

TABLE OF CONTENTS

DEDICATION	v
PREFACE	vii

INTRODUCTION

Chapter 1 : Manipulating in Abelian Categories	1
Section 1 : Categories	1
Section 2 : Subobjects and Quotient-Objects	4
Section 3 : Abelian Categories	11
Section 4 : Imbedding of Abelian Categories	44
Section 5 : Subquotients	56
Section 6 : Left Coherent Rings	66
Section 7 : Denumerable Direct Product and Denumerable Inverse Limit	80
Chapter 2 : Theory of Spectral Sequences	97
Section 1 : Spectral Sequences in the Ungraded Case	97
Section 2 : The Spectral Sequence of an Exact Couple, Ungraded Case	111
Section 3 : Graded Categories	137
Section 4 : Spectral Sequences in a Graded Abelian Category	185
Section 5 : The Spectral Sequence of an Exact Couple, Graded Case	208
Section 6 : Filtered Objects	235
Section 7 : The Partial Abutments of the Spectral Sequence of an Exact Couple	278
Section 8 : The Spectral Sequence of a Filtered Cochain Complex	339
Section 9 : Convergence	400
Section 10: Some Examples	441

PART I

Chapter 1 : The Generalized Bockstein Spectral Sequence	465
Chapter 2 : The Short Exact Sequence I.8	493

Chapter 3 : Cohomology of an Inverse Limit of Cochain Complexes	531
Chapter 4 : Cohomology of Cochain Complexes of t -Adically Complete Left A -Modules	539
Chapter 5 : Finite Generation of the Cohomology of Cochain Complexes of t -Adically Complete Left A -Modules	607
PART II	
Chapter 6 : The Highest Non-Vanishing Cohomology Group	659
Chapter 7 : Poincaré Duality	687
PART III	
Chapter 8 : Finite Generation of the Cohomology of Cochain Complexes of I -Adically Complete Left A -Modules for a Finitely Generated Ideal I	737
BIBLIOGRAPHY	801