- **Instructor Information**:

Name	Uditha A Wijesuriya	**Email**	u.wijesuriya@usi.edu
Office	SC 3283	**Phone**	(812) 461-5355
Office Hours	MW 1 pm-2 pm (Central Time), any other time by appointment		

  Zoom here

- **Course Description**: This is a 3 credit course. Prerequisite is that the student should at least to be an undergraduate minor in mathematics. This course emphasizes the study of probability models that form the basis of standard statistical techniques. Statistical techniques considered include inferences involving measures of central tendency and measures of variability. Maximum likelihood estimates, interval estimates and hypothesis testing are among these.

- **Course Learning Outcomes**:

  By the end of this course, students should be able to:

  1. Apply set theory in computation of probabilities of events in sample space for an experiment
  2. Compute probabilities of events in discrete and continuous probability models
  3. Apply counting and combinatorial methods to find probability
  4. Obtain cumulative distribution functions of discrete and continuous random variables
  5. Compute conditional probability
  6. Apply Bayes Theorem to find reversed conditional probability
  7. Use joint probability functions of random variables to compute probability
  8. Compute integrals by Monte Carlo approximation
  9. Compute expectation of discrete and continuous random variables
  10. Determine moments by moment generating function
  11. Compute variance, covariance and correlation
  12. Obtain sampling distributions of statistics
  13. Calculate probabilities using normal random sample related distributions
  14. Compute likelihood function and maximum likelihood estimates
  15. Determine estimates by method of moments and obtain confidence interval
  16. Identify mean squared error, bias, sufficiency and consistency of estimates
  17. Identify the shape of the distribution by obtaining histogram, boxplot and bar graph
  18. Evaluate hypotheses on population proportion, mean and variance over single and two samples including confidence intervals
  19. Compute p-value
  20. Interpret hypothesis testing and confidence intervals

- **Program Learning Outcomes**:

  - Find employment utilizing their statistical knowledge.
  - Use statistical knowledge to identify and solve problems.
  - Undertake graduate studies related to statistics.

- **Communication Guidelines**: The discussion board on the blackboard will be used to communicate with the students. Students can post questions there and I will respond within 24 hours during week days, and within 48 hours within weekend (Click here for netiquette).

- **Course Requirements**

  - **Textbook and Course material**: Michael J. Evans and Jeffrey S. Rosenthal (2010), *Probability and Statistics-the Science of Uncertainty*, 2nd Edition, ISBN: 9781429224628 (Click here to see online version of the textbook). A TI-83 or TI-84 is *required* for this course.

  - **Technical Requirements**
    * A Reliable Computer: a dedicated computer with an updated operating system, such as Windows 7 or later, or Mac OSX.
    * High-Speed Internet Connection: (e.g. DSL or Cable). All USI online students are required to have a stable high-speed Internet connection. A wired Internet connection is recommended for online meeting, exams, and assignment submission.
    * Office 365 (USI login needed) & Adobe Acrobat Reader installed.
    * Supported Web Browser: Firefox, Google Chrome, or Safari.
    * Microphone & Webcam
    * Pearson MyStatLab

- **Minimum Technical Skills**: Student should be familiar with navigating the Blackboard and sending emails. Also, students should have digital literacy skills such as using computer networks to locate and store files or data, and prepare a Word document for the group project.

- **Assessments**: There will be **five homework** assignments, **five quizzes**, a group project and three Exams. Completing these by due date students will meet the learning outcomes listed in *course mapping*.

  - **Project Part 1**: July 1, 2022
    Project Part 2: July 15, 2022
    Project Report: July 27, 2022

  - **Exam 1**: July 8, 2022

  - **Exam 2**: July 22, 2020

  - **Final Exam**: July 29, 2022

    * **Submitting Solutions**: Neat and organized solutions need to be submitted into blackboard as a single pdf file with the name "FirstNameHW1" or "FirstNameQuiz1" or "FirstNameExam1" for full credit, eg. RyanQuiz1. Other file format or file name will lead for a score of ZERO for the assignment.
    * **Exam Proctoring**: Either ZOOM or PROCTORIO on blackboard will be used by the instructor for proctoring. See Technical Requirements again!
    * **Makeup Exams** will be given under extenuating circumstances only, and you should contact me before the scheduled exam.

