COWICHAN VALLEY
School District

Board/Authority Authorized Course: **Assistive Technology 11**

School District/Independent School Authority Name: Cowichan Valley	**School District/Independent School Authority Number (e.g. SD43, Authority #432):** SD#79
Developed by: Julie Beland (PRCVI and TSVI)	**Date Developed:** January 21 2021
School Name: Cowichan Secondary School	**Principal's Name:** Darcy Hoff
Superintendent Approval Date (for School Districts only):	**Superintendent Signature (for School Districts only):**
Board/Authority Approval Date:	**Board/Authority Chair Signature:**
Course Name: Assistive Technology 11 (ECC-AT-VI 11)	**Grade Level of Course:** 11
Number of Course Credits: 4 credits	**Number of Hours of Instruction:** 120 hours
Course Category: (Filled in by the developing school) Special Education-Vocational, Career Preparation, Career Exploration	**Course Code: (Filled in by the district)** YSEVC-1B

Board/Authority Prerequisite(s): None

Special Training, Facilities or Equipment Required:

This course is designed to be delivered by a qualified teacher of students with visual impairments (TSVI) who is proficient in braille and assistive technologies. Students enrolled in this course are taught using direct instruction on an individual basis (one-on-one) as there is often only one student with a visual impairment in each school. This course is scheduled as one of the electives and the TSVI meets with the student during the appointed block.

Course Synopsis:

Assistive Technology 11 is intended to provide students with visual impairments with the skills they need to independently support their learning using assistive technologies. This framework connects big ideas to learning standards and provides TSVIs with a set of parameters for delivering individualized educational programming in assistive technology learning for students with visual impairments. This course is intended to teach the skills, knowledge, and strategies to empower students to create and apply their own assistive technology toolkit that includes specialized technology, mainstream devices using built-in accessibility features, and the ability to communicate technology needs and accessibility concepts to peers, teachers, and other community members.

Goals and Rationale:

The focus for technology instruction should be the student's ability to achieve meaningful access to content with the greatest level of independence. In order to be self-sufficient after graduation, the student must acquire skills for independent technology use, problem solving, life-long learning, and communicating technology and accessibility needs. Technology skills are not taught in isolation. Instead, technology should serve to achieve valuable learning and functional ends.

The responsible and ethical use of technology is also an important component of instruction. This includes respecting copyright and registering and updating software. Students with visual impairments who use technology need to learn proper care and maintenance of their own equipment.

The material taught in this course can be integrated with content in the BC curriculum. The instruction in mainstream courses, such as a computer skills course like Word Processing, is not enough to meet the learning needs of students with visual impairments. Specialized skill acquisition requires direct, sequential instruction by trained teachers of students with visual impairments in order to be effective.

Indigenous Worldviews and Perspectives:

While Assistive Technology for Students with Visual Impairments 11 is primarily designed to provide a meaningful framework within which technology instruction at the secondary level can unfold, the course also touches upon deeper issues and understandings that align with several First Peoples Principles of Learning.

1. Learning involves patience and time.

   The process of learning to use assistive technology takes patience and time. Technology use is complex, and it takes much practice and perseverance to become skilled in the use of advanced features.

2. Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).

   Assistive technology is wide in scope, and many different technologies are used in tandem to fully access information in the learning environment. Effective use of assistive technology first requires the student to be able to articulate their access preferences. Through experience and discussion, students will gradually develop the skills to determine when and where an assistive technology solution will be most effective, as well as how to advocate for greater accessibility in home, school, and community environments.

3. Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations.

   Assistive technology for students with visual impairments is highly specialized and, as a result, only a limited number of students and staff in a school community will possess the knowledge to use and maintain the technology. This knowledge is shared from teacher to student, or among the community of assistive technology users, who often develop networks and gatherings to share knowledge, resources, and suggestions. By learning competent use of this technology, students participate in these communities of practice, establishing and enhancing their connections to others with a similar lived experience.

Course Name: Assistive Technology 11 (ECC-AT-VI 11) **Grade: 11**

BIG IDEAS

Learning to use technology is vital to an individual's ability to access and analyze information in the home, school, community, and workplace.	The community of people who use assistive technology can be a rich resource for the learner, as well as a means of giving back to the community.	Learning is a perpetual process that requires continual upgrading of knowledge and skills as technologies change	A variety of tools and technologies are needed for different tasks, and an integrative approach to assistive technology use can maximize efficiency

Learning Standards

Curricular Competencies	Content
Students are expected to do the following: Problem Solving and Critical Thinking • Students will explore a variety of technology solutions and evaluate which is best suited to individual tasks • Students will explore use of advocacy strategies surrounding accessible learning materials, including those in digital formats Comprehend and Connect (Reading, Writing, Drawing) • Students will work through a sequential process to learn the features and commands of their assistive technologies • Students will explore strategies for accessing print and digital formats through assistive technology • Students will effectively integrate the use of multiple pieces of technology to complete tasks as needed Reflect and Project • Students will reflect on their own learning process and their preferences, strengths, and stretches with technology • Students will identify when they need help and where they might find assistance (help features/file, teacher, peers, online, technical support)	*Students are expected to know the following:* Technology Features and Functions • Learn technology specific to each learner's access needs • Understand the available built-in and external help features that can assist and extend learning Accessibility • Understand the implications of accessible and inaccessible documents, and strategies for responding to inaccessible documents (use of technology, advocacy) • Practice advocating for accessible digital and online materials Community Resources • Learn about existing community resources for assistive technology users such as mentoring, courses, meetings (online, telephone, and in person), webinars, and podcasts • Connect with mentors and/or mentor a younger student on technology use and learning

