# International
# CORE CURRICULUM
## For Ophthalmic Assistants

**March 2009**

*Presented by*:

*International Task Force on Para-Ophthalmic Vision Specialists Education*

**INTERNATIONAL COUNCIL** *of* **OPHTHALMOLOGY**

*and*

**IJCAHPO**
INTERNATIONAL JOINT COMMISSION ON ALLIED HEALTH PERSONNEL IN OPHTHALMOLOGY

**INTERNATIONAL JOINT COMMISSION ON ALLIED HEALTH PERSONNEL IN OPHTHALMOLOGY**

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# INTERNATIONAL CORE CURRICULUM FOR OPHTHALMIC ASSISTANTS

Presented by the Allied Health Curriculum Task Force of the International Council of Ophthalmology (ICO®) and the International Joint Commission on Allied Health Personnel in Ophthalmology (IJCAHPO®)

## Introduction

Countries around the world are experiencing urgent eye care needs that remain unmet. With ophthalmic specialists in short supply worldwide, the need for ophthalmic allied health personnel is growing at a fast pace. Since 1999, the International Council of Ophthalmology (ICO) has included ophthalmic education as an essential element for improving eye care worldwide and established a task force on education of para-ophthalmic vision specialists. While the term para-ophthalmic vision specialists has been used to encompass a broad group of eye and medical personnel, the profession of Ophthalmic Medical Personnel (OMP) is recognized as a specific group of the eye care team that includes Ophthalmic Assistants, ophthalmic technicians, ophthalmic medical technologists, orthoptists, ophthalmic photographers, and ophthalmic nurses. OMP increase the productivity of ophthalmic specialists and may be trained more efficiently and expeditiously to meet the increasing international demands for quality eye care.

The strategic plan of the ICO's Task Force on Para-Ophthalmic Vision Specialists Education called for development and implementation of a core curriculum. Concurrently, the strategic initiatives for curriculum development of the International Joint Commission on Allied Health Personnel in Ophthalmology, Inc. (IJCAHPO) included the development of a basic curriculum guide for newly hired and entry-level OMP, and an expanded curriculum. ICO and IJCAHPO collaborated on this project, both in content and in worldwide input, to create a comprehensive curriculum for entry-level Ophthalmic Assistants.

The target audience for training with this curriculum is ophthalmic medical personnel, specifically Ophthalmic Assistants or new members of the eye care team, who have little or no training in ophthalmology. The curriculum is designed to provide training on the basic knowledge and skills needed to perform the necessary ophthalmic tasks in the ophthalmology clinic, practice, or hospital setting. The curriculum is designed for the trainer's easy use in the "customization" of training OMP on common eye diseases, eye examinations, equipment, and treatments specific to a region.

This international entry-level curriculum has been designed as part of a continuum of education and training to help ensure that ophthalmic specialists worldwide have the qualified staff who are trained consistently within an appropriate timeframe. We gratefully acknowledge the many individuals and organizations that have given their support to this important project.

## Core Curriculum Principles and Guidelines

**The International Council of Ophthalmology recognizes:**

*All allied para-ophthalmic personnel must be trained and organized under one system so that there may be a unified effort of delivery of eye care . . . . so that maximum efficiency of the team may be achieved.*

ICO's 2006 Klinische Monatsblätter für Augenheilkunde *curricula*

With the comprehensive analysis and input from content experts and educators from around the world, this core curriculum is well designed, clearly defined, and carefully organized. It employs a system that can be used internationally by educators and ophthalmic specialists for on-the-job training of staff in practices or clinics. The core curriculum is designed to be compatible with local practice and regulations, and to be consistent with "best practices" in ophthalmology and patient care across the globe. The curriculum is designed to provide learners with content domains or categories and the appropriate performance objectives to perform their eye care job tasks.

