Annual Report for Assessment of Outcomes 2012-13

Subject Area Committee Name: ___Ophthalmic Medical Technology_____
Contact person: __Joanne Harris_____
For LDC/DE: Core outcome(s) assessed: _____
For CTE: Degree or certificate* assessed: ___AAS OMT_____
*please attach a table showing the alignment of the degree or certificate outcomes with the College Core Outcomes

Please address the questions below and
send to *learningassessment@pcc.edu* by **June 21, 2013** with Annual Report in the subject line

Note: Information provided in this report may be inserted into or summarized in Section 2C Program Review Outline.

1. Describe changes that have been implemented towards improving students' attainment of outcomes that resulted from recent outcome assessments. These may include but are not limited to changes to content, materials, instruction, pedagogy etc. Please be sure to **describe the connection** between the assessment results and the changes made.

   The Ophthalmic Medical Technology Program has implemented changes this year as a result of outcomes assessment initiated in academic calendar year 2011-2012. While utilization of clinical laboratory rubrics has proved most useful, we have continued to make small, but important, changes including patient instruction and overall communication skills. Student feedback led us to do earlier and more frequent online mock testing to prepare students for their national certification examinations. The SAC also undertook a project to review each OMT course CCOG looking for content overlap, redundancy and relevancy to current standards. At that time we also added content to the Ophthalmic Imaging course, specific to ophthalmic photography. This has been an area where students have had lower than average scores on the national exam. We continue to review student test scores on an annual basis from the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) technician level certification examination and believe it provides a direct measurement of program outcomes. Based on examination results a decision was made to add an introductory level pharmacology course within the program to increase student success in the ocular pharmacology course.
   A revision of the clinical practicum assessment rubric has been completed by our SAC and will be utilized beginning fall term 2013. The goal for this revised rubric will be to improve assessment of communication skills, professional and ethical behavior in the clinical setting.

   Revisions to employer surveys with specific questions related to program outcomes are still under revision and will be completed this summer, sent to employers and available for SAC review at the upcoming fall meeting.

For each outcome assessed this year:

2. Describe the assessment design (tool and processes) used. Include relevant information about:

   Assessment design in the OMT program includes:
   - *Using rubrics on a weekly basis during lab times to assist students in learning each step of a clinical skill.*
   - *All laboratory classes now include a final examination of practical skills based on the rubrics.*

- *At the end of fall and winter term in year two of the program skill evaluators from the professional community are brought into the lab setting. Students are required to demonstrate their skill level on volunteer patients in the six key areas defined by JCAHPO.*
- *Written results from the evaluation are shared with each student individually by a program instructor following the evaluation.*
- *For consistent and reliable results evaluators are provided copies of rubrics used by the students, a skills assessment form with criteria outlined, training for scoring results and room to include comments.*

See attached example of laboratory rubrics and evaluation form.

3. Provide information about the results (i.e., what did you learn about how well students are meeting the outcomes)?
    - *Using rubrics weekly vs. only at the end of the term for evaluation has increased student knowledge and skill in performing tests. It has also highlighted areas where rubrics need more detail/revision.*
    - *While students may be proficient at following all the steps correctly it does not necessarily translate to accurate results, both of which are equally important.*
    - *By using outside evaluators we learned specific weakness, most often in the area of patient instruction and clinical efficiency. The evaluator's comments provide valuable feedback for the instructors regarding improper habits, missing steps and lack of sanitation practices.*
    - *Once again the students attained a 100% pass rate on the national certification exam administered by JCAHPO!*
    - *JCAHPO Program Performance Report (attached) clearly shows the OMT program his consistently **higher** mean scores and **lower** standard deviation scores in **ALL** content areas as compared to all program graduates in accredited programs.*

    See attached aggregate results of community clinical evaluators and national certification examination.

4. Identify any changes that should, as a result of this assessment, be implemented to help improve students' attainment of outcomes. (These may include, but are not limited to, changes in curriculum, content, materials, instruction, pedagogy etc).

    Program changes that will take place in the coming year including the addition of a second clinical practicum day during the summer term between year one and year two. This extra experience should help students gain confidence in their clinical skills and ease the transition into the second year of the program. Another curriculum change will be the addition of MP 135, Introduction to Pharmacology, in term two of the program. This will prepare students for OMT 103, Ocular Pharmacology, and we expect better outcomes on the JCAHPO national exam this area. Additional course work on soft skills and professionalism will be added to Seminar II throughout year two of the program.

