

# Math 3283 - Foundations of Mathematics

## Fall 2021 - Schedule

updated November 15, 2021 at 12:55

Class	Day	Section	Title	Description
1	2021.08.16	1.1	Propositions, Connectives and Truth Tables	Introduction to the semester. Discuss Section 1.1, reading assigned.
2	2021.08.18			Discussion over Section 1.1 reading, introduction to truth tables. Problems 1.1.1-1.1.14 assigned.
3	2021.08.20			Discussion problems 1.1.1-1.1.14.
4	2021.08.23	1.2	Logical Equivalence and Implication	Hand in Section 1.1 problems, start Section 1.2, problems 1.2.1-1.2.25 assigned.
5	2021.08.25			Continue discussion of Section 1.2, work on assigned problems in class.
6	2021.08.27			Continue discussion over 1.2 and corresponding HW problems. Read Section 1.3 for next class meeting.
7	2021.08.30	1.3	Quantifiers	HW from Section 1.2 due, start of Section 1.3 discussion.
8	2021.09.01			Finish discussion of 1.3, start on HW problems.
9	2021.09.03			More discussion of HW problems.
10	2021.09.08			More discussion of HW problems.
11	2021.09.10			Review for Exam 1
12	2021.09.13		Chapter 1 Exam	HW problems due. Exam over Chapter 1 material.
13	2021.09.15	2.1	Making Conjectures	Introduction to Chapter 2, looking for patterns, making conjectures. Problems 2.1.1-2.1.12 assigned
14	2021.09.17			Continue on HW problems.
15	2021.09.20	2.2	Conditionals and Contradictions	Problems 2.1.1-2.1.12 due. Start discussion of Section 2.2 - focusing mainly on approaches to proving conditional type conjectures.
16	2021.09.22			Further explanation of the three main types of approaches: direct, contraposition, and contradiction. Focus on problems 2.2.5-2.2.15
17	2021.09.24			Conclude talk of approaches to proving conditional statements.
18	2021.09.27	2.3	Cases, Biconditionals and Quantifiers	Problems 2.2.1-2.2.15 due, start of discussion of Section 2.3.
19	2021.09.29			Continue discussion of Section 2.3, work on problems.
20	2021.10.01			Continue discussion of Section 2.3, work on problems.
21	2021.10.04			Work on problems as a group
22	2021.10.06			Work on problems as a group
23	2021.10.08	2.4	Mathematical Induction	Start discussion of Section 2.4 - Mathematical Induction. HW from Section 2.3. due.

24	2021.10.11			Discuss strong induction and compare to weak induction. Solve problems.
25	2021.10.13			Work on problems from 24 as a group.
26	2021.10.15			Work on problems from 24 as a group.
27	2021.10.18			Work on problems from 24 as a group.
28	2021.10.20			Work on problems from 24 as a group.
29	2021.10.22			Work on problems from 24 as a group.
30	2021.10.25		Chapter 2 Exam	HW problems due. Exam over Chapter 2 material.
31	2021.10.27	3.1	Set Notation and Venn Diagrams	Have 3.1 read for discussion in class, Discuss sets and set relations.
32	2021.10.29			Continue discussion of set relations, introduce set operations.
33	2021.11.01			Work on problems from Section 3.1.
34	2021.11.03	3.2	Proof Techniques in Set Theory	HW from 3.1 due, start discussion of Section 3.2.
35	2021.11.05			Continue working out problems from 3.2.
36	2021.11.08			Continue working out problems from 3.2.
37	2021.11.10	3.3	Cartesian Products and Relations	Finish up HW from 3.2 and start of discussion of 3.3: Cartesian Products and Relations.
38	2021.11.12			Hand in Section 3.2 HW problems. Continue discussion of properties of relations.
39	2021.11.15			Work on HW problems from 3.3
40	2021.11.17			Continue working on HW problems from 3.3
41	2021.11.19	3.4	Equivalence Relations and Orders	HW from 3.3 due, and we discussion Section 3.4
42	2021.11.29			Work out problems from Section 3.4
43	2021.12.01	4.1	Functions, Injectivity, and Surjectivity	Discussion the properties in the section title as they refer to functions, and the consequences of these properties.
44	2021.12.03			Solve some problems from 4.1
45	2021.12.08		Final Exam from 8:00-10:00	