MA 098 Basic Mathematics

Thomas Spring, SM
Chaminade University
Honolulu, Hawaii

Fall Semester, 1999; Day Session

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Course Expectations

Goal: To review arithmetic and get a start on algebra. To **learn**.

Strategy: Cooprative learning - **all** assume responsibility for learning and teaching. Each one can contribute **something**. Much work and study will be done in groups. Writing in the book to answer its questions is highly recomemended. Successful learning by each member of the group depends on the regular attendance of the group members. I encourage groups to work together also outside of class time.

Journal: Each week I will provide an oppotunity to journal on your own time. I will collect and peruse these, trying to respond to your questions and comments.

Assignments: An assignments will be given each class day. It is due the next class day.

Vocabulary: Mathematics has its own technical vocabulary. You will create a dictionary of terms. You will hand in a rough draft with many assignments. Then you will create the dictionary using a word processor. ou will need to store your developing dictionary in a folder or a binder.

Personal Interview: Each of you will meet with me twice during the semester, in October and November. We will talk about the material we have covered up the time of your interview.

Assessment: We will make efforts to keep track of how well you are learning. The means will include your participation in group work; journaling, writing assignments, your dictionary, class work, personal interviews, and a group final exam.

Final Exam: This is a group effort. It will take place on Tuesday, 14 December at 10:30 a.m. in ourusual classroom.

Grade: Your grade for the course is determined jointly by you and me. We base our judgments on the **Assessment Rubric** which accompanies this packet of papers. This **Assessment Rubric** will be applied to your journals, dictionary and assignments and class work.

Assistance: I am able and eager to assist you. The various ways of contacting me are given in the masthead of this sheet. My office hours are posted and I can easily make appointments for other hours.

You can also receive assistance in the **Math Lab** in HH 20. It will be open around 20 Sept.

The **Learning Center** will provide you with a tutor if you ask. You must make and keep appointments. The Learning Center is on the ground floor of Eiben Hall.

Walter Paddington: Walter's mission in life is to witness to such attitudes as:
there is more to life than mathematics;
success is more than high grades;
each of us is unconditionally loved.

Walter is available for consultation at any time. Consultation usually takes place through hugging and holding.

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Assessment Rubric

Excellent:
- Student's work is complete and demonstrates understanding of concepts.
- Student's choice of algorithms is appropriate and efficient.
- Student's reponses are clear, coherent and unambiguous.
- Student communicates effectively.
- Student demonstrates a firm grasp of mathematical ideas and processes.
- Students presents strong supporting arguments.

Very Good:
- Student's work is mostly complete and usually demonstrates understanding.
- Student exhibits a few minor flaws in content knowlege and understanding.
- Student uses appropriate, efficient algorithms most of the time.
- Most of the student's responses are clear and coherent.
- Student's communication is clear, with few uses of incorrect notation.
- Student demonstrates, with minor exceptions, a grasp of mathematical ideas and processes.
- Student presents supporting arguments that may contain minor flaws.

Good:
- Majority of work is complete but often reflects procedural thinking and understanding.
- Some flaws, mostly minor, in content knowledge.
- Student's responses are based on rote procedures with incomplete justification.
- Student's communication is sometimes vague or includes incorrect notation.
- Student demonstrates a partial grasp of mathematical ideas and processes.
- Student presents supporting arguments that may contain major flaws.

Fair:
- Student's work is incomplete or unorganized and demonstrates little understanding.
- Student exhibits some major flaws in content knowledge.
- Many of the student's responses are incoherent and do not justify the work.
- Student communication is often vague and uses incorrect notation.
- Student demonstrates little understanding of the mathematical ideas and processes.
- Student seldom presents supporting arguments or those presented have major flaws.

Poor:
- Majority of work is incomplete and not thoughtfully done.
- Student exhibits many major flaws in content knowledge.
- Most, if not all, of the student's responses are vague and fail to justify work.
- Student communication is always vague.
- Student shows little or no understanding of the mathematical ideas and processes.

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Course Syllabus

Text: "Mathematical Investigations"; An Introduction to Algebraic Thinking
By: DeMarois, McGowen, Whitkanack.   Addison-Wesley 1998

Content:

Doing mathematics
Variables
Whole numbers
Domain
Algebraic expressions
Commutative, associative, distributive properties
Function
Patterns
Using tables to predict outcomes
Algebraic representation of functions, equations.
Function notation
Graphs of functions
Power and factorial functions
Opposites of whole numbers
Operations with signed numbers
Order of operations
Absolute value function
Graphs over the integers on the HP 38G
Functions over the integers
Rational numbers (fractions)
Reciprocal and power functions
Integer exponents
Real numbers
Square root function
Classifications of basic functions
Polynomials
Linear functions
Quadratic functions
Linear equations and inequalities in one variable
Systems of equations
Zeroes of quadratic functions; factoring.

DEM	DEGREE	LAST NAME	FIRST NAME	MAJOR
Day	BS	Ross	Rachel	Elem Educ
Day	BS	Ross	Rachel	Elem Educ
Day	BS	Sakamoto	Angela	ECE/Elem Ed
Day	BS	Sobotta	Georgia	Elem Educ
Eve	BS	Thompson	Randall	Crim Just
Day	BS	Velez-Cottrell	Jessica	Elem Educ
Day	BS	Venuti	Guy	Biology
Eve	BS	Ward	Kim	Crim Just
Eve	BS	Whiteley	William	Crim Just
Eve	BS	Won	Jerry	Crim Just