5. Reflect on the effectiveness of this assessment tool and assessment process. Please describe any changes to assessment methodology that would lead to more meaningful results if this assessment were to be repeated (or adapted to another outcome). Is there a different kind of assessment tool or process that the SAC would like to use for this outcome in the future? If the assessment tool and processes does not need to be revised, please indicate this.

- *The SAC is satisfied with the current assessment tools and will continue to improve them.*
- *Due to a total revision of the national certification examination, scheduled for implementation in 2012 and now happening in late 2013, we will be reevaluating our assessment tools as they relate to the new content areas. The potential exists for creation of additional rubrics due to new content areas, many of which were not previously included in the technician level certification examination.*
- *While overall performance is satisfactory, improvements can be made in assessing soft skills such as communication, teamwork, critical thinking and problem solving. To accomplish this several courses will be utilizing a Classroom Behavior assessment in the upcoming academic year.*

Ophthalmic Medical Technology Program Outcomes

Ophthalmic Medical Technology Program Outcomes OMT program graduates should be able to:	Maps to a PCC Core Outcome?	Assessment Setting/Method
Provide appropriate and safe patient care commensurate with their medical competency.	Critical Thinking Prof. Competence Communication Self- Reflection	National Certification Test : results available for staff review immediately Practicum evaluations (Rubric needs to be enhanced/developed)
Utilize effective oral and written communication skills with patients and health care personnel.	Prof. Competence Communication	Lab finals; review/discuss as a SAC Practicum evaluation rubric Mock skill evaluations (Note: These evaluations will take place at the end of fall and winter term for second year students. Evaluators are professionals from outside the program, performance is be rated on clarity, accuracy and timing.
Apply knowledge of anatomy, physiology, and pathology to performing diagnostic tests and procedures.	Prof. Competence Critical Thinking	National Certification Test: results available for staff review Course specific rubrics
Exhibit professional and ethical behavior in the ophthalmic workplace.	Prof. Competence Self-Reflection Critical Thinking	Practicum evaluation rubric Laboratory evaluation rubrics
Expand one's own professional career; adopting a model of lifelong learning and continuing education.	Prof. Competence Self- Reflection Community/Environmental Responsibility	Career Assessment /Seminar IV: review results as a SAC to find trends Post graduate surveys
Prepared to take and pass the national certification examination to become a Certified Ophthalmic Technician (COT)	Prof. Competency Self-Reflection Critical Thinking	National Certification Test: results available for staff review immediately

Lensometry Rubric

CRITERIA EXCELLENT All criteria met. (3PTS)		GOOD Most criteria met. (2PTS)	NEEDS IMPROVEMENT Some criteria met. (1PT)	UNACCEPTABLE Criteria not met. (No Points)
Performed correctly with good technique. Confident, efficient and timely. No errors.		Performed correctly with good technique. Self-corrected 1 or fewer errors. Acceptable time.	Technique sloppy. Needs coaching. 2 or 3 errors. Slow. Lacks confidence.	Cannot proceed without coaching. 3 or more errors. Slow. Lacks confidence.
TASK Lensometry 1 Neutralize a pair of toric spectacle lenses and record the results.				
Turn on the lensometer.				
Focus the eyepiece (turn counter clockwise and then turn clockwise until the reticle first comes into focus and then stop).				
Place glasses evenly on the lens stage with the right lens on the lens stop and with temples pointed away from you.				
Turn the power drum to the most minus setting then move the power drum in the plus direction until the first set of target lines starts to come into focus.				
Use the axis wheel to make the first set of target lines the sphere (skinny) lines, and make the, lines unbroken.				
Use the power wheel to fine focus the sphere lines.				
Record the sphere power of the lens from the power drum, leave a space, and record the axis from the axis wheel.				
Continue moving the power drum in the positive direction until the cylinder lines (wide lines) come into focus.				
Calculate the difference (distance traveled) between the sphere reading and the cylinder reading.				
Record the difference as the plus (+) cylinder power.				
A. Repeat for process for the left lens (or) B. Proceed to Lensometry 2 and read the				

