

King Fahd University of Petroleum and Minerals

Department of Mathematics and Statistics

STAT-301: Introduction to Probability Theory

Spring Semester 2016 (Term 152)

Instructor: Nasir Abbas
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Office Hours (Tentative): UTR. 12:10 pm – 01:40 pm, or by appointment

Course Description: Basic classical models of probability. Set functions. Axiomatic definition of probability. Conditional probability and Bayes' theorem. Random variables and their types. Distributions, moments, and moment generating functions. Special discrete and continuous distributions. Random vectors and their distributions. Marginal and conditional distributions. Independent random variables. Functions of random variables. Sums of independent random variables. Weak law of large numbers and the central limit theorem.

Textbook: A First Course in Probability by Sheldon Ross, 9th edition. Pearson Education, 2014.

Assessment*

Activity	Weight
Class Participation (home works, quizzes, attendance, etc.)	15%
First Major Exam	10%
Second Major Exam	20%
Third Major Exam	25%
Final Exam (Comprehensive)	30%

Grade Assignment

Score	87 – 100	80 – 86.9	75 – 79.9	70 – 74.9	65 – 69.9	60 – 64.9	55 – 59.9	50 – 54.9	0 – 49.9
Grade	A+	A	B+	B	C+	C	D+	D	F

Academic Integrity: All KFUPM policies regarding **ethics** and **academic honesty** apply to this course.

Important Notes:

- ✓ Only University issued excuses will be accepted and only within a week of return to class.
- ✓ Excessive unexcused absences will result in a grade of **DN** in accordance with University rules.
- ✓ **Attendance** on time is **very** important.
- ✓ Use of **mobile** is **banned** during the class.
- ✓ Check **Blackboard** regularly for announcements.
- ✓ **Homeworks** will be assigned later.
- ✓ Quizzes may **not** be announced in advanced.

Your Responsibilities:

- ✓ Observe the academic calendar for important dates
- ✓ Taking all exams.
- ✓ Attending all lectures.
- ✓ Completing all homework problems posted on the Blackboard.
- ✓ Reading all my e-mails in a timely manner, i.e. check your e-mail every day.
- ✓ Asking for help when you need it and not waiting until the end of the semester.
- ✓ Practice active learning instead of waiting until the day before an exam to attempt to learn the material.

Syllabus

Chapter	No. of weeks
Combinatorial Analysis	1
Axioms of Probability	2
Conditional Probability and Independence	2
Random Variables	2
Continuous Random Variables	2
Jointly Distributed Random Variables	2
Properties of Expectation	2
Limit Theorems	2