

PREFACE	iii
1. FUNDAMENTAL CONCEPTS	1
Semigroups	1
Subsemigroups	8
Subgroups	13
Ideals	22
Homomorphisms and Congruences	36
2. NEW SEMIGROUPS FROM OLD	59
Cartesian Products	59
Semidirect Products	65
Rees Products	73
Adjunction Semigroups	77
Projective and Injective Limits	80
Semigroups of Homomorphisms	90
Semigroup Compactifications	99
Free Topological Semigroups	112
Coproducts	119
3. INTERNAL STRUCTURE THEOREMS	123
Monothetic Semigroups	123
Completely Simple Semigroups	130
Green's Relation	137
The Multiplicative Structure of a \mathcal{D} -Class	146
Schützenberger Groups	150
Green's Quasi-Orders	154
4. I-SEMIGROUPS	161
Topological Preliminaries	161
Basis I-Semigroups	162
The Structure of I-Semigroups	166
Closed Congruences on I-Semigroups	167
5. ONE PARAMETER SEMIGROUPS	171
Divisibility and Connectedness	171
Existence of One-Parameter Semigroups	173
Solenoidal Semigroups	186

6. COMPACT DIVISIBLE SEMIGROUPS	191
The Set of Divisible Elements	191
The Exponential Function	195
Cone Semigroups	200
Subarithetic Semigroups	205
Finite Dimensional Semigroups	213
Further Results on Divisible Semigroups	215
SYMBOLS	219
BIBLIOGRAPHY	221
INDEX	241