Closed)**.**
September 16, Friday:	Last day to withdraw from the University with a 25% refund of Tuition.
September 19, Monday:	**Last day to drop a course with a DR grade or to withdraw from the university with a WI grade.**
November 11, Friday:	Veterans Day (University Closed)
November 24, Thursday:	Thanksgiving Day (University Closed)
November 25, Friday:	Thanksgiving Beak (University Closed)
December 3, Saturday:	Fall Session Classes End
December 5-10, M-S:	Final week of the semester. Final exams and other course assessment activities are scheduled during this week.
December 10 Saturday:	End of Fall Session
December 15, Thursday:	Complete grades 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
(Advance) Mathematical Statistics, I
Short Course Syllabus

Prerequisites:
>MAC 2313 (Calculus III), or equivalent courses

Terms Offered:
>Fall Semester

Current Textbook:
>**"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 Rando 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), Distributions of Sample Mean and Sample Variance in Sampling from a Normal distribution, Sampling from a bivariate Normal Distribution

>***Chapter 7:**
>>**Basic Asymptotic: 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 (only if time permits)