CONTENTS

Procedure Boxes x	Uvea: Iris, Ciliary Body, Choroid 14
Videos and activities xi	Crystalline Lens 15
Preface xiii	Vitreous 16
Acknowledgments xiii	Retina 16
Introduction to the Course xv	Visual Pathway 17
To the Ophthalmologist xv To the Student xv	3 DISEASES AND DISORDERS OF THE EYE 19
1 INTRODUCTION TO OPHTHALMIC	Mechanisms of Disease and Injury 19
MEDICAL ASSISTING 1	General Types 20
What Is Ophthalmology? 1	Signs, Symptoms, and Syndromes 21
Meet the Eye Care Team 2	Abnormalities of the Adnexa 22
Ophthalmologist 2	Orbit 22
Optometrist 3	Extraocular Muscles 22
Optician 3	Eyelids 23
Registered Nurse 3	Lacrimal Apparatus 24
Orthoptist 3	Abnormalities of the Eye 25
Ocularist 3	Conjunctiva 25
Ophthalmic Photographer 4	Cornea and Sclera 26
Ophthalmic Medical Assistant 4	Anterior Chamber 27
What Is Certification? 4	Uveal Tract 29
Professional Development 5	Crystalline Lens 29
1	Vitreous 30
2 ANATOMY AND PHYSIOLOGY	Retina 30
OF THE EYE 7	Optic Nerve 33
The Eye as an Optical System 8	Visual Pathway 33
The Globe 8	
The Adnexa 8	4 SYSTEMIC DISEASES AND
Orbit 8	OCULAR MANIFESTATIONS 35
Extraocular Muscles 9	Inflammatory and Autoimmune Diseases 36
Eyelids and Conjunctiva 10	Myasthenia Gravis 36
Lacrimal Apparatus 12	Rheumatoid Arthritis 36
The Eye 12	Sarcoidosis 36
Cornea and Sclera 13	Sjögren Syndrome 37
Anterior Chamber 14	Systemic Lupus Erythematosus 37

Thyroid Disorders 37	Interpretation of Prescriptions 58
Multiple Sclerosis 38	Transposition of Prescriptions 59
Metabolic Disorders 38	Automated Refractors 60
Diabetes Mellitus 38	Objective Refractors 60
Vascular Diseases 39	Subjective Refractors 60
Cerebral Vascular Accident 39	Objective/Subjective Refractors 60
Giant Cell Arteritis 39	Lensometry 60
Migraine 39	Types of Lensmeters 60
Hypertension 40	Elements of Lensometry 61
Infectious Diseases 40	Lensometry Technique for Multifocal
Acquired Immunodeficiency	Lenses 63
Syndrome 40	Lensometry Technique for
Chlamydial Infections 41	Prisms 64
Herpetic Infections 41	Placement of Optical Centers 64
Histoplasmosis 41	Keratometry 64
Syphilis 41	
Toxoplasmosis 42	6 BASICS OF OPHTHALMIC
Neoplastic Diseases 42	PHARMACOLOGY 69
Metastatic Carcinoma 42	Delivery Systems of Drugs 70
Blood Dyscrasias 42	Topical Systems 70
Cerebral Neoplasms 43	Injections 71
	Oral Systems 72
OPTICS AND REFRACTIVE	Implants 72
STATES OF THE EYE 45	Improving Adherence to Treatment 72
Principles of Optics 46	Administration of Topical Eyedrops and Ointments 72
Refraction 46	
Refractive Properties of Curved	Purposes and Actions of Drugs 72
Lenses 47	Diagnostic Medications 74
Convergence, Divergence, and Focal Point 47	Mydriatics 74
	Cycloplegics 74 Dyes 75
Lens Power and Focal Length 48 Refractive States of the Eye 49	Anesthetics 75
•	
Emmetropia 49	Therapeutic Medications 76
Ametropia 50	Miotic Agents 76 Glaucoma Medications 76
Types and Uses of Corrective Lenses 51	
Spheres 52	Antimicrobial Agents 78
Cylinders 52	Antiallergic and Anti-inflammatory Agents 79
Spherocylinders 53	Lubricants 80
Prisms 54	Immunomodulators 81
Components of Refraction 54	Other Pharmaceuticals 81
Retinoscopy 55	Interpretation of a Prescription 81
Refinement 57	First Aid for Acute Drug Reactions 82
Binocular Balancing 58	That And for Acute Drug Reactions 02

