RCC
Rogue Community College

RogueCC · Student Learning and Success · MATH

Probability and Statistics

MTH-243

Summer 2022   Section 01   4 Credits   07/11/2022 to 09/01/2022   Modified 07/10/2022

🕐 Meeting Times

M,Tu,W,Th 4:00pm-5:30pm on Zoom

Join Zoom Meeting:

https://zoom.us/j/2325283598?pwd=OXd1dGkyekFtOU9ZWU5zTTBUcTZYdz09 (https://zoom.us/j/2325283598?pwd=OXd1dGkyekFtOU9ZWU5zTTBUcTZYdz09)
Meeting ID: 232 528 3598
Passcode: 950945

👤 Contact Information

Jeremy Knight, jknight@roguecc.edu (mailto:jknight@roguecc.edu)

Math Department Phone Number: **(541) 956-7127**

🖥 Course Description

Covers the nature and presentation of data, measures of central tendency, probability and probability distributions, normal and binomial distributions, estimates, sample sizes, confidence intervals and hypothesis testing. Course is graded A through F. A graphing calculator is required (instructor will be using the TI-83 or TI-84 graphing calculator in class). There is a significant online component in this class.

Requisites
MTH95 or MTH96

📘 Course Materials and Required Texts

There are three things that you will need to acquire before we get started:
1. A Textbook
2. A TI-84 (or TI-83) Graphing Calculator
3. Access (During class preferably) to a computer with Microsoft Excel

 Textbook: Our textbook is "Statistics: Informed Decisions using Data" by Michael Sullivan (either 4th Edition or 5th Edition). It will be important to read ahead in the text before classes to understand the material best. If you want to get started on your reading, it would be a good idea to read through chapter 1 before the first class. You can purchase this textbook from the bookstore, or you may be able to find it online for a better price. You may also be able to check it out from the RCC library if they still have some. Here are the ISBN numbers if you want to look for it online:

4th edition: ISBN: 9780321757272

5th edition: ISBN: 9780134133539

Graphing Calculator: You will need to have a Texas Instrument TI-84 (Best option) or TI-83 calculator. You can borrow one from a friend or family member, rent one at the RCC library, or buy one new or used. There are different versions of the TI-84 like the TI-84plus, TI-84silver, and the TI-84CE, but all will work just fine.

Microsoft Excel: We will be doing labs using Microsoft Excel. You don't have to have the latest version of Excel. If you don't have Microsoft Excel on your computer, you get it just for two months for $6.99 a month online:

https://www.microsoft.com/en-us/microsoft-365/p/microsoft-365-personal/cfq7ttc0k5bf?activetab=pivot:overviewtab (https://www.microsoft.com/en-us/microsoft-365/p/microsoft-365-personal/cfq7ttc0k5bf?activetab=pivot:overviewtab)

✳ Course Policies

- *All Assignments* will be **due at 11:59pm** and will all be turned in through the MyOpenMath (https://myopenmath.com) website. Due dates will all be shown on the calendar on MyOpenMath (https://myopenmath.com)
- **Online Assignments:** You will be given 5 late passes for online assignments that will extend the due date by 3 days.
- **Tests:** will be done during class on the dates shown on the calendar on MyOpenMath (https://myopenmath.com).
    - If you have a scheduling conflict with a test, you must inform me **2 days prior to the test**.
    - Failing to show up on the test day will result in a maximum grade of an 79% on the test when it is completed.

- **Labs:** due on dates listed on the calendar. Late work will not be evaluated, even if you are absent, unless prior arrangements are made. You may work/consult with classmates, but the work you turn in must be your own.
- **Paper "Hand-in" Homeworks:** You will be expected to show your work to justify your answers for full credit on these assignments. You will need to scan or take a clear picture of your work and submit this on MyOpenMath (https://myopenmath.com) for credit.
- **If you have any trouble** turning in labs or "Hand-in Homeworks" in MyOpenMath, you will be expected to email them to me at jknight@roguecc.edu (mailto:jknight@roguecc.edu)*before the due date/time.*
- *Late work will not be accepted unless prior arrangements have been made.*

☰ Expectations for Students

To be successful in this course I expect students to:

1. Be in class every day; you can expect me to be in class every day, too.
   For this zoom class, please *turn on your video* and *participate with audio* as often as possible (a good goal is to talk/ask a question *at least* once per class.)
2. Be prepared for class every day by
   1. Reading the textbook sections before class,
   2. Work on online assignments the day we cover them in class,
   3. Write down questions before class that you would like to get answered.
3. I expect you to contact me or come to office hours if you're having difficulty.
4. When you miss a class—**for any reason**—I expect you to read the text, copy someone else's notes or use mine, and attempt the homework before coming to ask me about the material.
5. Finally, I expect you to treat me and your fellow classmates with courtesy and respect; you can expect the same treatment from me.

