# SLIPPERY ROCK UNIVERSITY Department of Mathematics and Statistics

#### I. Who is my professor?

 Name: Dr. Jana Lynn Asher
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 Student (Office) Hours:
 Monday-Friday 11am-noon in VSC 200E OR at sru.zoom.us/j/3072619614

 or by making an appointment on https://professorasher.youcanbook.me

#### II. What is this course about?

I bet you came to class today expecting a class filled with formulas, math problems, quizzes and tests, and a lot of sitting, listening, and taking notes. I'm sorry, but I'm going to have to disappoint you. This is a course about numbers, that much is true. But this isn't *that* kind of math course.

This is a course about how **data** informs every aspect of your life, whether you are aware of it or not. Our story begins all the way back on September 17<sup>th</sup>, 1787: the day that the U.S. Constitution was signed. There's an important part to the constitution you might not be aware of, but it's right there in Article I, Section II, and it goes:

Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers... The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct.

And with these words, the first official **statistics** of our country were mandated. The U.S. Census, which is a count of each person in the country, started in 1790 and has been taken every 10 years since.

So, what is so important about statistics that the founding fathers wrote them into the U.S. Constitution before they even got to describing the Supreme Court or the Executive Branch? The answer is that without an accurate picture of the composition of our country, how is the government supposed to know how to create policy or allocate our shared resources? Who gets a new school, or fire station, or road? How much food production is needed to feed everyone? *How can a democracy function when there are so many people, each of whom are supposed to have a voice in how our country is run?* 

The answer lies in collecting data about those people: specifically, **what** data are collected, **how** they are collected, how they are **interpreted**, and how the possible **error** in those data is quantified and understood. In this class, we will learn about all the ways in which data are used by businesses, governmental agencies, researchers, and practitioners to understand our world. Most of the time, the data are only collected from some of a population of interest, but if those data are collected carefully, they can be used to represent the entire population. We will learn some very basic rules of probability—that is, how to quantify the chance that something will happen—and then we will see how those rules of probability help us understand how certain we are of the statistics we create from the data we collect. Most importantly, we will learn why we all have the responsibility to be participatory producers and critical consumers of statistics and data throughout our lifetime.

There is a bit more we need to learn about in this class. If the world were perfect, the data we collect and analyze to understand it would be unbiased and error-free. But data collection processes and data analyses are completed by human beings. Human beings are not objective: they consciously or unconsciously are influenced by their **assumptions** and **biases**, which are directly related to their own culture and experiences. Historically, in the United States, most of the data collection and analysis done to inform businesses, scientists, and government were completed by individuals with a specific set of **demographics**: white, male, Christian, able-bodied, heteronormative, cis-gender, welleducated, and economically secure. Although the field of statistics has grown more **diverse** over the last several decades, most statisticians still have those demographic characteristics. Thus, we will also be learning about **diversity**, **equity**, and **inclusion** (**DEI**) and, specifically, how data can exacerbate **structural violence** or help promote **equity** in our society. Even the U.S. Census is flawed due to **structural inequities** in how census data are collected.

#### Wait, so I won't have math problems to do?

I am afraid you will still have math problems to do, but you will be doing a great deal more than math problems.

## What will I be doing in this course?

I'm glad you asked! The learning opportunities in this course are diverse.

- We will be meeting during our regular course meeting time! You should plan to attend either from 8am through 8:50am OR 10am through 10:50am on Mondays, Wednesdays, and Fridays in the Bailey Mathematics Lab. Please note that attendance will be taken! If you end up with a "borderline" grade in this course that is, a grade on the border between an "A" and a "B", or a "B" and a "C" your attendance will be considered as I determine which way your grade should go!
- 2) Each day of the week, we will be engaging in a different learning activity.
  - a. On **Mondays**, we will begin our class with a **group discussion** about the readings you were assigned the previous week. We will be meeting in smaller groups for about 25 minutes that will each be facilitated by either the professor or one of the **classroom assistants**. On the first day of class you will be creating nametags; the classroom assistant for your group will keep the nametags and hand them out for your use each Monday.

You will know which readings to do by looking at the front of the **reading packet** that I will give to you on the first day of class. Each week's readings are listed, along with a set of **discussion questions** that you should consider as you are completing the reading. The discussion questions will then be used to start the group discussion Monday morning. After the 25 minutes of group discussion, we will reconvene as a class and debrief on what we learned. You should bring your reading packet with you to class on Monday with your notes and/or highlighting from your reading completed.