7	MICROORGANISMS AND		Visual Acuity Examination 105
	INFECTION CONTROL	85	Distance Acuity Test 105
	Types of Microorganisms 86		Pinhole Acuity Test 106
	Bacteria 86		Near Acuity Test 106
	Viruses 87		Other Acuity Tests 109
	Fungi 89		Procedures Following Acuity Tests 109
	Protozoa 90		Alignment and Motility Examination 109
	Prions 90		Ancillary Tests to Be Performed
	Transmission of Infectious Diseases 90		Before Motility Testing 110
	Airborne Droplets and Particles 91		Pupillary Examination 110
	Direct-Contact Transmission 91		Visual Field Examination 111
	Indirect-Contact Transmission 91		Intraocular Pressure Measurement 112
	Common-Vehicle Transmission 92		Principles of Tonometry 113
	Vector-Borne Transmission 92		Applanation Tonometry 114
	Infection Control Precautions 92		Indentation Tonometry 115
	Handwashing 94		Applanation Versus Indentation Tonometry 117
	Use of Personal Protective Equipment	94	Pachymetry 117
	Cleaning, Disinfection, and		External Examination 118
	Sterilization 95		Anterior Chamber Evaluation 118
	Aseptic Technique: Handling Sterile Medical Equipment 96		Biomicroscopy 119
	Handling and Decontaminating		Gonioscopy 120
	Contaminated Materials 97		Ophthalmoscopy 120
	Hygienic Practices in Potentially		Direct Ophthalmoscopy 120
	Infectious Situations 97		Indirect Ophthalmoscopy 121
	Collecting Specimens for the Identification		Additional Tests 121
	of Microorganisms 97		Color Vision Tests 121
0			Tear Output Test 122
8	COMPREHENSIVE MEDICAL		Evaluation of the Corneal and
	EYE EXAMINATION	99	Conjunctival Epithelium 123
	Overview of the Examination 100		Corneal Sensitivity Test 123
	Aspects of Eye Function, Anatomy, and Physical Appearance and Condition 100		Exophthalmometry 123
	Frequency of Examination 101		9 OCULAR MOTILITY 125
	Ophthalmic and Medical History 101		Anatomy and Physiology 125
	Chief Concern and History of Present		Nerve Control 127
	Illness 102		Eye Movements 127
	Past Ocular History 103		Motility Examination 129
		103	Strabismus Tests 129
	·	104	Corneal Light Reflex Tests 129
	Allergies, Medications, and		Cover Tests 129
	Supplements 104		Additional Tests 130
	History-Taking Guidelines 104		Summary 132

