

## Legislation

This bridging course teaches to the following competencies:

- 1.1.1 Adhere to privacy and confidentiality legislation, regulatory requirements and employer policies.
- 1.1.2 Integrate the Code of Ethics into professional practice as a basis for all decisions and actions.
- 1.1.3 Communicate title and credentials accurately.
- 1.1.4 Recognize and manage professional boundaries.
- 1.1.5 Refer any incompetent, illegal or unethical conduct by colleagues (regulated and non-regulated) or other health personnel to the appropriate authority.
- 1.1.6 Recognize and manage professional boundaries.
- 1.3.2 Ensure consistency with organizational policies and record keeping legislation, standards and guidelines
- 1.3.4 Release records in accordance with legislation, regulations and standards of practice.
- 1.4.1 Adhere to regulatory, legislative and standard requirements regarding informed consent.
- 1.4.2 Exercise the process of obtaining informed consent.
- 3.1.1 Demonstrate awareness and understanding of self-regulation and the role of professional associations.
- 3.7.2 Advocate for, and adapt to, change to support competent, ethical and patient/client-centred care.
- 4.3.1 Ensure that marketing information provided is truthful and professional.
- 4.3.2 Extend professional courtesy to competitors and collaborate as required to facilitate management of the overall eye health needs.

**The theoretical portion** covers detailed explanations of:

- The relationship between legislation and regulation with links to the legislative and regulatory documents in each province.
- The responsibilities of self-regulation including the roles of the regulator, the optician and the association.

- The definition of and purpose of Standards of Practice with examples of how they are put into everyday use
- The importance of using correct professional titles and explaining credentials.
- Privacy legislation including confidentiality, record keeping, obtaining consent, withdrawing consent. This includes examples of the ethical application of these principles in everyday practice.
- The importance of setting professional boundaries and of reporting unprofessional conduct.

**The interactive portion** reinforces the themes that have been taught in the theoretical portion. It is divided into four sections with a multiple choice self-assessment quiz at the end of each section. The questions in the self-assessment quiz are based on the information taught in the preceding section but also include directions for the student to read/view one of the recommended documents/videos (contained in the resource section) before selecting an answer.

## **Communication**

This bridging course teaches to the following competencies:

- 1.1.2** Integrate the Code of Ethics into professional practice as a basis for all decisions and actions
- 1.1.3** Communicate title and credentials accurately
- 2.1.1** Use a wide range of verbal and non-verbal communication strategies
- 2.1.2** Communicate in a manner that is respectful to the individual needs and beliefs of the patient/client
- 2.1.3** Use an effective dialogue, which employs an appropriate mix of questions to elicit information
- 2.1.4** Provide appropriate literature based on the patient/client/s specific needs
- 2.1.5** Consult the established protocols and policies to manage and report abusive and aggressive behaviour from patients/clients.
- 2.2.3** Use effective interpersonal skills to resolve conflicts and complaints
- 3.1.2** Recognize and promote the interprofessional care of the eye-care team

**3.1.3** Educate the employer and the public on the role of the Optician and benefits in receiving care from a Registered/Licensed Optician.

**3.5.1** Demonstrate an understanding of patient/client/s expectations and aspirations and manage situations where these cannot be met.

**3.5.2** Communicate the advantages and limitations of the product to the patient/client in a meaningful and clear manner

**3.5.3** Apply knowledge of learning principles and teaching techniques.

**3.6.1** Recognize factors influencing learning and adjust teaching/training

**3.6.2** Use appropriate supporting materials

The **theoretical portion** of this course includes instruction on:

- Verbal and non-verbal communications
- Empathetic and active listening skills
- Adjusting volume, tone and speed of information delivery suitable to patient needs and complexity of the information
- Body language as a communicator
- Engaging non-verbal cues/Negative non-verbal cues
- The Code of Ethics, communication and treating all patients respectfully
- Communication of sensitive information and respecting privacy/dignity
- Relationship of professional ethics to clear communication of titles and scope of practice
- Inter-professional co-operation and communication between professionals
- Collaboration in best interest of patient

The **interactive portion** of the course begins with a student self-evaluation of communication skills using a Likert scale. The student is encouraged to revisit this self-evaluation upon completion of the course.

- The significant role of opticians as educators and the importance of effective communication to that role.

- The link between communicating and assessing understanding
- Silent communicators such as personal appearance, facial expression and hygienic condition of the dispensing environment
  - Students are presented with a typical dispensary and invited to 'click on' the elements in the dispensary that make a poor impression
- Managing communication distractions in the dispensary i.e. ambient noise
  - Students are asked to listen to a complicated explanation while the sound of a ringing telephone is interfering and then answer a question based on the information communicated
- Identifying and manage verbal barriers to communication i.e. language
- Use of visual aids/demonstration in communicating with patients i.e. language-specific pamphlets
- Professional credentials and communication i.e. patient will have confidence in information and recommendations communicated upon understanding the Optician's education and training
- Questioning, listening and interpreting patient responses
  - Open and closed questions
  - Funnel questions
  - Probing questions
  - Leading questions
- Ensuring understanding/re-stating information
- Communicating features, advantages and benefits
  - Use of personalized comparison chart

The student then follows two typical dispensary scenarios in which an optician manages the following challenge using the skills, tools and techniques discussed in the tutorial. The optician follows an organized step-by-step process to clarify the issue, develop a plan to move forward, explain the plan to the patient, implement the plan, assess and record the results.