You will receive a grade based on your participation in the group discussions. To receive a good grade, you don't have to participate every single Monday, but **we expect that you will be part of the conversation for at least half of the group discussions**. Your overall group discussion participation grade is worth **5%** of your final grade for the course.

After class on Monday, you will be assigned a set of reflection questions to guide you as you write a reflection on the readings and the group discussion. The written reflection will be due the Wednesday immediately after the group discussion takes place. A rubric for how the reflections will be graded is included in the reading packet, along with the reflection questions for that week. Taken together, your grades on your reflections are worth 15% of your final grade for the course.

b. On **Wednesdays**, we will have a lecture; however, you will be encouraged to practice some of the techniques you are learning during the lecture on the computers in the Bailey Mathematics Laboratory. The classroom assistants will be available to help you if you get stuck during the Wednesday lecture.

c. Fridays will be used for an in-class laboratory, during which you will use computers to explore the concepts you are learning about in class. Typically, you will work in pairs; one member of the pair will be responsible for reading the laboratory out loud, and the other person will complete the work on the computer. Both members of the pair are responsible for turning in individual laboratory answer sheets. Within the in-class laboratories you will learn to use the Excel software package, and then use Excel to complete statistical analyses of real data. The in-class collaborative laboratories comprise 20% of your grade in this course and begin during the first week of class.

The group discussions and in-class laboratories will comprise a large portion of the **collaborative learning** process in the class. **Collaborative learning** is the use of groups to enhance learning. Students not only learn the substantive material of the course; they also develop problem-solving skills, communication skills, and conflict resolution skills through working together.

4) Yes, you will have homework. All of the homework assignments in this course are through the ALEKS online platform; you will be able to access these assignments through our D2L shell for the course. The homework assignments comprise 20% of your grade in this course and begin during the first week of class.

5) **Yes, you will have tests**. There are three tests that are already scheduled; see the back of this syllabus for the test dates. The tests comprise **20% of your grade** in this course.

6) That leaves a final **20%**, which you will earn with your **final project**. For the final project, you will be working in a group to analyze a real dataset on a topic of interest to you. Each person in your group will have an individual analysis to do, but together you will be able to answer a bigger research question. You will then present the results of your analysis during the final exam period for the class. There is no written final exam for this class.

## That sounds like a lot of work.

This course will require work, but it is not designed to overwhelm you with work. Here is what I believe the work for this class will look like most weeks:

- Class attendance: 3 hours
- Reading: 1-2 hours
- Reflection: 1 hour
- Homework: 1.5-3 hours
- Total: 6.5-9 hours including class attendance (3.5-6 hours outside of class)

Students taking more time than this are strongly encouraged to meet with the professor to determine why. Laboratories are completed in-class; occasionally students might require extra time to complete them, but they will be encouraged to meet with the professor to do so. **Tests are open note; the best preparation for the tests will be class attendance, lab completion and homework completion.** Students who keep up with the class should find they need very little time to study for the tests.

## Wait, remind me... what am I learning about in this class?

Here's the official course description and the learning outcomes for the course. Since you asked.

**Course description:** This is a course about how data inform every aspect of our lives. Without statistics, how does a drug company know which medicine is best at curing cancer? How can the government know who needs a new school, or fire station, or road? How much food production is needed to feed everyone? How do we know, during a pandemic, if the rate of new cases of a disease is rising or ebbing? The answer

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lies in what data are collected, how they are collected, how they are summarized and interpreted, and how the possible error in those data is quantified and understood. In this class, we will learn about all the ways in which statistics are used by businesses, governmental agencies, researchers, and practitioners to understand our world. Prerequisite: ACSD 110 or equivalent. (3 credits)