- **Grading Policy**: Course grade is computed by the weighted average with weights: 5% for self-introduction; 10% for homework; 10% for quizzes; 10% for project; 15% for each Exam; 20% for final exam. The course letter grades are obtained according to the followings: $[a, b)$ means $a \leq$ weighted average $< b$.

[0,60)	F	[60,67)	D	[67,70)	D+	[70,77)	C
[77,80)	C+	[80,87)	B	[87,90)	B+	[90,100]	A

  - **Example**: If a student scored 100% for self-introduction, 90% for homework, 80% for quizzes, 95% for the project, 92% for Exam 1, 78% for Exam 2, 81% for Exam 3, and 75% for Final Exam, then the course grade is computed as follows:

    $1.0 \times 0.05 + 0.90 \times 0.10 + 0.80 \times 0.10 + 0.95 \times 0.10 + 0.92 \times 0.15 + 0.78 \times 0.15 + 0.81 \times 0.15 + 0.75 \times 0.20 = 0.8415 \Longrightarrow 84.15\% \Longrightarrow$ the course letter grade is B.

  - **Assignments feedback** will be provided within one week of the due date.

- **Course and University Policies**: There will be **no exceptions** to the rules laid out in this syllabus.

  - **Participation**: To obtain full credit for the participation, students are expected to spend at least 10 hours per week before doing a quiz or an exam.
  - **Late Assignment Policy**: There will be a 30% reduction for any late assignements mentioned above.

- **University Statements**:

  - **Academic Continuity**: In the event of an announced campus closure or emergency, it may be necessary for the university to suspend normal operations. During this time, the university may opt to continue instruction through online or alternative modes of delivery. Each student is responsible to monitor the USI homepage at www.USI.edu and their USI email for important general information and instructions regarding classes. Please also view the guidance on emergency procedures and information.

  - **Academic Integrity**: Academic integrity is the hallmark of truth and honesty in an engaged university community. Students have the right and responsibility to pursue their educational goals with academic integrity. All members of the university are accountable for their actions in maintaining high standards of academic integrity. Students are responsible for completing academic requirements without action and/or material that violates academic integrity. Please view the Academic Integrity Policies and Procedures.

  - **Civility and Inclusion**: The university is dedicated to a culture of civility among students, faculty, and staff. The university embraces and celebrates the many differences that exist among the members of a dynamic, intellectual and inclusive community, and strives to maintain an environment that respects differences and provides a sense of belonging and inclusion for everyone. Any form of unlawful discrimination will not be tolerated. Each student has the right to be free from discrimination, including harassment, on the basis of race, color, religion, sex, pregnancy, or marital status, national origin, age (40 or older), disability, genetic information, sexual orientation, gender identity, veteran status, or any other category protected by law or identified by the University as a protected class. If you have experienced

discrimination, or know someone who has, you may seek help by contacting USI's Interim Affirmative Action Office, Dameion Doss, at 812-464-1835 or at ddoss@usi.edu. Find more information in the Student Rights and Responsibilities: Code of Student Behavior and Equal Opportunity and Non-Discrimination policy.

– **COVID-19 Safety**: The University of Southern Indiana is committed to providing a safe, on-campus learning environment for students and employees. It the responsibility of each person at USI to reduce the risk for COVID-19 transmission and contribute to the overall safety of the campus community.

As a student and a member of the USI community, you are required to:

1. Self-monitor for COVID-19 symptoms and report to a medical professional if you experience a fever of 100 °F or higher, a dry cough, difficulty breathing, chills, fatigue, muscle pain, headache, sore throat, nausea or vomiting, diarrhea, or loss of taste or smell;

2. Use hand sanitizer when entering and leaving the classroom;

3. Clean your classroom desk area before and after class and clean any materials and equipment you used as directed by your instructor;

4. Wear a face covering in the classroom and in university buildings. Please work with the Disability Resources office if an accommodation is needed regarding the wearing of face coverings;

5. Maintain physical distancing of 6 feet or more whenever possible. This includes sitting in the spaces marked in the classroom. You should not loiter in the hallways outside of classrooms between classes;

6. Eating and drinking in the classroom will not be permitted.

7. Stay home if you feel ill or if you have been exposed to someone who is ill or has tested positive for COVID-19. Please email your instructor to make arrangements to complete missed class work in these situations.

