

Math 321, Mathematical Statistics

Section 1, GCB 178

1-1:50pm

Instructor: Dr. Scott Hyde

Office: GCB 160A

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Course Description: Probability, random variables, sampling distributions, estimation and hypothesis testing, regression and correlation

Prerequisites: Math 214

Office Hours: 12-12:50 on Monday, Wednesday, and Friday. If you need to meet with me at any other time, I will be willing to accommodate you. Just email and schedule an appointment.

Required Text: **Introduction to Probability and Mathematical Statistics, 2nd Ed.**, by Lee J. Bain and Max Engelhardt

Calculators: A calculator can be helpful in the course. However, work must always be shown to receive full credit. You will not receive credit for just writing down the answer. Answers are not as important as the process through which an answer is derived.

Course Web Page: <http://jekyll.math.byuh.edu/courses/m321/wi07/>

The course web page will contain:

1. Resources for exams and quizzes.
2. Homework assignments
3. Important dates and times for exams.
4. Your current grade.
5. An updated syllabus.

You will be responsible for the web syllabus and not necessarily this one.

6. Other materials and links to web pages.

Homework and Quizzes: Homework will be assigned AND collected. Homework should be turned in every Friday, on problems that are covered on the sections covered the previous three class days (Friday of the previous week, and the previous Monday and Wednesday). You may turn in homework as a group of 2 or more students. If you do so, please write the names of all students at the top of the paper. If you work as a group, please do not turn them in separately. Make sure you keep up! You need to be self-motivated. If you do not do any homework, then you will NOT pass this class! If you need help, then ask me or ask the tutors (those that may know the material) in the Math Learning Center. Homework is your opportunity to prepare for the quizzes and exams. You will find that quizzes will be modeled after the homework, and may include exact problems from the homework. Quizzes will be given approximately once weekly. Quizzes cannot be made up for ANY reason, since I will drop one out of every five quizzes. Don't make that first one the one you drop! Keep your homework organized! If you keep all your homework and quizzes organized in a loose leaf notebook, you'll find it easier to study for the exams. When beginning the homework for a new section, start with a new sheet of paper. Working with partners or in groups on homework is encouraged!

Exams: The tests will be given in the Testing Center, except for the final. Consult our class calendar for the date and time of the final. Students who fail to take an exam during the scheduled time may only take a make-up exam for full credit if **previous** arrangements were made with the instructor or under extenuating circumstances. Make-up exams are rarely given. Note that class is not held during exam times; hence, the scheduled class time may be used to take exams. Under no circumstances will the lowest exam score be dropped. A schedule of the exams is on the calendar.

Exam	Material covered
1	Chapter 1, 2
2	Chapter 3, 4
3	Chapter 5, 6
4	Chapter 7, 8
5	Chapter 9
Final	comprehensive

Final Exam Policy: School policy dictates: “Final exams are to be offered on the specific day and time as determined by the official university exam schedule. Students must plan travel, family visits, etc., in a way that will not interfere with their final exams. Less expensive air fares, more convenient travel arrangements, family events or activities, and any other non-emergency reasons are not considered justification for early or late final exams.” Exceptions to this policy are as follows and should be submitted in writing to the Dean of the college or school as soon as possible:

- An activity sponsored by BYU-H which takes an individual or a team away from the campus at the time an examination is scheduled;
- Emergency situations that are beyond the student’s control

Attendance: Attendance is mandatory! Come every day! Your attendance and full participation in this class are required for a satisfactory grade. **You are responsible for any material covered during your absence!** You must ask other classmates for any hints or help learned in class during your absence!

Classroom Decorum: Late arrival or early departure from class, unless by prior agreement with me, is considered to be disruptive classroom behavior. Conversation between students during presentations is considered disruptive behavior. If you find that you are distracted during classroom presentations by disruptive behavior of any sort, please talk with me.

Grading and Evaluation: Your course grade will be based on exams, a final, and quizzes. Exams will be worth 70% of the course grade, with 20% in homework, and the remaining 10% in quizzes. Letter grades will be assigned as follows:

A	93-	B	83-87	C	70-75	D-	50-55
A-	90-93	B-	80-83	C-	65-70	F	Below 50
B+	87-90	C+	75-80	D	55-65	UW	Below 50 and fail to take final.

Mathematics Learning Center The MLC (GCB 173/177) is a good place for math students to study. Other students will be there working on their math homework, which means its a pretty good place to work together. To make it even better, there are math tutors to help on problems that you or your classmates can’t solve.