	Major Outcome	
Course Outcome	(Mathematics)	University Outcome
1. Students will distinguish between multiple methods of data collection and distinguish between the different analysis techniques required for different data collection methods.	1. Use mathematics knowledge to solve theoretical and applied problems.	<ol> <li>Apply critical thinking to argument and problem solving: (a) Gather, analyze and evaluate information and ideas. (b) Produce well-supported reasons and evidence. (c) Reach well- argued conclusions and decisions. (d) Use a variety of viewpoints and reflective thought.</li> </ol>
2. Students will create and critically analyze and interpret data displays, and will be able to identify manipulative practices in data displays.	<ol> <li>Use mathematics knowledge to solve theoretical and applied problems.</li> <li>Communicate mathematics knowledge to both expert and non- technical audiences.</li> </ol>	<ol> <li>Act as effective communicators: (a) Communicate successfully with diverse audiences in speech and writing. (b) Demonstrate active listening skills. (c) Apply analytical reading to support language use.</li> <li>Apply critical thinking to argument and problem solving: (a) Gather, analyze and evaluate information and ideas. (b) Produce well-supported reasons and evidence. (c) Reach well- argued conclusions and decisions. (d) Use a variety of viewpoints and reflective thought.</li> <li>Apply quantitative reasoning in appropriate contexts: (a) Create and use mathematics in a variety of forms including formulas, graphs, schematics, and computing, where appropriate. (b) Implement experimentation and quantitative reasoning to solve problems and make inferences.</li> </ol>
<ol> <li>Students will calculate and interpret the meaning of the different descriptive measures of data, including measures of central tendency, dispersion, position, and correlation.</li> <li>Students will distinguish between classical, empirical, and subjective probability, identify independent or mutually exclusive events, and determine probabilities of events through use of the fundamental counting principle and rules of probability.</li> <li>Students will define a probability distribution, distinguish between discrete and continuous probability distributions, construct discrete distributions, and calculate probabilities and moments (expected value, variance, standard deviation) for discrete distribution tables and the binomial and normal probability distribution of a sample mean, calculate probabilities for the sample mean of a normal distribution, and calculate probabilities for sample means not derived from a normal distribution through the Central Limit Theorem</li> </ol>	1. Use mathematics knowledge to solve theoretical and applied problems.	<ul> <li>4. Apply quantitative reasoning in appropriate contexts:</li> <li>(a) Create and use mathematics in a variety of forms including formulas, graphs, schematics, and computing, where appropriate. (b) Implement experimentation and quantitative reasoning to solve problems and make inferences.</li> </ul>

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Course Outcome	Major Outcome (Mathematics)	University Outcome	
Course outcome(Mathematics)7. Students will apply the Central Limit Theorem to calculate confidence intervals of means and proportions, correctly interpret the meaning of a confidence interval in relation to a population mean or proportion, and distinguish between scenarios in which a z-statistic based confidence interval is appropriate.1. Use mathem knowledge to s theoretical and applied proble 2. Apply rigoro deductive reas 	<ol> <li>Use mathematics knowledge to solve theoretical and applied problems;</li> <li>Apply rigorous deductive reasoning to prove mathematics results.</li> <li>Communicate mathematics knowledge to both expert and non- technical audiences.</li> </ol>	2. Apply critical thinking to ar Gather, analyze and evaluate	gument and problem solving: (a) information and ideas. (b)
<ul> <li>8. Students will be able to complete the hypothesis test for a sample mean or proportion appropriately, by: <ul> <li>a. Determining which hypothesis should be the null hypothesis and which the alternative;</li> <li>b. Choosing the appropriate reference probability distribution;</li> <li>c. Accurately determining a test statistic and p-value; and</li> <li>d. Appropriately interpreting the results</li> </ul></li></ul>	<ol> <li>Use mathematics knowledge to solve theoretical and applied problems.</li> <li>Communicate mathematics</li> </ol>	<ul> <li>Produce well-supported reasons and evidence. (c) Reaargued conclusions and decisions. (d) Use a variety of viewpoints and reflective thought.</li> <li>4. Apply quantitative reasoning in appropriate context (a) Create and use mathematics in a variety of forms in formulas, graphs, schematics, and computing, where appropriate. (b) Implement experimentation and quarreasoning to solve problems and make inferences.</li> </ul>	

mathematics

knowledge to both

of the hypothesis test, including the

meaning of the p-value.