✔ Grading Information

Evaluation and Scoring:

3 In-Class Chapter Tests …………………………………….…	50%
MyOpenMath & Paper Homework …………………........……	25%
Labs & Final Project ……………………………………………	15%
Labs & Final Project ……………………………………………	10%

Breakdown

A: 90%-100%

B: 80%-89%

C: 70%-79%

D: 60%-69%

F: < 60%

📊 Course Learning Outcomes

- CLO#1: Obtain data from existing sources or collect data and evaluate its relevance and accuracy.
- CLO#2: Analyze information and communicate the results to others using oral, written and graphic methods.
- CLO#3: Use Excel to organize, analyze, and communicate information including graphs. (ILO: Quantitative literacy & reasoning)
- CLO#4: Apply technology (computer and calculator) efficiently to solve statistical problems.
- CLO#5: Use quantitative data to construct logical explanations for real world situations.

📅 Schedule of Assignments

COURSE CALENDAR

*The following is a tentative calendar. Some daily lesson dates may change as needed. All changes will be reflected in the online calendar dates. **The dates of the tests are very important, please mark them in your calendar now!***

Test Dates: Test 1(ch 2-4)…… Tuesday, July 26

Test 2(ch 5-7)…… Wednesday, August 10

Test 3(ch 8-10)….. Tuesday, August 30

Week	Monday	Tuesday	Wednesday	Thursday
Wk.1: July 11	Introduction / Ch. 1 Overview **Lab 1 (due 7/18)**	2.1/2.2: Visualizing Data	2.3 Additional Displays of Data *TI-Basics*	3.1: Measures of Central Tendency **HIH 1 (due 7/21)**
Wk.2: July 18	3.2: Measures of Dispersion **Lab 2 (due 7/25)**	3.4 Measures of Position 3.5 The 5# Summary	4.1: Scatter Plots and Correlation)	4.2: Least-Squares Regression **HIH 2 (due 7/28)**
Wk.3: July 25	**REVIEW** **Lab 3 (due 8/1)**	**CH 2-4 TEST**	5.1-5.3: Probability	6.1: Discrete Random Variables
Wk.4: Aug. 1	6.2: Binomial Distribution	6.2: Binomial Distribution **HIH 3 (due 8/9)**	7.1: Normal Distribution	7.2: Applications of the Normal Distribution

Wk.5: Aug.8	Distributions Practice **Lab 4 (due 8/15)**	REVIEW	CH 5-7 TEST	8.1: Distribution of the Sample Mean
Wk.6: Aug.15	8.2: Distribution of the Sample Proportion	9.1: Estimating a Population Proportion	9.2: Estimating a Population Mean**HIH 4 (due 8/24)**	Confidence Interval Practice
Wk.7: Aug.22	10.1 The Language of Hypothesis Testing **Lab 5 (due 8/29)**	10.2: Hypothesis Test - Population Proportion	10.3: Hypothesis Test - Population Mean	Hypothesis test Practice
Wk.8: Aug.29	REVIEW	CH 8-10 TEST	Final PRESENTATIONS	Final PRESENTATIONS

Hand in Homework Assignments with Due Dates

HIH #1:   Chapter 2-3: Descriptive Statistics   …………..……..…   (DUE 7/21)

HIH #2:   Chapter 4: Relationships Between Variables   ……...   (DUE 7/28)

HIH #3:   Chapter 6: Binomial Distributions   ………..…………..   (DUE 8/9)

HIH #4:   Chapter 9: Confidence Intervals   ………..……..………   (DUE 8/24)

Excel Labs with Due Dates

Lab #1: Displaying Data   ……………..……   (DUE 7/18)

Lab #2: Descriptive Statistics   ………..…….   (DUE 7/25)

