1. Clinical relevance and importance of low vision rehabilitation in improving function and quality of life
   a. Prevalence of visual impairment/low vision
      i. In the United States
      ii. Worldwide
   b. Levels of visual impairment
      i. Mild
      ii. Moderate
      iii. Severe
      iv. Profound
      v. Near total
      vi. Definition of legal blindness
   c. Impact of visual impairment
      i. Among the 10 most prevalent causes of disability in America
      ii. Impact on quality of life
      iii. Increases risk of depression, injury, and decline of general health
      iv. Reduces quality of life, contributes to social isolation
      v. Effect on educational and employment problems
      vi. Cost to the visually impaired and to society
   d. Goals of low vision rehabilitation
      i. Address patients’ complaints and goals and to recognize when referral to low vision rehabilitation specialist is appropriate
      ii. Help patients to resume or continue to perform daily activities
      iii. Provide appropriate low vision devices, environmental modifications, and special training in the use of residual vision and use of low vision aids
iv. Educate patients regarding available resources and provide appropriate referrals

e. Evidence of the effectiveness of low vision rehabilitation
   i. Low Vision Intervention Trial (LOVIT) results and recommendations

f. Low vision testing considerations
   i. Visual acuity charts for distance and reading
   ii. Contrast sensitivity testing
   iii. Visual field and central field testing

2. New low vision devices on the market: their advantages and applications
   a. Reading
      i. Strategies for reading rehabilitation
         1. Relative distance magnification
            a. Calculating relative distance magnification
            b. Calculating magnification ratio for low vision device assessment
         2. Relative size magnification
         3. Projection magnification
         4. Contrast enhancement techniques
      ii. New reading/near task devices that apply these strategies – advantages and limitations
         1. Diffractive technology for
            a. reading glasses
            b. pocket magnifiers, hand magnifiers, stand magnifiers
            c. telemicroscopes
            d. This technology allows for thin and light weight lenses that are more cosmetically pleasing or more comfortable to use.
         2. E-readers and tablets:
a. Kindle Paperwhite, Kindle Dx, etc.

b. Backlit monitors: Kindle Fire, iPad, tablets, etc.

3. Video magnification systems: contrast enhancement, magnification, and OCR recognition and speech
   a. Handheld and portable:
      i. Compact Mini, Pebble, Ruby, Crystal XL, Candy, etc.
      ii. Compact 5 and 7 HD
   
   b. Handheld: mouse type cameras

   c. Collapsible units:
      i. Transformer
      ii. Prisma

   d. Desktop:
      i. DaVinci/Merlin Elite
      ii. Prodigi
      iii. Clearview +

b. Distance devices
   i. Strategy for distance devices
      1. Angular magnification
      2. Camera systems
   
   ii. Distance devices
      1. Handheld telescope
      2. Mounted telescopic system:
         a. VES sport
         b. SightScope, Instamount
      3. In development
         a. In-the-spectacle telescope
         b. Head-mount telescope and devices
   
   c. Visual field expansion
      i. EP prisms for hemianopia:
1. Clinical studies
2. Driving and mobility application
3. Protocol for fitting, training patients
   ii. Ocutech Image Minifier for restricted visual fields from RP, glaucoma, etc.
      1. Handheld, spectacle-mounted, and instamount

3. Latest in applied technology and computer accessibility
   a. Monitors and displays
   b. Screen magnification programs
      i. Windows operating system options
      ii. Zoomtext, MAGic Pro, iZoom
      iii. Mac options
   c. Speech output: screen readers/text-to-speech options and screen magnification + speech
      i. JAWS/Window options
      ii. Screen reader downloads
      iii. Mac options
   d. Internet access options
      i. Standard browser options
      ii. Web-based screen readers
      iii. Readability – for mobile devices
   e. OCR for print to speech
      i. Computer-based system
      ii. Free standing units
   f. Cell phone and tablet technology and accessibility
      i. Accessibility built into iOS5/6/7 (iPhone, iPod Touch and iPad)
         1. VoiceOver
         2. Zoom
         3. Large text
4. Inverted colors
5. Speak selection
6. Assistive touch

ii. Accessibility built into Android

iii. Smartphone accessibility apps
    1. Magnifiers
    2. Print to speech
    3. Currency identifiers
    4. Barcode readers
    5. Speech recognition / speech to text
    6. GPS utilities
    7. Intelligent assistants

4. Upcoming and developing technology
    a. Head borne low vision devices
    b. Recognition and voice output identification/reading devices
    c. Driving technology: Google car
    d. Smart houses