Course Syllabus
SEMESTER
School of Science, Technology, Engineering & Mathematics

Course Name:	**Statistical Pathways**
Course & Section Number:	**MTH013-XXX**
Meeting Day(s) & Time(s):	
Credits:	**4**
Contact Hours:	**Contact: 3 Lecture: 2**
Instructor's Name:	
Office Hours & Location:	
OCC Phone:	
OCC Email: *	

Please use your Owens email for communications: EMAIL

1. **Use student Owens email account**
2. **Place course and section number in the subject area**
3. **Emails from outside the college system will be deleted and/or reported as spam.**

Preferred:
NAME (Course and Section numbers in subject line)

Catalog Description: This course explores the arithmetic and algebraic concepts needed to prepare students for Introductory Statistics. Topics included: integers, fractions, decimals, percents, inequality representations on a number line, expressions, order of operations, absolute value, square root, ratios, proportions, sets, solving and graphing linear equations, basic problem-solving skills, creating and/or drawing conclusions from tables and graphs. (Not for graduation credit)

Prerequisites/Co-Requisites: Placement testing or equivalent

Current Textbooks and Equipment:
Julie Miller, Molly O'Neill, Nancy Hyde, *Developmental Mathematics: Prealgebra, Beginning Algebra, & Intermediate Algebra*, 2nd Edition | © 2022

Calculator: Graphing calculator with statistical capabilities is required (such as the Casio fx-9750GII or TI-84).

General Information:
For information on FERPA, Cheating and Plagiarism, Assessment of Student Learning Outcomes and Student Code of Conduct, please refer to the appropriate section of the current Owens Community College Catalog online.

Course Outcomes:
This course will:

1. Reinforce and build upon the mathematical skills introduced in students' previous coursework.
2. Introduce additional mathematical concepts necessary for success in Introductory Statistics.
3. Develop and build study skills that support success in probability and statistics.

Students Learning Outcomes:

To successfully complete MTH013 a student will:

1. Use the number line to plot integers, decimals, and inequalities. Understand absolute value as a distance from zero. Perform sign number arithmetic.

2. Know place value and round decimals. Find percent of a number. Convert among decimals, fractions, and percents. Perform operations with fractions, decimals, and percents, including application problems. Convert between standard notation and scientific notation.

3. Evaluate and simplify algebraic expressions, using order of operations, square roots and powers of numbers (using technology). Solve linear equations in one variable, including proportions and applications to real-world situations.
4. Plot linear pairs in a rectangular coordinate system (ie: scatterplot). Plot a line and understand the slope. Given an equation of a line, draw the graph of the line. Use the equation of a line to find y-value for a given x-value.

5. Understand and use set notation and Venn Diagrams (unions and intersections).

6. Find the complement of a set.

7. Read instructions, application problems, data tables and graphs to extract information, draw conclusions, and answer questions.

Grading Procedure:
This course is a Pass/Fail course and does not count towards graduation. Grades will be calculated on the following scale:

10% Attendance and In-Class Participation
10% Class Work & Check Ins
20% ALEKS Homework
10% Scheduled Knowledge Check & Pie Progress
40% Tests
10% Final Exam

75% and Above	PNP (Pass, No Points)
Less Than 75%	FNC (Fail, No Credit)

(A traditional letter grade will not appear on the student transcript, and a PNP is needed for successful completion of this course)

Class Expectations:
Outside of class assignments will be given for both the lecture and lab portions of this course. Students are expected to complete this work prior to the lecture or lab meeting for which it is assigned.

Assignment Calendar:
Check here for a schedule of daily objectives, check in, scheduled knowledge checks, pie progress, quizzes and the final exam. Refer to this calendar before each class period so that you are aware of what you will be doing each class period. If you miss a class period, the assignment calendar will point you to the missed material.

Classwork:
During class, you will be given a set of problems to complete. This activity will allow you to sharpen the skills just learned, ask questions, and get one-on-one instructions. You will get a chance to check your classwork before the end of the class period. This will give you example problems to help complete the Objectives in Aleks after class. You must be in attendance to complete the classwork.

Homework:
You will use ALEKS to do your homework. The homework will consist of completing the scheduled section homework in Aleks.