## **Professionalism**

This bridging course teaches to the following competencies:

- 1.1.3** Communicate title and credentials accurately
- 1.1.4** Recognize and manage professional boundaries
- 1.1.6** Recognize and manage ethical situations
- 1.2.1** Manage professional responsibilities by recognizing personal and professional limits.
- 1.2.2** Seek assistance or refer to an appropriate professional when the condition or situation is beyond personal competence and/or professional scope of practice.
- 1.4.2** Exercise the process of obtaining informed consent.
- 2.2.1** Contribute to team decision-making
- 2.2.2** Consider and apply knowledge of team members' strengths and capabilities.
- 2.2.4** Assume responsibility for completion of your assigned tasks.
- 3.1.2** Recognize and promote the interprofessional care of the eye-care team.
- 3.2.1** Serve as a patient/client advocate with other members of the eye care team.
- 3.2.2** Engage in active discussion with other members of the eyecare team to best meet and serve the patient/client needs.
- 3.5.1** Demonstrate an understanding of patient/client/s expectations and aspirations and manage situations where these cannot be met.
- 3.5.2** Communicate the advantages and limitations of the product to the patient/client in a meaningful and clear manner.
- 3.5.3** Apply knowledge of learning principles and teaching techniques.
- 3.5.4** Implement an individualized teaching plan in order to promote, maintain and restore ocular health.
- 3.6.1** Recognize factors influencing learning and adjust teaching/training.
- 3.6.2** Use appropriate supporting materials.

**3.7.1** Provide information within the scope of the profession and refer to the appropriate professional as necessary.

**4.4.1** Demonstrate willingness to embrace change and advancements in the industry.

**4.6.1** Assess, synthesize and analyze the competing issues and need of the patients/clients.

**4.6.2** Seek guidance and assistance as required.

**4.6.3** Demonstrate flexibility, creativity and adaptability in meeting unexpected demands.

**7.2.3** Demonstrate an understanding of the importance of continuous learning.

**The theoretical portion** covers detailed explanations of:

- The role of professionalism in fulfilling regulatory requirements
- How the use and explanation of professional titles and designations supports the professional relationship between the Optician and patients/clients.
- The relationship between the Code of Ethics and treating all patients/clients and other professionals on the vision care team equally with respect and without judgement – always focusing on the best interest of the patient/client.
- The importance of collaborating with other professionals and recognizing the limitations of the Optician's scope of practice, recognizing and acceding to the specialty knowledge of other registered professionals as well as seeking and considering the advice of other Opticians while being respectful in spite of having disagreeing points of view.
- Barriers to collaborative practice:
  - Personality differences
  - Culture and ethnicity
  - Generational differences
  - Gender
  - Hierarchy
  - Concerns regarding responsibility
  - Complexity of treatment
  - Emphasis on rapid decision making

- The role of the National Competencies for Canadian Opticians in measuring professionalism.
- Steps to establishing and maintaining professional boundaries with patients/clients.
- Collection and storage of personal information as it is related to respect for the client's privacy

**The interactive portion** of this course is about 'professionalism' - the way the optician displays his/her professionalism through the way he/ she performs the required competencies. It emphasizes that although registration and licensing can be achieved by meeting a minimum standard of competency, a professional must strive to move up the hierarchy of competency throughout his/her career. The optician must:

- Place the interests of the patient above any other priority
- Improve level of competence
- Maintain standards of honesty & integrity in the face of conflicting choices
- Be relentlessly accountable for decisions and actions
- Improve emotional maturity
- Honour commitments
- Respect the dignity of your patients
- Develop situational awareness & judgment as well as empathy

The **students are required to perform a self-evaluation** rating themselves against a set of personal characteristics that set a benchmark for professional behaviour. This offers a tool by which students that can serve as a goal-setting incentive.

**There are four scenarios depicted.** In each scenario the student is presented with a case study and then asked to indicate how he/she would manage the situation. After developing a course of action the student then compares his/her response to that of the registered optician in charge of the case.

## **Infection Control**

**The competencies covered in this bridging course are:**

- 5.1.1** Implement and maintain a daily infection prevention control procedure
- 5.1.2** Recognize the current landscape of infectious diseases and required preventative measure for public safety

5.1.3 Demonstrate proper aseptic techniques

5.1.4 Demonstrate proper aseptic techniques for contact lenses

5.2.1 Adhere to policies, standards and procedures as it relates to patient/client and workplace safety

5.2.2 Manage risk in the workplace to prevent and mitigate safety issues

5.2.3 Manage risk to prevent and mitigate safety issues to patients/clients

**The theoretical portion of this course includes:**

- Understanding the etiology of infection
- Implement and maintain infection control and safe practices
- Infection etiquette
- Recognizing the need for and using emergency intervention

These themes are explained focussing on how the optician's responsibility for health and safety of the dispensary environment and of the patients/clients connects to the application of all of the 8 core competencies required of a registered optician:

1. Assumes Professional Responsibilities
  2. Communicates and collaborates effectively
  3. Educates and advocates effectively
  4. Applies organizational management principles
  5. Ensures patient/client and practice safety
  6. Demonstrates clinical knowledge
  7. Applies critical thinking and professional judgment
  8. Utilizes practice processes.
- Virus, bacteria and fungi –
    - What are they and how do they spread infection?
    - Chain of infection
    - Incubation period for diseases
  - Sensitizing the student to:
    - Contamination of surfaces in the working environment
    - Human transfer of infectious diseases
    - Inventory of sources of infection in the average dispensary



