

Course Syllabus

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MARIAN UNIVERSITY

Indianapolis

PSY 205 Statistical Methods 3 Credits

Semester and Year: First Eight-Weeks, Summer 2023

Email: Contact via Canvas email



Required Textbook:

[Spatz, C. \(2019\) *Exploring Statistics: Tales of Distributions*, 12th ed. Outcrop Publ.](#) 
[\(https://exploringstatistics.com/\)](https://exploringstatistics.com/)

Students are required to purchase the items listed above prior to the start of the course. Look into all of your options - new, used, rental or e-books. If you choose a rental option, be sure to understand the policies and the due dates for the returns. While you have the option to obtain your course materials from any source, ordering from the MU Book Store can be a convenient option. Please note that you can also charge bookstore purchases to your student account or use your MU financial aid if applicable.

Visit www.bkstr.com/marianustore/home  [_.\(http://www.bkstr.com/marianustore/home\)](http://www.bkstr.com/marianustore/home)._

Additional Resources: In this course, you will learn how to perform a variety of statistical analysis using a free, downloadable, program called JASP. Below are links to two resources you will need.

- **JASP Website:** [Click here to access the JASP website](https://jasp-stats.org/)  [_.\(https://jasp-stats.org/\)](https://jasp-stats.org/)_. From the website, you can download the latest version of the program. The website also contains links to guides, tutorials, and a variety of other web-based resources for learning and using JASP.
- **JASP Student Guide:** Click the link to access the [Statistical Analysis in JASP: A Guide for Students \(2022\)](https://jasp-stats.org/wp-content/uploads/2022/04/Statistical-Analysis-in-JASP-A-Students-Guide-v16.pdf).  [_.\(https://jasp-stats.org/wp-content/uploads/2022/04/Statistical-Analysis-in-JASP-A-Students-Guide-v16.pdf\)](https://jasp-stats.org/wp-content/uploads/2022/04/Statistical-Analysis-in-JASP-A-Students-Guide-v16.pdf)_. This guide provides more in-depth instructions than those provided in the video tutorials embedded in various weekly deliverable instructions. Use this guide to help you complete activities that require the use of JASP.

Prerequisites: At least one year of high school algebra is recommended.

Course Description

This course is designed to provide the student with an introductory knowledge of the statistical methods used in the behavioral sciences and experience with their use. Basic concepts, uses, and methods of statistical computation, including descriptive statistics, correlation, probability, estimation, sampling, design, hypothesis testing, t-tests, ANOVAs, and Chi Square are presented in this course. This is a computational and interpretational statistics course designed to prepare students for upper division/graduate courses in research, data evaluation, and analytic reasoning.

Upon successful completion of this course, students will be able to:

Student Learning Objectives

Transformational Journey Program Learning Outcomes

Method of Assessment

1. Problem Solving - Criterion A: Articulate a clear and thoughtful problem statement.

Final Deliverable

2. Problem Solving - Criterion B: Identify multiple approaches to solving a problem.

Final Deliverable

3. Problem Solving - Criterion C: Develop an informed and logical plan to solve a problem.

Final Deliverable

Teaching Strategies

This course utilizes a variety of instructional techniques. Typically, for each assigned chapter of the textbook, there is a full-length (20 - 40 minute) video lecture covering essential concepts from the chapter. Each module also contains supplementary videos (e.g., YouTube videos by Crash Course statistics) that review relevant concepts. To provide practice with the formulas and other mathematical skills covered in the current chapter, each module also contains computational worksheets. Finally, peer-to-peer instruction is utilized in the discussion threads. There is a discussion thread per week/module where you will discuss concepts covered recently.

Methods of Evaluation:

- **Worksheets:** For each Chapter of the textbook, there is a corresponding worksheet that will provide practice performing the computations covered in the chapter and the corresponding concepts. Worksheets are worth 10 points each.
- **Weekly Discussion Threads:** Each week, we will have a class discussion thread. The weekly discussion threads are a valuable way for you to learn from and share with your classmates. Explaining concepts that we've learned recently will help you consolidate this new information, will provide a valuable opportunity for classmates to learn from one another, and will allow me to assess how well you're grasping concepts. Each discussion is worth 20 points (10 points for your initial post and 5 points each for two replies to classmates).
- **Weekly Deliverables:** Each week (except for the final week) you will have a deliverable that will provide an opportunity for you to practice the analysis and skills covered in that module. You will use either Microsoft Excel or JASP (a free statistical analysis tool) to complete the weekly deliverable. Each of the 7 weekly deliverables is worth 25 points.
- **Final Deliverable:** At the end of the course, you will have a final deliverable due. This final deliverable asks you to combine the skills obtained (e.g., selecting, performing, and interpreting statistical analyses) in a project of your choosing. During Week 5 of the course, you will select a propose a project based on a dataset that you will find and/or modify. Once your project has been approved, you will perform the analyses and write up a report of your findings using APA format (worth 80 points).

