Math 130 Finite Mathematics

Instructor: Professor Yvonne (ChinMei) Chueh

Office and Contact: Bouillon 107G, Tel: 963-2124, e-mail: chueh@cwu.edu,
Webpage: www.cwu.edu/~chueh

Office Hours: 10:00 to 10:50, Monday –Friday and by appointment.

Help Sessions: Supplemental instruction available in weekday evenings (TBA)

Course goals: This course is designed to help you become capable of critical thinking, master the basic principles of counting and probabilities, and apply the necessary techniques to quantitative decision makings. Descriptive statistics will be covered and tested in the last week.

Course description: This course meets General Education "Basic Skills (D)" requirement and prepares student for introductory statistics courses in various departments. It covers the language of sets, counting procedures, introductory probability, and introductory descriptive statistics.

Required Text: 1. Bill Owen and Fred Cutlip, *Finite Mathematics: Introductory Probability and Statistics*, Thomson Learning;
2. Math 130 Course pack by Professor Chueh picked up in the Wildcat store.

Calculator: **A calculator with statistical functions** is required in class and writing exams. TI-83 Plus graphing calculator or similar model is required.

Course outlines:

- Introductory counting and probability
- More counting and probability including conditional probability, independence, Bayes' theorem
- Random variables and probability distributions
- Descriptive statistics

Worksheets: In-class or Take-home worksheets will be assigned and collected for grading. The due date will be announced in class.

Homework: Daily homework from textbook sections will be assigned but not collected. The assigned problems will form the basis of the exams. You are encouraged to solve homework problems with classmates and seek help from the class or office hours.

Grading: Your course grade will be determined by the following:

1. **Tests:** Four 100-point in-class tests. You get to drop the lowest of your four scores (see note below), so these tests will count for 300 points.
2. **Worksheets:** 100 points. No late turn in is accepted once the worksheet is graded and returned to the class. However, I will waive extra 10 points to cover contingent absence for every student.
3. **A comprehensive final exam** worth 100 points.

A perfect score on both of the above categories would result in a total of 500 points. Your course grade will be determined by the percentage ***p*** of these points you earn, according the following scale.

A	$93 \leq p$	$A-$	$90 \leq p < 93$		
$B+$	$86 \leq p < 90$	B	$84 \leq p < 86$	$B-$	$80 \leq p < 84$
$C+$	$76 \leq p < 80$	C	$74 \leq p < 76$	$C-$	$70 \leq p < 74$
$D+$	$65 \leq p < 70$	D	$58 \leq p < 65$	F	$p < 58$

Note: No makeup exams will be given without a written request providing proof of evidence. If you miss an exam, it will be the one you drop. You **must** take the final exam to pass the course.

Students with Disability. Students with disabilities who require academic adjustments in this class are encouraged to meet with me during my office hours to discuss their disability-related needs. Please bring a copy of your Confirmation of Eligibility for Academic Adjustments. We will then discuss how the approved adjustments will be implemented in this class. Students without this but in need of requesting services should contact the CDS for additional information at Bouillon 205, or via cdsrecept@cwu.edu or 963-2171.

SCHEDULE OF CLASS TOPICS AND ASSIGNMENTS

Topic coverage and test schedule are presented below. In order to perform well in this class, **preliminary textbook reading** before each class and reviewing class notes throughout the entire quarter is necessary. Students are advised to complete the homework assignments soon after the each topic is covered. **Weekly homework assignments are all the odd-numbered textbook exercises although students are encouraged to solve even-numbered exercises with answers available on my webpage.**

Week and days	Textbook Reading	Topics
1. 3/29~4/1	§6.1~6.2	**Counting and Probability** ▪ Sorting a population ▪ Counting principle
2. 4/4~4/8	§6.3~6.7	▪ Probability ▪ Experiments ▪ Rules ▪ Equally likely prob. ▪ Relative frequency ▪ Subjective prob.

3. 4/11~4/15	**Review** **Test 1 (Covering Chapter 6)**	**Test 1. 4/15**
4. 4/18~4/22	**§7.1~7.2**	**More counting and prob.** ▪ Counts ▪ Variation on counting ▪ Conditional prob.
5. 4/25~4/29	**§7.3~7.4 (Important! DO NOT MISS.)** **Review**	▪ Multiplicative Rule ▪ Tree ▪ Independence
6. 5/2~5/6	**Test 2 (Covering Chapter 7)** §8.1~8.4	**Test 2. 5/2** **Random variables and prob. dist.** ▪ Random variables ▪ Dispersion of r.v. ▪ Binomial dist.
7. 5/9~5/13	**Review**	**Normal distributions** ▪ Density curves ▪ Applications
8. 5/16~5/20	**Test 3 (Covering Chapter 8)**	**Test 3. 5/16**

	§8.5~8.6 Reading	**May 17, 18, 19 Conference and SOURCE Day, no class**
9. 5/23~5/27	§9.1~9.4	**Statistics** ▪ Graphical ▪ Numerical ▪ Relative standing

		Review
10.	**5/20~6/3**	**Test 4 (Covering Chapter 9 and normal distribution)** **Test 4. 6/1**
11.	**6/6~6/10**	**Final Exam (To be scheduled by the registrar's office)**