meaning of the p-value. Students will additionally: a. Identify and interpret Type I and Type II error; b. Describe the purpose of an alpha level/significance level and appropriately choose an alpha level for a particular scenario.	expert and non- technical audiences.	
9. Students will have intermediate proficiency in Microsoft Excel, and will complete basic spreadsheet construction, sorting, function use, and descriptive data analysis through the Excel software package.	3. Use technology to perform and interpret mathematics analyses.	<ol> <li>Act as effective communicators: (a) Communicate successfully with diverse audiences in speech and writing. (b) Demonstrate active listening skills. (c) Apply analytical reading to support language use.</li> <li>Apply quantitative reasoning in appropriate contexts:         <ul> <li>(a) Create and use mathematics in a variety of forms including formulas, graphs, schematics, and computing, where appropriate. (b) Implement experimentation and quantitative reasoning to solve problems and make inferences.</li> </ul> </li> </ol>

STAT 152-01, 03 CRN: 4425, 4427 Elementary Statistics I M/W/F 8:00-8:50am or 10:00-10:50am Spring 2022 Bailey Math Lab

DEI Designation	Major Outcome	
Learning Outcome	(Mathematics)	University Outcome
1. Students will articulate the connection between the statistical concepts of demographics, independence, assumptions, bias, causation, correlation, data visualization, and hypothesis testing and the DEI concepts of social identity, diversity, intersectionality, marginalization, discrimination, implicit bias, structural privilege, structural oppression, cultural competence, and social justice.	s 5. Demonstrate professional integrity and accountability	<ol> <li>5. Develop as a whole person: (a) Acquire and apply knowledge and skills in the major and profession, including soft skills. (b) Make connections beyond traditional disciplinary boundaries.</li> <li>9. Develop a worldview that acknowledges diversity and global interdependence: (a) Understand the importance of diverse experiences, cultures, and identities. (b) Understand the ways that group and individual inequalities and interactions impact self and society. (c) Apply multiple perspectives to address local, regional, global, and cultural issues.</li> </ol>
2. Students will cite examples of how an individual's social and cultural identity can lead to biased scientific conclusions that exacerbate structural oppression.	in the use and communication of mathematics.	8. Act ethically: (a) Respect the range of ethical perspectives. (b) Understand their own values and principles. (c) Recognize the consequences and impacts of their actions on others.
3. Students will analyze examples of poorly- designed/unethical and well-designed/ ethical methods for data collection and analysis in the context of structural oppression and/or privilege.		<ol> <li>Develop a worldview that acknowledges diversity and global interdependence: (a) Understand the importance of diverse experiences, cultures, and identities. (b) Understand the ways</li> </ol>
4. Students will articulate the connections between demographic data collection and human diversity and how statistics can create or exacerbate structural oppression of demographic groups.		that group and individual inequalities and interactions impact self and society. (c) Apply multiple perspectives to address local, regional, global, and cultural issues.

	Major	
HIP Collaborative	Outcome	
Learning Outcome	(Mathematics)	University Outcome
		9. Develop a worldview that acknowledges
	5. Demonstrate	diversity and global interdependence: (a)
1. Students will demonstrate the ability to work with	professional	Understand the importance of diverse experiences,
others with diverse personalities or learning styles.	integrity and	cultures, and identities. (c) Apply multiple
	accountability	perspectives to address local, regional, global, and
	in the use and	cultural issues.
	communication	8. Act ethically: (a) Respect the range of ethical
2. Students will demonstrate accountability, integrity and	of	perspectives. (b) Understand their own values and
responsibility for their role in collaborative assignments.	mathematics.	principles. (c) Recognize the consequences and
		impacts of their actions on others.

# Can you explain how my grade is calculated again?

Homework: 20% Laboratories: 20% Participation in Group Discussions: 5% Reflections: 15% Tests and Pop Quizzes: 20% Final Project: 20% Attendance: borderline grade determination

## III. Okay, what do I need to get started?

Let's start with what you **don't** need: a textbook. But you can get one if that will make you more comfortable. The textbook for this course is: **Elementary Statistics** by William Navidi and Barry Monk, 3rd Edition, published 2019.

What you definitely need is an access code for ALEKS 360 for Elementary Statistics; this has already been charged to your SRU account. You should be able to access your online portal for this course right away. Instructions for accessing the homework assignments will be explained in a separate document that will be posted in the Content section of our class D2L shell.

# IV. Can you tell me a little bit more about the homework?

Your homework will be done online with ALEKS. Homework will be assigned weekly, except when there will be a test, and it will always be due Friday by 8am. You are responsible for the assignment even if you miss the class session and all assignments must be submitted on time.