Grade Distribution

Assessment	Point Value	Total Points	Percent of Final Grade
<i>Computational Worksheets (13)</i>	10 points /worksheet	130	24%
<i>Discussion Threads (8)</i>	20 points / discussion	160	29%
<i>Weekly Deliverables (7)</i>	25 / deliverable	175	32%
<i>Final Deliverable (1)</i>	80 points	80	15%
	Total Points:	545	100%

Grading Scale

To determine the final grade, point values will be converted to a percentage and rounded to the nearest whole number. The grading scale for this course is as follows:

Letter Grade	Percentage
A	93% - 100%
A-	90% - 92%
B+	87% - 89%


B	83% - 86%
B-	80% - 82%
C+	77% - 79%
C	73% - 76%
C-	70% - 72%
D+	67% - 69%
D	60% - 66%
F	< 60%

Course Policies

Late Policy & Due Date Extensions: Acceptance of work submitted past the due date or requests of due date extensions, including exams, may be considered in the event of unforeseen, documented hardships, such as medical emergencies, documentable technical issues, death of a loved one, etc. However, simply forgetting, time zone differences, going on vacation, or not performing a well as intended are not acceptable excuses.

Extra Credit: There is no extra credit in this course.

Plagiarism Statement: Plagiarism is using the words or ideas of another as your own without giving credit to the source author. This also includes taking a paper found online and submitting it as one's own paper and/or cutting and pasting from a website and submitting it as your work product.

Plagiarism is defined in detail in the [Code of Student Rights and Responsibilities](https://www.marian.edu/docs/default-source/campus-life/codeofstudentrightsandresponsibilities.docx?sfvrsn=14)  (<https://www.marian.edu/docs/default-source/campus-life/codeofstudentrightsandresponsibilities.docx?sfvrsn=14>) under Section 8: Academic Conduct Procedures, as well as an extended description of academic dishonesty.

The following are some helpful websites for understanding plagiarism, documentation and citation:

- Marian University's library: <https://www.marian.edu/current-students/library> (Links to an external site.) (<https://www.marian.edu/current-students/library>)
- org: <https://plagiarism.org/> (Links to an external site.) (https://urldefense.com/v3/__https://plagiarism.org/__;!!DUogwUQ!T_yXRW2Aa1Gbx09gkwJ_Q3X0PNE2K)
- Purdue OWL: <https://owl.purdue.edu/> (Links to an external site.) (https://urldefense.com/v3/__https://owl.purdue.edu/__;!!DUogwUQ!T_yXRW2Aa1Gbx09gkwJ_Q3X0PNE2K)

Accommodation/Accessibility Statement: Marian University, through policy and practice, is committed to providing equitable access to learning opportunities for all students. If you experience, or

anticipate experiencing, barriers to your education due to a disability please contact the Personalized Learning Center by emailing [plc@marian.edu \(mailto:plc@marian.edu\)](mailto:plc@marian.edu) or calling **317.955.6540** to start a conversation.

Although a student may request an accommodation at any time, it is best to initiate the accommodation process as early as possible as it may take time to complete the interactive process and accommodations will not be implemented retroactively. If a reasonable accommodation is determined, a Course Accommodation Letter will be created at the Personalized Learning Center for the student to provide to their faculty members with information related to their accommodations. Faculty will not set up disability-related accommodations without a current semester Course Accommodation Letter.

Faculty, Staff or Student questions or concerns regarding the accommodation process can be sent to [plc@marian.edu \(mailto:plc@marian.edu\)](mailto:plc@marian.edu) or Mandie Greiwe, [agreiwe@marian.edu \(mailto:agreiwe@marian.edu\)](mailto:agreiwe@marian.edu), Director of the Personalized Learning Center.












Diversity and Inclusivity: Marian's adult and online programs at Marian University is a collaborative academic community committed to fostering a diverse and inclusive community across the intersections of races, ethnicities, religions, sexual orientations, gender identities, ages, disability status, socio-economic backgrounds, political perspectives, cultures, immigration status, and national origins. I am committed to creating a safe, just environment of respect for students, faculty, and staff following our shared Franciscan values. I believe that every individual can improve their skills, learn from their mistakes, and be successful in this course.












Student Handbook








Please refer to the MAP [Student Resources \(https://marian.instructure.com/courses/3717514/modules\)](https://marian.instructure.com/courses/3717514/modules) and [Student Support Resources \(https://marian.instructure.com/courses/3717514/modules\)](https://marian.instructure.com/courses/3717514/modules) modules for information regarding academic and school of policies including [Services for Students with Disabilities \(http://marian.edu/campus-life/academic-support-services/services-for-students-with-disabilities\)](http://marian.edu/campus-life/academic-support-services/services-for-students-with-disabilities).

