# Fitchburg State University

# EDUCATOR Programs

# Comprehensive Syllabus

Summer 2021

# Multimedia Accessibility in the Digital Classroom:

# Strategies for Students With Visual Impairments

3.0 Credit hours

July 5 – August 29

Number of Class Meetings: 8 Number of Contact Hours: 40

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## COURSE DESCRIPTION:

Classrooms are increasingly technology driven and full of multimedia instructional materials. As digital instructional materials become more prevalent, the learning environment must be designed accessibly and students with visual impairments need skills to access all forms of information. Mainstream technologies offer many opportunities for students who are blind or visually impaired, but only when well integrated with specialized access according to classroom demands. For new and seasoned TVIs, critical thinking skills are necessary to assess challenges in the classroom, evaluate student needs, and implement appropriate solutions.This course will educate stakeholders on up and coming forms of digital instructional materials, tools to access multimedia, and how to integrate technology into a student’s workflow in the classroom. Access to an iPad throughout the course is strongly recommended; several activities will require an iPad for optimal learning.

***If you plan on matriculating into a graduate program at Fitchburg State University, please be aware that twelve semester hours of Fitchburg State University credit taken within a year prior to the student’s admission may be applied to the degree program with the approval of the program chairperson. Anything over 12 credits prior to matriculation will NOT be accepted towards the degree.***

## eTEXTS & RESOURCES:

* Siu, Y., Presley, I. (2020). *Access Technology for Blind and Low Vision Accessibility.* Louisville, KY: APH Press
* Perez, L. (2016). *Zoom In*. St. Petersburg, FL: Luis Perez. Retrieved from <https://itunes.apple.com/us/book/supporting-students-low-vision/id998667650?mt=11>
* Perkins Paths to Technology (PTT), <http://www.perkinselearning.org/technology>
* Quality Indicators of Assistive Technology (QIAT), <https://www.qiat.org/>
* WebAIM, <https://webaim.org/>
* YouTube!

Fitchburg State University Teacher Preparation Programs. (2012). *Conceptual framework.*  Fitchburg, MA: Author. [Online] Available: <http://www.fitchburgstate.edu/offices/academic-offices/education-unit/conceptual-framework/>

Massachusetts Department of Elementary and Secondary Education. (1999-2011). *Curriculum frameworks*. Malden, MA: Author. [Online] Available: <http://www.doe.mass.edu/frameworks/current.html>

### Other Resources:

* California School for the Blind (CSB), Curricula and How-To Guides; https://www.csb-cde.ca.gov/instruction/assistivetech/howto.aspx
* Texas School for the Blind and Visually Impaired (TSBVI), <http://www.tsbvi.edu/technology>
* Washington State School for the Blind Statewide Technology Services, Chromebook resources <https://www.wssb.wa.gov/wp/welcome-to-wssb/services/statewide-technology-services/>
* Available Curricula and Resources, *Paths to Technology*: http://www.perkinselearning.org/technology/curriculum/available-curricula-resources
* YouTube channels:
  + Jes TVI and OM
  + AT Neal
  + Diane Brauner
  + Mallory Carr
  + Dr. Denise Robinson
  + Christopher Hills

## Fitchburg State University Teacher Education Conceptual Framework

An 8-pointed star is titled "Educator as Reflective Leader". 4 of the points are labeled: Knowledgeable, Ethical, Skillful, Caring.

## LEARNING OUTCOMES / OBJECTIVES:

### Participants will learn:

* How to use mainstream and specialized technology for nonvisual access to a variety of media in the classroom, including text, images, and video.
* How to create, evaluate, and advocate for accessible mainstream media.
* How technology can support literacy for students with visual impairments.
* How to implement technology into students with visual impairment’s daily learning tasks.
* How to find and utilize resources to maintain and update assistive technology skills.

This course will address the dispositions of the Conceptual Framework in the following way(s):

1. **Knowledge**: As a result of the learning experiences in the course, you will become more cognizant of:

* Available tools for multimedia accessibility
* Accessible design of instructional materials

1. **Skill**: As a result of the learning experiences in the course, you will become better able to:

* Think critically about matching student needs with appropriate technology
* Implement technology use in the classroom

1. **Caring**: As a result of the learning experiences in the course, you will become more competent in your ability to:

* Apply technology in daily teaching and work practices
* Find professional resources and networks for ongoing professional development

1. **Ethical**: As a result of the learning experiences in the course, you will become more competent in your ability to:

* Collaborate with school staff to accommodate students with visual impairments
* Empower students in how to take charge of their accessibility needs
* Advocate for accessible design of instructional materials and environments

## INSTRUCTIONAL STRATEGIES

x Lecture Data Collection and Analysis

x Discussion/Questioning Pre-Practicum

Laboratory Role Playing/Simulation

x Problem Finding/Solving x Independent Learning

x Discovery Field Trips

Interviewing x Computer Applications

x Collaborative Learning Groups x Viewing or Listening to Followed by

x Reflective Responses Discussing

Creating Visual Illustrations of Concepts Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_

### Technology Initiatives:

Users of the Fitchburg State University technology systems are subject to all applicable federal, state, and international technology laws. Questions regarding regulations may be directed to the Office of Information Technology.

