

CJ 105- Applied Math Law Enforcement

Fall 2018 CRN 25637

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Course Materials:

- Textbook: No physical textbook is required for this course.
- Regular access to the internet and email. I expect you to be using MyOpenMath and email daily.
- A calculator with the ability to work in fractions. I recommend the TI-30XS or TI-30 XIIS. Personally, I think the TI-30XS is the easiest to use because of how it displays fractions.
- Recommended: 3-ring binder, filler paper, USB drive, pencils and erasers, graph paper, post-its, highlighters, etc.

Course Description: This course provides an overview of the quantitative skills and reasoning most commonly encountered in the criminal justice field. Students will learn how to read and interpret graphs, use basic statistics, and use basic mathematical operations in a variety of applications. Students will learn to communicate mathematical concepts and solutions to problems effectively in writing.

Grading Policy: The student's grade in this class is based on the following:

25% Homework

35% Quizzes

15% Activities

25% Comprehensive Final Exam

Grades will be assigned as outlined on the scale below:

A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: 0-59%

Deadlines

There are 4 major sections in this course and 6 major deadlines. Assignments from each section will not be accepted after the deadline. If you have extenuating circumstances and need an extension for some reason, you must contact me prior to the deadline. Deadlines for assignments are as follows:

Due Saturday, **September 29th** at midnight: Sections 1.1 and 1.2

Due Sunday, **October 7th** at midnight: Sections 1.3 and 1.4, Unit 1 Quiz, and Activity 1

Due Sunday, **October 28th** at midnight: All of Unit 2 and Activity 2

Due Sunday, **November 18th** at midnight: All of Unit 3 and Activity 3

Due Sunday, **December 2nd** at midnight: All of Unit 4 and Activity 4

Final Exams must be taken on Monday December 3rd, Tuesday December 4th, or Wednesday December 5th.

How to Earn Points

Homework: Each section has a homework assignment. The homework assignments are not timed, you have unlimited attempts on each problem, and many of the problems have video help.

You must complete a Reading Quiz before you can start the homework in each section. You must complete the homework for the previous section with a score of 90% before you can start a new section.

Quizzes: Each of the units has a Unit Quiz. This is a timed assignment. You will have 1.5 hours for the Unit Quiz. You will not have access to the videos and other help through MyOpenMath. The comprehensive final exam will come almost entirely from these quizzes, so it is worth your while to study for the quizzes, and practice taking them without using your notes or other tools that you won't have available on the final.

Activities: There are four activities in this course. These will be completed by hand and submitted by email. Scanners are available in the Learning Center. You may also upload photos of the activities as long as they are readable.

Final Exam: There is a comprehensive final exam in this course. This will be a paper-and-pencil test where you must **show your work** (you can practice this by writing up your homework). The final exam will be taken **at an official proctored testing site mutually agreed upon at the beginning of the term**. If you can't test at an LBCC site, you need to let me know right away so that an alternative can be arranged.

Calculator: You will be allowed to use a calculator for all assignments and tests in this class. I recommend the TI-30 XS. You could also use a TI-30XIIS, TI-83, TI-84, or TI-84 Plus. All of these calculators can do calculations with fractions. You will be much happier in this class if you get a calculator and learn to use it, especially for fractions. Remember that you will not be allowed to use your cell phone on the final exam, so it is worth your while to learn to use your calculator.

Getting the Most from the Reading and Videos

As you start exploring the course online, you will see that each section is laid out the same way, with six items: a list of goals, a summary, a reading quiz, a homework assignment, readings, and videos.

Some of the material in this course is probably going to be familiar, especially at the beginning. I can't make you read every page of the readings or watch every minute of the videos, and I don't expect you to. Here's what I **do** expect you to do.

- Read the section summary. Print it out and highlight things that seem important, maybe make a few notes in the margins.
- After reading the section summary, take the Reading Quiz. You must complete the Reading Quiz before you can start on the homework.
- Decide if you're ready to start the homework. You might even try a couple of the homework problems. If you're not ready to go to the homework, watch the videos and read the readings.
- Take notes on the videos and readings. Work the practice problems in the readings.
- Write up your homework problems as you work on them, even though they are online.

