

CONTENT AREAS	COA (BASIC)	COT (INTERMEDIATE)	COMT (ADVANCED)
HISTORY AND DOCUMENTATION	Ocular Medical Medication Social Family	Ocular Medical Medication Social Family	Ocular Medical Medication Social Family
VISUAL ASSESSMENT	Test and record visual acuity appropriately for patient with all levels of acuity:  • Counting fingers  • Hand motion  • Light perception  • No light perception  Test and record visual acuity on preliterate, illiterate, non-verbal, or foreign language patients  Define low vision  Test and record visual acuity using pinhole occlude  Test and record stereoacuity  Test and record near point of accommodation and convergence  Test for visual acuity (distance and near) using optotype (Allen, Tumbling E, numbers, and Snellen)  Describe the advantages and disadvantages of different low vision devices	Test and record visual acuity appropriately for patient with all levels of acuity:  • Counting fingers  • Hand motion  • Light perception  • No light perceptionn  Test and record visual acuity on preliterate, illiterate, non-verbal, or foreign language patients  Define low vision  Test and record visual acuity using pinhole occlude  Test and record stereoacuity  Test and record near point of accommodation and convergence  Test for visual acuity (distance and near) using optotype (Allen, Tumbling E, numbers, and Snellen)  Describe the advantages and disadvantages of different low vision devices	Test and record visual acuity appropriately for patient with all levels of acuity:  • Counting fingers  • Hand motion  • Light perception  • No light perception  Test and record visual acuity on preliterate, illiterate, non-verbal, or foreign language patients  Define low vision  Test and record visual acuity using pinhole occlude  Test and record stereoacuity  Test and record near point of accommodation and convergence  Test for accommodative convergence/ accommodation (AC/A) ratio  Test for visual acuity (distance and near) using optotype (Allen, Tumbling E, numbers, and Snellen)  Calculate approximate magnification needed to read a target acuity level  Describe the advantages and disadvantages of different low vision devices  Instruct patients in uses of low vision devices (optical and non-optical)
VISUAL FIELD TESTING	Perform Amsler grid testing Perform confrontation fields testing Perform automated perimetry Perform Goldmann perimetry	Perform Amsler grid testing Perform confrontation fields testing Perform automated perimetry Perform Goldmann perimetery	Perform Amsler grid testing Perform confrontation fields testing Perform automated perimetry Perform Goldmann perimetery
PUPIL ASSESSMENT	Measure Compare Evaluate Shape RAPD	Measure Compare Evaluate Shape RAPD	Measure Compare Evaluate Shape RAPD
TONOMETRY	Measure intraocular pressure with hand-held applanator Measure intraocular pressure by applanation tonometry Measure intraocular pressure with non-contact tonometer Clean and disinfect tonometers	Measure intraocular pressure with hand-held applanator Measure intraocular pressure by applanation tonometry Measure intraocular pressure with non-contact tonometer Clean and disinfect tonometers	Measure intraocular pressure with hand-held applanator Measure intraocular pressure by applanation tonometry Measure intraocular pressure with non-contact tonometer Clean and disinfect tonometers
KERATOMETRY	Perform automated keratometry	Perform automated and manual keratometry	Perform automated and manual keratometry



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OCULAR MOTILITY TESTING	Versions and Ductions Functions Anomalies Cover tests Stereoacuity Nystagmus	Versions and Ductions Functions Anomalies Near point convergence Near point accommodation Cover tests Strabismus with prisms Worth 4-Dot test Maddox rod Krimsky Stereoacuity Nystagmus Amblyopia therapy Convergence training	Versions and Ductions Functions Anomalies Near point convergence Near point accommodation Fusional convergence amplitudes Cover tests Strabismus with prisms Worth 4-Dot test Maddox rod Krimsky Stereoacuity Nystagmus Amblyopia therapy Convergence training