#### Candidates will utilize technology as:

* A research tool
* A communication method (email, discussion board)
* A professional network
* A tool for finding resources
* A hands-on learning medium to understand accessible digital media

## COURSE REQUIREMENTS:

* Use disability-empowering language in all course communications including discussions and assignments. Avoid “[ableist](https://developer.paciellogroup.com/blog/2017/03/slides-csun-2017-sidestepping-ableist-language/)” language that conveys a judgement of “better” or “normal” when referring to non-disabled individuals. Consider using [identity-first language](https://thebodyisnotanapology.com/magazine/i-am-disabled-on-identity-first-versus-people-first-language/) (more often preferred by members of disability communities) versus [person-first language](https://en.wikipedia.org/wiki/People-first_language) (traditionally used by non-disabled advocacy groups).
* View weekly course materials including lectures, readings, videos
* Participate in weekly course discussion boards
* Complete all assigned activities
* Utilize the internet to search for and utilize web-based information
* Total course points = 200

### Discussion Forums (20% of grade) - 5 points per week, 40 points total

This course is built to support collective knowledge building and shared expertise that is dependent on the quality of online discussions. We each come from different teaching backgrounds and can benefit from each other’s experiences. Each week will host a discussion forum that is designed to deepen your understanding of each week’s topic and guide you to implement new strategies immediately. Participation is critical to apply what you learn from the course into your teaching practice. The online discussions will model those that occur in other online networks, and help you develop strategies to interact and learn from other online groups. Full points for participation will be awarded based on the following criteria:

* A minimum of two posts per week are required. The forums are designed to enhance your learning, so posting more is encouraged and appreciated.
* Posts should be specific and responsive. Comments such as “I agree”, and “me too” will not be considered a substantive post. Be respectful of your colleagues’ efforts in reading what you write and make it worthy of their time and yours.
* Enrich your posts by referencing research you have read, include links to resources, and/or share real-world examples from your teaching practice. Be sure to cite all sources so that people can locate any resources you refer to.

### Accessible Docs (Due Week 3) - 40 points

Given a Word document (use the provided document or use one of your own:

* Re-format the document for accessibility with at least 3 levels of Headings Styles (20 points)
* Create alt text for at least 2 images within the document (10 points)
* Include at least one formatted list (5 points)
* Save the file by following this file naming convention to ensure a descriptive file name: LastNameFirstInitial\_AccessibleDoc (5 points)

### Video Description (Due Week 5) - 20 points

* Using the Google Chrome browser, create a free YouDescribe account using your Google account.
* Select a YouTube video approximately 2-3 minutes long. Avoid describing videos over 5 minutes (5 points)
* Create and add at least 5 descriptions for the video using YouDescribe
  + Use at least one extended description (5 points)
  + Use at least one in-line description (5 points)
* Share a link to your YouDescribe video on your preferred social media site.
  + Include at least one hashtag such as but not limited to: #multimediaA11Y #audiodesc #a11Y and tag @SKERI\_YD in your post. Share a link to your social media post on the course discussion board using a [self-described](https://webaim.org/techniques/hypertext/#screen_readers) link (5 points)

### Needs Assessment (Due Week 6) - 60 points

Select one of your students who could benefit from increased independence and timeliness in accessing instructional materials in the classroom. Refer to the WATI checklist as needed. Complete the provided Needs Assessment template with as many specific details as possible; provide information in bulleted lists, except for the Background Info section. The template includes the following sections:

* **Background Info.** Provide no more than 5 sentences of background information including: Diagnoses, functional implication of diagnoses, level of curriculum he or she accesses (if functional, then around what developmental level. if academic, provide grade), type of classroom the student is in (self-contained, general ed, resource room, etc) (10 points)
* **Use of Sensory Channels.** Using info that is synthesized from an FVA and LMA, identify the following (10 points):
  + Primary sensory learning channel:
    - Tasks the student can complete efficiently and independently using this channel
    - Tasks with limited efficiency that require help when using this sensory channel
  + Secondary sensory learning channel:
    - Tasks the student can complete efficiently and independently using this channel
    - Tasks with limited efficiency that require help when using this sensory channel
  + Tertiary sensory learning channel (optional and only if relevant to the student)
    - Tasks the student can complete efficiently and independently using this channel
    - Tasks with limited efficiency that require help when using this sensory channel
* **Possible Contexts for Intervention.** List classroom, school, and community learning activities that your student currently requires assistance to engage in – and has the potential to be more independent: (10 points)
* **Needs for Accessible Educational Media (AEM)**: List types of educational materials and instructional media that your student needs to access in various classes, labs, and electives. Identify non-adapted materials that are given out to all students, that your VI student has difficulty accessing (10 points)
* **Technology Needs**: List technology features that would benefit the student – use generic terms and do not identify any name brands. Each feature should match how the student uses his/her sensory learning channels.
* Identify potential constraints or challenges of implementing technology in this student’s environment (10 points)

### IEP exercise (Due Week 7) - 40 points

Use the same student from the Needs Assessment.

* Write one IEP goal for an academic task using AT. Include all 5 components of a goal (10 points)
* Following a task analysis approach, write 3 objectives that support this goal (30 points)

# EVALUATION OR GRADING POLICY:

All assignments are due before midnight on the last day of the week it is assigned. No late submissions will be accepted.

1. Participation in weekly discussion boards (20%) - 40 points
2. Accessible Docs exercise (20%) - 40 points DUE Week 3, 7/25
3. Video Description project (10%) - 20 points DUE Week 5, 8/8
4. Needs Assessment (30%) - 60 points DUE Week 6, 8/15
5. IEP exercise (20%) - 40 points DUE Week 7, 8/22

TOTAL (100%) = 200 points

## FITCHBURG STATE UNIVERSITY GRADUATE GRADING SYSTEM:

**4.0** 190-200 pts A

**3.7** 184-188 A-

**3.5** 178-182 A-/B+

**3.3** 172-176 B+

**3.0** 166-170 B

**2.7** 160-164 B-

**2.5** 154-158 B-/C+

**2.3** 148-152 C+

**2.0** 142-146 C

**0.0**  0 - 140 F

**W** Withdrawn

**IN** Incomplete

**IP** In-Progress

# COURSE CONTENT/TOPICAL OUTLINE

## WEEK 1 (7/5 – 7/11): Overview of Course

* Role of assistive technology
* Philosophy of this course
* TPACK framework

### Activities:

* **Weekly Lecture(s)**
* **View:** *Reach for the Stars* promo video: <https://youtu.be/5uJVX4i1haU>
* **Explore:** *Reach for the Stars* iBook, free download here: <https://itunes.apple.com/us/book/reach-for-the-stars/id763516126?mt=11>

1. Set up VoiceOver (VO) with your preferred speech rate
2. Set up VO on your iPad’s Accessibility Shortcut and know how to quickly turn VoiceOver on/off. Also try using Siri to turn VO on and off!
3. Conduct an online search for a list of VoiceOver gestures
4. Identify the key gestures needed to: Play/pause/resume reading, move to the next and previous items in the book, select an item, and turn a book page.
5. Try navigating the book with VoiceOver turned on. Be sure to click on the images in the book, especially some of the line and bar graphs.

* **Read:**
  + Siu & Presley: Forward, Introduction
  + Siu, Y. (2016). Designing for All Learners with Technology. *Educational Designer*, 3(9). <http://www.educationaldesigner.org/ed/volume3/issue9/article34>
  + Brauner, D. (2017). *Mastering Tech Skills: When and What?* http://www.perkinselearning.org/technology/blog/mastering-tech-skills-when-and-what
* **Post** on Week 1 discussion board:
  + **Introductory memo:** Name, where do you teach, what do you hope to get out of this course, what is your greatest challenge in using technology with students?
  + **Discuss:** After seeing all the features available in Reach for the Stars, reflect on your process exploring the book using VoiceOver. How might you strategize how to introduce this book to a student with low vision? A student who is totally blind? How would you facilitate active participation for a student with multiple disabilities?
* **Download:** *Zoom In:*Low Vision Supports for Apple Users (Perez, 2016) <https://itunes.apple.com/us/book/supporting-students-low-vision/id998667650?mt=11>

### Resources:

* Siu & Presley: Chapter 1
* *Zoom In*: Ch. 2, Section 3: *VoiceOver (iOS)*
* Facebook group: [Multimedia Accessibility in the Digital Classroom](https://www.facebook.com/groups/multimediaA11Y/)

