STAT 311: Introductory Probability Mathematics Education Majors Spring 2014 - Project (75 pts) Due Friday, April 22 in class.

This is an individual project to write, perform and evaluate a lesson plan concerning some aspect of probability that is covered in this course. The lesson plan must consist of an <u>activity</u>; not a lecture, though you may lecture to introduce the topic. A template for lesson plans (word document) and the scoring rubric are included as separate files on the website. Each of the parts of the scoring rubric is 5 points except for the Step-by-Step Procedures, the reflection and the critique of another presentation which are worth 10 points each.

Briefly, a lesson plan is just a guide on how to teach your students some objective. It should be detailed enough so that another teacher can use it in their classroom without having to contact you. I am making some changes to the standard template to make it more appropriate for this project. The project should consist of the following:

1) Paper in front:

- a) level of the student(s) (if K-12, level is the grade and school district; if college, level is the class and major) and the number of the student(s) taught.
- b) very brief (1 2 sentences) written introduction of what you are planning to do
- c) bibliography
- 2) Lesson Plan
- 3) Reflection statement
- 4) Critique be sure to include the name of the critiquer
- 5) Worksheets, etc. that the 'student(s)' use. If it is not possible to attach these papers, please explain the reason in the reflection.

You are not required to actually develop a brand new lesson/project. It is acceptable to use and adapt lessons obtained on the internet or in existing textbooks. Please see the links in the misc. information web page for starting points (e.g. nctm.org) or just do a google search. If you do start with another professionals' plan, you do need to include this in your brief introduction with the appropriate references in the bibliography.

As mentioned in class, if you are choosing a college student for your presentation, you will need to choose a student(s) who has (have) not already taken a course in probability. Please adjust your lesson plan to the appropriate mathematical level and maturity of your 'students'. This includes the lead-in questions and the assessments. If you have any problems finding someone to do this with, please contact me.

Comments on the specific aspects:

Standards Addressed: You can access the Indiana teaching standards on the misc. information web page.

Anticipatory Set (Lead-In Questions/Introduction): These are the questions and/or introduction that you will use in class to launch the ideas, or background information needed to introduce the topic.

- Step-By-Step Procedures: Your lesson plan should include more than a traditional lecture. You should include a 'group' task that your student(s) can work on and discuss (with each other or with you if you only have one student) to build an understanding of a particular topic in probability. Even if you only have one student, it needs to be possible that the task can be performed in groups.
- Plan For Independent Practice, Adaptations (For Students With Learning Disabilities), Extensions (For Gifted Students): Depending on the number of education courses, you may decide to include these sections. They are not required for the project.
- Closure (Reflect Anticipatory Set): This is a summary of the material learned in the lesson plan that you discuss with your student(s).
- Assessment Based On Objectives: This is one of the most important parts of a lesson plan. The assessment should be directly connected to your goals and objectives and should allow you to determine how well your students met the objectives from performing the task. The assessment cannot be part of the procedure; that is, after the student(s) have completed the lesson, there has to be an additional assessment which you are not involved in to determine if they learned what they were supposed to. In STAT 311, the worksheets are part of the activities and the exams are the assessments.
- Possible Connections To Other Subjects: This is often neglected, it is very important to relate your subject to what is relevant to the students. This part can be included in the Anticipatory Set, the Procedures or the Closure of the actually lesson plan.
- Reflection Statement: This should consist of at least one full paragraph on a separate sheet of paper explaining what went well, what didn't go well and how to improve the lesson in the future. Since this is not an education course, I will not penalize you if the lesson plan didn't work. After performing the task, if you think that some of the sections are below par (Novice or Unacceptable Lesson Plan Rubric), you can also use this section to explain what you would change to make those parts better and receive additional points in those sections. These points will be included in the appropriate section and are in addition to the points assigned to this part. This is one of the most important parts of the project so be sure that you spend enough time on it.
- Critique: Even though each student is required to create and teach one lesson, each student is also required to critique another student's presentation. The comments should be statements of what the presenter did well and constructive criticism of what needs improvement. Please put the critiquer's name on the paper and then give it to the presenter to be included in the presenter's project. It would be useful to give the presenter the critique as soon as possible after the presentation so they have time to read it before they write their reflections. Remember, you cannot videotape anything that involves children without their parent or guardian's consent so the critiquer needs to be physically at the presentation unless the permission slip is obtained from the guardian of the minor(s). Please see me if this will cause a problem.