Big Ideas – Elaborations

Learning to use technology is vital to an individual's ability to access and analyze information in the home, school, community, and workplace

- Explore the role assistive technology can play in completing a variety of tasks effectively at home, school, the community, and the workplace
- Learn the effective use of technology on a variety of platforms (desktop, laptop, mobile, specialized devices) and through a variety of input and output modalities corresponding to format needs (speech, braille, large print, keyboard, mouse, touchscreen)

The community of people who use assistive technology can be a rich resource for the learner, as well as a means of giving back to the community

- Explore both how they can benefit from and contribute to the community of assistive technology users in BC
- Learn about a variety of avenues for connecting with other users such as online presentations, in-person group meetings, telephone meetings, and one-on-one mentoring

Learning is a perpetual process that requires continual upgrading of knowledge and skills as technologies change

- Explore strategies for advancing their own learning through online tutorials, help documentation, technical support, and communities of practice.
- Track their own skill development to determine potential areas for future learning and skill refinement
- Explore avenues for keeping on top of developments in technology and explore new resources A variety of tools and technologies are needed for different tasks, and an integrative approach to assistive technology use can maximize efficiency
- Use a variety of technologies to determine what best meets their needs and preferences for a given task
- Reflect on learning, preferences, and efficiency to determine technology preferences

Curricular Competencies – Elaborations

Technology Exploration

- Engage in a systematic and critical comparison of two or more assistive technology solutions to effectively match an assistive technology solution to a specific access need
- Identify features of technology that are important for completing tasks and communicate this to those less familiar with the learner's access needs

Advocacy Strategies

- Communicate technology features to those not familiar with the student or their access needs
- Communicate accessibility needs to those unfamiliar with assistive technology (for example, other teachers at the school)

Learning Sequence

- Learn features and commands of an assistive technology solution from beginner to more advanced levels of knowledge and skill.
- Devise strategies for self-monitoring of the learning process, including strategies for goal setting and attainment for continued assistive technology learning.
- Access a variety of print, digital, and alternate format material (such as EPUB) using a variety of assistive technology solutions
- Determine the most effective combination of high- and low-tech devices for completing a variety of tasks

Reflection and Planning

- Reflect on one's learning to determine gaps in knowledge or need for more practice
- Identify when and what help is needed for specific troubleshooting scenarios
- Identify and use a variety of sources of assistance (teacher, peers, online, technical support, built-in help features)

Content – Elaborations
Technology Features and Functions • Learn the features and functions to perform tasks efficiently and effectively using assistive technologies • Explore options within technology features (visual enlargement/enhancement, speech, braille settings) to determine preferences Accessibility • Identify accessibility concepts important to learning materials (such as headings and alternative text) and how the inclusion of these features and attributes increases the accessibility of the material. • Explore a variety of methods of troubleshooting accessibility challenges Community Resources • Learn about a variety of community resources related to assistive technology that can facilitate future learning and skill development • Explore the use of mentoring in both developing technology skills and sharing one's knowledge with new users

Recommended Instructional Components:

- Exploration
- Analyze and Interpret
- Develop and produce braille work
- Read with speed and accuracy
- Connect with other Braille users
- Direct instruction
- Demonstrations
- Modeling
- Experiential Learning
- Self-Reflection

Recommended Assessment Components: Ensure alignment with the Principles of Quality Assessment

Performance Methods

- Braille code knowledge (as applicable)
- Projects
- Portfolio/binders/computer files
- Braille products evaluation
- Presentation of completed works
- Maintaining assignments on note taker

Personal Communication

- Student/instructor/mentor dialogue
- Logbook reflection
- Self-evaluation
- Teacher evaluation

Other

- Weekly assessment
- Teacher anecdotal records
- Teacher log
- Checklists
- Rubrics
- Rating scales

Learning Resources:

Kamei-Hannan, C. Brostek-Lee, D., & Presley, I. (2017). Assistive Technology. In M. C. Holbrook, C. Kamei-Hannan, & T. McCarthy (eds.). *Foundations of Education, Volume II: Instructional Strategies for Teaching Children and Youths with Visual Impairments* (pp. 611-653). New York, NY: AFB Press. [Professional Resource]

Provincial Resource Centre for the Visually Impaired (2016). Expanded Core Curriculum (ECC-VI) For Students with Visual Impairments: Assistive Technology 11. Retrieved from www.prcvi.org

McNear, D., & Farrenkopf, C. (2014). Assistive Technology. In C. B. Allman & S. Lewis (eds.) *ECC Essentials: Teaching the expanded core curriculum to students with visual impairments* (pp. 187-247). New York, NY: AFB Press.

Presley, I., & D'Andrea, F. M. (2009). *Assistive technology for students who are blind or visually impaired: A guide to assessment*. New York, NY: AFB Press. [Professional Resource]

Additional Information:

Given the swift pace of technological development, TSVIs should, in addition to the recommended learning resources, rely extensively on regularly updated web-based resources to ensure that students use the most current information in their learning.