## WEEK 2 (7/12 – 7/18): Low vision access and multiple disabilities

* Common features of technology for low vision access – Importance of multiple modes of access
* Strategies for accessing materials “on the board” - why is desktop access important?
* Considerations when working with a student with CVI
* Considerations when working with a student with multiple disabilities

### Activities:

* **Weekly Lecture(s)**
* **Read**:
  + Siu & Presley: Ch. 2, Tech Tip 2.1: Bigger Is Not Always Better
  + Paths to Technology (PTT): [*Five reasons why your students should learn to read at 600 words per minute*](https://www.perkinselearning.org/technology/blog/five-reasons-why-your-students-should-learn-read-rate-600-words-minute). Skim all four parts of this series.
  + PTT: [*Choosing the Appropriate Video Magnifier*](http://www.perkinselearning.org/technology/blog/choosing-appropriate-video-magnifier)
  + *Zoom In*: Ch.2 *Built-In Accessibility on iOS [mobile Apple such as iPhone, iPad, iPod]*
* **View:**
  + YouTube, JesTVIOandM channel:
    - [Smart Lens and iPad for Distance Video Magnifier](https://youtu.be/WinpMGKqDa0)
    - [Scanner Pro to Adobe Fill N Sign](https://youtu.be/3wYwkG3O7bU)
    - [Claro PDF Pro OCR](https://youtu.be/iqtZr3IO8dY)
    - [iZiggi Document Camera](https://youtu.be/CH3EtCGfqBo) (YouTube, Diane Brauner)
    - [IPEVO VZ-R](https://youtu.be/vR58RReHAHg) (VZ-X for wireless)
* **Contribute**: At least two entries on the worksheet titled “Options for low vision access”.
* **Post** on Week 2 discussion board:
  + **Discuss:** Why would a student with relatively good acuity of 20/50 require strategies for magnification or line/word spacing, contrast adjustment, and/or text-to-speech (TTS)? What are the benefits of digital text? What are the limitations?

### Resources:

* YouTube
  + VI Program SFSU channel: [*Screensharing Tools and Strategies*](https://youtu.be/rKljHzPQeH4)
  + Jes McDowell’s playlist: [*Chromebook FAQs for TVIs*](https://www.youtube.com/playlist?list=PLCbAWC92uzjmmM446XGSHPBEoWVmejdl-)
  + [Google Accessibility playlist](https://www.youtube.com/playlist?list=PL590L5WQmH8dvW6kLjd5jRDN0IiCJHLZZ)
* Paths to Technology: *Screen Magnification*, <http://www.perkinselearning.org/technology/screen-magnification>
* Paths to Technology: *Getting Started with Magnification Settings in Chromebook*, <http://www.perkinselearning.org/technology/getting-started/magnification-settings-chromebook>

## WEEK 3 (7/19 – 7/25): Nonvisual considerations including braille and auditory access

* Diving into the digital workflow
* Access to print and literacy – What is an accessible document?
* How to create an accessible Word document

### Activities:

* **Weekly Lecture(s)**
* **Due:** Accessible Docs exercise - 20 points, due before midnight 7/8
* **Read:**
  + Siu & Presley: Ch. 2, Section *Auditory Access to Print Information*
  + Learning to Make Documents Accessible with OCR Software
  + [*How to Make PDFs Editable with Google Docs*](https://www.wikihow.com/Make-PDFs-Editable-With-Google-Docs)
  + [*How to Convert PDF Files and Images Into Google Docs Documents*](https://www.howtogeek.com/269776/how-to-convert-pdf-files-and-images-into-google-docs-documents/)
* **View**:
  + [*Print worksheet to Google Docs OCR with iPad*](https://youtu.be/7-htjaGpNUQ)
  + [*How Headings Help Screenreader Users*](https://youtu.be/zRTqCGJ_HwQ)
  + [*New Technology for Education: CSUN Report (1 hr.)*](http://www.perkinselearning.org/videos/webinar/new-technology-education-csun-report)
* **Experiment with your digital workflow:**

1. Explore apps that can scan a document and upload the digital document as a PDF to Google Drive. Examples: CamScanner, ScannerPro, Scannable, Apple Notes
2. When the PDF is in Google Drive, use “Open with” to view the PDF as a Google Doc
3. Notice how well the text lays out, how much editing/re-formatting is necessary, how many headings would need formatting and images that would need describing.

* **Post** on Week 3 discussion board:
  + **Discuss:** Consider the Google Doc from your experiment. How could you train classroom or school staff to support this digital workflow? What preliminary skills would you need to focus on with a student who needs to use a screenreader and refreshable braille to access an accessible digital document? Consider: Auditory skills? Tactile proficiency? Device proficiency? Spatial comprehension of how information is laid out?