You will also need a notebook that is dedicated only to this class. Begin each assignment with the date, chapter and section number. Organize your scratch work in this notebook by labeling sections, making notes of problems you found difficult or needed learning aids to solve, and carefully writing out the solution for each problem before you enter the answer online. Since the professor provides handouts during most classes, a binder with loose-leaf notebook paper is ideal.

# What if I miss a homework, or lab, or class?

If you miss a homework, talk to me.

There will be 12 laboratory sessions (labs) during the course; three of those labs will occur during the last three regular class periods. Your lowest laboratory score will be dropped. This will allow you the flexibility to miss a class if you are ill, if you have responsibility for someone who is ill, or if you have another commitment you must maintain. However, you should do your best to attend every class session for the entire period.

## V. What else do I need to know?

I will communicate with you between classes by way of email announcements and through D2L. You should check your Slippery Rock University email regularly. **The best way to communicate with me between classes is by email;** you can normally expect a reply to an e-mail within a day. If you do not hear from me, assume I did not receive your email, and try again. Please include your full name and class number (STAT 152) in your emails.

## **MY EXPECTATIONS**

- 1. Perfect or near perfect attendance. You are responsible for all material covered in class whether or not you were there. It is critical that you be in class on time and that you be in the classroom for the duration of the class.
- 2. Active productive participation in each class and respect for the learning environment.
- 3. If you run into trouble, I encourage you to seek extra help as soon as needed. You should
  - Use the study aids available in ALEKS.
  - See me during office hours or by appointment.
- 4. **Ethical** and respectful **behavior**. We will be discussing some difficult topics in this class, and statistics isn't everyone's favorite course to begin with. We will treat each other with kindness even if we don't agree!

## SOME ETIQUETTE AND NETIQUETTE RULES

During this course we will be interacting with each other quite a bit both in person and online. We might also be sending emails to each other. Each of these different methods of communication presents its own challenges, and we need a set of common guidelines to make sure everyone in the course feels safe and has a good experience.

## For all forms of communication:

- 1. **Be inclusive.** It is important to be intentional about making sure we "see" each other in a classroom community. You can do this by making sure that everyone has a chance to respond during discussions. When you participate in the discussion board, try to respond to at least one person that has not had a response to their post yet.
- 2. Be on time. We need to be able to start right at the beginning of the class period. Try to get there a few minutes early! For our discussion boards, all discussion occurs between Sunday midnight and Friday midnight of the same week. Your contributions to our discussions are important, but our learning community will not benefit from them unless you post on time. Tip: Set calendar reminders to make sure you contribute on time!
- 3. **Disagree respectfully.** Disagreement and different ideas are essential parts of learning, problemsolving, and creativity. However, in order for different ideas to be heard and shared, it is important to maintain a respectful stance even through vehement disagreement; otherwise communication may break down.

**Tip:** You might start the conversation with a question to clarify or get more information before you explain your different perspective. For example, "Nathan, can you tell me more about what you meant when you said that recycling programs are a poor use of public resources?"

**Tip:** Refrain from using judgmental evaluations of what someone posted, and instead present your own perspective supported by factual information. For example, instead of "Jamal, your analysis makes no sense," you can say, "Jamal, I interpreted the results of the study differently. As I see it, there was no statistically significant difference in the children's test scores, which implies that the new program is not working."

## For online written communication:

- 1. **Be concise.** Lengthy paragraphs are difficult for readers to digest. Keep your paragraphs short and your writing concise. Tip: Consider using bullet points to help highlight your main points or headings if your post needs to be lengthy.
- 2. **Stay on topic.** Off-topic comments can derail our conversation. You can post off-topic comments in our open discussion forum or one of the other communication modes we are using in the course.
- 3. **NO YELLING.** When you write in uppercase letters in online communication, it is usually interpreted as yelling.
- 4. Add some emotion. :-) Sometimes it helps communicate the tone of your message when you add an emoticon. However, only do so as necessary for it can also be annoying to readers if you use too many (which is probably the opposite of your intention).
- 5. Use humor carefully. Sarcasm in particular does not translate well in an online environment. It is best to avoid the potential pitfalls of misunderstood messages.

# ACADEMIC INTEGRITY

All work that you submit for this course must be your own unless otherwise specified. Students are expected to know and adhere to the SRU student code of conduct as posted at <a href="http://www.sru.edu/offices/student-conduct/code-of-conduct">http://www.sru.edu/offices/student-conduct/code-of-conduct</a>.