- Highly touched objects i.e. pupillometer

### **Implement and Maintain Infection Control and Safe Practices**

- Organizing the task
  - Develop a rationale for establishing/reviewing the dispensary infection control protocol
  - Set out a timeline
  - Review staff and dispensary hygiene,
  - Research best practice methods of infection control and
  - Reflect on how epidemic/pandemic can impact you and your environment
  - Show leadership - re-energize others to implement best practise
  - Define responsibility and frequency for cleaning and disinfection patient care equipment and surfaces
  - Create control charts for each area that requires infection control and maintenance including frequency of routine and column for indicating date and time of performance
  - Determine policy on monitoring compliance
  - Staff should be able to answer question, "How do you know whether this item has been cleaned and/or disinfected?"
  - Staff Assignments
  - List of supplies appropriate for the task
- Methods of infection and sterilization
  - Evaluate the degree of contamination
  - Select a product that suits the level of decontamination required
  - Use product properly according to label direction
  - Protect yourself by cleaning your hands
- Spaulding Classification System

#### Infection Etiquette

- Personal wellness assessment flow chart
- Common flu and cold symptoms
- Managing staff and patients who demonstrate symptoms of illness

### **Recognizing the Need for and Using Emergency Intervention**

- Managing emergencies in the dispensary

- Categorizing level of emergency
  - Minor
  - Intermediate
  - Delayed
- Epidemic and Pandemic
  - Role of regulated health professionals under conditions of pandemic
- Pandemic Planning

**The interactive portion of this course focuses on:**

The importance of being pro-active about infection control and prevention in the dispensary by:

- Introducing the student to the portions of the National Competencies for Canadian Opticians document that is specific to infection control and prevention, and ensuring the workplaces is a safe environment
- Reviewing the genesis, and life expectancy of viruses, bacteria and fungi as well as the chain of infection
- Requiring the student to develop a list of objects and surfaces in their own dispensing environment that are most likely host to infectious contaminants
- Leading the student through the development of an infection control plan using:
  - The Spaulding Classification System
  - Templates for taking a disinfection inventory and creating a cleaning & disinfection schedule
  - The Infection Control Decision-Making Matrix
  - Government Guidelines for Personal Service Establishments in order to
    - Develop a list of places and things requiring regular infection control attention.
    - Evaluate the potential degree of contamination using the Spaulding Classification chart combined with a contextual understanding of the item.
    - Pick a product that suits the level of decontamination required
    - Use the product according to agreed upon standards and instructions on the product label
    - Use barrier protection and perform post disinfection clean-up.

Infection Control Etiquette focuses on understanding how the behaviour of one individual can impact others – both positively and negatively.

- Take steps to ensure your own wellness:

- Strong emphasis on the need for hand washing
- Understanding the Wellness Assessment Decision Making Matrix
- Understand common flu and cold symptoms and how they differ from more serious disease symptoms
- Promote personal wellness in the dispensary
  - Advocate for dispensary policy empowering staff and managers to use the Wellness Assessment Decision Making Matrix when deciding if staff should be at work or should stay home
  - Anticipate increasing potential for infection by monitoring the Canadian and provincial flu watch sites

**The student participates** by developing a list of ways to motivate staff to be more diligent about infection control then comparing their list to a master list.

**The student is instructed** to read a paper on “How NOT to Spread the Flu” then is asked to develop a list of tips from their own imagination.

### **Recognizing the Need for and Implementing Emergency Intervention**

- Developing a preparedness plan for emergency situations
  - Physical emergencies to patients and staff in the dispensary
  - Encourage staff to take CPR and emergency training courses
  - Create a patient emergency response plan
  - In time of pandemic
    - Back-up plan to ensure continuance of business and service
    - Increased emphasis on infection control procedures
      - Frequency of hand washing and sanitizing of environment
      - Barrier protection
      - Distancing
      - Coughing etiquette

### **Equipment Use Eyeglasses**

**This bridging course teaches to the following competencies:**

**6.1.1** Recognize and name the equipment used in your practice.

**6.1.2** Demonstrate your knowledge of operating the equipment appropriate to practice.

**6.1.3** Choose the appropriate equipment required for the situation.

**6.1.4** Interpret the readings and apply your knowledge to inform decisions and actions.

**8.3.1** Ensure measurements are performed accurately using approved devices and tools.

**8.3.2** Ensure all ophthalmic appliances meet minimum recommended tolerances.

**9.6.1** Demonstrate the ability to use and interpret the results found using optical tools.

The **theoretical portion** of the course is a description of all of the pieces of equipment and tools that are commonly used in an optical dispensary along with instructions on their use. These include:

- Automated refractor
- Standard eye charts
- Frame adjustment tools
  - Calipers
  - Cutters
  - Pliers
  - Screwdrivers
  - Forced air blower
  - Bead pan
- Laboratory specific equipment
  - Automatic edger
  - Fining/buffing machine
  - Frame tracer
  - Hand edger
  - Photometer
  - Surfacing machine
  - Tint/UV unit

- UV meter
- Lens clock
- Lensometer (automated and manual)
- Measuring tools
  - Digital measuring systems
  - Distometer/vertometer
  - Pantoscopic tilt tool
  - Pupillometer
  - PD Ruler
  - Wrap tool
  - Tolerance Chart
  - Ultrasonic cleaner

The **interactive portion** of this course takes the student through a typical day in an optical dispensary using two scenarios.

