

CMI COURSE CURRICULUM COURSE ACTION

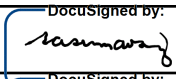
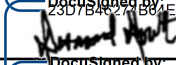
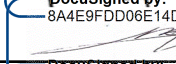
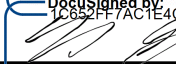
Course Title: Elementary Statistics**Alpha Number:** MATH 160**CIP No.** 27.0501**Type of Action:**☐ New Course (attach narrative justification for course creation)☐ Substantive Revision (attach narrative justification for changes, including assessment and/or achievement data and feedback from the advisory committee if relevant)

Select all that apply:

☐ Change in number of credit hours☐ Change in prerequisite☐ Substantive change in course content☐ Change to SLO ☒ Other: Hybrid☒ Non-substantive Revision

Select all that apply:

☐ Change in Alpha Number or Title (unless letter abbreviation has not previously been used)☐ Edit to course description that does not alter the substance of the course☐ Change to recommended texts☒ Other: Add the hybrid course mode☐ Reinstitution of Archived Course (attach narrative justification for reinstitution, including evidence of demand, evidence of capacity, feedback from the advisory committee if relevant, and commentary that speaks directly to the reasons the course was initially archived)☐ Reaffirmation of Course (only allowable if course completion rate exceeds ISS, the benchmark has been met for the majority of SLO assessments, and there is no evidence of inequitable levels of achievement across subpopulations; attach evidence)**Approvals:**

	Name	Signature	Date
Department Chair	Dr. Rosalinda Sumaoang		7/1/2025
Curriculum Committee Chair	Desmond Doulatram		7/10/2025
Dean	Edward Alfonso		7/11/2025
VPASA	Dr. Elizabeth Switaj		7/14/2025

CMI COURSE OUTLINE

CIP No. 27.0501**Version No.** 004**MATH 160****Elementary Statistics****Alpha Number****Course Title****Previous Alpha Number:**

Course Description: Provides conceptual understanding of descriptive and inferential statistics. Emphasis is placed on data collection and presentation, sampling, probability, hypothesis testing and confidence intervals, linear regression and correlation, analysis of variance, and critique of articles with statistical results.

Course originally prepared by: Math/Science DepartmentsSTEMNovember/2008**Most recent revision by:** Waisiki BaleikorocauSTeMMarch/2025**Course mode(s):** ☒ Face to Face (including Zoom) ☐ Hybrid ☐ Distance Education**Credits calculated by:** ☒ Credit Hour ☐ Clock Hour**Contact Hours:** 60

Type	No. of Hours	No. of Credits	Maximum No. of Hours Online
Lecture/Seminar/Workshop	60	4	16
Clinical			
Practicum			
Lab			
Fieldwork			
Studio Time			
Total	60	4	16

Purpose(s) of Course: Degree Requirement ☐ Nursing, Business ☐
Degree Elective ☐ LA ☐
General Education ☐ LA, Nursing ☐
Credit Certification ☐
Developmental ☐
CTE/TVET ☐
ABE/Adult HS ☐

Distribution Area: Humanities ☐
Social Sciences ☐
Mathematics (Credit) ☒ X ☐
Science ☐

Prerequisite: Math 90's or Placement in Credit Math**Student Learning Outcomes:** Upon completion of this course, students will be able to:

1. Collects and categorizes data for statistical analyses.
2. Draw graphs and charts to picture sample data.
3. Calculate probabilities of dependent and independent events.
4. Interpret statistical measures and models.
5. Report results of statistical analyses.

SLO Mapping:

Prerequisite Course SLO	Linked SLO from this Course	Explanation
Math 099: Calculate the mean, median, mode and range of ungrouped data.	1	Students have mastered the skills to find the measure of central tendency and measure of dispersion to perform statistical analysis.
Math 099: Utilize pictographs, bar graphs, histograms, line graphs and circle graphs.	2	Expanding skills on gathering information from graphs to drawing graphs of data.
Math 099: Solve word problems involving counting principles and probability of an event.	3	Employing skills from counting principles and probability to perform the work on probabilities of dependent and independent events.
Math 099: Calculate the mean, median, mode and range of ungrouped data. ENG 097: Implement the writing process independently in 3-5 paragraph academic essays and reflections	4 and 5	Having mastered the skills in Math 099 and ENG 097, students will be able to interpret the data and explain what it means.