Lab #3: Regression   …………………….……   (DUE 8/1)

Lab #4: Binomial Distribution   …..……….   (DUE 8/15)

Lab #5: Normal Distribution   ……………..   (DUE 8/29)

▤ Department Policies

Math Department Guidelines & Information:

- There are many websites and apps like cymath or photomath that will do your math for you. These can be helpful if used appropriately, but there is no substitute for the time, thought and practice that enable students to learn material sufficiently to perform well on tests; which typically compose half your grade. It is plagiarism to turn in work from any source that does not represent your own thinking.
- Part of the credit for most math assignments is from the work that leads to the solution.
- Textbooks for RCC math courses (MTH20, MTH60, MTH63, MTH65, MTH95, MTH96) are all available for free at the math website: Mathematics | RCC
- A final exam score of 70% is required to pass MTH20, MTH60, & MTH65
- Math Course Sequence

🏛 Institutional Policies

Deadlines for Attendance and Adding, Dropping, or Withdrawing from a Course

Administrative Drop: Students in face to face classes who are registered prior to the first day of the term in term-length classes or non-term length classes that begin week 1, who do not attend at least 50% of the first week's class sessions or have an excused absence may be administratively dropped for non-attendance. For online classes, students who are registered prior to the first day of the term in term-length classes, who do not submit an assignment by Wednesday of the first week of the term may be administratively dropped for non-attendance.

First week of the term Attendance: This portion of the procedure applies only to classes that student have registered in for prior to the first day of the term. For credit classes students must attend or they may be dropped for non-attendance. Instructors will take attendance during the first week of the term for each class session. For in-person classes, students who do not attend at least 50 percent of the first week's class sessions will be recorded as absent, unless they have an excused absence for that date. For web classes, students who do not submit an assignment by Wednesday of the first week of the term will be recorded as absent. Students unable to attend class during the first week class must contact the instructor prior to the class meeting to request an excused absence, if they wish to avoid being dropped from that class due to non-attendance. Students who do not meet these attendance requirements during the first week and do not have an excused absence may be dropped from the class.

Students dropped from a class or classes for non-attendance will receive a refund of tuition and fees according to college policy. Students dropped from classes will receive notice of their enrollment status.

When a student registers for a class or classes, the student becomes financially responsible for the tuition and fees. Lack of approved financial aid or failure of an agency to provide funding does not relieve the student of this financial obligation. Students may be dropped from classes due to non-payment of tuition. The College is not responsible for liabilities associated with drop for non-attendance of students. Reference AP 5070 Attendance (https://web.roguecc.edu/board-policies/ap-5070-attendance)

***First week attendance dates are only applicable to courses that begin in Week 1. First week attendance requirements do not apply for late-start classes that begin in Week 2 or later. ***

End of Term Attendance: Instructors will record students' last date of attendance at end of the term for students who have non-passing grades. For in-person classes, attendance is based on the last date the student either attended the class or submitted an assignment. For web classes, attendance is based on the last day a student engaged in an academically related activity such as submitting an assignment or a test. It is not the last date the student logged on, but did not submit assigned work.

Students who stop attending but do not officially drop, withdraw, or notify Enrollment Services will receive the grade that they earned based on syllabus requirements. If that grade is F, Incomplete, or NP the last date of attendance will be used for reporting withdraw information to the National Student Clearinghouse, National Student Loan Data System and used for potential return to Title IV financial aid repayment calculations. (Reference AP 5070 Attendance (https://web.roguecc.edu/board-policies/ap-5070-attendance))

Refund policy: For term-length classes, students may drop a class until **July 18, 2022** and receive a refund. After that there is no refund.

Withdrawal from class: For term-length classes, a student may withdraw from a class between **July 19 through August 11** at 11:59 pm, a grade of W will be assigned. (Reference Add/Drop/Withdraw from Classes (https://www.roguecc.edu/enrollmentServices/addDrop.asp)) W grades impact a student credit completion rate (PACE) and their Satisfactory Academic Standing (SAP).