### Resources:

* YouTube, VI Program SFSU channel: [The 3Cs of a Digital Workflow](https://youtu.be/2-VFORif-JU); [Intro to Multimedia Accessibility](https://youtu.be/RrYsn3gz6p0)
* Paths to Technology:
  + *[Getting Started with VoiceOver on the iPad](C:\\Users\\TingSiu\\Downloads\\•http:\\www.perkinselearning.org\\technology\\blog\\getting-started-voiceover-ipad)*
  + [*Getting Started with an iPad and Refreshable Braille Display*](http://www.perkinselearning.org/technology/getting-started/ipad-refreshable-braille-display)
* *JAWS vs. NVDA*, <https://www.second-sense.org/2017/07/jaws-vs-nvda/>
* [*NVDA vs. VO*](https://www.applevis.com/forum/macos-mac-app-discussion/comparison-screen-readers)
* [Quick reference guide for voiceover on iOS](http://support.sas.com/misc/accessibility/education/ios/quickref.html)
* Create accessible word documents
  + WebAim: <http://webaim.org/techniques/word/>
  + YouTube tutorial on MS Word accessibility: <https://youtu.be/vWoDq0S8Jsc>
  + For GDocs accessibility, search YouTube using terms “Heading Styles Accessibility Google Docs”
* DIAGRAM Center [*Image Description Guidelines*](http://diagramcenter.org/table-of-contents-2.html)

## WEEK 4 (7/26– 8/1): Digital talking books and notetaking

* Tools for accessing digital talking books from Bookshare: Web, PC, Mac, iPad
* Strategies for notetaking

### Activities:

* **Read:**
  + Siu & Presley, Ch. 3 *Technologies for Accessing Digital Text*
  + “This, That, There”, describing clearly <http://www.pathstoliteracy.org/this-that-there>
  + Paths to Technology: *Accessible Digital Picture Books for Preschoolers*, <http://www.perkinselearning.org/technology/blog/accessible-digital-picture-books-preschoolers>
  + *Reading Bookshare Books Downloaded in Word*, <https://www.bookshare.org/cms/help-center/reading-bookshare-books-downloaded-word>
  + *Speak Selection, Speak Screen, and VoiceOver – What’s the Difference?*, <http://ndipat.org/blog/speak-selection-speak-screen-and-voice-over-whats-the-difference/>
  + [Using AirDrop to Transfer Photos from iPod Touch to iPad](http://www.perkinselearning.org/technology/students/posts/using-airdrop-transferring-enlarged-photos-ipod-touch-ipad) (Paths to Technology, Pasta Guy)
  + [Why Use a Digital Format Instead of Paper](https://www.perkinselearning.org/technology/blog/why-use-digital-format-instead-paper) (Paths to Technology, OP Assassin)
* **Post** on Week 4 discussion board:
  + **Compare and contrast** two digital talking book apps of your choice, such as but not limited to: *VoiceDream Reader, iBooks, Dolphin EasyReader, CaptiNarrator. Optional* advanced challenge: Download a Bookshare book as an .epub and open it in iBooks. Download a Bookshare book as a Microsoft Word (MS) file and open it in Microsoft Word. Compare/contrast interacting with the book in MS Word versus iBooks. Discuss ease of use in accessing Bookshare books, highlighting text, taking and exporting notes that are made on the text, and ability to navigate the Table of Contents.
  + **Compare and contrast** two notetaking apps, such as but not limited to:Evernote, Noteability, OneNote, Apple Notes, GoodNotes, Google Keep. Discuss usability with Zoom and accessibility with VoiceOver. If the app supports handwriting OCR with Apple Pencil or Logitech Crayon, include discussion of usability of the handwriting OCR feature.

### Resources:

* YouTube: [Good Notes app with Apple Pencil – AT for students with low vision](https://youtu.be/-ct4zk-c9MY)
* Zoom In, Ch. 3: *Built-In Accessibility on OS X [Mac desktop computers]*
* Zoom In, Ch. 5: *Apps*
* Create accessible Powerpoint presentations <http://webaim.org/techniques/powerpoint/>
* [Making Distance Learning Meaningful for Learners with CVI: Creating a CVI-Friendly Digital Book](https://www.perkinselearning.org/videos/webinar/making-distance-learning-meaningful-learners-cvi-creating-cvi-friendly-digital-book) (Perkins, 2020)
* [Dear Ms. Teacher](http://www.perkinselearning.org/technology/blog/dear-ms-teacher) (Paths to Technology, Pasta Guy)