**The interactive component concludes with a second self-test.**

## **Equipment Use Contacts**

**The competencies covered in this bridging course are:**

**6.1.1** Recognize and name the equipment used in your practice.

**6.1.2** Demonstrate your knowledge of operating the equipment appropriate to practice.

**6.1.3** Choose the appropriate equipment required for the situation.

**8.3.1** Ensure measurements are performed accurately using approved devices and tools

**8.3.2** Ensure all ophthalmic appliances meet minimum recommended tolerances.

**10.1.4** Use ophthalmic instruments and devices to perform ocular measurements for contact lens fitting.

**10.2.2** Assess patient/client visual acuity, including the use of manifest over refraction if necessary, after a suitable adaptation time.

**The theoretical portion of this course** is a review of the following themes:

- Best Practice
- The Keratometer
- The Radiuscope
- The Slit Lamp

The teaching technique in each section is a didactic summary of the working parts, functioning and uses of equipment including pictorial depictions of each piece of equipment.

### **Best Practice equipment**

- Measuring magnifier (V-gauge)
- Burton lamp
- Trial lenses
- Manifest Over refraction kit
- Solutions
- Lensometer
- Adjustment units
- Crimper and caps
- Electric visual acuity chart

### **The Keratometer**

- Identifying parts of the keratometer
- Focussing the mires and recording the measurements
- Classifications of astigmatism

## **The Radiuscope**

- Identifying parts of the radiuscope
- Concave mount and use of solution in conjunction with
- Reading the clock dial and Zeroing the clock
- Focussing images in the radiuscope and recording the measurements
- Reading spherical lenses as well as front and back toric lenses
- Standard of tolerances

## **The Slit Lamp**

- Identifying types and uses of slit lamp illumination along with light sources used:
  - Direct Diffuse
  - Direct Focal
  - Optic Section
  - Parallelepiped
  - Conical Beam
  - Tangential
  - Specular Reflection
  - Indirect Focal Illumination
  - Sclerotic Scatter
  - Retro-illumination
- Use of fluorescein strips

**The Interactive component** of this course follows the steps a contact lens fitter takes in solving a fitting problem for her patient/client who is wearing soft contact lenses. At each step along the way the student is introduced to a teaching component about the equipment being used followed by how and why it is being used in this particular case. As well the student participates in the decision-making the optician

makes based on observation, measurement and assessment of information gathered by the optician both objective and subjective.

## **Anatomy**

This bridging module teaches to the following competencies:

**3.5.5** Discuss with the patient/client systemic disease and its ocular impact

**6.2.1** Demonstrate an understanding of the visual pathway

**6.2.2** Demonstrate an understanding of the anatomy of the eye

**6.2.3** Demonstrate an understanding of visual fields

**6.2.5** Demonstrate an understanding of the pathology of the ocular system

**6.2.6** Understand the implications and relevance of systemic diseases to ocular health

**10.2.2** Assess patient/client visual acuity, including the use of manifest over-refraction if necessary after a suitable adaptation time

**The Theoretical portion** covers a review of:

- the anatomy of the human eye
- how light rays are transmitted along the visual pathway to the retina and subsequently form an image on the brain,
- how the transmission becomes interrupted or distorted
- the importance of visual acuity and visual field to the patient's safety and well-being,
- the potential impact of systemic disease on a patient's quality of vision and overall vision health

Topics covered include:

- Structures of the eye and function
- Tear system and function
- Extra ocular muscles and function
- Cranial Nerves and innervations
- Bony orbit of the eye
- Nasal bone, temporal bone and maxilla



- Visual Pathway
- Pathologies of the ocular system
- Effects of medication on vision
- Visual acuity and manifest over-refraction

The **interactive portion** depicts a real life dispensing situation that demonstrates how the dispensing optician implements the knowledge acquired in the theoretical component.

## Optics

**The competencies covered in this bridging course are:**

- 6.3.1** Apply current and relevant ophthalmic theories using mathematical calculations to select appropriate ophthalmic appliance
- 8.1.4** Apply knowledge of binocular vision to the dispensing of an appropriate ophthalmic appliance
- 8.3.2** Ensure all ophthalmic appliances meet minimum recommended tolerances
- 9.1.3 & 10.1.2** Identify anomalies in a prescription

**The theoretical portion of this course** includes 8 instructional documents:

- Calculating Wraps
- Compensative Power
- Lens Fabrication
- Magnification
- Manifest Over-refraction
- Pantoscopic Tilt
- Prentice's Rule
- Vertical Imbalance

### Calculating Wraps

1. Define wrap and list the criteria necessary to determine the effect induced due to a wrap on the eyeglass frame
2. Calculate the effective power due to a wrap on a spherical prescription
3. Calculate the effective power due to a wrap on a compound myopic and hyperopic prescription with either axis 090 or 180

4. Calculate the effective power due to a wrap on a compound myopic and hyperopic prescription with an oblique axis
5. Describe how to eliminate all symptoms associated with a change in wrap

### **Compensative Power**

1. Define compensative power and list the components of the compensative power formula.
2. Calculate the compensative power of a minus prescription as the vertex distance is closer than the refracted distance.
3. Calculate the compensative power of a plus prescription as the vertex distance is closer than the refracted distance.
4. Given a spectacle prescription greater than 4.00 D and the client wants contact lenses, calculate the power required in a contact lens.