The knowledge, skills, and interpersonal behaviors required of Ophthalmic Assistants are focused on the following five core competencies:

- *Patient care*
- *Medical knowledge*
- *Professionalism, interpersonal and communication skills*
- *Technical and scientific skills*
- *Community and health services*

These competencies are supported in the core curriculum and are organized into the following three sections:

- *Introduction to Ophthalmology*
- *Basic Skills*
- *Advanced Skills*

The recommended implementation of the curriculum design by educators, trainers, and learners is to cover all curriculum content by starting with the Introduction to Ophthalmology section and progressing through Basic Skills to the Advanced Skills section. The three sections contain modules (or topics), each with detailed work-performance objectives. The recommended sequence for teaching the topics is shown by the order listed in the core curriculum; however, the curriculum is designed in modular format for maximum customization. The teaching sequence of the modules can be changed or additional categories or performance objectives can be added. For example, there may be local or regional health services, regulations or clinic requirements that must be added to the course instruction content. It was the intent that all sections be addressed at some level to ensure that the learner has a comprehensive understanding of Ophthalmic Assisting. No section or content should be deleted from the training, only the focus or time spent on a topic may be reduced.

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## History of Task Force on Para-Vision Specialists and Curriculum

The initial task force was established under the leadership of Professors Rubens Belfort (Brazil) and Kazuichi Konyama (Japan), followed by Professor Cristian Luco (Chile). In 2004, Professor Sivaguru Selvarajah (Malaysia) chaired the task force, which published their curriculum results in the *ICO's 2006 Klinische Monatsblätter für Augenheilkunde*. This publication was a collection of four worldwide curricula for Community Based Para-Ophthalmic Personnel, Hospital Based Para-Ophthalmic Personnel, Orthoptists, and Ophthalmic Technicians, and provided the initial resource for the development of this core curriculum.

In 2007, William F. Astle, MD, FRCS(C), Dipl. ABO (Canada) was appointed as Chair of the ICO Allied Health Curriculum Task Force. Dr. Astle's appointment was concurrent with his position as President of the International Joint Commission on Allied Health Personnel in Ophthalmology, Inc. (IJCAHPO®). This dual role created a unique opportunity for a collaborative effort between the two organizations to research and develop a comprehensive curriculum for Ophthalmic Assistants, following in the footsteps of the previous task force's excellent work. The result of this collaborative process was the creation of the *International Core Curriculum for Ophthalmic Assistants*, an international core curriculum that will meet the needs of eye care professions and professionals worldwide.

## Curriculum Development Process

Under Dr. Astle's leadership, IJCAHPO and the ICO Task Force began an 18-month process of research, drafting, and publication of a core curriculum designed specifically for Ophthalmic Assistants. An IJCAHPO Curriculum Task Force conducted an extensive review and analysis of the previously published ICO curricula and other resources to identify content gaps, augment the curricula framework, and assemble one core curriculum for training entry-level Ophthalmic Assistants. These resources included an international job task analysis by IJCAHPO; curricula and competencies published by the Canadian Medical Association (CMA), the Canadian Society of Ophthalmic Medical Personnel (CSOMP), the Commission on Accreditation of Ophthalmic Medical Personnel (CoA-OMP); and key allied health ophthalmic textbooks. In addition to the ICO Task Force, other ophthalmic allied health organizations were asked to review and provide input on the core curriculum through an electronic review process. These organizations included the Association of Technical Personnel in Ophthalmology (ATPO) and the Consortium of Ophthalmic Training Programs (COTP).

In June 2008, the ICO Task Force met in Hong Kong during the World Ophthalmology Congress (WOC) meeting. The ICO Task Force conducted a half-day, in-depth session to review and revise this new Ophthalmic Assisting core curriculum, followed by an electronic review and update for the final draft. At this sentinel meeting, the ICO Task Force endorsed the curriculum and IJCAHPO's certification for ophthalmic medical personnel as the recognized international training model for the profession and certification of Ophthalmic Assistants, Ophthalmic Technicians, and Ophthalmic Medical Technologists.

## Closing

It is now well recognized that there is a global shortage of trained OMP. All countries and regions, regardless of their economic situations, are developing. It is the goal of the ICO and IJCAHPO to make the development of new programs in Ophthalmic Assisting as easy as possible for the organizers of such programs, and to harmonize the curriculum so that highly trained ophthalmic medical personnel graduate from such programs in a consistent and efficient manner. Certification of these graduates and accreditation of programs will help to ensure that the quality of trained professionals is the same worldwide. Harmonized training of OMP will hopefully bring us all closer to the goal of elimination of blindness on a global level.

# INTERNATIONAL CORE CURRICULUM FOR OPHTHALMIC ASSISTANTS

## CURRICULUM

### Purpose:

To provide an on-the-job tool for training entry-level Ophthalmic Assistants who perform ophthalmic procedures under the appropriate direction or supervision of an individual who is qualified to practice in ophthalmology.