Links to Program Learning Outcomes:

SLO	Linked PLO	I/P/M	Explanation of Link
1	LA Critical Thinking LA Quantitative/Scientific Literacy GE Quantitative Literacy	P	Data analysis is a valuable skills that require critical thinking to interpret, evaluate, and communicate complex information.
2	LA Quantitative/Scientific Literacy GE Quantitative Literacy	P	Graphs provide visual display of data, facilitate comparison, and can reveal trends and relationships within the data, modelling and understanding of complex data information.
3	LA Critical Thinking LA Quantitative/Scientific Literacy GE Quantitative Literacy	P	Provide students information on the likelihood of an event to occur. Students will be able to compute probabilities of events, model random data, interpret the result and make decisions.
4	LA Critical Thinking LA Quantitative/Scientific Literacy GE Problem Solving GE Quantitative Literacy	P	Understanding statistical measures and models provides more tools in analyzing data to make better decisions. In business, these tools can help make better decisions such as creating better customer service, assessing the value of investment.
5	LA Quantitative/Scientific Literacy GE Quantitative Literacy	P	Reporting statistical analysis is essential to ensure target audiences can judge the validity of the output.

Course Content: Students in this course will be able to understand:

1. Measure of central tendency
2. Measure of variability and exception
3. Correlation and regression
4. Normal distribution
5. Probability theory
6. Introduction to inferential statistics
7. Statistical significance, p-values, hypothesis testing, and confidence intervals

Higher Order Thinking Skills: Students in this course will experience:

- ☒ Analyzing the basic elements of an idea, experience, or theory
- ☒ Making judgments about the value or soundness of information, arguments, or methods
- ☒ Applying theories or concepts to practical problems or in new situations

Recommended Methods of Instruction

- ☒ Demonstration
- ☒ Lecture
- ☒ Small group discussion
- ☒ Class discussion
- ☒ Audio-Visual Aids
- ☐ Laboratory
- ☒ Supervised Practice
- ☐ Field Trips
- ☒ Other: Online learning support system

Recommended Assessment Tool Type(s):

- ☐ Case Study
- ☐ Critique of Performance
- ☒ Exam/Quiz In-Course
- ☐ Exam/Quiz Standardized (attach narrative describing development and validation process)
- ☐ Focus Group
- ☒ Group Project
- ☒ Individual Project
- ☐ Observation
- ☐ Portfolio Review
- ☐ Presentation
- ☐ Simulation
- ☐ Skill Performance
- ☐ Supervisor Evaluation
- ☐ Survey
- ☒ Written Assignment

Required Forms of Regular and Substantive Interaction for Hybrid or Distance Education Courses (Selected at Least Two):

- ☒ Direct instruction through:
 - ☒ Live video lectures
 - ☐ Live audio-only lectures
 - ☒ Live text chats
- ☐ Assessing or providing feedback on a student's coursework
- ☒ Providing information or responding to questions about the content of a course or competency through:
 - ☒ Live video discussions
 - ☐ Live audio-only discussions
 - ☒ Live text chats
 - ☒ Asynchronous message boards or text chats
- ☐ Facilitating a group discussion regarding the content of a course or competency through:
 - ☐ Live video discussions
 - ☐ Live audio-only discussions
 - ☐ Live text chats
 - ☐ Asynchronous message boards or text chats
- ☐ Other, specify:

Note: for distance education courses, if only two are selected, both must occur within the course on a weekly basis. If more than two are selected, the instructor may choose which two are used during each week.

Equipment and Materials:

1. Recommended texts: Allan G. Bluman, Elementary Statistics: A Step by Step Approach, 10th Edition, McGraw-Hill, 2017. ISBN-13: 9781259755330
2. Equipment/Facilities: Calculators (scientific & graphing), computer lab.
3. Materials and Supplies: Whiteboard rulers, Statistical data from EPPSO, Public Information from Banks.

Connection to College Mission:

The College of the Marshall Islands will provide our community with access to quality, higher and further educational services, prioritize student success through engagement in relevant Academic, Career and Technical Education, and be a center for the study of Marshallese Culture. It will also provide intellectual resources and facilitate research specific to the needs of the nation. *EC approved 4th Nov, 2020. BOR approved 1st December, 2020*

The course provides higher, quality educational services to ensure student success in their educational pursuits. Throughout the course, students learn to collect, analyze, and communicate data, construct and test hypotheses, solve problems, and investigate processes that lead to data-based decisions.

Connection to Department Mission:

The mission of the Science, Technology, and Mathematics (STeM) Department is to provide science, technology and mathematics courses to support academic programs and prepare students seeking careers in marine science or an advanced education in a STeM discipline.
Approved by CC on March 5, 2018. Approved by IEC on March 14, 2018.

The elementary statistics course is aligned to the Department's mission by providing students broad statistical competency that will complement their academic program requirements and preparedness for future careers and advanced education.