

# Exam P topics

April 21, 2016

1. Elementary probability concepts, Venn diagrams, trees: 1-17
2. Conditional probability, Bayes's formula: 19-28, 113
3. Distributions normal: 18, 42; exponential: 29, 88, 123; Poisson: 30; binomial, negative binomial: 31, 32, 39, 41, 43
4. Continuous pdf, conditional probability: 33-36, 38
5. Expected value: 37, 44-50, 53, 55, 96; with deductible: 51, 52, 54, 56
6.  $Y=g(X)$ : 40, 71-75
7. Percentiles: 59/61, 70, 80; Median: 68, 69
8. Variance, standard deviation: 60, 62-65, 67, 99-102
9.  $X_{\max}$ ,  $X_{\min}$  : 66, 76, 103
10. Sampling and CLT: 80-83, 85-87
11. Joint distributions: 77/78, 79, 89-94, 117
12. Covariance: 84, 104-107
13. Conditional distributions: 106, 110-112, 119, 120
14.  $Y = g(X_1, X_2)$ : 97, 108, 109, 121, 122
15. Conditional variance: 114-116
16. Marginal density function: 118, 119
17. Moment generating functions: 57, 58, 95, 98