### Core Curriculum Instruction:

Instruction is based on the defined core content. Teaching revolves around imparting the predetermined body of knowledge. Although the core curriculum method does not preclude using critical thinking, problem solving, and team learning, it prompts teaching toward the "correct" answer.

### Variables:

Timing, teaching sequence, and topics may vary dependent upon practice needs, resources, and trainee knowledge and skills acquisition.

### Five Core Competencies:

The foundation of the knowledge, skills, and interpersonal behaviors required of Ophthalmic Assistants are the following five core competencies:
- Patient care
- Medical knowledge
- Professionalism, interpersonal and communication skills
- Technical and scientific skills
- Community and health services

These competencies are supported in the core curriculum and are organized into the following three sections:
- Introduction to Ophthalmology
- Basic Skills
- Advanced Skills

## A. Introduction to Ophthalmology

❶ **Clinic and Personnel Functions**
*Performance Objectives*
- Describe the professionals who make up the eye care team
- Identify the general responsibilities of OMP
- Define the various levels of training and certification levels for Ophthalmic Assisting careers
  1. Certified Ophthalmic Assistant (COA), Beginning Level
  2. Certified Ophthalmic Technician (COT), Intermediate Level and
  3. Certified Ophthalmic Medical Technologist (COMT) Advanced Level
- Identify available ophthalmic services
- Identify the scope of practice, training and education of members of the eye care team
- Identify continuing education and professional development opportunities for OMP

❷ **Medical Ethics, Regulatory and Legal Issues**
*Performance Objectives*
- Specify procedures for ensuring the confidentiality of health information
- Describe government and institutional rules and regulations for patient confidentiality, and safety
- Describe law/policies for the control, use, and release of health information including corrective lenses and contact lens prescriptions
- State the ethical and legal standards for the profession
- Demonstrate effective documentation skills (e.g., coding, scribing/charting/reporting)
- Describe the informed consent process
- Identify professional consequences of performing unprofessionally

❸ **Communication Skills, Patient Education and Ophthalmic Counseling**
*Performance Objectives*
- Communicate effectively with: co-workers, family of patients, doctors, patients, vendors, and sales representatives
- Identify and provide care needs of diverse populations (cultural, gender, age, etc.)
- Demonstrate effective interpersonal relationship skills
- Recognize and appropriately address patient dissatisfaction
- Instruct and educate patients on ocular/systemic diseases, medications, tests, procedures, results, and treatments
- Counsel and provide patient education on ophthalmic conditions, prevention, compliance, and acceptance
- Explain the effects prior to administering eye drops
- Demonstrate empathy for the patient

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❹ **Ophthalmic Patient Services and Relations (Triage)**
*Performance Objectives*
- Demonstrate how to properly greet patients
- Assist patients and accompanying individuals with special needs (e.g., visually and hearing challenged)
- Provide patient referrals as appropriate
- Apply and remove eye dressings and shields
- Provide patient counseling and assistance for medication reimbursement programs
- Respond to and properly document patient phone calls
- Complete legal forms for patient benefits (motor vehicle, government)
- Make simple spectacle adjustments and repairs
- Explain and care for ocular prosthetics, contact lenses and spectacles and other devices
- Elicit chief complaint or symptoms
- Classify symptoms according to severity
- Schedule appointment based on degree of urgency
- Administer first aid for acute ophthalmic drug reactions and emergencies (e.g., chemical burns)

❺ **Community Health Eye Care**
*Performance Objectives*
- Identify the major global and local causes of reversible and irreversible blindness and vision loss
- Describe the government and World Health Organization's definition of vision impairment and blindness
- Identify local resources (health, education and rehabilitation) available to assist visually impaired patients
- Describe a team approach to eye care
- Describe basic features of community eye care programs (e.g., cataract, surgical)
- Describe Vision 20/20 principles and strategies for implementation at a global and local level
- Develop and deliver health education information within the local community
- Identify community-based and provider-based strategies to improve utilization of eye care services

❻ **Safety**
*Performance Objectives*
- Define hazardous and bio-hazardous waste
- Describe acceptable methods for waste disposal
- Describe and follow universal precautions and infection control measures
- Maintain clinical asepsis
- Dispense medications correctly

- Implement Government or Institutional Safety and Regulatory programs, if applicable

