

Course number, title and credits; total time allocation

Course Letter/Number	MAT 210	Credits	4	Title	Foundations of Mathematics I			
Lecture/Discussion	60	hrs/semester	Lab	0	hrs/semester	Clinical	0	hrs/semester

Catalog Description and Pre- and Co-requisites (Same as taxonomy and catalog)

This course provides background material for students preparing to teach at the elementary level and emphasizes the structure and properties of the number system. It also covers concepts, models in algorithms for whole numbers, integers, fractions, decimals and percents. Some additional hours of on-site field work may be required. The mathematics department recommends that the prerequisite not be more than two years old. If the prerequisite is more than two years old the recommendation is the course placement exam be taken or the prerequisite be retaken to ensure the success of the student. Prerequisite: MAT 131, with a 2.0 minimum, within 2 years

Knowledge, Skills and Abilities Students Acquire from this Course (Educational Objectives)

- Acquire knowledge of the continuum of math learning, developmental patterns and the concepts and skills appropriate to children's development
- Acquire knowledge of how children construct knowledge and identify ways to enhance children's natural interest in mathematics.
- Acquire knowledge of the role of the environment, materials and activities in supporting emerging understanding of mathematics.
- Acquire knowledge of strategies/materials to promote formal and informal math concepts within a child-centered mathematics curriculum.
- Acquire knowledge of the role of the teacher/caregiver as facilitator in the math process.
- Acquire knowledge of the importance of observation and assessment of math skills and emergent math behaviors and implications for curriculum planning.
- Acquire knowledge of ways to explore math concepts through children's literature.
- Acquire knowledge of the role of technology and appropriate software to promote mathematical concepts.
- Acquire knowledge of strategies parents can use to support math concepts in the home.

Associate Degree Outcomes Addressed in this Course (These must appear in course syllabus.)

- ADO 3: Demonstrate computational skills and mathematical reasoning

Units/topics of Instruction

See course description and educational objectives.

Instructional Techniques and Procedures

Although techniques vary from instructor to instructor, this course incorporates active learning strategies. Format for instruction includes lecture, discussion, small group work, demonstration, and hands-on exploration. Discussions will draw heavily on experiences of the student.

Instructional Use of Computer or Other Technology

Students will need to be able to use a computer to do Research and as support of class assignments. The computer will not be used for direct instruction unless the instructor uses PowerPoint presentations as a teaching tool. A calculator is not required in this course. Teaching the use of a calculator is not one of the focal points of the course. Students may be required to do a project outside of class that involves a research paper or accessing educational journals. So knowledge of navigation of websites will be important

Instructional Materials and Costs to Students

The instructional material for this course consists of the textbook and a calculator, if the student chooses to use one.

Skills and abilities students should bring to the course

Able to read	<input type="checkbox"/> a limited amount of material <input checked="" type="checkbox"/> an average amount of material <input type="checkbox"/> an above average amount of material	Able to compute	<input checked="" type="checkbox"/> basic, pre-algebraic problems <input type="checkbox"/> simple algebraic problems <input type="checkbox"/> higher order mathematical problems
Able to read	<input checked="" type="checkbox"/> relatively easy material <input type="checkbox"/> moderately difficult material <input type="checkbox"/> technical or sophisticated material	Able to write	<input checked="" type="checkbox"/> short compositions <input type="checkbox"/> medium length compositions <input type="checkbox"/> lengthy compositions
Able to use technology	<input checked="" type="checkbox"/> keyboard skills/familiar with computer <input checked="" type="checkbox"/> computer application <input checked="" type="checkbox"/> web navigation	Other necessary abilities	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

The course is usually scheduled

Day: Fall Winter Spring

Evening: Fall Winter Spring

Prepared by Mona Baarson

Date June 25, 2012

Approved by Dept. _____

Date _____

Approved by Dean _____

Date _____

Approved by Curr. Comm. _____

Date _____

(Last names, please)

Form Revised 12/4/00