LENSOMETRY	Neutralize Spectacles • Automated • Manual	Neutralize Spectacles	Neutralize Spectacles
REFRACTION, RETINOSCOPY AND REFINEMENT	Measure refractive error with an automated refractor Use refraction techniques: fogging, duo chrome, binocular balance Measure vertex distance Perform and record transposition Calculate and record spherical equivalence	Measure refractive error with an automated refractor Use refraction techniques: fogging, duo chrome, binocular balance Perform and record retinoscopy Measure vertex distance Perform and record transposition Calculate and record spherical equivalence Determine near add: • Bifocal • Trifocal • Multifocals	Measure refractive error with an automated refractor Perform and record retinoscopy results Refine refractive error (sphere and cylinder) using phoropter or trial lenses in +/- cylinder Use refraction techniques: fogging, duo chrome, binocular balance Measure vertex distance Perform and record transposition Calculate and record spherical equivalence Determine near add: Bifocal Trifocal
BIOMETRY	Diagnostic/standardized A-Scan	Diagnostic/standardized A-Scan and B-Scan	Diagnostic/standardized A-Scan and B-Scan



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SUPPLEMENTAL TESTING	Perform and record glare testing (e.g. BAT) Perform and record Potential Acuity Meter (PAM)  Demonstrate use of slit lamp lenses Demonstrate use of pen light Perform and record color vision using color plates Perform pachymetry Assess and record anterior chamber depth with a slit lamp or pen light Perform and record laser tests for glaucoma/retina (OCT) Perform and record tear tests: Schirmer BUT Rose Bengal Order and maintain patient education materials inventory	Perform and record glare testing (e.g. BAT) Perform and record Potential Acuity Meter (PAM) Proper use of slit lamp Demonstrate use of slit lamp lenses Demonstrate use of pen light Perform and record color vision using color plates Perform pachymetry Measure and record fusional amplitudes Perform and record Maddox Rod measurements Perform and record corneal sensitivity testing Identify fluorescein and indocyanine green angiography (ICG) phases and images Identify electrophysiologic tests: • ERG • VEP • EOG Order and maintain patient education materials inventory Assess and record anterior chamber depth with a slit lamp or pen light Perform and record laser tests for glaucoma/retina (OCT) Perform and record tear tests: • Schirmer • BUT • Rose Bengal	Perform and record glare testing (e.g. BAT) Perform and record Potential Acuity Meter (PAM) Proper use of slit lamp Demonstrate use of slit lamp lenses Demonstrate use of slit lamp lenses Demonstrate use of gen light Perform and record color vision using color plates Perform pachymetry Assess and record anterior chamber depth with a slit lamp or pen light Perform and record laser tests for glaucoma/retina (OCT) Perform and record tear tests: Schirmer BUT Rose Bengal Perform and record contrast sensitivity testing Assess and record head and posture abnormalities Perform and record specialized color tests: Farnsworth-Munsell D-15 Farnsworth-Munsell 100-HUE Perform and record wavefront diagnostics Measure and record wavefront diagnostics Measure and record Maddox Rod measurements Perform and record corneal sensitivity testing Identify fluorescein and indocyanine green angiography (ICG) phases and images Identify electrophysiologic tests: ERG VEP EOG Order and maintain patient education materials inventory
MICROBIOLOGY	Describe and follow Universal Precautions and infection control measures to maintain clinical asepsis	Define the types of microorganisms: bacterium, virus, fungus, protozoan Explain pathways of disease transmission Assist in the collection of conjunctival and corneal specimens Describe and follow Universal Precautions and infection control measures to maintain clinical asepsis	Define the types of microorganisms: bacterium, virus, fungus, protozoan Explain pathways of disease transmission Assist in the collection of conjunctival and corneal specimens Describe and follow Universal Precautions and infection control measures to maintain clinical asepsis