add power.				
Lensometry 2				
Raise the lens up to the place the add segment in the lens stop.				
Continue moving the power drum in the positive direction (or negative direction if cylinder power is greater than add power) until the sphere lines come into focus again.				
Calculate the differect between the sphere power in distance and the sphere power in the add segment.				
Record the difference as the Add power of the lens.				
A. Repeat process for left lens (or) **B. Proceed to Lensometry 3 and read prism power in a lens.**				
Lensometry 3				
Place spectacles on patient and use a water soluble marker (Visa-vise) to mark the point of the lens where the patient is looking through.				
Place the mark on the lens stop and proceed through Lensometry 1.				
Lensometry 4 **Read Prism with a Prism Compensating Device (PCD)**				
Place the optical center of the lens in the lens stop.				
Rotate the knob of the PCD to bring the target into the center of the reticle.				
Rotate the knob on its axis to find the prism power.				
Rotate the knob about the optical axis to change the base direction.				
Prism power and base direction are read from the drums.				
If the prism power is RED, add 180 degrees to the base direction.				
If the prism looks to be between 15-20, set the PCD to 15 and rotate the base direction to the center of the target.				

Focus the target. The prism will be 15 + the drum reading.				
Lensometry 5 Mark the Optical Centers of the Lenses				
Place the lens on the lens stop.				
Looking through the eyepiece at the target, move the lens until the centermost intersection of the target lines are in the center of the innermost circle of the reticle.				
Clamp the lens into place on the lens stop.				
Mark the optical centers with the marking device on the lensometer. This is located close to the eyepiece on the right side of the lensometer. If the device is out of ink or does not have a marking device, use a water soluable pen to mark directly over the lens stop.				
Lensometry 6 Read Progressive Lenses (PALs) **In all progressives, the transistion corridor is slanted inward to compensate for the convergence of the eyes for near vision.**				
Mark 20-21mm below and 2 -2.5mm nasal to the pupillary center. This allows an approximate location for the reading portion of the progressive.				
Center the mark in the lensometer field.				
Read the addition power.				
Calculate the difference between the distance power and addition power to determine the correct add power.				

Keratometry Rubrics

EXCELLENT All criteria met. (3PTS)		GOOD Most criteria met. (2PTS)	NEEDS IMPROVEMENT Some criteria met. (1PT)	UNACCEPTABLE Criteria not met. (No Points)
Performed correctly with good technique. Confident, efficient and timely. No errors.		Performed correctly with good technique. Self-corrected 1 or fewer errors. Acceptable time.	Technique sloppy. Needs coaching. 2 or 3 errors. Slow. Lacks confidence.	Cannot proceed without coaching. 3 or more errors. Slow. Lacks confidence.
TASK: Measure patient's central anterior corneal curvature.				
Clean and turn on the keratometer.				
Focus the eyepiece.				
Explain the procedure to the patient.				
Adjust the height of the keratometer platform and position the patient, with the lateral canthus in line with the black ring along the headrest bars.				
Occlude one eye of the patient that is not being tested and instruct patient to look at the center of the ketatometer mires, or at the reflection of his or her own eye.				
Position keratometer so that black crosshair is centered in the lower right circle, and lock the instrument in place.				
Rotate the keratometer barrel either clockwise or counterclockwise to align the crosses of the two lower circles so that they are exactly opposite of each other.				
With one hand on the focus and the other hand on the horizontal (left) drum, rotate to superimpose the plus signs.				
With one hand on the focus and the other hand on the vertical (right) drum, superimpose the minus signs. It is important to realize that the first focus (horizontal) will blur as you attempt to superimpose the vertical meridian.				
Record the horizontal reading, the vertical reading and the axis.				
Repeat with the fellow eye if indicated.				
Turn off, clean and cover the instrument.				

Determine the Rule of Astigmatism				

PORTLAND COMMUNITY COLLEGE
OPHTHALMIC MEDICAL TECHNOLOGY
SKILL EVALUATION LAB FINAL
EVALUATORS SCORE SHEET
MARCH 8th, 2013

Name of Student _____ **Start Time** _____

LENSOMETRY **End Time** _____

• STANDARD: OD_____ Add_____

OS_____ Add _____

• CANDIDATE PERFORMANCE:

Did the candidate properly focus the eyepiece? ____Yes ____No

Did the candidate properly position the spectacles on the spectacle table (stage)?
____Yes ____No

Rate overall performance on skill. Satisfactory _____ Unsatisfactory _____
Evaluator's notes and suggestions:
_____
_____
_____

