OFFICIAL TRANSITIONAL SYLLABUS

Math 320: Introduction to Algebraic Structures

(Text adopted - Fall 2003; Committee: Drs. J. Bryden, J. Parish, S. Rigdon)
(Topics adopted Fall 2008; Committee: Drs. J. Parish, G. Pelekanos, G.S. Staples, C. Traub)

Catalog Description: [Dist.NSM] Introduction to group theory. Groups, subgroups, cyclic groups, cosets and Lagrange's theorem, homomorphisms, factor groups. Prerequisites: Math 223 or consent of instructor.

Textbook: *CONTEMPORARY ABSTRACT ALGEBRA*, *6th edition*, Joseph A. Gallian, 2006, Houghton Mifflin

Course Outline and Topics

Ch. 0: Preliminaries (brief review)

Ch. 1: Introduction to Groups

Ch. 2: Groups

Ch. 3: Finite Groups; Subgroups

Ch. 4: Cyclic Groups

Ch. 5: Permutation Groups

Ch. 6: Isomorphisms

Ch. 7: Cosets and Lagrange's Theorem

Ch. 8: External Direct Products

Ch. 9: Normal Subgroups and Factor Groups

Ch. 10: Group Homomorphisms

Ch. 11: Fundamental Theorem of Finite Abelian Groups

Ch. 12: Introduction to Rings

Any instructor should cover all of the material specified; additional sections are optional.