

Math 405

SPECIAL TOPICS: ETHNOMATHEMATICS

FALL, 2005

University of North Dakota, Department of Mathematics; Witmer Hall 211, T, TR:1PM

Credits: 2

Instructor: T. Gilsdorf

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Texts: Marcia Ascher, *Ethnomathematics*, Chapman & Hall/CRC, 1991;

Marcia Ascher *Mathematics Elsewhere*, Princeton University Press, 2002.

Note: *This course carries GER and World Cultures credit (take this info to your college).*

Student outcomes goals: 1) To be able to describe concepts from mathematics within cultural contexts; 2) To understand basic techniques of research in ethnomathematics; 3) To recognize interactions between mathematics and disciplines such as anthropology and linguistics; 4) To have in-depth experiences in working with the ethnomathematics of specific cultural groups (e.g., the Otomíes, the Incas, the Sioux, others as time permits); 5) To have sufficient understanding of ethnomathematics so as to be able to create classroom projects in multicultural mathematics.

Course Outline (subject to minor changes): *Ethnomathematics*: Introduction, plus Chapters 1, 3, 5 - 7.
Mathematics Elsewhere: Chapters 1-3, 5.

Grading: *Two hour exams*, 30% of the total; *Homework*: 15%; *Two 3 -5 page papers*: 30%; *Final Exam*, 25%. Final grades will be determined by taking a percentage of total points earned for the course and weighting them according to the percentages above. The grading scale is: 90%+: A, 80-89%: B, 70-79%: C, 56-69%: D, < 55%: F.

Graduate Students will have extra requirements beyond the undergraduate level, specifically of an independent research nature. These requirements will include such things as more challenging problems on some homework, submitting investigative papers, or possibly making a class presentation.