Math 481- Data Analysis and Probability for Middle School Teachers  
Fall 2012  
Tuesdays 5:00-8:00pm

Janet Walkoe  
Benjamin Building 2226 E  
312-685-5359  
jwalkoe@umd.edu

Course Description:  
This course is a math content course specifically designed to prepare teachers with elementary certification to teach middle school mathematics, including simple data analysis and probability. We will discuss core statistical content in depth and explore how this content knowledge can inform practice.

Topics:  
We will cover traditional statistics topics such as basic statistical definitions, methods for organizing and displaying both categorical and quantitative data and ways to describe and analyze this data. We will also cover probability topics including counting techniques. Finally, we will discuss probability distributions and explore elements of the Central Limit Theorem.

Text:  
Data and Probability Connections: Mathematics for Middle School Teachers, by Debra and Michael Perkowski

Assignments:  

Class Participation/ Reflections:  
Each week you will be asked to submit a short reflection. This will be a reaction to ideas you are thinking about as you participate in this class. Among other issues, you may choose to discuss the week’s homework, ideas discussed in class, and/ or ideas you have for your classroom teaching.

Unit assessments: At the end of each unit you may choose to do a unit project or a unit portfolio.

Unit Projects*: These will involve creating a small classroom activity that incorporates the ideas learned in the unit and a presentation of the activity in class.

Unit Portfolios- The portfolio will showcase your work from the unit in a way that ties together the main ideas and highlights your experience exploring these ideas.

Final Project*:  
As a final project for the class, you will choose between the following options:
1) Interview- You will conduct a clinical interview with a student on some idea covered in this class. You will prepare the interview protocol and videotape or record the interview. The interview should be 20-30 minutes. You will analyze the student’s thinking and submit the analysis along with the interview protocol.

2) Curriculum materials- You will create a short curricular unit to use with your future students. You will include classroom activities, homework activities and assessments. If you choose to do a unit project for any of the units, you may use this activity in your final project.

* Unit projects and final projects may be completed individually or in groups of 2 or 3.

Everyone must get his or her final projects approved. I recommend getting approval before beginning work on the project.

Late assignments, unless discussed and improved by me, will receive point deductions. Assignments that are 1-3 days late will receive a 10% point deduction. Assignments that are 3-7 days late will receive a 20% point deduction. Assignments will not be accepted more than one week late.
Academic Integrity:

Students in this course are expected to comply with the University of Maryland’s Code of Academic Integrity. For details, visit: http://www.president.umd.edu/policies/iii100a.html.

Accommodations for students with disabilities:

The University provides accommodations, by law, for students with disabilities. Please inform me if you have a disability and we can work together with the Disability Support Services Office (DSS) to provide appropriate accommodations for you. You may discuss this with me or contact the DSS by calling 4-7682 or emailing Dissup@umd.edu, directly.

Grades:

It is expected that all students will complete all of the homework assignments and weekly reflections, and attend all class sessions. Students are also expected to participate in class discussions and activities each week. Grades will be determined based on the following:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class participation/reflections</td>
<td>10</td>
</tr>
<tr>
<td>Homework</td>
<td>20</td>
</tr>
<tr>
<td>Projects/presentations</td>
<td>20</td>
</tr>
<tr>
<td>Midterm</td>
<td>20</td>
</tr>
<tr>
<td>Final Project</td>
<td>30</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
</tr>
</tbody>
</table>