## MATH-6203-1 APPLIED PROBABILITY

**Instructor**  
Dr. Chulmin Kim

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Boyd 326

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**Email**  
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**Course Web**  
(Course DEN) [https://westga.view.usg.edu/](https://westga.view.usg.edu/)

**Lecture**  
MW 3:30-4:50 pm (Boyd 304)

**Office hours**  
MWF 10.20-11.00 am (Boyd 205) & MW 1.45-3.30 pm (Boyd 326)

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<tbody>
<tr>
<td>1</td>
<td>Aug-24 <a href="1.2">L1</a></td>
<td>Aug-26 <a href="1.4">L2</a></td>
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</tbody>
</table>
| 2  | Aug-31 [L3](1.5)  
   Q1 (1.2, 1.4)  
   [H1] | Sep-2 [L4](1.6) |
| 3  | Sep-9 [L5](1.7)  
   Q2 (1.5-1.6)  
   [H2] | Sep-14 [L6](1.8-1.9)  
   [Q3](1.7)  
   [H3] |
| 4  | Sep-16 [Exam1](1.2, 1.4-1.9) | Sep-21 [L7](2.1) |
| 5  | Sep-23 [L8](2.2) | Sep-28 [L9](2.3)  
   [Q4](2.1-2.2)  
   [H4] |
| 6  | Oct-7 [L10](2.5) | Oct-5 [Q5](2.3)  
   [H5] |
| 7  | Oct-14 [Exam2](2.1-2.3, 2.5) | Oct-12 [Q6](2.5)  
   [H6] |
| 8  | Oct-21 [L12](3.2) | Oct-19 [L11](3.1)  
   [H7] |
| 9  | Oct-28 [L14](3.4) | Oct-26 [L13](3.3)  
   [Q7](3.1-3.2)  
   [H7] |
| 10 | Nov-2 Review 3.1-3.4 | Nov-4 [L15](3.6)  
   [Q8](3.3-3.4)  
   [H8] |
| 11 | Nov-9 [Q9](3.6)  
   [H9] | Nov-11 [Exam3](3.1-3.4, 3.6) |
| 12 | Nov-16 [L16](5.3) | Nov-18 [Q10](5.3)  
   [H10] |
| 13 | Nov-30 Ch1 & 2 Review | Dec-2 Ch3 & 5 Review |
| 14 | Dec-9 (2-4.30 pm) | FINAL (1.2-5.3) |

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

- Introduction to Mathematical Statistics, 7th Edition, by Hogg, McKean and Craig (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. If you miss the class you will not get the credits by doing weekly worksheet. 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.

- Cheating: Cheating of any sort will not be tolerated. If you are found cheating or assisting in any form of cheating, you will be awarded a failing grade in that exam or quiz.

- Questions about grading: Questions about grading must be asked within one week of the graded works return.

- 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.
Components for Evaluation

- Exam (Three Midterms and One Final exam)

  Exam 1  3.30-4.50 pm, Wednesday, Sep-16, Boyd 304  
  Exam 2  3.30-4.50 pm, Wednesday, Oct-14, Boyd 304  
  Exam 3  3.30-4.50 pm, Wednesday, Nov-11, Boyd 304 
  Final exam  2.00-4.30 pm, Wednesday, Dec-9, Boyd 304

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: (Due Aug. 31)
     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: (Due Sep. 9)
     Sec. 1.5 (2, 4, 8)
     Sec. 1.6 (2, 7, 8)
  ➢ HW#3: (Due Sep. 14)
     Sec. 1.7 (1, 5, 8, 9, 22, 23, 24)
  ➢ HW#4: (Due Sep. 28)
     Sec. 2.1 (2, 6, 8, 10, 12)
     Sec. 2.2 (2, 3, 4, 6)
  ➢ HW#5: (Due Oct. 5)
     Sec. 2.3 (2, 3, 4, 7, 8)
  ➢ HW#6: (Due Oct. 12)
     Sec. 2.5 (2, 4, 5, 7, 8, 9, 12)
  ➢ HW#7: (Due Oct. 26)
     Sec. 3.1 (6, 7, 9, 11, 14, 18, 21)
     Sec. 3.2 (1, 2, 4, 5, 8, 10, 11)
  ➢ HW#8: (Due Nov. 4)
     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: (Due Nov. 9):
     Sec. 3.6 (1, 2, 8, 9, 10)
  ➢ HW#10: (Due Nov. 18):
     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)
Disabilities

- Students with a documented disability may work with UWG Accessibility Services to receive essential services specific to their disability. All entitlements to accommodations are based on documentation and USG Board of Regents standards. If you need course adaptations or accommodations because of a disability or chronic illness, or if you need to make special arrangements in case the building must be evacuated, you should notify me in writing and provide a copy of your Student Accommodations Report (SAR), which is available only from Accessibility Services. I cannot offer accommodations without timely receipt of the SAR; further, no retroactive accommodations will be given.

Grading Policy

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

$$S = Q + W + M_1 + M_2 + M_3 + F,$$

where $Q =$ sum of the scores on all ten Quiz, and $M_1$, $M_2$, $M_3$, and $F$ are the scores on Midterm1, Midterm2, Midterm3, and Final.

- Possible full points for each component are the following:

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<th>150 points (25.00%)</th>
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- Course grades based on $S$ are assigned according to the following minimum:

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<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>
<td>F</td>
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Special Note

- You may click the following to view University of West Georgia Syllabus Policies. http://tinyurl.com/UWGSyllabusPolicies.

- You can find all of your scores including Quiz, Midterms, Final, and the overall Total score under https://westga.view.usg.edu/.