MAED 534: Reasoning about Data and Chance K-12
Fall, 2006
TENTATIVE Syllabus

Course Instructor:	Dr. Stephen Smith
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Office Hours:	By arrangement

TENTATIVE Description of the Course:

This course is a survey of concepts, principles, mathematical processes of probability and statistics; activities and applications appropriate for developing quantitative literacy in elementary and secondary school classes; common difficulties encountered by students and alternatives for structuring learning; applications of technology, materials, and resources in the probability and statistics curriculum.

We will be flexible concerning allocation of time but I would expect the first two Saturdays to focus on Probability (including counting concepts) and the third and fourth Saturdays to focus on Statistics. We can negotiate the particulars as the class develops. The key, of course, is for the course to be of use to you as teachers.

Since the class sessions are very long, I expect we will spend significant time engaged in mathematical activities in pairs or small groups followed by discussions of the mathematical content. These will alternate with discussions related to pedagogical approaches that reflect the NCTM Standards—what students might need to know prior to the activity, how it might be introduced, what pedagogical or management issues might arise, the teacher's role, and so forth.

Prerequisite: Permission of the instructor.

Textbooks and Materials required:

Bright, et al. (2003). *Navigating through Data Analysis in Grades 6–8 (with CD-ROM).* NCTM: Reston, VA.

Burrill, et al. (2003). *Navigating through Data Analysis in Grades 9–12 (with CD-ROM).* NCTM: Reston, VA.

A scientific calculator.

Assessment:

Participation is an important part of the course and will be assessed on an ongoing, informal basis. Participation includes timely arrival along with adequate preparation and active contribution to the professional conversations of our class. You will log on to WebCT at least once a week. In addition to responding your peers' (&/or my) posts, your posts might include: reactions to the assigned readings; questions about or insights related to the assigned problems; reflections on your teaching of Probability &/or Statistics (or any other topics).

I will assign homework each class. For the most part, this will consist of problems that extend or work of that day but may also include questions related to pedagogical issues that require a response of a page or so. There will also be assigned readings from the CDs that accompany the texts. Again, responses of a page or so will be expected. Problems should be written up neatly and presented in an organized (mathematically logical) fashion. Responses should be typed.

Note: If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Disability Services Office at 2001 C. B. Hedgcock (227-1700; TTY 227-1543). Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state and University guidelines.