10 ADJUNCTIVE TESTS AND	Key Measurements in Fitting Eyeglasses 171
PROCEDURES 135	Interpupillary Distance 172
Vision Tests for Patients With Opacities 135	Vertex Distance 175
Visual Potential Tests 136	Base Curve 176
Contrast-Sensitivity and Glare Tests 137	Fitting, Care, and Adjustment of Eyeglasses 177
Assessment of Corneal Abnormalities 138	Fitting of Eyeglasses 177
Pachymetry 138	Care of Eyeglasses 179
Corneal Topography 139	Adjustment of Eyeglasses 179
Specular Microscopy/Photography 139	
Ophthalmic Photography 139	13 LOW VISION 183
Tomography 140	Visual Acuity and Low Vision 184
Ultrasonography 142	Common Causes of Low Vision 184
	Increasing Awareness 185
PRINCIPLES AND TECHNIQUES	Low Vision Care 185
OF PERIMETRY 145	Low Vision Aids 185
Anatomical Basis of the Visual Field 146	Low Vision Devices 186
Map of the Visual Field 147	Nonoptical Aids 187
Orientation of the Visual Field Map 149	Other Services 188
Purposes and Types of Perimetry 149	0.000
Kinetic Perimetry 151	14 PRINCIPLES AND PROBLEMS
Static Perimetry 153	OF CONTACT LENSES 189
Miscellaneous Visual Field Tests 155	Basic Principles 190
Defects Shown by Perimetry 156	Characteristics of Contact Lenses 190
Generalized Defects 156	Contact Lenses Versus Eyeglasses
Focal Defects 156	for Vision Correction 191
Hemianopic and Quadrantanopic Defects 158	Contact Lens Specification Versus Eyeglass Prescription 191
Other Defects 158	Types and Materials of Contact Lenses 191
Conditions for Accurate Perimetry 160	Polymethyl Methacrylate and Rigid
Environment-Related Factors 160	Gas-Permeable Contact Lenses 192
Device-Related Factors 162	Soft Contact Lenses 193
Patient-Related Factors 162	Extended-Wear Contact Lenses 193
Examiner-Related Factors 163	Daily-Wear Contact Lenses 193
	Disposable Contact Lenses 193
FUNDAMENTALS OF PRACTICAL OPTICIANRY 165	Planned-Replacement Contact Lenses 194
Types of Corrective Lenses 166	Contact Lens Designs for Special
Single-Vision Lenses 166	Purposes 194
Multifocal Lenses 166	Cosmetic Fashion Contact Lenses 194
Types of Lens Materials 170	Cosmetic Restorative Contact
Lens Safety Standards 170	Lenses 194
Lens Treatments, Tints, and	Toric Contact Lenses 194
Coatings 171	Bifocal Contact Lenses 195

