

EXAM 2 INFO

Math 262, Fall 2016

Exam 2 will consist of an in-class portion on Wednesday, November 9, and a take-home portion, distributed on Nov. 9 and due at the beginning of class on Nov. 11. The exam will test your knowledge of concepts, definitions, and theorems, as well as your ability to solve problems involving discrete and continuous random variables, from the sections we have studied in Chapters 2 and 3 in the textbook.

In-Class

Books, notes, and internet-capable devices will not be permitted during the in-class exam. Calculators will be allowed, but probably not very useful. You should know the mean, variance, and probability mass/density functions for the following distributions:

- Binomial distribution
- Geometric distribution
- Poisson distribution
- Uniform distribution
- Exponential distribution
- Normal distribution

You should also know the definitions and basic properties of the moment-generating functions for discrete and continuous random variables.

Take-Home

The take-home portion of the exam will contain three problems that are more involved than those on the in-class exam. For this part of the exam, you may use your textbook, your notes, a calculator, R , and *Mathematica*. Do not consult other sources, people, web sites, etc. Remember the honor code! All of the probability distributions that we have studied are fair game for this part of the exam, but you don't need to memorize the associated formulas.

Problems to Review

*Consider the following problems for practice, especially those printed in **bold**.*

- Section 3.7: #114, **116**, 118, **119**, 120, **121**
- The *Supplementary Exercises* at the end of each chapter in the book.
 - Section 2.9: #**147**, 149, 151, 153, 154, **156**, **157**, 158, **159**, 160, 163, **164**, **165**, **166**, 167, 168 (pages 171 – 176)
 - Section 3.9: #**140**, **141**, 142, **143**, 144, **145**, 146, 150, **151**, 152, **153**, **156**, 157, **159**, 162, 166, 168 (pages 277 – 285)
- All problems assigned in the homework (note that solutions are on the course web site).