MATH-6203-1 APPLIED PROBABILITY (2017-Sum)

Instructor Dr. Chulmin Kim  
Office Boyd 326  
Phone 678-839-4142  
Email ckim@westga.edu  
Lecture MW 2:00-4:30 pm (Boyd 307)  
Office hours MW 1:00-2:00 pm & 5:00-6:00 pm (Boyd 326)

Course Calendar  
L: Lecture note, H: Homework, Q: Quiz, E: Exam

<table>
<thead>
<tr>
<th>Wk</th>
<th>MON</th>
<th>WED</th>
<th>SAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No Class</td>
<td>May-31 [L1] (1.2, 1.4)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Jun-5 [L2] (1.5-1.6)</td>
<td>Jun-7 [L3] (1.7)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q1 (1.2, 1.4) [H1]</td>
<td>Q2 (1.5-1.6) [H2]</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Jun-12 [L4] (1.8-1.9)</td>
<td>Jun-14 Exam1 (1.2, 1.4-1.9)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q3 (1.7) [H3]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q4 (2.1-2.2) [H4]</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Jun-26 [L7] (2.5)</td>
<td>Jun-28 Exam2 (2.1-2.3, 2.5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q5 (2.3) [H5]</td>
<td>Q6 (2.5) [H6]</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Jul-3 [L8] (3.1-3.2)</td>
<td>Jul-5 [L9] (3.3-3.4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q7 (3.1-3.2) [H7]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Jul-10 [L10] (3.6)</td>
<td>Jul-12 [L11] (5.3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q8 (3.3-3.4) [H8]</td>
<td>Q9 (3.6) [H9]</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Jul-17 Exam3 (3.1-3.4, 3.6)</td>
<td>Jul-19 Review for Final Q10 (5.3)</td>
<td>Jul-22 (3-5 pm) FINAL (1.2-5.3)</td>
</tr>
</tbody>
</table>

Course Description & Topics

- Topics include probability counting methods, discrete and continuous random variables and their distributions, expected value, sampling distributions, Central Limit Theorem, and normal approximation to the binomial.  
  (Prerequisite: MATH 1634 and one of MATH 2063 and MATH 4203)

Required Text

  (Caution: The older or international versions may have different sets of exercise problems. You should check the correct assignments with the 7th Edition if you have a different version.)
Course Policy

- **Attendance:** Attendance is **required**. Please do **not** arrive late or leave early. If you need to arrive late or leave early, please clear it with me before the class begins.

- **Make-ups:** You will **not** be allowed to make-up missed exams except under extraordinary circumstances. If you know that you will miss an exam, please let me know **in advance**. In case of an illness (with **medical certificate**) or dire emergency, the instructor must be contacted **prior to** the test or quiz, by **email**. Accommodations for missed tests and quizzes will be handled **depending on** the severity of the situation between the student and me.

- **No Laptop and No Cell phone (Text):** No laptop and cell phone (and any other devices) is allowed to use during the class. You must bring the **paper-version** lecture notes.

- **Email:** If using email, you must use your **university email** (@westga.edu) for any communication; also check your university email account for any announcement regarding the class. I will not respond to any non-university emails.

Grading Policy

- **You total score** $S$ will be computed as follow:

$$S = Q + W + M1 + M2 + M3 + F,$$

where $Q =$ sum of the scores on all ten **Quiz**, and $M1$, $M2$, $M3$, and $F$ are the scores on **Midterm1**, **Midterm2**, **Midterm3**, and **Final**.

- **Possible full points** for each component are the following:

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Q</td>
<td>150 points</td>
<td>(25.00%)</td>
<td>M1</td>
<td>100 points</td>
<td>(16.67%)</td>
</tr>
<tr>
<td>M2</td>
<td>100 points</td>
<td>(16.67%)</td>
<td>M3</td>
<td>100 points</td>
<td>(16.67%)</td>
</tr>
<tr>
<td>F</td>
<td>150 points</td>
<td>(25.00%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$S$</td>
<td>600 points</td>
<td>(100%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Course grades** based on $S$ are assigned according to the following **minimum**:

<table>
<thead>
<tr>
<th>Grade</th>
<th>$S$</th>
<th>Grade</th>
<th>$S$</th>
<th>Grade</th>
<th>$S$</th>
<th>Grade</th>
<th>$S$</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>540</td>
<td>B</td>
<td>480</td>
<td>C</td>
<td>420</td>
<td>D</td>
<td>360</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>&lt;360</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Special Note

- You can find all of your scores including Quiz, Midterms, Final, and the overall Total score under [https://westga.view.usg.edu/](https://westga.view.usg.edu/).
Components for Evaluation

- **Exam (Three Midterms and One Final exam)**
  
  Exam 1  2.00-4.30 pm, Wednesday, Jun-14, Boyd 307  
  Exam 2  2.00-4.30 pm, Wednesday, Jun-28, Boyd 307  
  Exam 3  2.00-4.30 pm, Monday, Jul-11, Boyd 307  
  Final exam  3.00-5.00 pm, Saturday, Jul-22, Boyd 307

Use of calculators is permitted (and necessary) for the Exams. About Calculators, go to [http://mathbits.com/MathBits/TISection/Openpage.htm](http://mathbits.com/MathBits/TISection/Openpage.htm).

- **Quiz (Totally 10 Quiz)**

  Quizzes will be partially based on Homework Assignments. At least 50% of the Quiz problems will be coming from the Homework Assignments which however will **not** be collected. You should try to work on Homework problems by yourself. Then you work to overcome incorrect or uncertain answers with the help of study partners. **No make-up** Quiz will be given unless it is previously arranged.

  ➢ HW#1:
    - Sec. 1.2 (2, 3, 6, 7, 8, 9, 10, 16, 17)  
    - Sec. 1.4 (5, 6, 9, 10, 11, 12, 20, 29)

  ➢ HW#2:
    - Sec. 1.5 (2, 4, 8)  
    - Sec. 1.6 (2, 7, 8)

  ➢ HW#3:
    - Sec. 1.7 (1, 5, 8, 9, 22, 23, 24)

  ➢ HW#4:
    - Sec. 2.1 (2, 6, 8, 10, 12)  
    - Sec. 2.2 (2, 3, 4, 6)

  ➢ HW#5:
    - Sec. 2.3 (2, 3, 4, 7, 8)

  ➢ HW#6:
    - Sec. 2.5 (2, 4, 5, 7, 8, 9, 12)

  ➢ HW#7:
    - Sec. 3.1 (6, 7, 9, 11, 14, 18, 21)  
    - Sec. 3.2 (1, 2, 4, 5, 8, 10, 11)

  ➢ HW#8:
    - Sec. 3.3 (1, 2, 6, 7, 16, 17, 18, 19, 20, 24)  
    - Sec. 3.4 (4, 8, 10, 14, 16, 28, 29, 30, 31)

  ➢ HW#9:
    - Sec. 3.6 (1, 2, 8, 9, 10)

  ➢ HW#10:
    - Sec. 5.3 (1, 2, 3, 4, 5, 6, 7, 8)

**NOT HW but suggested:**

*Sec. 1.8 (2, 3, 6, 7, 9, 11)  
*Sec. 1.9 (6, 12, 16, 23, 26)