Keratoconus Contact Lenses 196		Office Waiting Periods 220
Therapeutic Contact Lenses 197		Disruptive Patients 221
Care of Contact Lenses 197		Visually Impaired or Blind Patients 221
Cleaning 197		Patient Greeting and
Disinfecting 198		History-Taking Guidelines 221
Lubrication 198		Offering Assistance 222
Storage 198		Visual Acuity Assessment 223
Insertion and Removal of Contact Lense	es 199	Infants and Young Children 223
Soft Contact Lenses 199		Patient Greeting 223
Rigid Contact Lenses 199		Patient Positioning 223
Problems With Contact Lenses 202		Visual Acuity and Ability Testing 224
Allergy 202		Older Patients 226
Solution–Contact Lens Interaction	202	Age-Related Vision Changes 226
Overwearing Syndrome 202		Visual Acuity Testing 227
Improper Contact Lens Fit 202		Patients Who May Be
Irritation and Tearing 203		Suffering From Abuse 227
Giant Papillary Conjunctivitis 203	3	Patients With Physical Disabilities 228
Corneal Problems 203		Patients With Diabetes Mellitus 228
Inability to Insert or Remove Lense Lens "Lost" in the Eye 207	es 207	Special Help for Patients With Diabetes
	207	Mellitus 229
Contramidications for Contact Lenses	207	
		18
15 PATIENT INTERACTION,		17 MINOR SURGICAL ASSISTING IN THE OFFICE 231
SCREENING, AND	·	
SCREENING, AND EMERGENCIES	209	IN THE OFFICE 231
SCREENING, AND EMERGENCIES Patient–Assistant Interaction 210	·	IN THE OFFICE 231 Patient Preparation Before Surgery 232
SCREENING, AND EMERGENCIES Patient–Assistant Interaction 210 Patient Greeting 210	·	IN THE OFFICE 231 Patient Preparation Before Surgery 232 Informed Consent 232
SCREENING, AND EMERGENCIES Patient–Assistant Interaction 210 Patient Greeting 210 Patient Screening 210	·	IN THE OFFICE 231 Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211	·	IN THE OFFICE 231 Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211 Appointment Scheduling 212	·	IN THE OFFICE 231 Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232 Surgical Site Identification 233
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211	·	IN THE OFFICE Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232 Surgical Site Identification 233 Administration of Anesthetics 233 Surgical Materials and Instruments 233 Preparing Instruments and
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211 Appointment Scheduling 212 Referred Patients 213	·	IN THE OFFICE Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232 Surgical Site Identification 233 Administration of Anesthetics 233 Surgical Materials and Instruments 233 Preparing Instruments and Materials 233
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211 Appointment Scheduling 212 Referred Patients 213 Emergencies in the Office 213	·	IN THE OFFICE Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232 Surgical Site Identification 233 Administration of Anesthetics 233 Surgical Materials and Instruments 233 Preparing Instruments and Materials 233 Common Minor Surgical Procedures 237
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211 Appointment Scheduling 212 Referred Patients 213 Emergencies in the Office 213 Burns 213	209	IN THE OFFICE Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232 Surgical Site Identification 233 Administration of Anesthetics 233 Surgical Materials and Instruments 233 Preparing Instruments and Materials 233 Common Minor Surgical Procedures 237 General Considerations 237
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211 Appointment Scheduling 212 Referred Patients 213 Emergencies in the Office 213 Burns 213 Trauma 214	209	IN THE OFFICE Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232 Surgical Site Identification 233 Administration of Anesthetics 233 Surgical Materials and Instruments 233 Preparing Instruments and Materials 233 Common Minor Surgical Procedures 237
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211 Appointment Scheduling 212 Referred Patients 213 Emergencies in the Office 213 Burns 213 Trauma 214 General Emergency Assistance 21 Hospital Admission 218	209	IN THE OFFICE Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232 Surgical Site Identification 233 Administration of Anesthetics 233 Surgical Materials and Instruments 233 Preparing Instruments and Materials 233 Common Minor Surgical Procedures 237 General Considerations 237 Postsurgical Medications, Dressings, and
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211 Appointment Scheduling 212 Referred Patients 213 Emergencies in the Office 213 Burns 213 Trauma 214 General Emergency Assistance 21 Hospital Admission 218 16 PATIENTS WITH SPECIAL	209	IN THE OFFICE Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232 Surgical Site Identification 233 Administration of Anesthetics 233 Surgical Materials and Instruments 233 Preparing Instruments and Materials 233 Common Minor Surgical Procedures 237 General Considerations 237 Postsurgical Medications, Dressings, and Patches 237
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211 Appointment Scheduling 212 Referred Patients 213 Emergencies in the Office 213 Burns 213 Trauma 214 General Emergency Assistance 21 Hospital Admission 218 PATIENTS WITH SPECIAL CONCERNS	209	IN THE OFFICE Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232 Surgical Site Identification 233 Administration of Anesthetics 233 Surgical Materials and Instruments 233 Preparing Instruments and Materials 233 Common Minor Surgical Procedures 237 General Considerations 237 Postsurgical Medications, Dressings, and Patches 237 First Surgical Experience 237 Surgical Assisting Skills 243 Aseptic Technique and Minor
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211 Appointment Scheduling 212 Referred Patients 213 Emergencies in the Office 213 Burns 213 Trauma 214 General Emergency Assistance 21 Hospital Admission 218 16 PATIENTS WITH SPECIAL CONCERNS All Patients Considered 220	209	IN THE OFFICE Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232 Surgical Site Identification 233 Administration of Anesthetics 233 Surgical Materials and Instruments 233 Preparing Instruments and Materials 233 Common Minor Surgical Procedures 237 General Considerations 237 Postsurgical Medications, Dressings, and Patches 237 First Surgical Experience 237 Surgical Assisting Skills 243 Aseptic Technique and Minor Surgery 243
SCREENING, AND EMERGENCIES Patient-Assistant Interaction 210 Patient Greeting 210 Patient Screening 210 Triage 211 Appointment Scheduling 212 Referred Patients 213 Emergencies in the Office 213 Burns 213 Trauma 214 General Emergency Assistance 21 Hospital Admission 218 PATIENTS WITH SPECIAL CONCERNS	209	IN THE OFFICE Patient Preparation Before Surgery 232 Informed Consent 232 Preoperative Assessment 232 Patient Assistance 232 Surgical Site Identification 233 Administration of Anesthetics 233 Surgical Materials and Instruments 233 Preparing Instruments and Materials 233 Common Minor Surgical Procedures 237 General Considerations 237 Postsurgical Medications, Dressings, and Patches 237 First Surgical Experience 237 Surgical Assisting Skills 243 Aseptic Technique and Minor