# DIVERSITY AND INCLUSION

The professor for this course strives to create a learning space that effectively serves students of diverse backgrounds. I know that the diversity students bring to our campus is a benefit and source of strength for our institution. However, I also acknowledge that course materials used across campus have originated from a predominantly white and male intellectual tradition.

For that reason, I pledge to:

- 1. Continuously re-evaluate the course format, materials, and outcomes to remove sources of implicit and/or explicit cultural, racial, ethnic, gender-based, disability-based, or sexuality-based bias;
- 2. Search out and represent, to the best of my ability, the contributions of underrepresented groups to the fields of mathematics and statistics; and
- 3. Present materials and activities that are respectful of sources of diversity, including gender, sexuality, disability, age, socio-economic background, ethnicity, race, and culture.

Your perspective is unique and desired, and your suggestions are encouraged and appreciated. Please let me knows ways to improve the effectiveness of the course for you personally and for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can plan your coursework around those events.

## CORRECT PRONOUNS, NAMES, AND INCLUSION

I hope to create a space where students bring all aspects of their selves into the classroom in order to fully engage in this course. I support people of all gender expressions and gender identities and encourage students to use the name and set of pronouns which best reflect who they are. In this spirit, I welcome and expect all students to also use the correct name and pronouns of their classmates. I will do my best to respect and use the language you use to refer to yourself and will encourage other members of our classroom community to do the same. Please inform me if my documentation reflects a name or set of pronouns different from what you use, and if you have any questions or concerns, please contact me after class, by email, or during office hours.

## SPECIAL ACCOMODATIONS

Any student who needs disability accommodations must see me as soon as possible during my office hours. A letter from the Office of Disability Support Services authorizing your accommodations will be needed. The Office of Disability Support Services is in Room 105 of the University Union with hours of operation from 8:00 am until 4:30 pm during the semester and until 4:00 pm during spring, summer, and winter breaks. Their telephone number is 724-738-4877.

## **VETERAN'S SERVICES**

Slippery Rock University Veterans Resources and the Student Veteran Center play a primary role in serving the University's growing community of veterans and military connected students. Our Veterans Resources provide information on admissions, financial aid, GI Bill<sup>®</sup>, and other various contacts and resources.

Slippery Rock University Student Veterans Center plays a primary role in serving the university's growing community of veterans and military connected students. It provides SRU student veterans, military affiliated and ROTC cadets a place to relax and share information and experiences. The center is located in 253 Smith Student Center and is equipped with computers, CAC-Smart Card Readers, printing capabilities, cable-TV and lounge space. The center can also be used to collaborate on academic programs or as a quiet place to study.

For more information, please contact George McDowell, Recruitment and Retention Strategist/Veterans Certifying Official Enrollment Management at 110 North Hall Welcome Center (george.mcdowell@sru.edu, 724-738-2702).

## **INCLEMENT WEATHER**

If the decision is made to operate on a two-hour delay or cancel classes or close the University, University Communication and Public Affairs will post the information to the SRU Web site (www.sru.edu), Facebook and Twitter; send e-mail alerts to all sru.edu addresses (faculty, staff and students); notify e2Campus subscribers; and notify the media. Our class period is **10-10:35am** for the 01 section and **11:30-12:05pm** for the 03 section if we are operating on a two-hour delay.

# TITLE IX

Slippery Rock University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to comply with the requirements of Title IX of the Education Amendments of 1972 and the University's commitment to offering supportive measures in accordance with the new regulations issued under Title IX, the University requires faculty members to report incidents of sexual violence shared by students to the University's Title IX Coordinator. The only exceptions to the faculty member's reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project. Faculty members are obligated to report sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred to the person designated in the University protection of minors policy. Information regarding the reporting of sexual violence and the resources that are available to victims of sexual violence is set forth at: https://www.sru.edu/offices/diversity-and-equal-opportunity/sexual-misconduct-and-victim-resources.

