

# Course Syllabus

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# MARIAN UNIVERSITY

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## Indianapolis

### PSY 205 Statistical Methods 3 Credits

**Semester and Year:** First Five-Weeks, Fall 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/arianustore/home](http://www.bkstr.com/arianustore/home)  [\\_.\(http://www.bkstr.com/arianustore/home\)](http://www.bkstr.com/arianustore/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%
	<b>Total Points:</b>	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 as 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](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](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 \(https://marian.instructure.com/courses/3828747/modules\)](https://marian.instructure.com/courses/3828747/modules) and [Student Support Resources \(https://marian.instructure.com/courses/3828747/modules\)](https://marian.instructure.com/courses/3828747/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 Aug 27, 2023	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027576">Discuss: Module 1 - A Picture is Worth 1,000 Words (https://marian.instructure.com/courses/3828747/assignments/42027576)</a>	due by 11:59pm
	 <a href="#">Practice: Chapter 1</a>	due by 11:59pm

Date	Details	Due
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027577">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027577">https://marian.instructure.com/courses/3828747/assignments/42027577</a>)</a>	
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027582">Practice: Chapter 2</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027582">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027582">https://marian.instructure.com/courses/3828747/assignments/42027582</a>)</a>	due by 11:59pm
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027591">Submit: Weekly Deliverable 1 - Build a Dataset &amp; Create a Data Visualization</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027591">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027591">https://marian.instructure.com/courses/3828747/assignments/42027591</a>)</a>	due by 11:59pm
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027575">Discuss: Module 2 - How do Americans Spend their Time?</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027575">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027575">https://marian.instructure.com/courses/3828747/assignments/42027575</a>)</a>	due by 11:59pm
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027583">Practice: Chapter 3</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027583">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027583">https://marian.instructure.com/courses/3828747/assignments/42027583</a>)</a>	due by 11:59pm
Sun Sep 3, 2023	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027584">Practice: Chapter 4</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027584">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027584">https://marian.instructure.com/courses/3828747/assignments/42027584</a>)</a>	due by 11:59pm
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027592">Submit: Weekly Deliverable 2 - Perform Descriptive Analysis of the Titanic Passengers</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027592">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027592">https://marian.instructure.com/courses/3828747/assignments/42027592</a>)</a>	due by 11:59pm
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027574">Discuss: Module 3 - Show Me the Data: Our World in Numbers</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027574">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027574">https://marian.instructure.com/courses/3828747/assignments/42027574</a>)</a>	due by 11:59pm
Sun Sep 10, 2023	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027585">Practice: Chapter 5</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027585">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027585">https://marian.instructure.com/courses/3828747/assignments/42027585</a>)</a>	due by 11:59pm
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027593">Submit: Weekly Deliverable 3 - Create a Descriptive Statistics Report</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027593">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027593">https://marian.instructure.com/courses/3828747/assignments/42027593</a>)</a>	due by 11:59pm
Sun Sep 17, 2023	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027573">Discuss: Module 4 - What's Trending? Exploring Correlations using Google Trends</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027573">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027573">https://marian.instructure.com/courses/3828747/assignments/42027573</a>)</a>	due by 11:59pm
	 <a href="#">Practice: Chapter 6</a>	due by 11:59pm

Date	Details	Due
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027586">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027586">https://marian.instructure.com/courses/3828747/assignments/42027586</a>)</a>	
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027594">Submit: Weekly Deliverable 4 - Perform &amp; Interpret Correlational Analyses</a>	due by 11:59pm
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027594">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027594">https://marian.instructure.com/courses/3828747/assignments/42027594</a>)</a>	
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027572">Discuss: Module 5 - Final Deliverable Project Brainstorm Session</a>	due by 11:59pm
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027572">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027572">https://marian.instructure.com/courses/3828747/assignments/42027572</a>)</a>	
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027587">Practice: Chapter 7</a>	due by 11:59pm
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027587">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027587">https://marian.instructure.com/courses/3828747/assignments/42027587</a>)</a>	
Sun Sep 24, 2023	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027588">Practice: Chapter 8</a>	due by 11:59pm
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027588">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027588">https://marian.instructure.com/courses/3828747/assignments/42027588</a>)</a>	
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027595">Submit: Weekly Deliverable 5 - Propose a Project for your Final Deliverable</a>	due by 11:59pm
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027595">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027595">https://marian.instructure.com/courses/3828747/assignments/42027595</a>)</a>	
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027571">Discuss: Module 6 - Stats in Action! How Data Improve Society &amp; Inform Policy</a>	due by 11:59pm
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027571">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027571">https://marian.instructure.com/courses/3828747/assignments/42027571</a>)</a>	
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027578">Practice: Chapter 10</a>	due by 11:59pm
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027578">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027578">https://marian.instructure.com/courses/3828747/assignments/42027578</a>)</a>	
Sun Oct 1, 2023	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027589">Practice: Chapter 9</a>	due by 11:59pm
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027589">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027589">https://marian.instructure.com/courses/3828747/assignments/42027589</a>)</a>	
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027596">Submit: Weekly Deliverable 6 - Perform &amp; Interpret T-tests</a>	due by 11:59pm
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027596">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027596">https://marian.instructure.com/courses/3828747/assignments/42027596</a>)</a>	
Sun Oct 8, 2023	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027570">Discuss: Module 7 - How Big Data is Reshaping Industry &amp; Institutions</a>	due by 11:59pm
	<a href="https://marian.instructure.com/courses/3828747/assignments/42027570">(<a href="https://marian.instructure.com/courses/3828747/assignments/42027570">https://marian.instructure.com/courses/3828747/assignments/42027570</a>)</a>	

Date	Details	Due
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027579">Practice: Chapter 11</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027579">Practice: Chapter 11</a>	due by 11:59pm
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027580">Practice: Chapter 13</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027580">Practice: Chapter 13</a>	due by 11:59pm
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027597">Submit: Weekly Deliverable 7 - Perform &amp; Interpret ANOVAs</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027597">Submit: Weekly Deliverable 7 - Perform &amp; Interpret ANOVAs</a>	due by 11:59pm
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027569">Discuss: Module 8 - Using Chi-Square to Analyze the 50 States</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027569">Discuss: Module 8 - Using Chi-Square to Analyze the 50 States</a>	due by 11:59pm
Sat Oct 14, 2023	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027581">Practice: Chapter 14</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027581">Practice: Chapter 14</a>	due by 11:59pm
	 <a href="https://marian.instructure.com/courses/3828747/assignments/42027590">Submit: Final Deliverable - Construct &amp; Analyze a Dataset &amp; Report your Findings</a> <a href="https://marian.instructure.com/courses/3828747/assignments/42027590">Submit: Final Deliverable - Construct &amp; Analyze a Dataset &amp; Report your Findings</a>	due by 11:59pm