KERATOMETRY

• STANDARD: Horizontal Power_____ Axis _____ OD
Vertical Power _____ Axis _____

: Horizontal Power_____ Axis _____ OS
Vertical Power _____ Axis _____

NAME OF PATIENT _____

• CANDIDATE PERFORMANCE:

Did the candidate properly adjust the eyepiece? ____Yes ____No

Was the candidate familiar with the instrument? ____Yes ____No

Rate overall performance on skill. Satisfactory _____ Unsatisfactory_____
Evaluator's notes and suggestions:

_____
_____
_____

APPLANATION TONOMETRY

• CANDIDATE PERFORMANCE:

Did the candidate select an anesthetic? ___Yes ___No

Did the candidate position the patient properly at the slit lamp? ___Yes ___No

Did the candidate properly position the tonometer? ___Yes ___ No

Did the candidate properly position the illumination source? ___Yes ___No

Did the candidate dial in the cobalt filter? ___Yes ___No

• REQUIRED PERFORMANCE: Perform applanation tonometry on both eye

• STANDARD: _____mm Hg OD
_____mm Hg OS

NAME OF PATIENT _____

Rate overall performance on skill. Satisfactory _____Unsatisfactory_____

Evaluators notes and suggestions:
_____
_____
_____

RETINOSCOPY:

STANDARD:

Sphere _____ Cylinder _____ Axis _____ OD

Sphere _____ Cylinder _____ Axis _____ OS

NAME OF PATIENT _____

CANDIDATE PERFORMANCE: Rate the candidates overall technique for skill.

___Excellent ___Good ___Fair ___Poor ___Unsatisfactory

Evaluators notes and suggestions:
_____
_____
_____

REFRACTOMETRY:

STANDARD:

Sphere _____ Cylinder _____ Axis _____ OD

Sphere _____ Cylinder _____ Axis _____ OS

NAME OF PATIENT _____

CANDIDATE PERFORMANCE: Rate the candidates overall technique for skill.

___Excellent ___Good ___Fair ___Poor ___Unsatisfactory

Evaluator's notes and suggestions:

_____
_____
_____
_____

PORTLAND COMMUNITY COLLEGE
OPHTHALMIC MEDICAL TECHNOLOGY
SKILL EVALUATION LAB FINAL
EVALUATORS SCORE SHEET
MARCH 8th, 2013

Compiled results of entire OMT class **Average Time 27 min.**

LENSOMETRY

• STANDARD: OD_____ Add_____

OS_____ Add _____

• CANDIDATE PERFORMANCE:

Did the candidate properly focus the eyepiece? 16 Yes 1 No

Did the candidate properly position the spectacles on the spectacle table (stage)?
13 Yes 4 No

Rate overall performance on skill. Satisfactory 14 Unsatisfactory 3
Evaluator's notes and suggestions:
Watch alignment for BF seg. Corrected later. Good job focusing eye piece, leveling specs on table. Good blur. OD watch alignment for BF, better on OS. Watch stage for BF – stage stuck? Good job focusing eyepiece, leveling table. Careful when switching to BF. Focus eyepiece, don't rock power drum. Good use of time, followed appropriate steps.

KERATOMETRY

• STANDARD: Horizontal Power_____ Axis _____ OD
Vertical Power _____ Axis _____

: Horizontal Power_____ Axis _____ OS
Vertical Power _____ Axis _____

• CANDIDATE PERFORMANCE:

Did the candidate properly adjust the eyepiece? 17 Yes ____No

Was the candidate familiar with the instrument? 16 Yes 1 No

Rate overall performance on skill. Satisfactory 15 Unsatisfactory 2

Evaluator's notes and suggestions:
Good job. Sanitized hands and equipment, great patient instruction, good use of time. Sanitized with alcohol and swab, good patient instruction. Good job. Wasted time with instrumentation (seemed unfamiliar with chair and vertical movement of keratometer arm. Did not introduce herself or ask the patients name. Sanitized keratometer, focused eyepiece, forgot to sanitize hands. Good patient instruction. Good. Did not overcorrect and then refine. Sanitized hands, good patient instruction. Sanitized keratometer, great at talking through things. Good job. Sanitized equipment and hands. Good patient instruction and communication.

