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| Lecture | Title | Book |
| 1 and 3 Sep  | BackgrounderTopics: Mean, Median, Mode, Percentiles, Variance, Distribution, Graphs and Plots, Symmetry of graphs, Random Variables  | Chapters 1 - 4, Iversen and Gergen  |
| 8 Sep | Combinatorial AnalysisThe Basic Principle of Counting,Permutations,Combinations, Binomial Theorem (No Proof),Multinomial Coefficients | Chapter 1, Ross  |
| 10 Sep | Probability Sample Space and EventsAxioms of ProbabilitySome Simple Propositions (with Proofs)Sample Spaces having Equally Likely OutcomesProbability as a Continuous Set Function | Chapter 2, Ross  |
| 15 and 17 Sep  | Conditional Probability and Independence Bayes’ Formula (with proofs)Independent EventsP(·|F ) Is A Probability | Chapter 3, Ross  |
| 22 and 24 Sep | Random Variable Discrete Random Variables, Properties of The Cumulative DistributionMathematical ExpectationsExpected ValueExpectation of a Function of a Random VariableVarianceExpectation of Sums of Random VariablesMoment Generating FunctionsChebyshev’s Theorem (No Proof)All Proofs, wherever used.  | Chapters 4, 7 Ross Chapters 3, 4 Miller and Miller |
| 29 Sep, 1 and 6 Oct | Special Probability Distributions (Bernoulli, Binomial, Poisson are very important. All Proofs.) | Chapter 5, Miller and Miller Second half Chapter 4, Ross |
| 8, 13 and 15 Oct | Continuous Random Variables Special Probability Densities (Uniform, Normal, Exponential are very important. All Proofs.) | Chapter 6, Miller and MillerSecond half Chapter 5, Ross  |
| 27 October | TEST (Saha Section) |  |
| 29 Oct | Joint Distribution FunctionsMarginal Distribution FunctionsIndependence |  |
| 3 Nov | Covariance, Variance of Sums, and CorrelationsAll Proofs, wherever used. | Chapter 4, Miller and Miller Chapter 7, Ross |
| 5 Nov | Functions of One Random Variable.Very Important. | Chapter 7, Miller and Miller  |
| 12 and 17 Nov | Sampling DistributionComplete Chapter. Only Proofs done in Class | Chapter 8, Miller and Miller |
| 17 Nov | Point Estimation (may be shortened)Unbiased EstimatorsEfficiencyMethod of MomentsMethod of Maximum LikelihoodBayesian Estimation (Ideas Only) | Chapter 10, Miller and Miller  |
| 19 and 24 Nov | Interval EstimationComplete Chapter. Very Important.  | Chapter 11, Miller and Miller  |
| 26 Nov | Hypothesis Testing (Testing a Statistical Hypothesis) | Chapter 12, Miller and Miller  |
| 1 Dec | Hypothesis Testing, Testing of Hypothesis including Mean, Variances and ProportionsTopics (1-5) | Chapter 13, Miller and Miller  |