### **Lens Fabrication**

1. Calculate the minimum blank size required to cut out and finish a spectacle lens
2. Determine the amount of decentration required to obtain a patient's pupil distance
3. Calculate the decentration and segment inset needed for a progressive using monocular pupil distance measurement.

### **Magnification**

1. Calculate the magnification due to power and shape to determine the total magnification in each eye.
2. Determine if the magnification of retinal images are within the 10% tolerance which allows fusion and binocular vision
3. Calculate a new base curve for one of the spectacle lenses in order to equalize the magnification of retinal image sizes.
4. Prove mathematically that the retinal images are equalized and binocular will occur.

5.

### **Manifest Over-refraction**

1. Introduction to mathematical formulae
2. Calculate the final prescription if given a prescription and a simple spherical M.O.R.
3. Calculate the final prescription if given a compound prescription and compound M.O.R. with the axis 090 apart
4. Combine cylinders that are not 090 (cross cylinders) apart by finding:
  - a. Resultant cylinder
  - b. Added sphere
  - c. New Sphere
  - d. Angle 'r'
  - e. Final axis
5. Calculate the mathematical prescription and finalize by rounding to the nearest 0.25 D in all mathematical calculations

### **Pantoscopic Tilt**

1. Define and describe pantoscopic angle/tilt
2. List the criteria to determine the effects of pantoscopic angle/ tilt
3. Calculate the effective power due to a tilt on a spherical prescription
4. Calculate the effective power due to a tilt on a compound myopic and hyperopic prescription with either the axis of 090 or 180 degrees
5. Calculate the power in any meridian required
6. Calculate the effective power due to a tilt on a compound myopic or hyperopic prescription with an oblique axis
7. List the symptoms induced and associated with a change in pantoscopic angle/ tilt
8. Describe how to eliminate all symptoms associated with a change in pantoscopic angle/tilt

## **Prentice's Rule**

1. Diagram an eye looking down on a plus lens to determine the base direction
2. Diagram an eye looking up to determine the base direction
3. Diagram an eye looking nasally to determine the base direction
4. Diagram an eye looking temporally to determine the base direction
5. Repeat 1-4 for an eye looking on a minus lens to determine base directions
6. Define prism dioptre
7. Define the optical center of the lens
8. Define the geometrical center of the frame
9. Recognize symptoms associated with prismatic effects in order to problem solve a client's concerns related to their eyeglasses.
10. Apply prentice's rule to calculate prismatic effects when the eye is looking in various directions away from the optical center.

## **Vertical Imbalance**

1. Define anisometropia and antimetropia
2. Define vertical imbalance
3. List and identify the methods of correction for vertical imbalance
4. Calculate vertical imbalance using prentice's rule.
5. Determine the amount of bi-centric grind required to eliminate the imbalance and enhance binocular vision
6. Determine where to place the bi-centric line
7. Verify the bi-centric lens

**The interactive portion of this course** provides everyday scenarios that illustrate the use of the concepts and formulae taught in the theoretical component.

## Critical Thinking

**The competencies covered in this course are:**

- 6.1.4 Interpret the readings and apply your knowledge to inform decisions and actions
- 7.1.1 Apply relevant and current knowledge of physiology, lens theory and solutions and understanding of fabrication of ophthalmic appliances
- 7.1.2 Solve problems by applying an organized approach
- 7.1.3 Demonstrate problem-solving skills to correct any deficiencies related to the ophthalmic appliance.
- 7.2.1 Evaluate the effectiveness of the resolution
- 7.2.2 Acquire and apply knowledge from everyday experiences
- 7.2.3 Demonstrate an understanding of the importance of continuous learning
- 8.2.1 Consider assessment data to support decisions

**The theoretical portion of this course** reviews the concept of Critical Thinking and its role in the Optical Dispensary through the use of case studies and real world examples.

**The themes covered are:**

- Analysis of the prescription and considering potential optical lens and/or frame options to fulfill the patient's vision needs
- Using communication and a variety of questioning techniques as well as collecting objective data to gather information that will help the optician narrow the choices and build a complete understanding of the patient's wants and needs

**The interactive portion of this course** presents a problem solving scenario. The student is required to work through the information gathering and critical thinking process with the optician. As each piece of information is collected either by subjective or objective means the student is asked about why the information is important and how this might guide solutioning. After completing this assignment the student is allowed to view what the optician is thinking. The following is an example.

