

CONTENTS

CHAPTER 0: PRELIMINARIES.....	1
SETS.....	1
FUNCTIONS.....	2
COUNTABILITY.....	2
ORDERINGS AND LATTICES.....	3
CONVERGENCE IN \mathbb{R}^*	5
UNORDERED SUMMABILITY.....	6
HAUSDORFF MAXIMAL PRINCIPLE.....	7
CHAPTER 1: PRE-MEASURES.....	8
SUPPLEMENT: CONTENTS.....	13
SUPPLEMENT: G INVARIANT CONTENTS.....	15
SUPPLEMENT: CARATHÉODORY PRE-MEASURES.....	18
CHAPTER 2: PRE-MEASURE TO PRE-INTEGRAL.....	21
SUPPLEMENT: VOLUME λ_n ; THE ITERATED INTEGRAL.....	28
SUPPLEMENT: PRE-INTEGRALS ON $C_c(X)$ AND $C_0(X)$	30
CHAPTER 3: PRE-INTEGRAL TO INTEGRAL....	32
CHAPTER 4: INTEGRAL TO MEASURE.....	42
SUPPLEMENT: LEBESGUE MEASURE Λ^n FOR \mathbb{R}^n	50
SUPPLEMENT: MEASURES ON $\mathcal{B}^n(X)$	51
SUPPLEMENT: G INVARIANT MEASURES.....	52

CHAPTER 5: MEASURABILITY AND σ -SIMPLICITY	54
SUPPLEMENT: STANDARD BOREL SPACES	62
CHAPTER 6: THE INTEGRAL I_μ ON $L_1(\mu)$	65
SUPPLEMENT: BOREL MEASURES AND POSITIVE FUNCTIONALS	76
CHAPTER 7: INTEGRALS* AND PRODUCTS...	80
SUPPLEMENT: BOREL PRODUCT MEASURE	87
CHAPTER 8: MEASURES* AND MAPPINGS	91
SUPPLEMENT: STIELTJES INTEGRATION	98
SUPPLEMENT: THE IMAGE OF Λ_p UNDER A SMOOTH MAP ..	100
SUPPLEMENT: MAPS OF BOREL MEASURES*; CONVOLUTION.	104
CHAPTER 9: SIGNED MEASURES AND INDEFINITE INTEGRALS.....	108
SUPPLEMENT: DECOMPOSABLE MEASURES.	114
SUPPLEMENT: HAAR MEASURE	117
CHAPTER 10: BANACH SPACES.....	121
SUPPLEMENT: THE SPACES $C_0(X)^*$ AND $L_1(\mu)^*$	128
SUPPLEMENT: COMPLEX INTEGRAL AND COMPLEX MEASURE	129
SUPPLEMENT: THE BOCHNER INTEGRAL.	132
SELECTED REFERENCES	140
INDEX	143