CONTENT AREAS	COA (BASIC)	COT (INTERMEDIATE)	COMT (ADVANCED)
PHARMACOLOGY	Describe the advantages and disadvantages of various methods of drug delivery: drops, ointments, sustained-release, injectables, and systemics  Describe the components of a medical prescription  Describe and demonstrate the	Describe the advantages and disadvantages of various methods of drug delivery: drops, ointments, sustained-release, injectables, and systemics  Describe the components of a medical prescription  Describe and demonstrate the	Describe the advantages and disadvantages of various methods of drug delivery: drops, ointments, sustained-release, injectables, and systemics  Describe the components of a medical prescription  Describe and demonstrate the
	correct method of instilling drops and ointments  Describe the indications, contraindications, and potential side effects of:  • Mydriatics and cycloplegics  • Provide patient instruction regarding medications	correct method of instilling drops and ointments  Describe the indications, contraindications, and potential side effects of:  • Mydriatics and cycloplegics  • Glaucoma medications  • Anti-infective agents, anti-bacterial, anti-viral, anti-fungal, and anti-parasitic  • Allergy medications  • Steroids  • Non-steroidal, anti-inflammatory drugs  • Ocular lubricants  • Anesthetics  • Diagnostic agents  • Nutritional supplements  • Anti-neovascular drugs  • Provide patient instruction regarding medications	correct method of instilling drops and ointments  Describe the indications, contraindications, and potential side effects of:  • Mydriatics and cycloplegics  • Glaucoma medications  • Anti-infective agents, anti-bacterial, anti-viral, anti-fungal, and anti-parasitic  • Allergy medications  • Steroids  • Non-steroidal, anti-inflammatory drugs  • Ocular lubricants  • Anesthetics  • Diagnostic agents  • Nutritional supplements  • Anti-neovascular drugs  • Provide patient instruction regarding medications
SURGICAL ASSISTING	Instrument preparation Refractive surgery Aseptic technique Non-refractive laser therapy Intraocular injections Yag laser Sterilization Surgical site identification Maintain surgical instruments and equipment Laser safety	Instrument preparation Refractive surgery Aseptic technique Non-refractive laser therapy Intraocular injections Yag laser Sterilization Surgical site identification Maintain surgical instruments and equipment Laser safety	Instrument preparation Refractive surgery Aseptic technique Non-refractive laser therapy Intraocular injections Yag laser Sterilization Surgical site identification Maintain surgical instruments and equipment Laser safety
OPHTHALMIC PATIENT SERVICES AND EDUCATION	Communicate effectively with:	Communicate effectively with:	Communicate effectively with:



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OPHTHALMIC PATIENT SERVICES AND EDUCATION, Continued	Counsel and provide patient education on ophthalmic conditions, prevention, compliance, and acceptance  Explain effects prior to administering eye drops	Counsel and provide patient education on ophthalmic conditions, prevention, compliance, and acceptance  Explain effects prior to administering eye drops	Counsel and provide patient education on ophthalmic conditions, prevention, compliance, and acceptance  Explain effects prior to administering eye drops