## **Dispensing Eyeglasses 1**

**The competencies covered in this bridging course are:**

- 6.1.4** Interpret the readings and apply your knowledge to inform decisions and actions
- 8.1.1** Obtain relevant optical and health history
- 8.1.2** Collect both objective and subjective information
- 8.1.3** Determine environmental influences on vision including lighting and physical set up of workstation
- 8.1.4** Apply knowledge of binocular vision to the dispensing of an appropriate ophthalmic appliance
- 8.2.1** Consider assessment data to support decisions
- 9.1.1** Understand the relationship between the prescription requirements and the lens characteristics
- 9.1.2** Understand the relationship between the prescription requirements and the frame characteristics
- 9.1.3** Identify anomalies in a prescription
- 9.1.4** Recommend appropriate ophthalmic appliances, taking into consideration visual, vocational and avocational needs
- 9.1.5** Advise patient/client on the limitations resulting from the lenses and frame combination
- 9.1.6** Apply knowledge of available manufacturing specifications
- 9.1.7** Identify frame materials and consider material properties

The **theoretical portion** of this course covers in detail all elements of dispensing beginning with when a patient enters the dispensary with a prescription and ending when the optician sends the patient order to the laboratory for processing.

- **Greeting the patient, building a rapport and asking questions**
- **The prescription**
  - Parsing a specific prescription (detailed example)
  - Considering prescriptive factors that might constrict lens selection
    - High plus challenges and lens options
    - High minus challenges and lens options
    - Special challenges i.e. aniseikonia
  - Considering frame selection
    - Plastic and metal frame materials
    - Rimless, nylon mounts, semi-rimless, drilled rimless
- **How the patient will use his/her eyeglasses**
  - Detailed analysis of the lifestyle and occupational visual usage using case studies for two patients
- **Assessing frame fit**
  - The ideal fit explained
  - Aesthetic frame selection
- **Lens selection**
  - Coatings
  - Sun treatments
  - Lens materials
  - Lens designs
  -

- **Measurement**
  - Performing an initial fit to ensure all measurements will be accurate
  - PD
  - Ocular centre height
  - Measuring wrap
  - Measuring pantoscopic tilt
- **Confirming patient expectations of completed eyeglasses**
  - Visual expectations
  - Terms of service
  - Patient's maintenance and follow-up
- **Ordering**
  - Examining a typical order

In the **interactive portion** of this course the student and optician work through the following processes:

- **Collecting and analysing data**

Medical, personal history and lifestyle/vocational data (Visual Needs Analysis template examined)

- How information collected may impact quality of vision
  - High blood pressure/diabetes
  - Previous problems with eyewear formats – lenses and/or frames
  - Medications
  - Ocular trauma/surgery
  - Facial trauma
  - Developing cataracts



- Mobility challenges
  - Case studies analysing visual needs of six occupations
  - Student challenged to complete a visual analysis and develop a recommendation of lens format for a 50 year old electrical who is a first time presbyope. The contractor believes his best choice will be a pair of distance and a pair of reading glasses. The student must develop a rationale for his/her recommendation.
- **Collecting both subjective and objective information**
    - Subjective information from patient
    - Objective findings by observation (for example)
      - Patient's posture
      - Facial anatomy
      - Corneal readings
      - Data from neutralizing existing vision appliances
    - Use of open and closed questions including examples and student challenge
    - Using a template complaint form to analyse patient problems
- **Applying knowledge**
    - Importance of understanding and applying knowledge of binocular vision
    - Applying critical thinking to accumulated information to arrive at informed decision-making

## **Dispensing Eyeglasses 2**

**The competencies covered in this bridging course are:**

- 7.1.1** Apply relevant and current knowledge of physiology, lens theory and solutions and understanding of fabrication of ophthalmic appliances.
- 7.1.2** Solve problems by applying an organized approach.
- 7.1.3** Demonstrate problem-solving skills to correct any deficiencies related to the ophthalmic appliance.
- 7.1.4** Establish mutual understanding with the patient/client.
- 7.1.5** Manage time and organize patient/client care effectively.
- 7.2.1** Evaluate the effectiveness of the resolution.
- 7.2.2** Acquire and apply knowledge from everyday experiences
- 8.3.1** Ensure measurements are performed accurately using approved devices and tools.
- 8.3.2** Ensure all ophthalmic appliances meet minimum recommended tolerances.
- 8.3.3** Ensure manufacturer's recommendations are considered.
- 9.2.1** Demonstrate the skills required to ensure accurate measurements.
- 9.3.1** Demonstrate an understanding of the manufacturing process.
- 9.3.2** Order frames and lenses from the appropriate suppliers to complete the eyeglasses.
- 9.3.3** Ensure timely delivery of the eyewear
- 9.4.1** Perform final inspection of ophthalmic appliance upon receipt from the lab and before delivery to the patient/client.
- 9.4.2** Take appropriate measurements to validate lens to the prescription and confirm lenses are within regulatory standards.
- 9.5.1** Perform appropriate adjustments to ensure a correct fit.
- 9.5.2** Determine the frames and lenses are properly positioned on the patient/client.