8. Inform the university through the self-reporting form if you test positive or are presumed positive for COVID-19. You will be contacted by a trained university employee regarding your next steps.

If a student or instructor tests positive for COVID-19, the university safety committee will work with the college dean, Dean of Students and/or Human Resources, and the Provost Office to determine the next steps for classroom instruction and other safety measures.

Students and employees who repeatedly disregard these safety guidelines are subject to disciplinary action and will be reported to the Dean of Students Office (students) or to an employee's supervisor.

– **Disability Accommodations**: For on-campus courses: If you have a disability for which you may require academic accommodations for this class, please register with Disability Resources as soon as possible. Students who have an accommodation letter from DR are encouraged to meet privately with course faculty to discuss the provisions of those accommodations as early in the semester as possible. To qualify for accommodation assistance, students must first register with Disability Resources located in Science Center Rm. 2206, 812-464-1961. To help ensure that accommodations will be available when needed, students are encouraged to meet with course faculty at least 7 days prior to the actual need for the accommodation. However, if you will be in an internship, field, clinical, student teaching, or another off-campus setting this semester, please note that approved academic accommodations may not apply. Please contact Disability Resources as soon as possible to discuss accommodations needed for access while in this setting.

- **For online learning courses**: If you have a disability for which you may require academic accommodations for this class, please contact Disability Resources at 812-464-1961 or email Disability Communications at usi1disres@usi.edu as soon as possible. Students who are approved for accommodations by Disability Resources should request their accommodation letter be emailed to them to forward to their online instructors. Due to the nature of online courses, some accommodations approved for on-campus courses may not apply. Please discuss this with Disability Resources to clarify as needed. Students who receive an accommodation letter from Disability Resources are encouraged to discuss the provisions of those accommodations with their professors before or during the first week of the semester. If you will be in an internship, field, clinical, student teaching, or another off-campus setting this semester please note that approved academic accommodations may not apply. Please contact Disability Resources as soon as possible to discuss accommodations needed for access while in this setting. For more information, please visit the Disability Resources website.

- **Title IX – Sexual Misconduct**:
The University of Southern Indiana is committed to providing a safe learning, living and working environment free from discrimination. Sexual misconduct and incidents of interpersonal violence deeply interrupt the collegiate experience, and USI is dedicated to ensuring a campus that is free of these types of incidents in order to promote community well-being and student success. USI encourages individuals who believe that they have been sexually harassed, assaulted or subjected to sexual misconduct to seek assistance and support.

  Confidential resources are available on campus at Counseling and Psychological Services (CAPS) and the University Health Center (UHC). For a full list of resources, support opportunities, and reporting options, contact Chelsea Keaton, the University Title IX Coordinator, at 812-464-1703 or Dameion Doss, Deputy Title IX Coordinator, at 812-464-1835, email the office at title.IX@usi.edu, or stop by the Title IX office located in the Wright Administration Building, Forum Wing, Suite 171.

  As Responsible Employees, all faculty, staff, and administrators of the University community (except those noted above) are not considered confidential resources and are required to report incidents of sexual misconduct to the University Title IX Coordinator. The University will work with complainants to protect their privacy by sharing information with only those who need to know to ensure that USI can respond and assist. For a full list of resources, support opportunities, and reporting options, contact Chelsea Keaton, the University Title IX Coordinator, at 812-464-1703 or Dameion Doss, Deputy Title IX Coordinator, at 812 464-1835. Additionally, you may email the office at title.IX@usi.edu or stop by the Title IX office located in the Wright Administration Building, Forum Wing, Suite 171.

