CONTENTS

Introduction		ix
CHAPTER 0	Preliminaries	
Section 1	Introduction	1
Section 2	The role of functional analysis	2
Section 3	Background	3
Section 4	Notes for chapter 0	4
CHAPTER 1	Multiplier Theory	
Section 1	Multipliers on L^p	7
Section 2	Multipliers on $L^{p'}$	12
Section 3	Multipliers and summability of series	21
Section 4	Remarks for chapter 1	24
CHAPTER 2	The Hilbert Transform	
Section 1	Introduction	27
Section 2	The Hilbert Transform	33
Section 3	Cotlar's Theorem	36
Section 4	The Hardy-Littlewood maximal function	45
Section 5	The maximal Hilbert transform	55
Section 6	Remarks for chapter 2	60
CHAPTER 3	Good Lambda and Weighted Norm Inequalities	
Section 1	Good lambda inequalities	61
Section 2	The A_p condition	66
Section 3	Weighted norm inequalities	70
Section 4	Remarks for chapter 3	74
CHAPTER 4	Multipliers with Singularities	
Section 1	The Hormander-Mihilin theorem	75
Section 2	The Littlewood-Paley and Marcinkiewicz theorems	81
Section 3	Remarks and extensions	88
CHAPTER 5	Singularities along Curves	
Section 1	Asymptotics of Bessel functions	89
Section 2	A theorem of deLeeuw and Stein	94
Section 3	Remarks and extensions	100
CHAPTER 6	Restriction Theorems	
Section 1	Restriction	101
Section 2	Bochner-Riesz means	110
Section 3	Extensions and remarks	113

CHAPTER 7 The Multiplier Theorem for the Disc

Section 1 Meyer's lemma 114
Section 2 The Kakeya set 118
Section 3 Extensions and remarks 125

CHAPTER 8 The Cordoba Multiplier Theorem

Section 1 Almost orthogonality 126
Section 2 The Cordoba maximal function 133
Section 3 The Cordoba multiplier theorem 138
Section 4 Restriction revisited 143
Section 5 Remarks and extensions 146

REFERENCES 147

INDEX 149