## WEEK 5 (8/2 – 8/8): Image & video accessibility and strategies for accessing information

* A decision tree: Does my student need an image description, tactile graphic, or 3D printed model?
* How do I evaluate and advocate for accessible digital environments?
* Demonstration of video accessibility

### Activities:

* **Weekly Lecture(s)**
* **Due:** Video description assignment - 20 points, due before midnight 7/22
* **Read:** 
  + Siu & Presley: Ch. 6, *Strategies for Accessing Multimedia and Data*
  + *Tactile Graphics Decision Tree*, <http://diagramcenter.org/decision-tree.html>
  + [Described and Captioned Media Program (DCMP) *Description Key*](https://dcmp.org/learn/descriptionkey)
  + [3D Models from Nonscriptum: Hacker Calculus and Geometry Lesson Plans](https://www.nonscriptum.com/projects)
* **Post** on Week 5 discussion board:
  + **Share:** Post a link to your YouDescribe video – be sure to use a [self-described link](https://youtu.be/P4s3GZnE7tU) for accessibility
  + **Discuss**: If you have a student whose district is using Google, create and share a folder with this student (be sure to name it with both your names so it’s clear what the folder is). Discuss how you might guide the student to set up a shared Google Drive folder with each classroom teacher to receive/submit digital instructional materials, and how you might guide the IEP team to support a digital workflow.

### Resources:

* Youtube, VI Program SFSU
  + [*Intro to Multimedia Accessibility*](https://youtu.be/RrYsn3gz6p0)
  + [*TechTalk #5: Intro to 3D Printing for Tactile an Information Literacy*](https://youtu.be/rLlXIX6No8o)
* 1 hr webinar: “3D Printing for Accessible Materials in Schools” [http://diagramcenter.org/webinars.html - 3D](http://diagramcenter.org/webinars.html#3D)
* [See3D](https://see3d.org/), a non-profit organization that manages the printing and distribution of 3D printed models for people who are blind
* YouDescribe Support page: https://youdescribe.org/support
* Do’s and Don’ts of video description: <https://www.youtube.com/playlist?list=PLNJrbI_nyy9uzywoJfyDRoeKA1SaIEFJ7>
* How to Give an Accessible Presentation, https://youtu.be/9n9KacDbpzw

## WEEK 6 (8/9 – 8/15): Conducting a needs assessment

* Determining student needs + Fit of technology
* Considerations for multimodal accessibility

### Activities:

* **Due:** Needs Assessment - 60 points, due before midnight 7/29
* **View:**
  + [YouTube: VI Program SFSU, *Needs Assessment* (1 hour)](https://youtu.be/-zdDlF3u-H4)
* **Read:**
  + Siu & Presley:
    - Ch. 7, *Considerations When Conducting a Technology Evaluation*
    - Ch. 8, *Evaluate the User Experience*
  + *Evaluating a Student and Choosing the Right Technology*; Paths to Technology, <http://www.perkinselearning.org/technology/getting-started/evaluating-student-and-choosing-right-technology>
  + *Assistive Technology Assessment*; Paths to Literacy (Mason), <http://www.pathstoliteracy.org/blog/assistive-technology-assessment>
  + *Assistive Technology Assessment*; Teaching Students with Visual Impairments, https://www.teachingvisuallyimpaired.com/assistive-technology-assessment.html
* **Post** on Week 6 discussion board:
  + **Discuss** how technology needs would differ in the math classroom versus history classroom versus english classroom. How does the content change how a student accesses the material?
  + **Share** the 5 sentences of background information on your student from this week’s assignment (be sure to use non-identifying information to maintain your student’s confidentiality). When considering technology options for this student, identify what features and/or activities you would choose for comparison across different devices.

### Resources:

* Webcast *Dueling Devices: Assessing and Justifying Student Needs for Technology* (1 hour) (Siu), <http://www.perkinselearning.org/earn-credits/self-paced/dueling-devices>
* Webcast (25 min.): *Assistive Technology Assessment* (Presley), http://www.perkinselearning.org/videos/webcast/assistive-technology-assessment
* Pinterest board: *Explore VI and Assistive Technology*, <https://www.pinterest.com/pin/409405422349740088/?lp=true>

## WEEK 7 (8/16 – 8/22): Implementation of technology in the classroom

* How to write IEP goals and objectives
* Strategies for teaching new technology to a student
* Help classroom teachers support your student