Mondays Topic Homework(s) due on Tuesday at 11:59pm,
Wednesday Topic Homework(s) are due on Thursday at 11:59pm,
You can always work ahead, even on Saturday and Sunday.

Scheduled Knowledge Check - In ALEKS
You will complete a schedule knowledge check 6 times during the semester. Each knowledge check will determine what you have mastered and what needs more work.

ALEKS may also provide you with knowledge checks after 20 topics mastered and 5 hours of work.

Check In:
Feedback is a valuable source of information. I want you to be aware of your role as a student and your abilities in mathematics. I will need a little information to meet with you. The Check In will provide you and I with a framework to talk about your progress, what to keep doing, and perhaps what needs to be done differently.

Quizzes (40%)
There will be 5 quizzes given throughout the semester. The scheduled knowledge checks will help you determine what material needs to be clarified before you take the quiz.

What if . . . I missed a quiz.

- If you did not make it to the scheduled quiz class, you will earn a zero. Often missing a quiz is a result of things out of your control, therefore, I can take your final exam percent and replace up to one missed quiz. This is a better resolution to make up quizzes.
- If you have been attending every quiz class, I can use your final exam percentage to replace your lowest quiz score.

Final Exam (10%)
A comprehensive Final Exam will be given during the last week of the semester. The Student Learning Outcomes will be used to determine material on the final exam.

Pie-Grades and Knowledge Checks:
Knowledge Checks will appear in Aleks after finishing sections indicated on the schedule. These will check knowledge learned from the last knowledge check. The results will update the overall Pie score. The target Pie score after each Knowledge Check is as follows:
Knowledge Check 1 – 20%,
Knowledge Check 2 – 40%,
Knowledge Check 3 – 60%,
Knowledge Check 4 – 75%,
Knowledge Check 5 – 90%,
Knowledge Check 6 – 100%.
Take the Knowledge Checks seriously! The more honest you answer, the more personally tailored the experience will be.

Inclement Weather Policy

In the event that the College closes due to inclement weather, all on-campus, hybrid, and synchronous mathematics classes will be cancelled. Asynchronous classes will not be affected. If the decision is made to close the College, a public announcement will be communicated via local television, social media, and Owens Alert. Students will not receive individual class cancellation notices.

If the College is open, all on-campus, hybrid, and synchronous classes will meet as regularly scheduled.

For addition information about the communication of closings or to learn about Owens Alert, visit https://www.owens.edu/news/weather.html

Classroom Admittance:
OCC classes (e.g., traditional, land-based, laboratory, hybrid, asynchronous online, synchronous online, etc.) shall only be attended by the officially registered OCC students, instructor of record, guest lecturer, or substitute. Visitors are not permitted in the classroom and should not be invited to attend or participate in the class. See FERPA for specifics: https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html

Miscellaneous Information:
Owens Community College does not automatically withdraw students when they stop attending class, nor does the College permit instructors to withdraw students who stop attending class. To avoid earning an F, the student who needs to stop attending a class should complete the necessary paperwork at the Records Office to officially drop the class from his/her schedule by the "Last Day to Drop" deadline, which is published in the schedule book. Students who stop attending a class but do not officially drop the class will earn an F.

Academic Support

Disability Services Resource Center: If you have a disability or acquire one, you may be entitled to receive reasonable accommodation intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to register for accommodations, please contact the Disability Resource Center at 567-661-7007, email disability@owens.edu, visit https://www.owens.edu/disability/, or stop by College Hall 124.

Tutoring Services: Owens Community College offers academic tutoring and assistance in a variety of subjects including accounting, computing, economics, mathematics, science, and writing. For more information go to: https://www.owens.edu/successcenters/.

Counseling Services: Counseling Services provides assistance to students experiencing personal, educational, interpersonal/relationship, family, social, or psychological difficulties. If you feel you may benefit from this service, please contact them at counselingservices@owens.edu. More information is at https://www.owens.edu/counseling/.

Campus and Community Connections: The Center for Campus and Community Connections (College Hall 151) is a walk-in office created to provide retention support through resource stability initiatives and community connections. Go here for more information: https://www.owens.edu/connection/ or contact connections@owens.edu

Owens Library: The Owens Library offers two locations (Toledo and Findlay) as well as online resources. For more information visit https://www.owens.edu/library/.

Students can find more information on campus resources, student support, student life, and security at this link.

