MAT 6520

Selected Topics from Higher Algebra I

Course Credit: 3 semester hours

PREREQUISITE: Graduate standing

COURSE DESCRIPTION: A development of the real number system along with a

study of algebraic systems such as groups, rings, integral domains, and fields. A

development of the complex numbers and other numbers fields.

RATIONALE: This course is an introduction to topics in higher algebra in which the

content is concentrated on groups. It is highly recommended for students seeking the

M.S. in Mathematics as well as those seeking the M.Ed. in Mathematics.

LEARNING OBJECTIVES: Define and make applications of groups, subgroups,

normal subgroups, quotient groups, homomorphisms, isomorphisms, automorphisms.

State and apply related thereoms.

METHODS OF INSTRUCTION: Various instructional procedures are used including

lecture, exams, questions and answers, class discussions, problem solving, etc.

REQUIRED PRACTICES: Students are expected to do homework assignments from

problems assigned from textbook. They are expected to attend class, participate in

problem solving and class discussions, ask questions, and keep a notebook of homework

problems as well as class notes.

INSTRUCTIONAL MATERIALS: Text: Topics in Algebra, 2

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Edition, Herstein

ATTENDANCE: Class attendance is extremely important in this course. The

responsibility for missed work rests entirely with the student.

ACADEMIC INTEGRITY: Students are expected to be honest. Dishonesty, such as

cheating or plagiarism, will not be tolerated. Tests and other materials handed in by the

student are assumed to be the student’s own work. Refer to the following web site:

http:/ / www.mc.edu/ publications/ policies/ academic/ 2 1 9 .wpd .

SPECIAL ACCOMODATIONS: If a student needs special accommodations due

to learning, physical, psychological, or other disabilities, please contact Dr. Amy

Christian in the Counseling and Career Development Center.

ASSESSMENT: Assessment is based upon student participation, homework, and

exams.