

Contents

Foreword	xi
Preface	xiii
Acknowledgements	xvii
CHAPTER 1: Barriers and their Social Meaning	1
Design as Evolution	1
Barriers as a Universal Experience	3
Barriers in Intellectual Life	4
Social Functions of Space	8
Socio-spatial Order	12
Origins of Universal Design	15
Summary	24
Review Topics	24
References	24
CHAPTER 2: Defining Universal Design	27
Introduction	27
Emergence of Universal Design	27
Definition	28
Origins	30

Modernism and the Modernist Style	31
Critiques of Modernist Style	33
Return to Human-Centered Design	34
Summary	42
Review Topics	42
References	42
CHAPTER 3: The New Demographics	45
Demography for Universal Design	45
Uses of Demography in Design	48
Beneficiaries of Universal Design	49
Demography: Points to Remember	60
Summary	62
Review Topics	63
References	63
CHAPTER 4: Practicing Universal Design	67
Introduction	67
Universal Design as Innovation	67
Tools for Increasing Adoption	70
Introducing Universal Design to Practice	82
Improving Practice	86
Summary	91
Review Topics	91
References	92
CHAPTER 5: Design for Human Performance	95
Introduction	95
Anthropometry	96
Biomechanics	103
Perception	108
Cognition	119
Summary	129
Review Topics	132
References	132

CHAPTER 6: Design For Health and Wellness.....	137
Introduction.....	137
What are Health and Wellness?	139
Injury Protection	140
Disease Prevention.....	142
Low-Resource Settings	147
Mental Health	149
Health Impact Assessments.....	152
Designing for Health and Wellness Guidelines.....	152
Summary	153
Review Topics	153
References	153
CHAPTER 7: Design for Social Participation.....	159
Introduction.....	159
Social Construction Theory	160
Interpersonal Interaction	163
Access to Resources.....	167
Segregation and Clustering	172
Design Participation	177
Summary	181
Review Topics	185
References	185
CHAPTER 8: Public Accommodations	187
Introduction.....	187
The Purpose of Accessible Design.....	188
Universal Design Strategies	197
The Future	213
Summary	214
Review Topics	220
References	220

CHAPTER 9: Housing..... 223

Evolution of Accessible Housing Policy	223
Community-Based Rehabilitation and Special-Purpose Housing	236
Neighborhood Context	238
Summary	242
Review Topics	243
References	244

CHAPTER 10: Home Modifications..... 245***Danise Levine***

Introduction.....	245
Target Populations	246
Purpose of Home Modifications.....	248
Common Needs and Solutions.....	253
Home Assessments.....	261
Barriers to Service Delivery	263
Policy	265
Knowledge Needs	268
Summary	269
Review Topics.....	270
References	271

CHAPTER 11: Universal Design and the Interior Environment..... 275***Mary Jane Carroll***

Introduction.....	275
Wayfinding	276
Acoustics.....	279
Lighting	282
Color	287
Furnishings.....	292
Floor Coverings	299
Summary	302
Review Topics	304
References	304

CHAPTER 12: Product Design.....307**Heamchand Subryan**

Introduction.....	307
Assistive Technology	310
Knowledge Translation Problem.....	312
Changing Marketplace	316
Smarter Products.....	321
Case Studies.....	327
Summary	334
Review Topics.....	335
References.....	335

CHAPTER 13: Public Transportation and Universal Design339

Introduction.....	339
Background.....	339
Access to Public Transportation	340
Components of Public Transportation Systems	342
Progress around the World.....	362
Summary	363
Review Topics.....	364
References.....	365

INDEX369