General Information:

Student Code of Conduct: All students are expected to follow Owens Community College's Student Code of Conduct, which includes academic honesty, encompassing plagiarism. See the Board Policy for more information.

Anti-Discrimination and Harassment & Title IX/Sexual Misconduct: All students, faculty, and staff are expected to follow Owens Community College's Anti-Discrimination and Harassment Policy and the College's Title IX Policy/Sexual Misconduct Procedures and Guidelines. The College strictly prohibits and will not tolerate harassment, discrimination, intimidation, or hostile/offensive working or learning environments.

Religious Accommodations: A student seeking an accommodation for an absence permitted under Ohio's Testing Your Faith Act must provide the instructor with a written email notice with the specific dates for an absence and must do so not later than fourteen (14) days after the first day of instruction. Alternative accommodations are not retroactive, and no academic penalty will be imposed for an absence under the policy*. The request for an alternative accommodation will be kept confidential. Students with questions about a religious accommodation under Ohio's Testing your Faith Act may contact the College's Office of Academic Affairs: provost@owens.edu

The policy may be found on the Owens website: 3358:11-2-63 Accommodation for a Student Absence for the Observance of Religious Beliefs and Practices Policy

Document Collection: Throughout the semester, your instructors may ask for a variety of assignments including tests and/or quizzes for student learning of institutional general education competencies or program assessment. Please save all your class materials by the end of the semester.

Classroom Admittance: OCC classes shall only be attended by officially registered OCC students or perspective students, instructor of record, guest lecturer, or substitute. Visitors are not permitted to be in the classroom and should not be invited to attend or participate in the class. See FERPA regulations for more information.

Use of AI Tools: In this course, students are encouraged to explore and utilize generative AI tools, such as chatbots, text generators, paraphrasers, etc., as part of their learning and coursework. Proper attribution and transparency about your usage of an AI tool are expected. Here are some examples of ethical and responsible generative AI use.

- Use AI tools only for tasks that are appropriate for your level of learning and understanding. Do not use AI tools to replace your own thinking or analysis, or to avoid engaging with the course content.
- Cite any AI tools you use properly, following the citation style specified by the instructor. APA Example:
    - OpenAI. (2024). *ChatGPT* (Mar 14 version) [Large language model]. https://chat.openai.com/chat
- Provide evidence of how you used the AI tool and how it contributed to your assignment. Explain what you learned from the AI tool, how you verified its accuracy and reliability, how you integrated its output with your own work, and how you acknowledged its limitations and biases.
- Take full responsibility for any mistakes or errors made by the AI tool. Do not rely on the AI tool to produce flawless or correct results. Always check and edit the output before submitting your work. If you discover any inaccuracies or inconsistencies in the output after submission, notify the instructor immediately and correct them as soon as possible.
- If you are working on a group assignment, discuss the use of AI tools with your group members and agree on how you plan to use them and how you will be transparent with the instructor regarding their use.

If you have any questions about what constitutes ethical and responsible use of AI tools, please consult with the instructor before submitting your work.

Instructor/Students Communication Expectations:

Office Hours - My office hours are listed at the top of the of this document. If for any reason I'm out of the office during my designated hours, email me at EMAIL to set up an appointment. This appointment may be done virtually.

Upon emailing me, place your course and section number on the subject line. When emailing for a medical reason, attach a document with the time and date of your doctor's visit or hospitalization. This includes family members that are in your care. Please, do not include details of the medical circumstance, since you have a right to this privacy.

Make-up policy:

Please contact me if you have any issues which interfere with your ability to complete

Your work on time, please contact me immediately.

Study and Homework Recommendations

Taking notes during class lectures is a vital part of the learning process. Carefully writing down the steps demonstrated by the instructor is highly recommended. Students are also encouraged to use examples provided by Pearson Education to reinforce understanding.

You may show your work using a variety of methods, as long as the process of solving the question is clearly and completely written.

It is highly recommended that you complete your homework in a spiral notebook prior to taking the chapter quiz, as this will help you achieve the best results. Homework is available for the entire semester, allowing continued practice throughout the course. So, the deadline for each of them will be on the last day of Final Exam week.

