Moberly Area Community College  
Common Syllabus  
MTH215 Introduction to Probability and Statistics  
**Current Term**

**Instructor:**

**Office number:**

**Office hours:**

**Contact information:**

**Classroom number:**

**Class days and time:**

**Catalog Description:**  MTH215 Introduction to Probability and Statistics (3-0-3)  
This course is designed primarily for students seeking a degree in business. Probability theory, random variables, expectations, continuous and discrete probability distributions, descriptive statistics, sampling distributions, estimation, and hypothesis testing are covered. (IN)

**Prerequisite/Co-requisite:**  MTH201 Analytic Geometry & Calculus I

**Text(s):**  
- **Title:** Statistics for Business and Economics  
- **Author:** McClave, Benson, Sincich  
- **Edition:** 7th Edition 1998  
- **Publisher:** Prentice Hall

**Other Required Materials:**  Notebook and Scientific Calculator

**Purpose of Course:**  Introduction to Probability and Statistics is an in depth course which explores both theory and application of statistics and probability.

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

- Recognized and comprehend basic statistical terms.
- Recognize the role of mathematics as a language for ideas in decision making and scientific research.
- Recognize the value of statistical literacy for all liberally educated people.
- Perform and use graphical and numerical summaries of data.
- Use a calculator to do statistical calculation.
- Construct a confidence interval for population means and execute various hypothesis tests.
- Apply standard statistical inference procedures in the areas of linear regression, control charts, binomial distribution, z-statistics, t-statistics, and Chi-square statistics.
- Recognize when the above procedures are not valid by checking the assumptions before doing the calculations.
- Understand the basic principles of a research project using data collection, analysis and interpretation.
Course Content:
- Organizing Data
- Averages and Variation
- Elementary Probability Theory
- Binomial Probability Distributions
- Normal Distributions
- Estimation
- Hypothesis Testing

Assessment of Student Learning: Emphasis will be on NCTM math standard for course content, especially estimation, problem-solving, and communication.

Grades will be calculated on a total point system where 60% mastery will be necessary for satisfactory completion of the course. Points may be accumulated through the following: class participation, handouts, quizzes, homework, tests, and a project (if time permits). Total points will range from 800 to 1000 points.

Students will have the option of retaking one test during the semester and the retake grade will replace the original test grade.

Expected Study Time Commitments: Students should expect to spend approximately 2 to 4 hours per week studying, reading, and working on assignments for each registered credit hour. For example, 6 to 12 study hours per week may be expected for a 3 credit hour class.

Testing Expectations: This is a credit-bearing course. Retakes of tests are not allowed for individual students. Contact the Math Department Coordinator and/or refer to the course pages in the Math Department Canvas Shell for guidelines.

Description of Major Assignment(s)/Project(s): A class project involving designing a statistical experiment may be assigned if time permits.

Statement to Connect Course with General Education Outcomes: In compliance with MACC’s General Education outcomes, the student who successfully completes this course will be able to:

- Higher Order Thinking: Students will demonstrate the ability to distinguish among opinions, facts, and inferences; to identify underlying or implicit assumptions; to make informed judgments; to solve problems by applying evaluative standards; and to reflect upon and refine those problem-solving skills. This outcome involves creative thinking, critical thinking, and quantitative literacy.

Instructor Policies:

Academic Dishonesty: MACC board policy is as follows: “Academic dishonesty by students damages institutional credibility and unfairly jeopardizes honest students; therefore, it will not be tolerated in any form.” Forms of academic dishonesty include but are not limited to the following: violations of
copyright law, plagiarism, fabrication, cheating, collusion, and other academic misconduct. Incidents of dishonesty regarding assignments, examinations, classroom/laboratory activities, and/or the submission of misleading or false information to the College will be treated seriously. The procedure for handling academic dishonesty is outlined in the Student Handbook (Policy Handbook, M.010). In cases of alleged academic dishonesty, the burden of proof is on the student, not on the instructor.

**Attendance Policy:** Students are expected to attend all class sessions for which they are enrolled. The College reserves the right to drop or withdraw students from courses due to lack of attendance.

Students need to be aware that dropping/being dropped from a course and their last date of attendance in the course may impact their financial aid.

MACC faculty are required to track attendance and report lack of attendance. An instructor must complete the appropriate steps to drop a student within one week following the student’s violation of the attendance policy. Additionally, a student’s attendance rate will be calculated based upon the first day the academic session begins (not the student’s date of enrollment in the course). If a student does not attend a course as defined below, the student will be dropped as “Never Attended.”

**Term Length Drop Calculations**

- **16-week:** Any student who misses two (2) consecutive weeks of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

- **8-week:** Any student who misses one (1) consecutive week of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

- **4-week:** Any student who misses two (2) consecutive days of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

- **Intersession:** Any student who misses one (1) day of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

Acceptable justification may include, but is not limited to, family emergencies, illness or injury, college-approved co-curricular and extra-curricular activities, and religious holidays.

**Definition of Course Attendance**

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<tr>
<th>In Seat Course</th>
<th>Physically attending scheduled, face-to-face, class meetings</th>
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<tr>
<td>Virtual Course</td>
<td>Being present, via appropriate platform, for scheduled class meetings/activities</td>
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Hybrid Course
Physically attending scheduled, face-to-face, class meetings and active participation in the online portion of the course which may include any or all of the following:
- Completion of quizzes or exams during class meetings and online
- Submission of assignments during class meetings and online
- Participation in discussions during class meetings and online

Online Course
Active participation in an online course includes the following:
- Completion of quizzes or exams
- Submission of assignments
- Participation in threaded discussions

Simply logging into the Learning Management System (Canvas) and/or accessing the course and course related material does not constitute active participation for the online component of hybrid courses or for online courses. *(Policy Handbook, I.090 & M.095)*

Tardiness: Per instructor’s policy

Make-up and late work: Per instructor’s policy

Extra-credit work: Per instructor’s policy

Student Email: MACC Mail is the official student email system at MACC. Official college communication is sent via this email system. Students are responsible for checking their MACC Mail account regularly. Students may also receive notifications and reminders from MACC through the online learning platform. However, students should remain aware that the online learning platform messaging system and MACC Mail (student email) system are two separate systems.

Schedule of Student Assignments/Activities: Instructors will identify a Student Assignment/Activities schedule. Instructors have the prerogative to construct the schedule by class periods, weeks, or an overview of topics to be covered.

ADA Statement: Students who have disabilities that qualify under the Americans with Disabilities Act may register for assistance through the Office of Access and ADA Services. Students are invited to contact the Access Office to confidentially discuss disability information, academic accommodations, appropriate documentation and procedures. For more information, please call either the Moberly office at (660) 263-4100 x 11240 or the Columbia office at (573) 234-1067 x 12120, or visit our web page at [http://www.macc.edu/index.php/services/access-office](http://www.macc.edu/index.php/services/access-office).

Title IX Statement: MACC maintains a strict policy prohibiting sexual misconduct in any form, including sexual harassment, sexual discrimination, and sexual violence. All MACC employees, including faculty members, are considered mandated reporters of sexual misconduct and as such are expected to contact the Title IX Coordinator when they become aware, in conversation or in writing, of an incident of sexual misconduct. For more information on this policy or to learn about support resources, please
see [http://www.macc.edu/sexual-misconduct-policy](http://www.macc.edu/sexual-misconduct-policy) (links to an external site) or contact Ms. Cheryl Lybarger, MACC’s Title IX Coordinator, at 660-263-4110, ext. 11369 or CherylLybarger@macc.edu.