JCC OFFICIAL COURSE OUTLINE

Course number, title and credits; total time allocation													
Course Letter/Number	MA	Г 210	Credits	4	Title	Foundation	ns of Mathe	ematic	sl				
Lecture/Discussion	60	hrs/semester		Lab	0	hrs/semest Clinical 0 hrs/seme		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

Able to read	a limited amount of material an average amount of material an above average amount of material	Able to compute	x basic, pre-algebraic problems simple algebraic problems higher order mathematical problems
Able to read	x relatively easy material moderately difficult material technical or sophisticated material	Able to write	x short compositions medium length compositions lengthy compositions
Able to use technology	xkeyboard skills/familiar with computerxcomputer applicationxweb navigation	Other necessary abilities	
The course is	s usually scheduled		
Day:	X Fall X Winter X Spring		
Evening:	X Fall X Winter X Spring		
Prepared by	Mona Baarson	Date	<u>June 25, 2012</u>
Approved by Dep	pt	Date	
Approved by Dea	an	Date	
Approved by Cu	rr. Comm	Date	
	(Last names, please)		Form Revised 12/4/00