Email – If you send me an email I will respond within 24 hours. If you do not hear from me within a reasonable time frame, I probably did not know the information listed above. So, to expedite your issue and resolve it quickly, help me with being specific with your request/question.
Computer – Make sure your computer is ready to receive the required materials for this course. This hasn't been an issue in the past. However, call the Owens Help desk for any issues regarding Bb access.

Assignment Calendar for Statistics Pathway

Week	Day	Date	Activity/Section(s) to be Covered
1	M		Introduction to the Course and ALEKS **** Skills for Success – Study Habits **** 1.1 – Introduction to Whole Numbers 1.2 – Addition and Subtraction of Whole Numbers and Perimeter 1.3 – Rounding and Estimating
	W		1.4 – Multiplication of Whole Numbers and Area 1.5 – Division of Whole Numbers
2	M		TBD
	W		1.6 – Exponents, Algebraic Expressions, and the Order of Operations 1.7 – Mixed Applications and Computing Mean 2.1 – Integers, Absolute Value, and Opposite **** Skills for Success – Fractions on a Calculator **** **Scheduled Knowledge Check**
3	M		2.2 – Addition of Integers 2.3 – Subtraction of Integers 2.4 – Multiplication and Division of Integers

	W		2.5 – Order of Operations and Algebraic Expressions **** Skills for Success – Using Resources **** **Check-In #1**
4	M		3.1 – Simplifying Expressions and Combining Like Terms 3.2 – Addition and Subtraction Properties of Equality 3.3 – Multiplication and Division Properties of Equality
	W		**Review and Test 1 (Chapters 1 and 2)**
5	M		3.4 – Solving Equations with Multiple Steps 3.5 – Applications and Problem Solving
	W		4.1 – Introduction to Fractions and Mixed Numbers 4.2 – Simplifying Fractions 4.3 – Multiplication and Division of Fractions **Scheduled Knowledge Check #2**
6	M		4.4 – Least Common Multiple and Equivalent Fractions 4.5 – Addition and Subtraction of Fractions
	W		4.7 – Order of Operations and Complex Fractions 4.8 – Solving Equations Containing Fractions **Check-In #2**
7	M		5.1 – Decimal Notation and Rounding 5.2 – Addition and Subtraction of Decimals 5.3 – Multiplication of Decimals and Applications with Circles
	W	10/8	**Review and Test 2 (Chapters 3 and 4)**
8	M		5.4 – Division of Decimals 5.5 – Fractions, Decimals, and the Order of Operations 5.6 – Solving Equations Containing Decimals
	W		6.1 – Ratios 6.3 – Proportions **Scheduled Knowledge Check #3** **Check-In #3**
9	M		7.1 – Percents, Fractions, and Decimals 7.2 – Percent Proportions and Applications 7.3 – Percent Equations and Applications
	W		**Review and Test 3 (Chapters 5 and 6)**
10	M		9.1 – Tables, Bar Graphs, Pictographs, and Line Graphs 9.3 – Circle Graphs 9.4 – Introduction to Probability
	W		9.5 – Mean, Median, and Mode 10.1 – Addition, Subtraction, Multiplication, and Division Properties of Equality **Scheduled Knowledge Check #4**

11	M		10.2 – Solving Linear Equations 10.3 – Linear Equations: Clearing Fractions and Decimals 10.4 – Applications of Linear Equations: Introduction to Problem Solving
	W		10.5 – Applications Involving Percents 10.8 – Linear Inequalities **Check-In #4**
12	M		11.1 – Rectangular Coordinate System 11.2 – Linear Equations in Two Variables
	W		**Review and Test 4 (Chapters 7, 9, and 10)**
13	M		11.3 – Slope of a Line and Rate of Change 11.4 – Slope-Intercept Form of a Linear Equation
	W		11.6 – Applications of Linear Equations and Modeling **Scheduled Knowledge Check #5**
14	M		13.1 – Multiplying and Dividing Expressions With Common Bases 13.6 – Multiplication of Polynomials and Special Products
	W		**TBD**
15	M		15.7 – Applications of Rational Equations and Proportions 17.1 – Compound Inequalities
	W		**Review and Test 5 (Chapters 11, 13, 15, and 17)** **Check-In #5** **Scheduled Knowledge Check #6**
16	M		**Final Exam (Comprehensive)**

Disclaimer: “The instructor reserves the right to amend this syllabus as deemed necessary and will communicate such amendment to the students in the course.”