Course Calendar

	Monday	Tuesday	Wednesday	Thursday	Friday
Sept	4 **Labor Day**	5 **Registration Day**	6	7 Lecture 1: Course overview. Basic data types. Basic proof methods. **PS1 out.**	8 Tutorial 1
Sept	11	12 Lecture 2: Predicates and quantifiers. Induction. **PS1 due.** **PS2 out.**	13	14 Lecture 3: Inductive proofs. Strong Induction.	15 Tutorial 2
Sept	18	19 Lecture 4: Structural induction. Set theory. **PS2 due.** **PS3 out.**	20	21 Lecture 5: Relations.	22 Tutorial 3
Sept	25	26 Lecture 6: Digraphs, graphs, and trees. **PS3 due.** **PS4 out.**	27	28 Lecture 7: Digraphs, graphs, and trees.	29 Tutorial 4

Oct	2	3 Lecture 8: Computational processes. Proofs about processes: Invariants. **PS4 due.** **PS5 out.**	4	5 Lecture 9: Proofs about processes: Termination, step bounds. Process behavior.	6 Tutorial 5 **Add date**
Oct	9 **Columbus Day holiday**	10 **Columbus Day holiday**	11	12 Lecture 10: Process structure. Abstraction. Composition. **PS5 due.**	13 Tutorial 6
Oct	16	17 Lecture 11: Series. Summations. Products. **PS6 out.**	18 **QUIZ 1: Lectures 1-10**	19 Lecture 12: Estimation. Asymptotics. Stirling's formula. Recurrences.	20 Tutorial 7
Oct	23	24 Lecture 13: Recurrences. **PS6 due.** **PS7 out.**	25	26 Lecture 14: Cardinality. Bijections. Pigeonhole Principle.	27 Tutorial 8
Oct-Nov	30	31 Lecture 15: Basic counting. Sum and product rules. Inclusion/ exclusion. **PS7 due.** **PS8 out.**	1	2 Lecture 16: Permutations. Combinations. Binomial coefficients.	3 Tutorial 9

Nov	6	7 Lecture 17: Permutations and combinations with repetition. **PS8 due.**	8	9 Lecture 18: Countable and uncountable sets.	10 **Veteran's Day holiday**
Nov	13	14 Lecture 19: Introduction to probability. Sample points and spaces. **PS9 out**	15 **QUIZ 2: Lectures 11-18**	16 Lecture 20: Probability laws. Conditional probability.	17 Tutorial 10
Nov	20	21 Lecture 21: Independence. Failure analysis. **PS9 due. PS10 out.**	22 **Drop date**	23 **Thanksgiving holiday**	24 **Thanksgiving holiday**
Nov-Dec	27	28 Lecture 22: Random variables. Binomial distribution. **PS10 due. PS11 out.**	29	30 Lecture 23: Expectation.	1 Tutorial 11
Dec	4	5 Lecture 24: Computing expectations. Wald's theorem	6	7 Lecture 25: Variance. Bounding tails of distributions. **PS11 due.**	8 Tutorial 12

Dec	11	12 Lecture 26: Random Walks.	13	14	**FINAL, Date and time TBA**