❼ **Administrative Duties**
*Performance Objectives*
- Deliver patient prescriptions to a pharmacy via telephone or fax
- Coordinate patient flow
- Answer phones
- File, locate and copy patient charts (scan if Electronic Medical Record [EMR])
- Schedule appointments
- Schedule systemic medical diagnostic tests (e.g., magnetic resonance imaging [MRI], computed tomography [CT], blood tests)

❽ **Medical Terminology**
*Performance Objectives*
- Spell, define, and use medical terms correctly
- Identify acceptable abbreviations (specifically related to clinic practice)
- Use a medical dictionary

❾ **General and Ocular Anatomy, Physiology**
*Performance Objectives*
- Describe the basic functions and processes of each body system:
    - Respiratory system
    - Cardiovascular system
    - Endocrine system
    - Nervous system
- Describe the structure and function of the following:
    - Orbit
    - Extra ocular 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 the eye (ocular blood supply)
    - Visual pathway
    - Cranial nerves III, IV, V, VI, and VII
    - Describe the physiology of color vision

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⑩ **Pharmacology**
*Performance Objectives*
- Describe the advantages and disadvantages of various methods of drug delivery, including drops, ointments, sustained-release medications, injectable medications, and systemic medications
- 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
   - glaucoma medications
   - anti-infective agents, including anti-bacterial, anti-viral, anti-fungal,and anti-parasitic
   - allergy medications
   - steroids
   - non-steroidal, anti-inflammatory drugs
   - ocular lubricants
   - osmotic
   - anesthetics
   - diagnostic agents
   - nutritional supplements
   - anti-neovascular drugs

⑪ **Microbiology**
*Performance Objectives*
- Define the types of microorganisms: bacterium, virus, fungus, protozoan
- Explain common 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

⑫ **History Taking**
*Performance Objectives*
- Elicit and record the chief complaint/reason for visit
- Elicit and record the history of the present eye problem or concern
- Elicit and record medical and surgical history
- Elicit and record family history
- Elicit and record social history
- Elicit and record the review of physical systems

## B. Basic Skills

❶ **Vital Signs**
*Performance Objectives*
- Measure and record vital signs (i.e., blood pressure, pulse, and respiration rate)

- Perform cardiopulmonary resuscitation (CPR) procedures

❷ **Visual Testing (Distance and Near)**
*Performance Objectives*
- Test and record visual acuity appropriately for patients with all levels of acuity (e.g., count fingers, hand motion, light perception, no light perception)
- Test and record visual acuity using a distance visual acuity chart
- Test and record visual acuity on preliterate, illiterate, non-verbal, or foreign language patients
- Test and record visual acuity using the pinhole occluder
- Test and record visual acuity using Allen figures or picture tests
- Test and record visual acuity for low vision patients
- Test and record near vision
- Use conversion tables to record visual acuity (e.g., Snellen chart, LogMar or metric systems)

❸ **Pupillary Assessment**
*Performance Objectives*
- Measure, compare, and evaluate pupil function
   - direct and consensual response
- Identify relative afferent pupillary defect using the swinging-light test

❹ **Lensometry**
*Performance Objectives*
- Neutralize and record spectacle lenses using automated and manual lens meters
- Describe spectacle prescription components

❺ **Keratometry**
*Performance Objectives*
- Perform automated and manual keratometry
- Record keratometry readings

❻ **Tonometry**
*Performance Objectives*
- Define and measure intraocular pressure
- Clean and disinfect tonometers

❼ **Supplementary Tests – Basic Skill Level**
*Performance Objectives*
- Assess and record anterior chamber depth (pen light)
- Perform and record color vision
- Perform and record pachymetry
- Perform and record Schirmer tests
- Perform and record Amsler Grid
- Perform and record confrontation field test

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❽ **Clinical Equipment and Supplies Maintenance**
*Performance Objectives*
- Change batteries/bulbs in ophthalmic instruments
- Maintain and calibrate ophthalmic equipment per manufacturer's recommendation
- Maintain emergency equipment
- Clean lenses and prisms
- Order and maintain medical supplies inventory
- Order and maintain patient education materials inventory
- Maintain clinical equipment and supplies
- Maintain ophthalmic theatre equipment

❾ **Examination of the Eye and Face**
*Performance Objectives*
- Perform the external examination
    - Demonstrate use of the penlight
    - Demonstrate use of slit lamp