APPLANATION TONOMETRY

• CANDIDATE PERFORMANCE:

Did the candidate select an anesthetic? 16 Yes 1 No

Did the candidate position the patient properly at the slit lamp? 16 Yes 1 No

Did the candidate properly position the tonometer? 17 Yes ___ No

Did the candidate properly position the illumination source? 15 Yes 2 No

Did the candidate dial in the cobalt filter? 16 Yes 1 No

• REQUIRED PERFORMANCE: Perform applanation tonometry on both eye

• STANDARD: _____mm Hg OD
_____mm Hg OS

Rate overall performance on skill. Satisfactory 15 Unsatisfactory 2

Evaluators notes and suggestions:
Good job. Great pt. instruction. Did very well with blinking pt. Watch finger on globe. Good thought to use Q-tip. Struggled with positioning illumination for OS. Good handwashing and patient care. Sanitized hands, tono-tip and slit lamp. Slow and steady with slit lamp. Good control. Great patient instruction. Selected anesthetic patient reminded. Good instillation of drops, sanitized tono-tip, good pt. instruction. Good job. Did not sanitize hands or slit lamp. Did sanitize tono-tip. Sanitized hands, tono-tip, and slit lamp. Good instruction. Lower patient for easier lid holding. She was sl. High in slit lamp. Remember to clean tip. Tips: raise eyebrows up.

RETINOSCOPY:

STANDARD:

Sphere _____ Cylinder _____ Axis _____ OD

Sphere _____ Cylinder _____ Axis _____ OS

CANDIDATE PERFORMANCE: Rate the candidates overall technique for skill.

3 Excellent 14 Good ___Fair ___Poor ___Unsatisfactory

Evaluators notes and suggestions:
Take out working distance OD, remembered later. Take out working distance, remembered c OS. OD forgot to take out working distance lens. Sanitized phoropter and hands, good patient instruction, struggled w/ alignment of phoropter, cost you time, did not take out R lens of OS when checking VA in OD. Past time remember spherical equivalent. Caught her error and corrected on cyl. Great pt. instruction. Good pt. instruction, sanitized phoropter, just dial in power, see what you get! Good pt. care, take out working distance OD, when blurry use 3D steps (OS). Did not check VA last. Scope line with axis. Did not clear out to plano 1st Va check, used small letters when scoping OD, Corrected herself for OS. Sanitized phoropter, good pt. instruction, complete steps appropriately, good job leaning in and out to check neutrality. Hint if pt reads 20/25 or better, minimal correction, retinoscopy lens vs. working distance, took out working distance, pt. using R lens push plus, spherical equivalent, better OS. Sanitized phoropter and hands, good alignment of phoropter, good pt. education, used R lens appropriately, Good job lean in and out to check neutrality.

REFRACTOMETRY:

STANDARD:

Sphere _____ Cylinder _____ Axis _____ OD

Sphere _____ Cylinder _____ Axis _____ OS

CANDIDATE PERFORMANCE: Rate the candidates overall technique for skill.

5 Excellent 8 Good 4 Fair ___Poor ___Unsatisfactory

Evaluator's notes and suggestions:
Start c lowest line, pt. can see for 0.25 steps/ chase 0.50 for cyl., pushed plus, good job. Good instruction, followed steps on JC and refinement. Good time interval beween lens choices, 4 step or cyl. Search there was no cyl power in phoropter for OD, duplicate steps on JC, confused on OS JC, good refractive endpoints. Did not check VA OD after refraction. Watch for eating minus, Did great with patient instruction, stayed calm with difficult pt. and K chin rest not working. Good pt. instruction. Good sph. Equivalent, continue to check VA, smaller steps, good use of R/G filter, pt. had very high Rs OS. OD axis refinement w/ no power, forgot to adjust sphere on cyl. Adjustment, then remembered, You know the steps! Need better time management. Good confindence, comfortable with phoropter, worked through complicated refration OD. Take time on choices. Time spherical equivalent. Confusion on JCC OD, only check 90 axis, no 4 step, OS JCC more on track, forgot to compensate sph. Adj. OS pt. wanted more cyl, retested and same. Got mixed up on JCC power refine OD, pt wanted cyland you removed, found groove on OS, JCC axis and power refine. Good job pushing plus and R/G filter. Start on best VA line Better OS.