**9.6.1** Demonstrate the ability to use and interpret the results found using optical tools.

The **theoretical portion** of this course follows the completion of dispensing beginning with the receipt of the eyeglasses from the laboratory and follows the process through to the final delivery of the eyewear to the patient. The topics covered include:

- **Comparison of paperwork to verify the received order matches the requested order**
- **Visual inspection of the eyeglasses (use of Standard Tolerance Chart)**
  - Condition of frame
  - Condition of lenses – external and internal defects
  - Eyeglasses are in standard alignment
- **Use of lensometer to:**
  - Verify power
    - Detailed verification for single vision lenses including both spherical and sphero-cylindrical lenses
    - Lined bifocal Rx confirmation
    - Progressive lens Rx confirmation
    - Reading of prism power
  - Verifying PD
    - Marking and measuring OC (PD and OC height)
    - Assessing accuracy using Standard Tolerance Chart re: unwanted prism generated
    - Measuring near PD in standard bifocal eyeglasses
    - Measuring PD in progressive lens multifocals
- **Measuring base curve**
- **Assessing frame alignment**

- The bridge
  - Check for 'X'ing and coplanar issues
  - Remedies for 'X'ing and coplanar issues
    - Plastic frame
    - Metal frame
- Temples
  - Spread
  - Fold
  - Tips
- Table test
- **Passing or failing the job**
  - Pass the job – call the patient
  - Fail the job – return to the lab – advise the patient of delay
- **Patient pick-up**
  - Fitting to the patient
    - Observe eyeglasses on patient and assess adjustments that need to be made
    - Bridge, temple splay, length to bend, adjustment of temple tips
    - Patient feedback
  - Confirmation of vision (Includes detailed instructions on performance of visual acuity check)
    - Subjective and objective assessment
      - Reviewing with patient visual expectations discussed at intake
      - Instructing patient on ways to become accustomed to the new eyeglasses

- Teaching and expectations
  - Case study of teaching a first time presbyopic patient to use progressive addition lenses
- Follow-up care
- Update patient record to reflect outcomes of dispensing visit

The **interactive portion** of this course focuses on the importance of solving problems related to deficiencies in an ophthalmic appliance, by applying an organized approach and using relevant and current knowledge of physiology and lens theory.

## **Contact Lenses 1**

The competencies covered in this bridging course are:

- 6.1.4** Interpret the readings and apply your knowledge to inform decisions and actions
- 8.1.1** Obtain relevant optical and health history
- 8.1.2** Collect both objective and subjective information
- 8.1.3** Determine environmental influences on vision including lighting and physical set up of workstation
- 8.1.4** Apply knowledge of binocular vision to the dispensing of an appropriate ophthalmic appliance.
- 8.2.1** Consider assessment data to support decisions

The **theoretical portion** of this course includes:

1. Demonstrating knowledge of the importance of obtaining a relevant medical and optical health history from the patient in order to complete an initial contact lens fitting and to provide organized ongoing care of the patient.
2. Developing a detailed patient file.
3. Understanding the importance of taking measurements and performing assessment relative to the patient's ocular status and suitability for contact lens wear.
4. Demonstrating knowledge of the use of ophthalmic instruments and devices to perform ocular measurements for contact lens fitting.

5. Identifying anomalies in prescriptions that are indicators for contact lens fitting decisions.
6. Interpreting readings considering assessment data and applying knowledge to inform and support decisions.
7. Demonstrating an understanding of the affect of prescription and non-prescription drugs on contact lens wear.

The themes upon which this course focuses are:

- The importance of developing a detailed medical history and its relevance, when considered in conjunction with observations and measurements taken by the contact lens fitter to product selection (lens modalities, wearing schedules and solutions regimens), problem solving and continued patient care.
- Assessing visual acuity monocularly and binocularly as a pre- and post-fitting routine
- Measuring tear volume
- Tear break-up time
- Factors impacting pre-corneal tear film (i.e. how diabetes affects contact lens wear
- Pathological conditions related to contact lens wear
  - Blepharitis
  - Hyperthyroidism
  - Inflammatory arthritis
  - Cold sores and herpes
  - Contact lenses and dry eyes

Objective measurements are detailed.

- HVID and VPA
- Pupil size
- Performing keratometer readings
  - Classification of types of astigmatism
- Performing slit lamp biomicroscopy
  - Diffuse illumination
  - Direct focal illumination
    - Optic section
    - Conical beam illumination
    - Specular reflection illumination
    - Tangential illumination
    - Parallel piped illumination
  - Indirect focal illumination
    - Sclerotic scatter
    - Retro-illumination
- Spectacle magnification/contact lens magnification
  - Explanation of magnification problems related to anisometropia, antimetropia and aniseikonia
    - Examples with detailed calculations to establish magnification disparity with spectacles compared to the magnification disparity when contact lenses are used.
- The affect if medications on vision
- The affects of alcohol on vision
- Environmental issues that affect vision

- Climate and indoor conditions
- Digital eye fatigue
- Prescription interpretation and ordering
  - Selection of base curves for soft and rigid lenses (spherical as well as toric)
  - Detailed prescription interpretation examples
- Patient training and continued care
  - Training the patient on insertion, removal
  - Selecting solution regimen tailored to meet patient's specific needs
  - Equilibration and adaptation/wearing schedules
  - Explanation of normal adaptive symptoms
- Follow-up requirements
  - Frequency of check-ups immediately post-fitting
  - Continued care check-up recommendations
  - Detailed itemization of post-fitting routine contact lens fitter performs at each visit

The **interactive portion** of this bridging course concentrates on applying the knowledge and skills taught in the theoretical component to a typical dispensing scenario. The student follows a contact lens fitter as she manages a contact lens fitting for a patient who has not previously worn contact lenses.