8 REFRACTIVE SURGERY	Adhere to Compliance Requirements 263
CONCEPTS AND PROCEDURES 249	Coding Compliance 263
History of Refractive Surgery 250	Coding Systems 263
Indications and Contraindications for Refractive Surgical Procedures 250	The Benefits of Proper Coding 265
Evaluating Refractive Surgical Patients 250	Documentation 265
Refraction in Myopia 250	Coding for Ophthalmology Office
Refraction in Hyperopia 250	Visits 265
Refraction in Astigmatism 251	Modifiers 265
Near Refraction in Patients With	Ophthalmic Coding Specialists 266
Presbyopia 251	Focus on the Business Aspect of
Cycloplegic Refraction 251	Ophthalmology 266
Wavefront Analysis 251	Be the Solution, Not the Problem 266
Pupil Size Measurements 251	What to Do 266
Ultrasound Pachymetry and	What Not to Do 267
Keratometry 252	Attitude and Demeanor 267
Videokeratography 252	20
Refractive Surgical Procedures 252	20 MEDICAL ETHICS, LEGAL ISSUES,
Laser In Situ Keratomileusis 252	AND REGULATORY ISSUES 269
Photorefractive Keratectomy 253	Ethics in the Time of COVID-19 269
Laser Subepithelial Keratomileusis 254	Ethics and Allied Ophthalmic Personnel 270
Epithelial Laser In Situ	Ethics and Ophthalmic Medical
Keratomileusis 255	Assistants 270
Small-Incision Lenticle Extraction 255	Ethical Behavior 271
Astigmatic Keratotomy 255	Providing Technical Services 271
Conductive Keratoplasty and Laser Thermokeratoplasty 255	Competence of Technicians 271
Intrastromal Corneal Ring Segments 255	Communication With Patients 272
Phakic Intraocular Lenses 256	Informed Consent and Ophthalmic Assistants 273
Review 256	Ethics and Pharmaceutical Company
	Representatives 274
9 UNDERSTANDING PRACTICE	Professional Conduct 274
MANAGEMENT 259	Appearance 275
The Ophthalmic Practice and You 260	Respect and Sensitivity 275
For Whom Do You Work? 260	Complementary Topics 275
Implementing Patient-Identified Priorities 260	21
Seek Patients' Feedback 260	21 COMMUNITY HEALTH
"Welcome to the Practice" Brochure	EYE CARE 277
or Website 261	Definitions of Visual Impairment and Blindness 278
The Art of Scheduling 261	Prevalence of Visual Impairment and
Coordinating Patient Flow 261	Blindness 279
Patient Educational Materials 262	

Major Causes of Reversible and Irreversible Lenses That Do Not Contact the Eye 286 Blindness 280 Lenses That Contact the Eye 287 Social Determinants of Health 280 Care of Instruments 288 VISION 2020: The Right Standard Care Guidelines 288 to Sight 280 Keratometer 289 Strategies for Improving Utilization of Eye Lasers 289 Care 281 Lensmeter 290 Local Delivery of Health Education Direct Ophthalmoscope 290 Information 281 Indirect Ophthalmoscope 291 Screening Programs 281 Phoropter 291 Surgical Programs 282 Perimeters 292 Community Health Eye Care Programs and the Potential Acuity Meter 292 Team Approach 283 Local Resources Available to Assist Visually Projector 292 Impaired Patients 283 Retinoscope 294 In Summary 283 Slit Lamp 294 Applanation Tonometer 294 **22** CARE OF OPHTHALMIC Indentation Tonometer 295 LENSES AND INSTRUMENTS 285 Tono-Pen Tonometer 296 Cleaning and Disinfection in the Presence iCare Tonometer 296 of the Patient 286 Appendix A: Glossary 297 Care of Lenses 286 Standard Guidelines for Care of Appendix B: Resources 321 Lenses 286 Index 327

