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Texts: Howell, D.C. Statistical methods for psychology (3rd ed.) Boston:
 Duxbury, 1987. (SMP)

Forrin, B. Experimental design in psychology: supplements and
 problem sets (1992 ed.). Scarborough College Bookstore. (EDP)

Course Outline

Week	Topic	SMP	EDP
1	0. Review and preview		1- 6 47-48P
2-3	1. Simple one-factor design		49-50P
	1.1 Rationale: the analysis of variance	287-294	
	1.2 Computation of F	294-301	7- 9
	1.3 Models and components of variance	301-317	10-13
4-5	2. Treatments-by-subjects design		51-52aP
	2.1 Rationale		
	2.2 Computation of F	431-433	14-16
	2.3 Relation to simple one-factor design		
	2.4 Models and components of variance	433-439	17
6	3. Synthesis: F and other statistics		53-54P
	3.1 F, z, and t		18-20
	3.2 F and χ^2		
	3.3 F and correlation (r , η^2 , ω^2)	317-323	21-25
7	READING WEEK		
8	4. Within-condition variance		55P
	4.1 Homogeneity of variance: 2 independent samples		26-27
	4.2 Homogeneity of variance: k independent samples		27-28
	4.3 Homogeneity of variance: 2 related samples		28-29
	4.4 Confidence limits for a true variance		30-31
9	5. Multiple comparisons		56P
	5.1 Rationale	335-341	
	5.2 Selected orthogonal comparisons	341-349	32-35
	5.3 Selected non-orthogonal comparisons	349-355	
	5.4 A posteriori comparisons	355-368	

10	6. Trend analysis		56P
	6.1 Rationale	368-370	
	6.2 Computation: simple one-factor design	370-377	
	6.3 Computation: treatments-by-subjects design		
11-13	7. Factorial designs		57-59P
	7.1 Rationale	381-384	
	7.2 Computation of F	384-390	36-37
	7.3 The concept of "interaction"	390-391	
	7.4 Components of variance	400-403	38-39
	7.5 Tests for "simple" effects	391-396	40-41
	7.6 Trends and multiple comparisons	398	41a
	7.7 Magnitude of experimental effects	403-409	
	7.8 Unbalanced designs	409-417	
	7.7 Three-factor designs	417-426	42-43
14	8. Complex multifactor designs		59-59aP
	8.1 Two-variable: repeated measures on one	439-452	
	8.2 Two-variable: repeated measures on both	452-457	
	8.3 Three-variable "mixed" designs	457-478	44-46
	8.4 Hierarchical (nested) designs		

P = Problem set (Complete solutions follow p. 60.)

Evaluation:

		Date
Quizzes (10, best 9 count)	100 points	F 1 Weekly (except 6 Jan, 10 Feb, 24 Mar)
Term test 1 (following Unit 2.4)	100 points	W 8 Feb 5-7pm
Term test 2 (following Unit 7.4)	100 points	W 22 Mar 5-7pm
Final examination	<u>200 points</u> 500 points	TBA