

CMI COURSE CURRICULUM COURSE ACTION

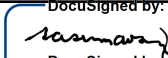
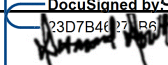
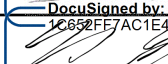
Course Title: Fundamentals of Mathematics**Alpha Number:** Math 099**CIP No.** 33.0104**Type of Action:**☐ New Course (attach narrative justification for course creation)☐ Substantive Revision (attach narrative justification for changes, including assessment and/or achievement data and feedback from 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 SLOs ☒ 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	 DocuSigned by: 23D7B4627B67EF...	7/1/2025
Curriculum Committee Chair	Desmond Doulatram	 DocuSigned by: 8A4E9FD06E4D5...	7/10/2025
Dean	Edward Alfonso	 DocuSigned by: 1C652FF7AC1E4C5...	7/11/2025
VPASA	Dr. Elizabeth Switaj	 89BEB3BDDC23455...	7/14/2025

CMI COURSE OUTLINE**CIP No.** 33.0104**Version No.** 003

Math 099

Fundamentals of Mathematics**Alpha Number****Course Title****Previous Alpha Number:**

Course Description: Focuses on application of mathematical skills to solving problems that are relevant to Non-STEM students for Credit level Math that does not lead to College Algebra and Calculus. Topics include principles and applications of decimals, fractions, ratio, proportions, signed operations, properties of operations, order of operations, measurements, perimeter, area and volume of plane geometric figures, and introduction to Statistics and Probability.

Course originally prepared by: Adedayo Ogunmokun/Edward Alfonso STeM March/2021

Most recent revision by: Adedayo Ogunmokun/Edward Alfonso STeM March/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 _____
Degree Elective _____
General Education _____
Credit Certification _____
Developmental ☒ _____
CTE/TVET _____
ABE/Adult HS _____

Distribution Area: Humanities _____
Social Sciences _____
Mathematics (Credit) _____
Science _____

Prerequisite: Math 089 or Placement

Student Learning Outcomes: Upon completion of this course, students will be able to:

1. Solve word problems using real numbers
2. Perform problems involving U.S. and Metric Systems of measurements.
3. Compute the perimeter, area, and volume of basic geometric figures.
4. Utilize pictographs, bar graphs, histograms, line graphs and circle graphs
5. Apply word problems involving counting principles and probability of an event.
6. Calculate the mean, median, mode and range of ungrouped data.

SLO Mapping:

Prerequisite Course SLO	Linked SLO from this Course	Explanation
Math 089 SLO 01: Perform basic operations involving whole numbers, fractions and decimals, and SLO 02: Simplify numerical expressions involving rational numbers.	Math 099 SLO 01	Apply basic fundamental operations such as whole numbers, fractions and decimals.
Math 089 SLO 03: Solve ratios and proportions problems.	Math 099 SLO 02	Apply the basic concept of ratio and proportions in solving measurement problems.
Math 089 SLO 04: Compute the perimeter and area of basic geometric figures.	Math 099 SLO 03	Extend the discussion beyond perimeter and area to include volume of geometric figures.
Math 089 SLO 01: Perform basic operations involving whole numbers, fractions and decimals, SLO 02: Simplify numerical expressions involving rational numbers, SLO 03: Solve ratios and proportions problems, and SLO 04: Compute the perimeter and area of basic geometric figures.	Math 099 SLO 04	Bringing all the conceptual topics in visual representations.

Links to Program Learning Outcomes:

SLO	Linked PLO	I/P/M	Explanation of Link
1-4	PLO02 – Graphs DEV Graphic Reasoning	I	Students will be taught how to visualize and interpret different graphing representations and problem solving.
4	PLO03 – Quantitative Problems DEV Mathematical Reasoning	I	Students will be taught how to use the basic topics in statistics and probability involving quantitative data.
1,2,4, 5, & 6	PLO04 – Word Problems DEV Solving Word Problems	P	Students will be taught how to solve word problems using basic algebraic properties and the four problem solving steps in Polya's How to Solve It.

Course Content: Students in this course will be introduced to:

1. Numerical Pathways
2. Algebraic Pathways: Equations
3. Algebraic Pathways: Graphs and Linear Functions
4. Geometric Pathways: Measurements
5. Geometric Pathways: Perimeter, Circumference, Area, and Volume
6. Pathways to Probability
7. Statistical Pathways

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 (Moodle), Rich Tasks, Projects

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: Blitzer Robert, Pathways to College Mathematics, 2nd Edition, 2019. ISBN-13:978-0135492529
2. Equipment/Facilities: Statistics Software, ALEKS application
3. Materials and Supplies: Whiteboard Rulers/Math Manipulatives

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.

Most of, if not all, the degrees at CMI require success in Credit Level Math before students can graduate with quality, higher and further education qualifications. Many students however struggle with passing Math and this is a common (if not the main) reason for dropout or non-completion of degree requirements. This course supports the mission of the college in prioritizing students' success by providing developmental classes to prepare them for Math success.

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.

This course supports the STEM Department's mission by providing a Developmental Math pathway to Non-STEM students which then allows them to progress to higher level math culminating in Math Credit Level success in support of academic programs in Non-STEM degrees.