**Non-discrimination:** Slippery Rock University of Pennsylvania does not discriminate on the basis of race, color, sex, sexual orientation, gender identity, gender expression, national origin, religion, age, disability, or veteran status in its programs or activities in accordance with Title IX of the Educational Amendments of 1972, the Americans with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, Title VII of the Civil Rights Act of 1964, and other applicable statutes and University policies. www.sru.edu/offices/diversity-and-equal-opportunity/notice-of-non-discrimination

## GENERAL COURSE DATES TO KNOW

Tuesday, January 18	First Day of Classes for Spring 2022
Tuesday, January 25	Last day to Drop/Add in Campus Office or MySRU
Monday, January 31	Last day to Add course with Instructor Permission
Sunday, March 13 –	
Sunday, March 20	Spring Break
Monday, April 4	WITHDRAW Deadline for Full Semester Courses
Monday, May 2	Last Day of Classes
Wednesday, May 4	8am – 10am for 01 section and 10:30am-12:30pm for 03 section,
	Final Exam Period/Final Presentations
Saturday, May 7	Commencement

# VI. CALENDAR

Test dates may change as necessary, and any changes will be announced in class. For writing exercises, use complete sentences, and write clearly.

WEEK	DATE	SECTIONS	TOPICS
Week 1	01/19/2022	Intro	Syllabus Review and Getting to Know You
	01/21/2022	LAB 1	Basic Ideas
Week 2	01/24/2022	1.1-1.4	Basic Ideas, Group Discussion on Reading 1
	01/26/2022	2.1	Graphical Summaries of Data, Reflection 1 Due
	01/28/2022	LAB 2	HW 1 Due
Week 3	01/31/2022	2.2-2.3	Organizing Data, Group Discussion on Reading 2
	02/02/2022	2.4	Bad data displays, <b>Reflection 2 Due</b>
	02/04/2022	LAB 3	HW 2 Due
Week 4	02/07/2022	3.1-3.2	Central Tendency, Variation, Empirical Rule, Group Discussion on Reading 3
	02/09/2022	3.3-4.1	Measures of Position, Measures of Correlation, Reflection 3 Due
	02/11/2022	LAB 4	HW 3 Due
Week 5	02/14/2022	Review Day	
	02/16/2022	TEST 1 (1.1-4.1)	
	02/18/2022	5.1-5.2	Probability Basics
Week 6	02/21/2022	5.3	Contingency Tables & Conditional Prob., Group Discussion on Reading 4
	02/23/2022	5.4	Independence, Counting Rules, Reflection 4 Due
	02/25/2022	LAB 5	HW 4 Due
Week 7	02/28/2022	6.1	Random Vars & Discrete Prob. Distributions, Group Discussion on Reading 5
	03/02/2022	6.2	The Binomial Distribution, Reflection 5 Due
	03/04/2022	LAB 6	HW 5 Due
Week 8	03/07/2022	7.1-7.2	The Normal Distribution, Group Discussion on Reading 6
	03/09/2022	7.3-7.4	Sampling Distributions & The Central Limit Theorem, Reflection 6 Due
	03/11/2022	LAB 7	HW 6 Due
Week 9	SPRING BREA	к	
Week 10	03/21/2021	Review Day	
	03/23/2022	TEST 2 (5.1-7.4)	
	03/25/2022	Final Project	
Week 11	03/28/2021	8.1-8.2	Confidence intervals for the Mean, Group Discussion on Reading 7
	03/30/2022	8.1-8.3	Confidence intervals for the Population Proportion, Reflection 7 Due
	04/01/2022	LAB 8	HW 7 Due
Week 12	04/04/2022	9.1	Introduction to Hypothesis Testing, Group Discussion on Reading 8
	04/06/2022	9.2	Hypothesis Testing, Reflection 8 Due
	04/08/2022	Final Project	HW 8 Due
Week 13	04/11/2022	9.3	Hypothesis Testing, Group Discussion on Reading 9
	04/13/2022	9.4	Hypothesis Testing for Population Proportions, Reflection 9 Due
	04/15/2022	LAB 9	HW 9 Due
Week 14	04/18/2022	10.1-10.3	Cls for Two Populations, Group Discussion on Reading 10
	04/20/2022	11.1-11.3	HT for Two Populations, Reflection 10 Due
	04/22/2022	LAB 10	HW 10 Due
Week 15	04/25/2022	Final Project	Group Discussion on Reading 11
	04/27/2022	Final Project	Reflection 11 Due
	04/29/2022	Review Day	HW 11 Due
Week 16	05/02/2022	TEST 3 (7.1-12.2	
	05/04/2022	Final Project Pre	sentations
	05/06/2022	Final Paper Due	