### Activities:

* **Due:** IEP Worksheet - 25 points, due before midnight August 5
* **Read:**
  + Siu & Presley, Ch. 9 *Optimize the User Experience*
  + [Desmos Audio Tracing: Introducing Sonified Graphs](https://www.perkinselearning.org/technology/blog/desmos-audio-tracing-introducing-sonified-graphs) (Paths to Technology, 2021)
  + Introducing Technology to Students with Visual Impairments (Brauner); PTT, <http://www.perkinselearning.org/technology/blog/introducing-technology-students-visual-impairments-toddler-preschool-and>
  + AT Goals for the IEP, cheatsheet <http://bit.ly/1Fiaxrb>
* **View:**
  + YouTube, Yue-Ting Siu: *How to Scale Up Students’ Digital Literacy Skills* (32 min.)
* **Post** on Week 7 discussion board:
  + **Discuss:** What are some strategies to introduce technology to a student with visual impairments? Consider: how to teach a student to visualize the digital environment, how to start small and expand skills, how to teach gestures and move from concrete to virtual interactions

### Resources:

* [VI Resources, including PIAF Tactile Teaching Aides by Neal McKenzie, Sonoma County Office of Education](https://sites.google.com/scoe.org/scoevs/vi-resources)
* Quality Indicators for Assistive Technology, <https://www.qiat.org/indicators.html>
* Teaching VoiceOver Gestures with I Hear Ewe app: Activity (Brauner); PTT, http://www.perkinselearning.org/technology/blog/teaching-voiceover-gestures-i-hear-ewe-app-activity
* [Learning Numeric Keypad Layout: Activities](https://www.perkinselearning.org/technology/blog/learning-numeric-keypad-layout-activities) (Paths to Technology, 2020)

## WEEK 8 (8/23 – 8/29): Engaging with a community of practice

* How to use online media and access professional networks
* How to find resources to support your teaching practice and maintain skills
* Empower your students to be in charge of their own accessibility

### Activities:

* **Read:** 
  + Siu & Presley, Ch. 10 *Scaling Up Digital Literacy Skills*
  + What Distance Learning Means to Me: 8th Grader with Low Vision (Paths to Technology, 2020)
  + Siu, Y. (2014). What can social media do for me, and how the heck is Twitter relevant?! *CTEBVI Journal, 55*(3), 30-32. <http://bit.ly/teacherstweet>
  + *Why Teachers are Turning to Twitter*, <http://theconversation.com/why-teachers-are-turning-to-twitter-94582>
  + Morash, V. S., Siu, Y. T. (2016). Social predictors of assistive technology proficiency among Teachers of Students with Visual Impairments. *ACM Transactions on Accessible Computing (TACCESS), 9*(4).DOI: http://dx.doi.org/ [10.1145/2999569](https://doi-org.jpllnet.sfsu.edu/10.1145/2999569)
* **Explore:** AccessWorld (AFB), AppleVis, Google Accessibility team (<https://www.google.com/accessibility/get-in-touch.html)>, Apple Accessibility Support Communities (https://discussions.apple.com/community/accessibility)
* **Post** on Week 8 discussion board:
  + Links to TVI networks on social media: Facebook groups, Pinterest boards, listservs including contact information to join, blogs
  + Links to helpful “how-to” YouTube video tutorials

### Resources:

* Google: “apps for students with visual impairments”

# ONLINE STUDENT SERVICES

**Fitchburg State University** encourages all Extended Campus students to take advantage of our online student services. We have created a “virtual student center” just for you. Here you will find access to Counseling Services, Career Services, The Student Activity Center, the university bookstore and many other helpful links. You can access our student center by going to the university homepage at <http://www.fitchburgstate.edu> and clicking on Offices and Services. Scroll down and click on Extended Campus Center. You will find links to Library Services, our Virtual Student Center and other important information.

# FITCHBURG STATE UNIVERSITY

# DISTANCE LEARNING & EXTENDED CAMPUS LIBRARY SERVICES

The Gallucci-Cirio Library at Fitchburg State University provides a full range of library services including borrowing privileges; document delivery (books and articles mailed to your home); Interlibrary Loan; reference assistance via: phone, email, IM, Blackboard’s Collaboration and Elluminate tools, Skype and in-person; library instruction; research help and more. Any questions relating to library services should be directed to the Linda LeBlanc, Access Services Librarian, at 978-665-3062 or [dllibrary@fitchburgstate.edu](mailto:dllibrary@fitchburgstate.edu). There is also a special section for Distance Learning and Extended Campus Services at <http://fitchburgstate.libguides.com/dlservices> outlining the wide range of services available to you and how to access them.