- **Course Materials**: My lectures and course materials, including presentations, tests, exams, outlines, and similar materials, are protected by copyright. I am the exclusive owner of the copyright in those materials I create. I encourage you to take notes and make copies of course materials for your own educational use. However, you may not, nor may you knowingly allow others to reproduce or distribute lecture notes and course materials publicly without my express written consent. This includes providing materials to commercial course material supplies such as Course Hero and other similar services. Students who publicly distribute or display or help others publicly distribute or display copies or modified copies of an instructor's course materials may be in violation of The Student Rights and Responsibilities: Code of Student Behavior. Similarly, you own the copyright in your original papers and exam essays. If I am interested in posting your answers or papers on the course web site, I will request your written permission.

- **Recorded Class Sessions**: Some of the sessions in this course may be recorded or live-streamed. Such recordings/streaming will only be made available to students registered for this class. Students may not share these sessions with others not in the class or upload them to any other online environment. Doing so would be a breach of the Code of Student Conduct, and, in some cases, a violation of the U.S. Department of Education Family Education Rights and Privacy Act (FERPA).

- **Technical Support**:

  - **Help Desk Support**: Since your professors are not trained as technology experts, they will not be able to assist you with your technical needs. Please contact the Help Desk at (812) 465-1080 or send an email to it@usi.edu for technical support. To learn more about the USI helpdesk, please visit USI IT Help Desk

    * **Blackboard Support**: If you would like to speak to a support technician, you can call (812) 465-1080 during normal USI business hours (8am-4:30pm, Monday-Friday). Click on the following link for more FAQ about Blackboard.
    * **Zoom Support**: For issues involving Zoom, please contact the Information Technology office at 812-465-1080 or send an email to it@usi.edu. For additional Zoom tutorials, please go to Zoom Support
    * **Panopto Support**: Documentation finds here

  - **Online Learning Office Support**:

    * VoiceThread Support For issues involving VoiceThread, please contact Online Learning at (812) 228-5124 or send an email to online.support@usi.edu . The following link will direct you to tutorials on how to use VoiceThread here.

  - **Privacy Policies and Accessibility Statements** For detailed information about the privacy policies and accessibility statements of the course technologies, please visit USI Online Learning Support Services.

- **Academic Support Services**

  - **Academic Skills**:
    This office offers tutoring and learning assistance to help you develop skills to succeed in your academic life. To contact them, please call 812/464-1743 or go to the website above to find the latest tutoring schedule. In addition to tutoring in math and other content areas in Academic Skills, please note that the Writers' Room (ED 1102) provides writing assistance in person and online. To use this service, please contact their office by calling 812/461-5359 or visit their website at here.

  - **Online Learning Library Services**: Click here.

  - **Counseling Center** The Counseling Center is open every Monday through Friday from 8:00 am to 4:30 pm. You'll find the Counseling Center in the Orr Center, Room 1051; their phone number is 812/464-1867, click here.

  - **Additional Student Resources**: The university provides a comprehensive range of support services and activities for students. Please refer to here for detailed information regarding academic advising, registration, financial aid, student affairs, counseling, career services, etc.

    * **University Health Center**: The University Health Center is a full-service clinic offering medical services and health-related information to students, faculty, and staff. It located in the lower level of the Health Professions Center and is open Monday through Friday,

8 am to 4:30 pm. Click on this link to learn more about the Health Services offered at USI, or to make an appointment, please call 812/465-1250.

* **Financial Aid Office**: Information about current or future financial aid (including the implications of withdrawal from courses) can be obtained from the University Financial Aid Office. The office open is every Monday through Friday from 8:00 am to 4:30 pm; phone 812/464-1767, or email them at finaid@usi.edu.

* **Student Basic Needs**: Students who have difficulty affording food on a regular basis or lack a safe place to live and believe this may affect their class performance are encouraged to contact the Dean of Students Office. A list of resources is also available.

- **Syllabus Change Policy**: The syllabus is a guide to the course and is subject to change with reasonable advanced notice as course needs arise.

- **Course Outline and Schedule**: See *Tentative Schedule* on Blackboard.