Credit Class Refund and Withdraw Deadlines		
Class Length	**Last day for a refund, 100% refund, nothing on transcript**	**Last day to withdraw, no refund, W grade on transcript**

Regular term length classes	Monday, week two of the term	Friday of week eight; summer term on Thursday of week five
One-day classes	One day prior to class meeting	First day of class
One-week classes	The day of the first class meeting	The day of the last class meeting
Two-week classes or longer	The day of the first class meeting	One day before the last class meeting

Waitlist process: Students waitlisted for a face to face class must attend the first week and ask the instructor for the "Permission Code" to register for the class. Students waitlisted for an online class may use the Blackboard email inbox or email the instructor and ask for the "Permission Code" to register for the class. If the instructor gives you the code, log on to My Rogue (http://www.roguecc.edu/myRogue), choose "Register with Permission Code" from the Registration Resources Menu, enter the code and follow the online instructions for completing your registration. Students have until Monday of the second week of the term to get officially registered in class with a "Permission Code" provided by the instructor. Not all students waitlisted will be given the permission code. If you are given a permission code, do not share it with any other students. If you share a permission code, both you and the other student will be dropped from the class. The waitlist expires Friday (Thursday for Summer term) of the first week of the term at 4 PM. Students who were waitlisted for an online class or a class with a web-based component, are able to log into Blackboard and follow the class up until the waitlist expires. Once the waitlist expires students will no longer be able to access the classes Blackboard information, and any work submitted for the class will not be saved by the instructor. Students who have not registered by the waitlist expiration deadline, but think they will get permission after the first week, must save any Blackboard work they have submitted to their own computer hard drive.

Academic Integrity

Academic Integrity is expected for all students at RCC. Learning is built on the qualities of honesty, fairness, respect, and trust. At RCC, academic integrity is a shared endeavor characterized by truth, personal responsibility, and high academic standards. An important aspect of academic integrity is academic honesty. Violations of academic honesty include, but are not limited to: plagiarism, collusion, inappropriate assistance, cheating, fabrication, falsification, alteration, unauthorized multiple submission, sabotage, tampering*, and sharing classroom documents, including test items, with other students or with online platforms*. All acts of academic dishonesty are regarded as serious offenses. Students who violate academic honesty or academic integrity will be subject to disciplinary action. Instructors have the right to take action on any suspected acts of academic dishonesty. Depending on the nature of the offense, serious penalties may be imposed, ranging from loss of points to expulsion from the class or college.

Classroom Behavior

Expectations for classroom behavior are outlined in the Standards of Student Conduct, available in the catalog, schedule, and online. Students may not engage in any activity which the instructor deems disruptive or counterproductive to the goals of the class.   Instructors have the right to remove students from class for not following the Standards of Student Conduct or other specified classroom rules. Expectations for behavior in online classes are similar to what is required in the classroom.

Classes meeting on Zoom: Zoom is a technology RCC utilizes and your use of it is governed by the Standards of Student Conduct and the Acceptable Use Policy. Violations of the Standards of Student Conduct in Zoom will be treated as though they have occurred on campus.

Tutoring Center

Tutoring Centers provide free tutoring service if you are registered in credit courses at Rogue Community College. The primary areas of tutoring are math, writing and science; however, tutors are prepared to cover most subjects. Please visit the tutoring center webpage (https://go.roguecc.edu/department/academic-success/tutoring-services)for more details. Online Tutoring through eTutoring service is also available. As an enrolled RCC student, you have access to our eTutoring services. For information, go to the eTutoring link (https://etutoringonline.org/login.cfm?institutionid=54&returnPage=&institution=ROGUE_COMMUNITY_COLLEGE) and follow the login instructions.

Student Evaluations of this Course: In Blackboard

Students enrolled in all credit (and some non-credit) courses will receive an RCC email and prompt within Blackboard around

week 8 of each term to complete online evaluations <u>on each course</u> they are enrolled in. Full instructions for accessing and completing the evaluations will be in the reminder email and prompt. These evaluations are anonymous and will not be released to the teachers until after the term is over. They provide valuable feedback to faculty about your experiences in and impressions of the course.

Access and Disability Resources

Any student who feels that they may need academic accommodations for a disability, such as vision, hearing, orthopedic, learning disabilities, psychological or other medical conditions, should make an appointment with the Access Office.

