

<i>Monday</i>	<i>Wednesday</i>	<i>Friday</i>
January 19 Introduction Propositional and Predicate Calculus Equivalence Transformations Reasoning about Programs Gries, Chap. 1, 2	January 21 Partial Functions Computability LISP: Design, Innovations Contributions, Sample Code Comparisons with Scheme Mitchell, Chapters 1-3	January 23 Questions/Group Work
January 26 Predicates Gries, Chapter 4	January 28 Language Fundamentals Syntax Lambda Calculus Mitchell, Sec. 4.1-4.2	January 30 Questions/Group Work
February 2 Arrays Using Assertions Gries, Chapter 5-6	February 4 Language Fundamentals Denotational Semantics Examples decimal numerals regular expressions Mitchell, Sec. 4.3	February 6 Questions/Group Work
February 9 Denotational Semantics Propositional logic Simple expressions Language with error values	February 11 Denotational Semantics Language with state Combining expressions, commands Other language features	February 13 Comparison of Functional and Imperative Languages Mitchell, Sec. 4.4-4.5 Questions/Group Work
February 16 The Algol Family of Languages Algol 60 and Algol 68 Pascal C Mitchell, Sec. 5.1-5.3	February 18 An Introduction to ML Basic Elements Examples Mitchell, Sec. 5.4-5.5	February 20 Type Systems Type Declarations, Type Checking Type Safety, Type Inference Overloading Examples in ML Mitchell, Chapter 6

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February 23 Weakest Preconditions <i>skip, abort</i> Composition Gries, Chap 7-8	February 25 More ML Patterns Declarations Examples	February 27 Questions/Group Work
March 1 Assignment Conditional Execution Gries, Chapter 9-10	March 3 Iteration Gries, Chapter 11	March 5 No Class Meeting
March 8 Program Development Gries, Chap. 13, 14	March 10 Block-Structured Languages Functions and Procedures Mitchell, Sec. 7.1-7.3	March 12 Function Calls Parameter Passage Higher-Order Functions Mitchell, Sec. 7.4-7.5
March 15 <i>Break</i>	March 17 <i>Break</i>	March 19 <i>Break</i>
March 22 <i>Break</i>	March 24 <i>Break</i>	March 26 <i>Break</i>
March 29 Developing Loops from Invariants and Bounds Gries, Chapter 15	March 31 Control Mechanisms Evaluation Order Exceptions Continuations Mitchell, Chapter 8	April 2 Data Abstraction and Modularity Structured Programming Information Hiding Mitchell, Sec. 9.1-9.2
April 5 Developing Invariants Deleting a Conjunct Replacing a Constant by a Variable Gries, Sec. 16.1-16.3	April 7 Generic Abstractions Templates Containers Mitchell, Sec. 9.3-9.5	April 9 Questions/Group Work (Developing Programs Using Invariants)

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April 12 Developing Invariants Enlarging the Range of a Variable Combining Pre- and Post-conditions Gries, Sec. 16.4-16.5	April 14 Object-Oriented Concepts Dynamic Lookup (Polymorphism) Abstraction Subtyping and Inheritance Mitchell, Chapter 10	April 16 Questions/Group Work
April 19 Objects in Simula in Smalltalk Mitchell, Chapter 11	April 21 Objects in C++ Overview of C++ Classes and Inheritance Mitchell, Chapter 12	April 23 Questions/Group Work (More Program Development)
April 26 Design Choices in Java Classes and Objects Security and Type Safety Mitchell, Chapter 13	April 28 Logic Programming and Prolog History Prolog Basics Mitchell, Sec. 15.1-15.2, 15.5	April 30 Logic Paradigm and Rule-Basis Logic Paradigm Unification Examples in Prolog Mitchell, Sec. 15.3-15.4
May 3 Elements of Prolog Arithmetic Control Search Mitchell, Sec. 15.6-15.7	May 5 Assessment of Prolog Mitchell, Sec. 15.8-15.10	May 7 Review End-of-Course Evaluations