_____

JCAHPO
JOINT COMMISSION ON ALLIED HEALTH PERSONNEL IN OPHTHALMOLOGY

2011-2012 Program Performance Report

Examination: COT® Multiple Choice

Portland Community College

Population	# of Examinees	1st Attempt Pass	2nd Attempt Pass	3rd Attempt	Total Passed	Pass Rate	Mean Score
Program	19	19	0	0	19	100%	162
All Program Graduates	106	79	8	0	87	82.08%	142
All Candidates	468	330	38	5	373	79.70%	135

Content Area Scores

Content Area	Percent of Exam	Program N=19		All Program Graduates		All Candidates	
		Mean	SD	Mean	SD	Mean	SD
History Taking	7	11.58	1.68	10.45	2.03	10.79	1.86
Basic Skills & Lensometry	8	13.63	1.86	12.22	2.51	11.73	2.39
Patient Services	4	7.42	0.77	7.05	1.02	7.20	0.99
Basic Tonometry	4	7.05	1.08	5.93	1.50	5.97	1.48
Instrument Maintenance	6	9.05	1.27	7.97	1.78	7.60	1.70
General Medical Knowledge	10	17.68	1.67	15.81	2.71	14.65	3.00
Clinical Optics	14	21.37	3.15	18.04	5.69	15.39	5.24
Basic Ocular Motility	10	17.47	1.95	14.97	3.37	12.94	3.60
Visual Fields	12	17.58	2.06	16.21	3.52	15.63	3.53
Contact Lenses	10	16.05	3.24	13.73	3.34	13.08	3.29
Intermediate Tonometry	4	6.47	0.96	5.56	1.59	5.92	1.52
Ocular Pharmacology	8	12.26	1.91	10.46	2.65	10.48	2.59
Photography	3	3.89	1.05	3.69	1.22	3.38	1.33

Definitions

Pass Rate: Reported as a percentage

Mean: The average score

SD: Standard deviation; the larger this number, the more the spread in the scores

Revised Course Content and Outcome Guide for OMT 250

Date: 31-AUG-2012

Posted by: Curriculum Office

Course Number: OMT 250

Course Title: Ophthalmic Imaging

Credit Hours: 3

Lecture hours: 30

Lecture/Lab hours: 0

Lab hours: 0

Special Fee:

Course Description

Introduces the common forms of ophthalmic imaging (CT, MRI, GDx, OCT, HRT, B-scan, and wave front), ophthalmic photography (external and fundus), and fluorescein angiography. Prerequisites: WR 115, RD 115 and MTH 20 or equivalent placement test scores.

Intended Outcomes for the course

1. Apply knowledge of ophthalmic imaging to use of diagnostic laser testing equipment (GDx, OCT, HRT) in the clinic setting.
2. Use photographic principles to support clinical training and use of ophthalmic imaging.

Course Activities and Design

This course will be presented by means of lecture/discussion, audio/visual presentations, handouts and demonstrations. Guest speakers and field trips may be used to enhance mastery of course goals and student learning.

Outcome Assessment Strategies

At the beginning of the course the instructor will detail the methods used to evaluate student progress and criteria for assigning a course grade. These may include examinations, quizzes, homework assignments, research papers, and student participation during class sessions.

Course Content (Themes, Concepts, Issues and Skills)

Identify terms and definitions of basic photography including:

- Film vs. digital
- Exposure
- Focal length
- Depth of field
- Synchronization
- Beam splitters
- Reticles
- Ocular
- Focus
- Video
- Astigmatic correction
- List steps required to perform fundus photography.
- Identify photographic defects/artifacts.
- Describe the relationship between shutter speed, aperture number and film speed.
- Define the relationship between ISO/ASA film rating and film sensitivity.
- Differentiate digital, fluorescein and indocyanine green angiograms.
- List major indications for fluorescein angiography.
- List contraindications to angiography.
- List both mild and major reactions to fluorescein injection.
- List treatments for adverse reactions to fluorescein.
- Slit lamp photography
- Anterior segment photography
- External photography
- Endothelial cell counts

Scanning laser tests for glaucoma and retinal anomalies:

- HRT
- GDX
- OCT
- Time domain VS spectral domain

A-scan

- Describe situations where an A -scan would be used
- List steps in A-scan
- Describe errors in A-scan measurements

B-scan

- Describe situations where a B scan would be used

- List steps in B-scan
- Describe errors in B-scan measurements

Corneal topography

- Describe situations where corneal topography would be used
- List steps in Corneal topography
- Describe the color mapping in topography

Imaging considerations

- Media opacities
- Diagnostic dyes
- Artifacts
- CT MRI