EDUCATION,	Explain effects prior to administering eye drops  Demonstrate empathy for the patient  Demonstrate how to properly greet people  Assist patients and accompanying individuals with special needs (e.g. visually and hearing challenged)  Provide patient referrals as appropriate  Apply and remove eye dressing and shields  Provide patient counseling and assistance for medication reimbursement programs  Respond to and properly document phone calls  Complete legal forms for patient benefits (motor vehicle, government, etc.)  Make simple spectacle adjustments and repairs  Schedule appointments based on degree of urgency  Administer first aid for acute ophthalmic drug reactions and emergencies (e.g. chemical burns)  Coordinate patient flow  File, locate, and copy patient charts (scan if Electronic Medical Records (EMR))  Schedule non-ophthalmic medical diagnostic tests (e.g. magnetic resonance imaging [MRI], computed tomography [CT], blood tests)  Vital Signs  Measure and record vital signs (e.g. blood pressure, pulse and respiration rate)  Perform cardiopulmonary	Explain effects prior to administering	Explain effects prior to administering
	resuscitation (CPR) procedures	tomography [CT], blood tests)  Vital Signs  • Measure and record vital signs (e.g. blood pressure, pulse and respiration rate)  • Perform cardiopulmonary resuscitation (CPR) procedures	tomography [CT], blood tests)  Vital Signs  • Measure and record vital signs (e.g. blood pressure, pulse and respiration rate)  • Perform cardiopulmonary resuscitation (CPR) procedures



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GENERAL MEDICAL KNOWLEDGE	General Ocular Anatomy, Physiology Describe basic functions and processes of each body system: • Respiratory • Cardiovascular • Endocrine • Nervous	General Ocular Anatomy, Physiology Describe basic functions and processes of each body system: • Respiratory • Cardiovascular • Endocrine • Nervous	General Ocular Anatomy, Physiology Describe basic functions and processes of each body system: • Respiratory • Cardiovascular • Endocrine • Nervous
	Describe the structure and function of the following: Orbit Extraocular muscles Lids Lacrimal system and tears Conjunctiva Cornea and sclera Anterior chamber and angle Aqueous humor Lens Uvea Retina and vitreous Optic nerve Circulation of ocular blood supply	Describe the structure and function of the following: Orbit Extraocular muscles Lids Lacrimal system and tears Conjunctiva Cornea and sclera Anterior chamber and angle Aqueous humor Lens Uvea Retina and vitreous Optic nerve Circulation of ocular blood supply	Describe the structure and function of the following: Orbit Extraocular muscles Lids Lacrimal system and tears Conjunctiva Cornea and sclera Anterior chamber and angle Aqueous humor Lens Uvea Retina and vitreous Optic nerve Circulation of ocular blood supply
	Visual pathway Cranial nerves III, IV, V, VI, and VII Describe the pathology of color vision Eye Diseases Differentiate between inflammation and infection Describe frequently encountered eye conditions involving: Lids Conjunctiva Cornea Lens Uvea Vitreous Retina Orbit Trauma Extra ocular muscles	Visual pathway Cranial nerves III, IV, V, VI, and VII Describe the pathology of color vision Eye Diseases Differentiate between inflammation and infection Describe frequently encountered eye conditions involving: Lids Conjunctiva Cornea Lens Uvea Vitreous Retina Orbit Trauma Extra ocular muscles	<ul> <li>Visual pathway</li> <li>Cranial nerves III, IV, V, VI, and VII</li> <li>Describe the pathology of color vision</li> <li>Eye Diseases</li> <li>Differentiate between inflammation and infection</li> <li>Describe frequently encountered eye conditions involving:</li> <li>Lids</li> <li>Conjunctiva</li> <li>Cornea</li> <li>Lens</li> <li>Uvea</li> <li>Vitreous</li> <li>Retina</li> <li>Orbit</li> <li>Trauma</li> <li>Extra ocular muscles</li> </ul>
	Optic nerve Cranial nerves III, IV, V, VI, and VII Visual pathway  Describe the ocular manifestations of the following systemic diseases: Nutritional deficiencies Diabetes mellitus Thyroid disease Autoimmune/inflammatory disease Infectious disease (e.g. HIV/AIDS, tuberculosis) Cardiovascular disease Neurologic disorders Cancer (primary and metastatic)  Medical Terminology	Optic nerve Cranial nerves III, IV, V, VI, and VII Visual pathway  Describe the ocular manifestations of the following systemic diseases: Nutritional deficiencies Diabetes mellitus Thyroid disease Autoimmune/inflammatory disease Infectious disease (e.g. HIV/AIDS, tuberculosis) Cardiovascular disease Neurologic disorders Cancer (primary and metastatic)  Medical Terminology	Optic nerve Cranial nerves III, IV, V, VI, and VII Visual pathway  Describe the ocular manifestations of the following systemic diseases: Nutritional deficiencies Diabetes mellitus Thyroid disease Autoimmune/inflammatory disease Infectious disease (e.g. HIV/AIDS, tuberculosis) Cardiovascular disease Neurologic disorders Cancer (primary and metastatic)  Medical Terminology