PROCEDURE BOXES

5-1	Performing Retinoscopy Using the Plus Cylinder	9-6	Performing the Titmus Stereopsis Test 133	
	Convention 58	11-1	Checklist for Visual Field Testing 162	
5-2	Performing Basic Lensometry 62	12-1	Verifying the Prescription and Fit of Progressive	
5-3	Measuring Multifocal Power 63		Addition Lenses 169	
5-4	Measuring Prism Power and Orientation 64	12-2	Measuring Binocular Interpupillary Distance 173	
5-5	Performing Keratometry 65	12-3	Measuring Monocular Distance Interpupillary	
6-1	Administering Eyedrops and Ointments 73		Distance 174	
6-2	Giving First Aid 83	12-4	Measuring Binocular Near Interpupillary Distance 174	
7-1	Following Universal Precautions 93	12-5	Using a Distometer 176	
7-2	Basic Standard Precautions 94	12-6	Adjusting Frame Screws 179	
7-3	Washing the Hands Effectively 94	12-7	Checking Optical Centers 180	
8-1	Performing the Distance Acuity Test 107	13-1	Testing Acuity for Patients With Low	
8-2	Performing the Pinhole Acuity Test 107		Vision 186	
8-3	Performing the Near Acuity Test 108	14-1	Inserting Soft Lenses 199	
8-4	Checking Direct and Consensual Pupillary	14-2	Removing Soft Lenses 200	
	Reaction 111	14-3	Inserting Rigid Lenses 200	
8-5	Performing the Confrontation Field Test 113	14-4	Removing Rigid Lenses 201	
8-6	Performing the Amsler Grid Test 113	15-1	Irrigating the Eye 215	
8-7	Performing Goldmann Applanation	15-2	Assisting a Patient Who Feels Faint 217	
	Tonometry 116	16-1	Testing an Infant's Visual Ability 224	
8-8	Performing the Flashlight Test to Estimate	17-1	Applying Pressure Patches and Shields 243	
9-1	the Depth of the Anterior Chamber 119 Conducting a Motility Examination 129	22-1	Cleaning Lenses That Do Not Make Contact With the Eye 287	
	,	22.2	•	
9-2	Performing the Cover–Uncover Test 130	22-2	Cleaning Lenses That Make Contact With the Eye 287	
9-3	Performing the Alternate Cover Test 131	22-3	Disinfecting Lenses That Make Contact With	
9-4	Performing the Prism and Alternate Cover Test 131	0	the Eye 288	
9-5	Performing the Worth 4-Dot Test 132	22-4	Troubleshooting Instrument Failure 288	

VIDEOS AND ACTIVITIES

Videos		
5-1	Neutralization of spectacles 57	
5-2	Clinical optics 57	
5-3	Keratometry 64	
6-1	Instilling eyedrops 73	
8-1	History taking 105	
8-2	Visual acuity 105	
8-3	Distance visual acuity testing 105	
8-4	Near visual acuity testing 109	
8-5	Motility examination 110	
8-6	Evaluation of pupils 111	
8-7	Confrontation visual fields 112	
8-8	Amsler grid testing 112	
8-9	Applanation tonometry 115	
8-10	Pachymetry 118	
8-11	External examination 118	
8-12	Slit-lamp assessment of angles 120	
8-13	Color vision 122	
8-14	Examination with exophthalmometer 123	
9-1	Cover testing and alternate cover testing 130	
9-2	Ocular motility 132	
11-1	Formal visual fields 163	
16-1	Patient services 220	
16-2	Pediatric examination 226	
17-1	Patching 243	
17-2	Sterile technique 244	

22-1 Instrument maintenance 288

Activities

2-1	The eye as an optical system 8	
2-2	The orbit 9	
2-3	The external eyelids 10	
2-4	Cross-section of the eyelid 11	
2-5	The lacrimal apparatus 12	
2-6	The 5 layers of the cornea 13	
2-7	The uveal tract 15	
2-8	The retina at its junction with the optic disc	17
2-9	The visual pathway 18	
5-1	Reflexes produced by the streak retinoscope	56
9-1	Anatomy of the extraocular muscles 126	
9-2	Brainstem anatomy of the cranial nerves involved in eye movement 127	