- Redwood Campus (Wiseman Student Success Center-moving Summer Term to L Building.):
  - Phone: 541-956-7337; Oregon Relay Service: 7-1-1
- Table Rock Campuses (Building A, Rooms 189 and 191):
  - Phone: 541-956-7337; Oregon Relay Service: 7-1-1
- Riverside Campus (Student Success Center); by appointment.
  - Phone: 541-956-7337; Oregon Relay Service: 7-1-1

For more information, go to [Access and Disability Resources (https://www.roguecc.edu/accessResources/)](https://www.roguecc.edu/accessResources/) or email AccessOffice@roguecc.edu

To report a disability-related barrier, go to [Report a Barrier (https://www.roguecc.edu/webforms/ReportDisabilityBarrier/)](https://www.roguecc.edu/webforms/ReportDisabilityBarrier/)

Courses in Blackboard have alternative formats of certain documents available, including audio and electronic braille formats. To learn how to access these accessible files, please refer to [Ally Help for Students (https://help.blackboard.com/Ally/Ally_for_LMS/Student)](https://help.blackboard.com/Ally/Ally_for_LMS/Student).

Discrimination, Harassment and Title IX Policies

Rogue Community College ("RCC") does not discriminate in any programs, activities or employment practices on the basis of race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, gender identity, marital status, veteran status, disability, age, pregnancy or any other status protected under applicable federal, state or local laws.

RCC is committed to providing an academic and work environment free from all forms of discrimination and harassment. In accordance with federal and state law, RCC prohibits illegal discrimination and harassment, works to inform individuals of their right to be free from such behaviors, and promotes the safety of all at College sites and activities. RCC's prohibition includes all forms of sex discrimination--including instances of sexual harassment such as sexual assault, domestic violence, gender-based stalking, and sexual violence--which are also prohibited by Title IX of the Education Amendments of 1972.

For further policy information and for a full list of regulatory specific contact persons visit the [Nondiscrimination (http://www.roguecc.edu/nondiscrimination)](http://www.roguecc.edu/nondiscrimination) webpage.

For further information regarding Title IX at RCC, go to the [Harassment/Discrimination/Title IX (https://web.roguecc.edu/harassment-discrimination-and-title-ix)](https://web.roguecc.edu/harassment-discrimination-and-title-ix) webpage.

The following person has been designated to handle inquiries regarding the non-discrimination policies unless otherwise listed below.

Vice President of People, Culture, & Safety/CHRO
Jamee Harrington
541-956-7017
JHarrington@roguecc.edu
Redwood Campus, Josephine Building

The following persons are responsible for coordinating Title IX (sex/gender discrimination), Title II (ADA reasonable accommodations) and Section 504 (discrimination against individuals with disabilities):

Lead Title IX Coordinator **Marco Vasquez** Equity, Diversity, and Inclusion (EDI) Coordinator 541-956-7124 MVasquez@roguecc.edu Table Rock Campus, A Building	**Deputy Title IX Coordinator** **Sean Taggart** Director of Risk Management 541-956-7061 STaggart@roguecc.edu Redwood Campus, A Building
Deputy Title IX Coordinator **April Hamlin** Dean of Student Success AHamlin@roguecc.edu 541-956-7255 Redwood Campus, L (Looking Glass) Building	**ADA Coordinator for employees and applicants** **Kathryn Averyt** Director of HR & Payroll Operations. KAveryt@roguecc.edu 541-956-7346 Redwood Campus, Jo (Josephine) Building
ADA coordinator for students **Andrew Childress** Access and Disability Resources Coordinator AChildress@roguecc.edu 541-956-7431 Table Rock Campus, A Building	

Basic Needs

RCC wants your time with us to be successful, productive, and even fun. We understand that many things can interfere with your ability to learn effectively. You must have your basic needs met including a roof over your head, a safe place to sleep, enough food to eat, and stable mental health. If you are struggling to meet any of these basic needs, a list of resources and ways to contact a Counselor can be found here (https://web.roguecc.edu/counseling).

Smoking restrictions (Board policy)

Smoking is not permitted on the premises of Rogue Community College except in designated areas. For more information go to AP 3570 Tobacco Use (https://web.roguecc.edu/board-policies/ap-3570-tobacco-use).

Safety

The College assists in keeping the campus safe, but a safe campus can only be achieved through the efforts and cooperation of all students, faculty, and staff. For information on safety services, visit Risk Management (https://web.roguecc.edu/risk-management).