	Spell, define, and use medical terms correctly Identify, acceptable abbreviations (specifically related to clinical practice) Utilize a medical dictionary Safety Define hazardous and bio-hazardous waste Define acceptable methods for waste disposal	<ul> <li>Spell, define, and use medical terms correctly</li> <li>Identify, acceptable abbreviations (specifically related to clinical practice)</li> <li>Utilize a medical dictionary</li> <li>Safety</li> <li>Define hazardous and bio-hazardous waste</li> <li>Define acceptable methods for waste disposal</li> </ul>	<ul> <li>Spell, define, and use medical terms correctly</li> <li>Identify, acceptable abbreviations (specifically related to clinical practice)</li> <li>Utilize a medical dictionary</li> <li>Safety</li> <li>Define hazardous and bio-hazardous waste</li> <li>Define acceptable methods for waste disposal</li> </ul>



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OPTICS AND SPECTACLES	Transpose cylinder readings	Transpose cylinder readings Prescriptions Vertex distance • Measure • Conversion	Transpose cylinder readings Prescriptions Vertex distance • Measure • Conversion Geneva lens clock Progressive lens markings
CONTACT LENSES	Contact lens types Contact lens care systems Need for follow-up appointments	Contact lens types Wearing schedules Contact lens care systems Need for follow-up appointments Contraindications, symptoms, and fitting Perform contact lens fitting: • Soft rigid • Toric • Bifocal	Contact lens types Wearing schedules Contact lens care systems Need for follow-up appointments Contraindications, symptoms, and fitting Perform contact lens fitting: • Soft rigid • Toric • Bifocal Specialty lenses for: • Irregular cornea • Post-transplant • Keratoconus • Cosmetic/prosthetics • Bandages
OPHTHALMIC IMAGING	Corneal topography Scanning laser test for glaucoma/retina • HRT • OCT	Fluorescein angiography Corneal topography Scanning laser test for glaucoma/retina HRT OCT	Fluorescein angiography Corneal topography Scanning laser test for glaucoma/retina HRT OCT
PHOTOGRAPHY AND VIDEOGRAPHY	Slit lamp/anterior segment photography Fundus photography External photography	Slit lamp/anterior segment photography Fundus photography External photography	Slit lamp/anterior segment photography Fundus photography External photography
EQUIPMENT MAINTENANCE AND REPAIR	Change batteries in ophthalmic instruments  Maintain and calibrate ophthalmic equipment per manufacturer's recommendations  Maintain emergency equipment  Clean lenses and prisms  Order and maintain medical supplies and inventories  Maintain clinical equipment and supplies	Change batteries in ophthalmic instruments  Maintain and calibrate ophthalmic equipment per manufacturer's recommendations  Maintain emergency equipment  Clean lenses and prisms  Order and maintain medical supplies and inventories  Maintain clinical equipment and supplies	Change batteries in ophthalmic instruments  Maintain and calibrate ophthalmic equipment per manufacturer's recommendations  Maintain emergency equipment  Clean lenses and prisms  Order and maintain medical supplies and inventories  Maintain clinical equipment and supplies
MEDICAL ETHICS, LEGAL AND REGULATORY ISSUES	Coding Government/institutional rules and regulations Quality assurance Ethical and legal standards Scribing Confidentiality Informed consent	Coding Government/institutional rules and regulations Quality assurance Ethical and legal standards Scribing Confidentiality Informed consent	Coding Government/institutional rules and regulations Quality assurance Ethical and legal standards Scribing Confidentiality Informed consent