The videos and textbook cover the material in much greater depth than the summaries. Taking the time to *learn* new material before starting the homework will save you time, and frustration. The homework will go much faster if you're already comfortable with the material.

Getting the Most from the Homework

The homework is how you learn to do the math, so this practice is important! To get the most out of your online homework you should keep a **write up** of all your homework problems as you work them.

Writing up Homework: Keep a notebook where you write down your work on the problems. Here's what should go in that notebook:

- Clearly state the problem, listing all the given information. (This helps a lot when you need to ask for help on a problem, or if you are studying a problem later.)
- Show all the major steps involved in solving the problem.
- Clearly state your answer. Word problems should have complete sentences for answers, and all answers should have appropriate units (inches, square feet, etc) where applicable.

And here are some reasons why you should do this:

- Writing down your steps organizes your thinking and helps you learn the process.
- The final exam is not online. You will be expected to show your work.
- Having the problem and your work is really helpful when you ask for help from you instructor, a tutor, or the math help desk.
- You will create a great tool to help you study for the Unit Quizzes and Final Exam.

Being Successful and Getting Help:

There is help and support available to you- do not hesitate to seek it out when you have difficulty in the class.

- Instructor- You can talk to me! I check email, and can talk to you on the phone by appointment. Remember, I'm here to help you. *You* are the reason I do this job, and the reason I love it. I want to hear from you. I do not live in the Albany/Corvallis area, so meeting in person is difficult.
- Help Desk- Each of our campus locations has a Math Help Desk. This is a place where you can get drop-in help with your math questions. The Help Desk is designed to help you for about 5 minutes at a time, but you can always go back when you get stuck.
- Tutoring- You are eligible for 3 hours a week of free tutoring services from the Tutoring Center. You must sign up in advance, in the Learning Center, for tutoring. This is an amazing opportunity. There are very few places you get this kind of help for free!
- Books and videos- Each homework assignment has videos linked at the top. Additionally, there is a whole internet full of videos and tutorials at your fingertips!

It is essential to your success in this course that you keep up and do the homework on a regular basis. It is very difficult to be successful in a math class if you fall behind. You will need to plan on spending **9-12 hours each week** on this course.

Academic Honesty: I assume you are ethical and honest. However, if there is an incident of academic dishonesty, you will receive a score of zero for that test/assignment and the incident will be reported to the college administration for possible further disciplinary action. If there is a second offense, you will receive a grade of F for the course and the incident will be reported to the college administration with a recommendation for disciplinary action.

Special Circumstances: Students who may need accommodations due to documented disabilities, who have medical information which the instructor should know, or who need special arrangements in an emergency should speak with the instructor during the first week of class. If you have not accessed services and think you may need them, please contact Disability Services, 9-7-4789.

Statement of Inclusion: The LBCC community is enriched by diversity. Everyone has the right to think, learn, and work together in an environment of respect, tolerance, and goodwill. We will work toward creating a community without prejudice, intimidation, or discrimination.

Statement of Nondiscrimination: LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, or any other status protected under applicable federal state or local laws.

Disclaimer: I reserve the right to be an actual human being and make mistakes. If you find a mistake I've made, please come and politely talk to me about it and we can work out how to remedy the situation.

Any policy or procedure not explicitly covered in the syllabus is at the discretion of the instructor.

Outcomes:

Upon successful completion of this course, students will be able to:

- Perform the four basic mathematical operations on whole numbers, fractions, and decimals to obtain exact answers.
- Model and solve problems using the four basic mathematical operations.
- Demonstrate understanding and knowledge of the use of units including labeling measurements, applying units to solutions, and converting units by using dimensional analysis.
- Interpret and use percents in a variety of problems such as utilizing graphs, utilizing formulas, and solving applications.
- Interpret and use percents in a variety of problems such as mean, median, and standard deviation, and probabilities using the normal distribution.
- Communicate mathematical concepts and solutions to problems effectively in writing.