Students who are currently registered with the university may access any of the library’s subscription databases, including an increasing number with full-text, by visiting the Gallucci-Cirio Library’s homepage at <http://www.fitchburgstate.edu/academics/library> and clicking on the Research Databases button in the center of the page. Select the resource you want to access from the alphabetical or subject listing. Once you click on the database title you will be prompted for your Falcon Key logon information; this is the same logon you will use for your Fitchburg State email account and if you have any online Blackboard courses. If you do not know your Falcon Key username and password or if you have any problems logging in, contact the university’s Technology Help Desk at 978-665-4500 or [helpdesk@fitchburgstate.edu](mailto:helpdesk@fitchburgstate.edu). The Library can issue you a temporary guest Falcon Key to use while the Technology Department is setting up your account: contact us at 978-665-3062 or [dllibrary@fitchburgstate.edu](mailto:dllibrary@fitchburgstate.edu)

All registered Fitchburg State University students are eligible for a Fitchburg State University OneCard ID which also serves as his/her library card. If you have not received your OneCard yet, you can still access all of our online services as long as you have activated your library account. Activate your library account online at <http://fitchburgstate.libguides.com/dlservices> or in person at the Circulation Desk. After activation by the Gallucci-Cirio Library and receipt of your OneCard, students may also use any Massachusetts State College/University Library as well as participating libraries in the Academic and Research Collaborative (ARC) during the current semester. OneCards are available on campus all year round. Students wanting a OneCard must either complete the online Extended Campus OneCard request form <http://www.fitchburgstate.edu/offices/technology/onecard/> or present a course registration confirmation at the OneCard Office in the Anthony Building, main campus. Please call 978-665-3039 for available times or if you have any questions about your OneCard.

# UNIVERSITY AND EDUCATION UNIT POLICIES

## Policy on Disability

Disability Services is the primary support system for students with disabilities taking classes in the day and evening divisions. The office is located on the third floor of the Hammond Building and can be reached at 978-665-4020 (voice/relay). If you need course adaptations or accommodations because of a disability, if you have emergency medication information, or if you need special arrangements in case the building must be evacuated, please make an appointment at the beginning of the course to talk with me. It is important that the issues relating to disabilities be discussed with me as soon as possible.

## Attendance and Participation

1. As an emerging professional, you are expected to attend every class session, to be on time, and to communicate with the instructor regarding any absences. Absences and tardiness may result in a permanent grade change. Attendance at all pre-practicum sessions is mandatory.
2. Participation in class discussions and cooperative groups is expected. All candidates are responsible for meeting required deadlines on projects and assignments; your ability to complete tasks in a timely fashion demonstrates professional maturity and an ability to organize and manage time. Completion of assigned reading is imperative to your individual development as a professional.
3. All of these behaviors regarding attendance, preparation, and meeting deadlines are critical for successful teaching and thus are factored into the final grade.

# Education Unit Computer Literacy Requirement

All assignments must be typed, doubled-spaced, and use APA format when appropriate. Refer to Internet Resources for Writing on the Fitchburg State University website for assistance.

You are expected to use word processing for all assignments (unless otherwise instructed). [If your course has other requirements list those also, e.g., ‘You are expected to use e-mail for dialogues with other class members, to examine the use of software in the field, and to use the Internet to obtain information, ideas and resources.’]

# Cellular Telephones and Other Devices

Kindly turn-off cellular telephones during class time and field experiences and place them in book bags or purses. Please no texting in class. It reflects negatively upon you as a developing professional. Once class begins and if use of the laptop is not required, all laptops should be closed during class time so that your full attention can be focused on your colleagues and the discussion or lecture in progress. If you prefer to take class notes on your laptop, please inform the instructor. You are on your honor to be focused on note taking and not on e-mail, Facebook or other technological enterprise not germane to the class in progress. Thank you in advance for your consideration of colleagues and students.

# Grade Appeal

If you disagree with the evaluation of your work or believe an improper grade has been assigned, an appeal may be followed. Please discuss the matter with the instructor and refer to the Fitchburg State University Grade Appeal Policy in your Student Handbook located: athttp://www.fitchburgstate.edu/uploads/files/EducationUnit\_NCATE/Standard2/narrative/Student\_Handbook\_Web\_1213.pdf

# Academic Integrity Policy

The faculty in the Education Unit at Fitchburg State University that work submitted in fulfillment of course requirements will be solely that of the individual candidate and all other sources will be cited appropriately. University Academic Integrity Policy, as outlined in the University Catalogue, will be strictly adhered to.

# Copyright Policy

You are reminded that, in preparing handouts for peers or the instructor, reproduction of copyrighted material without permission of the copyright owner is illegal. Such unauthorized copying may violate the rights of the author or publisher. Fitchburg State University adheres to federal laws regarding use of copyrighted materials. See the Electronic Use of Copyrighted Materials on the Fitchburg State University website for more details.