## **Contact Lenses 2**

The competencies covered in this bridging course are:

**7.1.1** Apply relevant and current knowledge of physiology, lens theory and solutions and understanding of fabrication of ophthalmic appliances

**7.1.2** Solve problems by applying an organized approach



- 7.1.3 Demonstrate problem-solving skills to correct any deficiencies related to the ophthalmic appliance
- 7.1.4 Establish mutual understanding with the patient/client
- 7.1.5 Manage time and organize patient/client care effectively
- 7.2.1 Evaluate the effectiveness of the resolution
- 7.2.2 Acquire and apply knowledge from everyday experiences
- 8.3.1 Ensure measurements are performed accurately using approved devices and tools
- 8.3.2 Ensure all ophthalmic appliances meet minimum recommended tolerances
- 8.3.3 Ensure manufacturer's recommendations are considered
- 10.2.1 Apply product knowledge to select the appropriate lens design, material, modality and compatible solution
- 10.2.2 Assess patient/client visual acuity, including the use of manifest over refraction if necessary, after a suitable adaptation time
- 10.2.3 Verify lens fitting subjectively and objectively and make any adjustments to the fitting

The **theoretical portion** of this course uses an academic approach to teaching the following topics

- **Lens materials and lens designs**
  - Properties of ideal contact lens material
  - Comparisons of
    - PMMA
    - RGP
    - Hydrogel
    - Silicon Hydrogel
  - Designs
    - Single Vision
    - Toric
    - Bi-toric
    - Multifocal

- Therapeutic contact lenses
  - Scleral contact lenses
- **Selecting a lens for the patient: The process**
  - Cornea
    - The tear system
      - Tear layer
      - The Blink
      - Function of pre-corneal film
      - Tear volume
      - Tear break-up time
      - Contact lens wear and dry eyes
    - The keratometer
      - Recording the mean reading
      - Guideline of tolerances for measurement of corneal toricity
      - Classification of types of astigmatism (examples included)
  - Manifest over-refraction
  - Selecting the lens
  - Assessing visual acuity
  - Factoring in the modulus, water content, oxygen permeability and UV protection of lens materials
- A guide to assessing the fit of contact lenses
  - Lens coverage and lens movement
  - Over-keratometry – The blink test
  - The push test
  - Signs of a steep fitting contact lens
  - Signs of a flat fitting contact lens
  - Criteria for a good fitting soft toric contact lens
    - Stabilization techniques
    - Axis rotation
  - Multi-focal contact lenses
  - Criteria for a good fitting rigid gas permeable lenses
  - Symptoms of a steep fitting RGP contact lens
  - Symptoms of a flat fitting RGP contact lens
  - Contact lens theory case study
    - RGP patient complaining of blurred vision and general discomfort
    - Subjective and objective assessments performed including slit lamp observations using a variety of illuminations techniques

- Verifying specifications
  - Assessing visual acuity and 'K' readings
  - Verifying the results of a modified fit
- Fitting the presbyope
  - The monovision fit
  - Method for fogging
  - Types of soft multifocal designs
  - Pupil size
  - Fitting multifocal RGP designs
  - Summary of fitting strategy
    - Patient selection
    - Take necessary measurements
    - Identifying patient's visual needs
    - Select a lens design, material and modality
    - Follow the manufacturer's nomogram
    - Allow lenses to equilibrate
    - Explain to the patient the adaptation period
    - Evaluate the fitting with fluorescein
    - Order contact lens parameters
    - Verify parameters once received
    - Train patient
    - Book follow-up appointments
- **Contact lens verification**
  - Using required tools, instruments and items for soft lenses PLUS additional tools for RGP lenses
    - Radiuscope
    - V-gauge, PD ruler and measuring magnifier
    - Lensometer
    - Base curve
  - Measurements to be verified
    - Base curve (RGP and Soft lenses)
    - Power (RGP and Soft lenses)
    - Total diameter (RGP and soft lenses)
    - Optic zone diameter (RGP lenses)
    - Peripheral curve width (RGP lenses)
    - Material (RGP and soft lenses)

- **Dispensing to the patient**
  - The importance of patient education
  - Training of insertion and removal of contact lenses
- **Contact lens solutions**
  - Cleaning
  - Rinsing
  - Disinfection
  - Wettability
  - Storage
  - Buffering agent
  - Biocompatibility of contact lens solutions and materials
  - Corneal staining
  - Special care solutions
- **Appendix**
  - Standard Tolerance Charts
  - Detailed examples of manifest over-refraction calculations
  - Steps involved in teaching a patient to insert and remove a soft contact lens
  - Steps involved in teaching a patient to insert and remove rigid gas permeable lenses

The **interactive portion** of this course provides a case study in which the contact lens fitter uses a calm, deliberate, pro-active, methodical approach to provide after care and service to solve a patient's problem at a follow-up visit.

As the case study unfolds the student is required to participate with the contact lens fitter and the patient to:

1. Define the problem.
2. Consider all possible causes.
3. Collect subjective and objective information.
4. Narrow choices.
5. Identify the most likely cause.
6. Verify the cause.
7. Develop a plan going forward.

In the course of following this routine the following matters are covered:

- Importance of patient wearing the contact lenses to a follow-up appointment
- Symptoms of a tight lens
- Observing lens movement with lens in situ
  - Use of slit lamp
- Vascularization
  - Assessing degree of vascularization
- Ocular discharge
- Observing contact lens under magnification for damage
- Comparing "K" readings at follow-up visit to baseline readings at intake
- Requiring patient to demonstrate his insertion/removal techniques
- Retraining patient
  - Developing personalized insertion/removal routine to overcome patient lack of skill
- Pro-active follow-up