Additional Help: Seek help when you need it! Email is a good place to ask me questions. The best time to catch me at my office is during my office hours, or by appointment. Email me to schedule an appointment.

Sexual Harassment/Disabilities Statements for Course Syllabi:

Preventing Sexual Harassment: Title IX of the education amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds, including Federal loans and grants. Title IX also covers student-to-student sexual harassment. If you encounter unlawful sexual harassment or gender-based discrimination, please contact the Human Resource Service at 780-8875 (24 hours).

Student With Disabilities: Brigham Young University-Hawai’i is committed to providing a working and learning atmosphere, which reasonably accommodates qualified person with disabilities. If you have any disability that may impair your ability to complete this course successfully, please contact the students with Special Need Counselor Leilani Auna at 293-3999 or 293-3518. Reasonable academic accommodations are reviewed for all students who have qualified documented disabilities. If you need assistance or if you feel you have been unlawfully discriminated against on the basis of disability, you may seek resolution through established grievance policy and procedures. You should contact the Human Resource Services at 780-8875.

Tentative Schedule Winter 2007

Monday	Tuesday	Wednesday	Thursday	Friday
		January 10 §1.1-1.2	11	12 §1.3-1.4
15 Martin Luther King Holiday	16	17 §1.5-1.6	18	19 §2.1-2.2
22 §2.3	23	24 §2.4	25	26 §2.5
29 Exam 1	30	31 §3.1-3.2	February 1	2 §3.3-3.4
5 §4.1-4.2	6	7 §4.3	8	9 §4.4-4.5
12 §4.6	13	14 Exam 2	15	16 §5.1-5.2
19 President's Day	20	21 §5.3	22	23 §5.4
26 §5.5	27	28 §6.1	March 1	2 §6.2
5 §6.3	6	7 §6.4	8	9 §6.5
12 Exam 3	13	14 §7.1-7.3	15	16 §7.4-7.5
19 §7.6-7.7	20	21 §8.1-8.2	22	23 §8.3
26 Kuhio Day Holiday	27	28 §8.4-8.5	29 Exam 4	30
April 2 §9.1-9.2	3	4 §9.3	5	6 §9.4
9 Exam 5	10	11 §11.1-11.2	12	13 §11.3
16 §11.4-11.5	17	18 §Review		
<p>The Final is on Friday, April 20th, 3 - 6pm in our classroom.</p>				

Homework for each section should be completed before the next class day.

Check the course web page for homework assignments.

Outcomes for Math 321, Winter 2007

The Math Department has established eight outcomes for graduating mathematics majors. The table below indicates which outcomes will be addressed in Math 321.

Outcome	Priority / Emphasis	Where / When addressed
1. Demonstrates proficiency in Algebra and Trigonometry necessary for success in advanced mathematical studies.	Medium	Algebra and Trigonometry are essential topics in this course.
2. Demonstrates proficiency in Differential, Integral, and Multivariable Calculus necessary for success in advanced mathematical studies.	High	Calculus knowledge is indispensable in this course. Topics from calculus include infinite sums, integrals, multiple-integrals, Jacobians, convergence in probability, distribution, and convergence almost everywhere.
3. Demonstrates content knowledge of both abstract and applied mathematical disciplines by stating definitions, salient theorems, and proofs of major theorems and concepts that are core content in upper division courses.	Not applicable	
4. Organize and explain their knowledge of logic and mathematical content in the structure of original valid proofs.	Medium	A student will be asked to duplicate a few "proofs" that are presented in the textbook, no completely original proofs will be required. The proofs are typically direct proofs, and essentially algebraic in nature.
5. Communicate mathematical ideas effectively in both written and oral context.	High	Students are expected to communicate effectively in mathematics using homework, quizzes, take home quizzes, and exams. The student is expected to learn how to effectively use language in addition to mathematical symbols and work.
6. Apply major definitions, theorems and algorithms in problem solving.	Very High	Homework problems and take home quizzes will include problems that involve applying definitions, theorems and algorithms. These problems will reinforce definitions, theorems, and concepts.
7. Use appropriate technological tools while solving mathematical problems.	High	Students are expected to use technology to help in the statistical analysis of data, in addition to using technology to shorten mathematical problems they engage in. When technology is used, emphasis is given on overall concepts and theory, to help the students develop their mathematical intuition and abilities. Typesetting of mathematical documents is also encouraged in the class.
8. Prepare professionally for graduate school or employment in mathematics or related fields.	Medium	Some assignments given are an introduction to graduate level statistics courses.