

Contents

PREFACE vii

Chapter 1

Some Set Theoretic Concepts 1

Chapter 2

Partially Ordered Sets and Lattices 6

Chapter 3

What Is Topology? 12

Chapter 4

Topological Spaces Defined by Means of the Family $\mathcal{F}$ of Open Sets 18

Chapter 5

Subspaces and Embedding 25

Chapter 6

Connectedness 29

Chapter 7

Bases and Subbases 37

Chapter 8

Topological Spaces Defined by Means of the Closure Operator 42

Chapter 9

Neighborhood Spaces 48

<i>Chapter 10</i>	
Continuous Functions and Quotient Spaces	55
<i>Chapter 11</i>	
Product Spaces	66
<i>Chapter 12</i>	
Nets	72
<i>Chapter 13</i>	
Filters	78
<i>Chapter 14</i>	
Separation Axioms	90
<i>Chapter 15</i>	
Cardinality Axioms	110
<i>Chapter 16</i>	
Compactness	118
<i>Chapter 17</i>	
Extensions and Compactifications	131
<i>Chapter 18</i>	
Local Bicomactness	147
<i>Chapter 19</i>	
Metric and Pseudometric Spaces	151
<i>Chapter 20</i>	
Uniform Spaces	172
<i>Chapter 21</i>	
Proximity Spaces	191
<i>Chapter 22</i>	
Topological Groups	209
<i>Chapter 23</i>	
Paracompactness and Metrization	220
BIBLIOGRAPHY	226
INDEXES	
Author Index	235
Subject Index	237