❿ **Clinical Optics**
*Performance Objectives*
- Identify refractive errors: hyperopia, myopia, astigmatism, presbyopia
- Describe accommodation and its relation to age
- Describe the difference between cycloplegic and manifest refraction
- Explain the difference between subjective and objective refractometry

⓫ **Biometry**
*Performance Objectives*
- Measure and record axial length (A-Scan biometry and Optical Coherence Biometer)
    - Describe contact and immersion techniques
- Calculate and record intraocular lens (IOL) power

⓬ **Eye Diseases**
*Performance Objectives*
- Differentiate between inflammation and infection
- Describe frequently encountered eye conditions involving:
    - Lids
    - Conjunctiva
    - Cornea
    - Lens
    - Uvea
    - Vitreous
    - Retina
    - Orbit
    - Trauma
    - Extra ocular muscles
    - Optic nerve
    - Cranial nerves
    - Visual pathway
- Identify the various types of glaucoma

⓭ **Systemic Diseases**
*Performance Objectives*
- Describe the ocular manifestations of the following systemic diseases:
    - Nutritional deficiencies
    - Diabetes mellitus
    - Thyroid disease
    - Auto immune/inflammatory disease
    - Infectious disease (e.g., HIV/AIDS, tuberculosis)
    - Cardiovascular disease
    - Neurologic disorders
    - Cancer (primary and metastatic)

## C. Advanced Skills

❶ **Low Vision**
*Performance Objectives*
- Define low vision
- Measure visual acuity of a low vision patient
- Calculate approximate magnification needed to read a target acuity level
- Describe the advantages and disadvantages of different low vision devices
- Instruct patient in uses of low vision devices (optical and non-optical)

❷ **Supplementary Tests – Advanced Skill Level**
*Performance Objectives*
- Perform and record stereoacuity testing
- Perform and record glare testing (e.g., BAT)
- Perform and record potential acuity (PAM)
- Perform and record automated perimetry
- Perform and record manual perimetry
- Perform the internal examination
    - Demonstrate use of direct ophthalmoscopy
    - Demonstrate use of indirect ophthalmoscopy
    - Demonstrate use of slit lamp lenses

❸ **Ophthalmic Imaging**
*Performance Objectives*
- Label photos with patient identification
- Perform external photography
- Perform and record corneal topography
- Perform and record fundus photography
- Perform and record scanning computer ophthalmic diagnostic imaging (optical coherence tomography [OCT], GDx, HRT)
- Perform external slit lamp photography

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❹ **Surgical Procedures**
*Performance Objectives*
*Minor*
- Clean, sterilize, and prepare instruments for minor office surgical procedures
- Assist the physician with office-based minor surgical procedures
- Set up and assist in non-refractive laser surgery (argon, YAG, etc.)
- Maintain clinical asepsis and universal precautions
*Major*
- Apply proper sterile technique procedures to ensure safety/security
- Maintain surgical asepsis and universal precautions
- Maintain surgical instruments/equipment

❺ **Refractometry, Retinoscopy, Refinement**
*Performance Objectives*
- Measure refractive error with an automated refractor
- Perform and record retinoscopy
- Refine refractive error (sphere and cylinder) using phoropter or trial lenses in +/- cylinder
- Use refractometry techniques: fogging, duo chrome, binocular balance
- Measure vertex distance
- Perform and record transposition
- Calculate and record spherical equivalence
- Determine near add (bifocal, trifocals, multifocal)

❻ **Ocular Motility**
*Performance Objectives*
- Perform and record versions and ductions
- Distinguish between phoria and tropia
- Define motility prefixes: eso and exo, hyper and hypo
- Perform and record cover and uncover tests in correct sequence and hypo
- Perform and record the Krimsky and Hirschberg tests

❼ **Contact Lenses**
*Performance Objectives*
- Instruct the patient on the insertion and removal of lenses
- Explain contact lens types and wearing schedules
- Explain care systems
- Explain the need for scheduled follow-up visits

- Explain contraindications, symptoms, and the fitting
- Perform lens fitting (soft, rigid, toric, bifocal, irregular cornea, post-transplant, keratoconus, cosmetic/prosthetics, bandages and tints)

❽ **Supervision and Training Support**
*Performance Objectives*
- Explain the importance of self-monitoring of personal professional development
- Describe quality assurance processes/monitor clinical outcomes
- Describe the responsibilities for the supervision of technical staff