Course number, title and credits; total time allocation

| Course Letter/Number | MAT 210 |  | Credits | 4 | Title | Foundations of Mathematics I |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lecture/Discussion | 60 | hrs/s | ester | Lab | 0 | hrs/semest er | 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 onsite 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 childcentered 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 navigationof 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



## The course is usually scheduled

| Day: | X Fall | X | Winter |
| :--- | :--- | :--- | :--- |
|  |  | X | Spring |
| Evening: | X | Fall | X |
|  |  |  |  |



