# ProofSpace: Sample Schedules

## Two 75-Minute Meetings/Week

In this configuration, we suggest the following:

1. Each day, students watch one section of videos and complete the quiz before class.
2. In class, students work on the discussion problems.
3. Students work at home on the evaluated problems.
4. On the first day of each week, students hand in their solutions to the evaluated problems from *both* of the previous week's problem sets.

We suggest using 2 midterm exams and one final exam. In the schedule below, one test is after proof techniques, one after sets, and then a final that emphasizes functions and relations. However, you may alternatively choose to delineate these as a short test on logic, a test on proof techniques (including induction), and the final exam emphasizing sets, functions, and relations.

*2 Day, 2 Midterms Format – 13 Weeks*

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|---|---|
| 26-Aug | Introduction; Pre-test |
| 28-Aug | Statements, Connectives, and Truth Tables |
| 2-Sep | Conditionals |
| 4-Sep | Basic Proof Writing; Logical Identities |
| 9-Sep | Number Systems, Quantifiers and their Negations |
| 11-Sep | Unraveling Definitions; Direct Proofs and Counterexamples |
| 16-Sep | Proofs by Contrapositive and Contradiction |
| 18-Sep | Proving Implications with Disjunctions (Cases) |
| 23-Sep | Review |
| 25-Sep | Exam One – Logic and Proofs |

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| 30-Sep | Induction (Day 1) |
| 2-Oct | Induction (Day 2) |
| 7-Oct | Introduction to Sets (Elements, Empty Set, Subset, Power Set) |
| 9-Oct | Proving Set Relations (Union and Intersection, Element Chasing, Set Equality, Disjoint sets) |
| 14-Oct | Fall Break - No Class |
| 16-Oct | Set Operations (Cartesian Product, Set Difference, Complement), Identities, and Set Algebra |
| 21-Oct | Indexed Sets |
| 23-Oct | Review |
| 28-Oct | Exam 2 – Induction and Sets |
| 30-Oct | Functions and Functions on Sets |
| 4-Nov | Injections, Surjections, and Bijections |
| 6-Nov | Inverses and Compositions |
| 11-Nov | Cardinality |
| 13-Nov | Cardinality |
| 18-Nov | Equivalence Relations |
| 20-Nov | Equivalence Classes |
| 25-Nov | Extra Topics |
| 27-Nov | Thanksgiving - No Class |
| 2-Dec | Extra Topics |
| 4-Dec | Review |
| 16-Dec | Final Exam (Emphasis on Functions, Cardinality, and Relations) |