

CONTENTS

PREFACE	vii
CHAPTER 1 FOUNDATIONS	1
1. Ordered sets	1
2. Mappings between ordered sets; residuated mappings	5
3. Directed sets; semilattices	19
4. Lattices; complete lattices	27
5. Morphisms	36
6. Regular equivalences on an ordered set	41
7. Complementation in lattices	63
8. Modularity in lattices	71
9. Distributive lattices	75
10. Congruence relations	81
CHAPTER 2 COORDINATIZING BAER SEMIGROUPS	94
11. Baer rings	94
12. Baer semigroups	104
13. Range-closed residuated mappings	118
14. Strongly regular Baer semigroups	135
15. Decreasing Baer semigroups	143
16. Annihilator-preserving homomorphisms	149
17. The notion of involution	161
18. Orthomodular lattices	167
19. Foulis semigroups	183

20. Idempotent residuated mappings	189
21. Boolean algebras	199
CHAPTER 3 RESIDUATED ALGEBRAIC STRUCTURES	211
22. Residuated groupoids and semigroups; Molinaro equivalences	211
23. The zigzag equivalence	227
24. Group homomorphic images of ordered semigroups; Querré semigroups	247
25. Dubreil-Jacotin semigroups; <i>A</i> -nomal semigroups	260
26. Particular types of <i>A</i> -nomal semigroups	282
27. <i>F</i> -normality	291
28. <i>B</i> -normality	300
29. Isotone homomorphic Boolean images of ordered semigroups	309
30. Glivenko semigroups	321
31. Loipomorphisms	331
32. Brouwer semigroups; Brouwer semilattices	340
BIBLIOGRAPHY	361
INDEX	373
OTHER TITLES IN THE SERIES	380