Institutional Learning Outcomes (ILO)

Institutional Learning Outcomes (ILOs) are skills that will contribute to your success in life beyond RCC. Rogue's ILOs are: Communication, Critical Thinking, Equity, Diversity, Inclusion, and Global Consciousness, Information Literacy, and Quantitative Literacy and Reasoning.

Why are they important?

- *Employers call these soft skills or employability skills. They may help you get and keep a job.*
- *These are skills that will help you complete a 4-year degree.*
- *They are skills for success in your life as a family member, worker, citizen, life-long learner, and more.*

Institutional Learning Outcomes (ILO):

Communication	Students will engage in effective communication using active reading and listening skills and expressing ideas appropriately in oral, written, and visual work.
Critical Thinking	Students will explore, reach, and support appropriate conclusions through the analysis, synthesis, and evaluation of information and varying opinions.
Equity, Diversity, Inclusion and Global Consciousness	Students will recognize and identify equity, diversity, inclusion and global consciousness as it applies to people and the world today.
Information Literacy	Students will identify an information need and locate, evaluate, and use information effectively and ethically.
Quantitative Literacy and Reasoning	Students will reason through and solve quantitative problems by collecting and interpreting data and applying mathematical/statistical techniques.

Services to Support Students

Did you know we have free counseling on campus? Or that there is emergency money available to students? Do you need help using myRogue, Blackboard, or navigating the online Bookstore?

[Virtual Student Center (https://web.roguecc.edu/student-affairs/services-support-students)](https://web.roguecc.edu/student-affairs/services-support-students)https://web.roguecc.edu/student-affairs/services-support-students

On Campus:

Drop by any one of our three campuses in the new locations 9 a.m. to 4 p.m., Monday through Friday.

- **Redwood Campus**, Grants Pass: Wiseman Building ([Student Success Center (link is external) (https://goo.gl/maps/cpbMM1WG9552)](https://goo.gl/maps/cpbMM1WG9552)) or the Welcome Center (formerly Rogue Central)
- **Riverside Center**, Medford: SSC Building, Room 16 ([RVC-SSC 16(link is external) (https://goo.gl/maps/Fp8r6kbEcdouXxxm7)](https://goo.gl/maps/Fp8r6kbEcdouXxxm7)), entrance on 9th St. across from the Medford Library
- **Table Rock Campus**, White City: use the main entrance on Pacific Ave ([west side of building TRC-A(link is external) (https://goo.gl/maps/8GemuCRiYQ771CKt7)](https://goo.gl/maps/8GemuCRiYQ771CKt7)).

Stop The Spread: COVID 19 Safety

Stop The Spread: COVID 19 Safety

Masks
On February 24, 2022, Governor Brown announced that the mask requirement for indoor public spaces, including colleges, would be lifted on March 12, 2022. Based on the governor's announcement, RCC will no longer require masks to be worn inside RCC facilities starting on March 12, 2022. Specific exceptions may exist for certain healthcare programs when students are working in off-campus healthcare settings.

RCC understands that students may want to continue to wear a mask while on campus voluntarily. RCC will support the student's right to choose and will continue to provide masks free of charge to any student.

Illness Reporting
Starting April 1, 2022, any student who has been exposed to or who has tested positive for a communicable disease, including but not limited to COVID 19, should review the process outlined in RCC Administrative Procedure 5210 Communicable Disease - Students and follow the guidance of their healthcare provider.

Additional information, including testing information, vaccination locations, etc., can be found on the [RCC COVID webpage (https://web.roguecc.edu/covid-19)](https://web.roguecc.edu/covid-19).

Payment Information

Refunds to Students

Tuition, fees and authorized non-institutional charges on student accounts are deducted from the term's financial aid before excess proceeds are disbursed to the student. Disbursements of proceeds are processed from RCC's Business Office at the end of the second week of each new term, and weekly until the end of term.

BankMobile Disbursements

Rogue Community College delivers refunds with its partner, BankMobile Disbursements, a technology solution powered by BMTX, Inc. For more information, visit [BankMobile. (https://bankmobiledisbursements.com/refundchoices)](https://bankmobiledisbursements.com/refundchoices) Please select your preferences as soon as possible to avoid delays to your refund.

For more information on payments to students, please visit [Payment. (https://www.roguecc.edu/businessOffice/payment.asp)](https://www.roguecc.edu/businessOffice/payment.asp)