****Any changes to this syllabus will be communicated to the students.**

Course Summary:

Date	Details	Due
Sun May 14, 2023	 Discuss: Module 1 - A Picture is Worth 1,000 Words https://marian.instructure.com/courses/3717514/assignments/40851891	due by 11:59pm
	 Practice: Chapter 1 https://marian.instructure.com/courses/3717514/assignments/40851904	due by 11:59pm
	 Practice: Chapter 2 https://marian.instructure.com/courses/3717514/assignments/40851922	due by 11:59pm
	 Submit: Weekly Deliverable 1 - Build a Dataset & Create a Data Visualization https://marian.instructure.com/courses/3717514/assignments/40851959	due by 11:59pm
Sun May 21, 2023	 Discuss: Module 2 - How do Americans Spend their Time? https://marian.instructure.com/courses/3717514/assignments/40851890	due by 11:59pm
	 Practice: Chapter 3 https://marian.instructure.com/courses/3717514/assignments/40851926	due by 11:59pm
	 Practice: Chapter 4 https://marian.instructure.com/courses/3717514/assignments/40851930	due by 11:59pm
Sun May 28, 2023	 Submit: Weekly Deliverable 2 - Perform Descriptive Analysis of the Titanic Passengers https://marian.instructure.com/courses/3717514/assignments/40851963	due by 11:59pm
	 Discuss: Module 3 - Show Me the Data: Our World in Numbers https://marian.instructure.com/courses/3717514/assignments/40851888	due by 11:59pm
Sun May 28, 2023	 Practice: Chapter 5 https://marian.instructure.com/courses/3717514/assignments/40851934	due by 11:59pm
	 Submit: Weekly Deliverable 3 - Create a Descriptive Statistics Report https://marian.instructure.com/courses/3717514/assignments/40851966	due by 11:59pm

Date	Details	Due
Sun Jun 4, 2023	 Discuss: Module 4 - What's Trending? Exploring Correlations using Google Trends https://marian.instructure.com/courses/3717514/assignments/40851886	due by 11:59pm
	 Practice: Chapter 6 https://marian.instructure.com/courses/3717514/assignments/40851939	due by 11:59pm
	 Submit: Weekly Deliverable 4 - Perform & Interpret Correlational Analyses https://marian.instructure.com/courses/3717514/assignments/40851968	due by 11:59pm
Sun Jun 11, 2023	 Discuss: Module 5 - Final Deliverable Project Brainstorm Session https://marian.instructure.com/courses/3717514/assignments/40851882	due by 11:59pm
	 Practice: Chapter 7 https://marian.instructure.com/courses/3717514/assignments/40851943	due by 11:59pm
	 Practice: Chapter 8 https://marian.instructure.com/courses/3717514/assignments/40851947	due by 11:59pm
	 Submit: Weekly Deliverable 5 - Propose a Project for your Final Deliverable https://marian.instructure.com/courses/3717514/assignments/40851970	due by 11:59pm
Sun Jun 18, 2023	 Discuss: Module 6 - Stats in Action! How Data Improve Society & Inform Policy https://marian.instructure.com/courses/3717514/assignments/40851878	due by 11:59pm
	 Practice: Chapter 10 https://marian.instructure.com/courses/3717514/assignments/40851907	due by 11:59pm
	 Practice: Chapter 9 https://marian.instructure.com/courses/3717514/assignments/40851951	due by 11:59pm
	 Submit: Weekly Deliverable 6 - Perform & Interpret T-tests https://marian.instructure.com/courses/3717514/assignments/40851972	due by 11:59pm

Date	Details	Due
Sun Jun 25, 2023	 Discuss: Module 7 - How Big Data is Reshaping Industry & Institutions https://marian.instructure.com/courses/3717514/assignments/40851874	due by 11:59pm
	 Practice: Chapter 11 https://marian.instructure.com/courses/3717514/assignments/40851911	due by 11:59pm
	 Practice: Chapter 13 https://marian.instructure.com/courses/3717514/assignments/40851915	due by 11:59pm
	 Submit: Weekly Deliverable 7 - Perform & Interpret ANOVAs https://marian.instructure.com/courses/3717514/assignments/40851974	due by 11:59pm
Sat Jul 1, 2023	 Discuss: Module 8 - Using Chi-Square to Analyze the 50 States https://marian.instructure.com/courses/3717514/assignments/40851869	due by 11:59pm
	 Practice: Chapter 14 https://marian.instructure.com/courses/3717514/assignments/40851919	due by 11:59pm
	 Submit: Final Deliverable - Construct & Analyze a Dataset & Report your Findings https://marian.instructure.com/courses/3717514/assignments/40851955	due by 11:59pm