College of Education and Human Development
Division of Special Education and disAbility Research

Spring 2022
EDSE 616: Braille Reading and Writing
Section: DL1; CRN: 15840
Section: 6V1; CRN: 24355
Section: 6Y1; CRN: 24395
3 – Credits

Instructor: Dr. Kim Avila	**Meeting Dates:** 1/24/22 – 5/2/22
Phone: 703.993.5625	**Meeting Day(s):** Monday
E-Mail: kavila@gmu.edu	**Meeting Time(s):** 4:30 pm – 7:10 pm
Office Hours: Monday/Wednesday 3:30-430pm virtually or by appointment	**Meeting Location:** N/A; Online
Office Location: Virtual office via Ultra and Zoom; Finley 203a	**Other Phone: N/A**

Note: **This syllabus may change according to class needs. Teacher Candidates/Students will be advised of any changes immediately through George Mason e-mail and/or through Blackboard.**

Assignments **Course Schedule**

Prerequisite(s):
EDSE 311 or EDSE 511 and EDSE 412 (minimum grade B) or EDSE 512

Co-requisite(s):
None

Course Description
Provides instruction on transcription of advanced braille codes, including mathematics (Unified English Braille (UEB) and Nemeth), music, foreign language, and other specialized codes. Introduces techniques for teaching skills in each code. Explores technology tools used to create braille and tactile materials in addition to other assistive technologies used for instruction in science, technology, engineering, and mathematics (STEM) content.

Course Overview
EDSE 616 prepares candidates to transcribe advanced braille codes used in mathematics, science, technology, foreign languages, and other specialized codes. Emphasizes practices, methods, technologies, and materials used in braille transcription and instruction for students who are blind and visually impaired. Provides learning related to braille and tactile materials in addition to other assistive technologies used for instruction in math and science.

Advising Contact Information
Please make sure that you are being advised on a regular basis as to your status and progress in your program. Students in Special Education and Assistive Technology programs can contact the Special Education Advising Office at 703-993-3670 or speced@gmu.edu for assistance. All other students should refer to their assigned program advisor or the Mason Care Network (703-993-2470).

Advising Tip
Have you scheduled your RVE and Braille Proficienty tests? Students who need RVE for their program are encouraged to take it after completing EDSE 503. The Braille exam can be taken after EDSE 616. Check your program plan or talk with your advisor to find out if the tests you need for your program.

Course Delivery Method
Learning activities include the following:

1. Class lecture and discussion
2. Application activities
3. Small group activities and assignments
4. Video and other media supports
5. Research and presentation activities
6. Electronic supplements and activities via Blackboard

This course will be delivered online (76% or more) using a synchronous format via the Blackboard Learning Management system (LMS) housed in the MyMason portal. You will log in to the Blackboard (Bb) course site using your Mason email name (everything before @masonlive.gmu.edu) and email password. The course site will be available on Monday, January 24, 2022

Under no circumstances, may candidates/students participate in online class sessions (either by phone or Internet) while operating motor vehicles. Further, as expected in a face-to-face class meeting, such online participation requires undivided attention to course content and communication.

Technical Requirements

To participate in this course, students will need to satisfy the following technical requirements:

- High-speed Internet access with standard up-to-date browsers. To get a list of Blackboard's supported browsers see: Browser support (https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#supported-browsers)

  To get a list of supported operation systems on different devices see: Tested devices and operating systems (https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#tested-devices-and-operating-systems)

- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students will need a headset microphone for use with the Blackboard Collaborate web conferencing tool.
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.
- The following software plug-ins for PCs and Macs, respectively, are available for free download:
  - Adobe Acrobat Reader (https://get.adobe.com/reader/)
  - Windows Media Player (https://support.microsoft.com/en-us/help/14209/get-windows-media-player)
  - Apple Quick Time Player (www.apple.com/quicktime/download/)

Expectations

- Course Week:
  Our course week will begin on the day that our synchronous meetings take place as indicated on the Schedule of Classes.
- Log-in Frequency:
  Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access to course materials at least 3 times per week. In addition, students must log-in for all scheduled online synchronous meetings.
- Participation:
  Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- Technical Competence:
  Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the

course are expected to seek assistance from the instructor and/or College or University technical services.

- Technical Issues:
  Students should anticipate some technical difficulties during the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.
- Workload:
  Please be aware that this course is not self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the Class Schedule section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.
- Instructor Support:
  Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.
- Netiquette:
  The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. *Be positive in your approach with others and diplomatic in selecting your words*. Remember that you are not competing with classmates but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.
- Accommodations:
  Online learners who require effective accommodations to ensure accessibility must be registered with George Mason University Disability Services.

Learner Outcomes

Upon completion of this course, teacher candidates/students will be able to:

1. Transcribe and read mathematical materials for school-aged students using Nemeth and Unified English Braille (UEB) codes.
2. Calculate mathematical problems using the Cranmer abacus including addition, subtraction, multiplication, and division.
3. Demonstrate knowledge of materials and instructional strategies for teaching mathematics and science to students with visual disabilities.
4. Demonstrate basic knowledge of foreign language and music codes, and identify resources for obtaining information on these codes.
5. Demonstrate knowledge of basic guidelines for production of tactile graphics.
6. Identify strategies for teaching the reading of tactile graphics to students with blindness and visual impairments.
7. Demonstrate knowledge of technology tools for creating braille materials and

tactile graphics.
8. Demonstrate the use of a slate and stylus to produce accurate braille.
9. Demonstrate knowledge of materials and instructional strategies for teaching reading and writing of literary braille.

Professional Standards

(Council for Exceptional Children [CEC] and the Interstate Teacher Assessment and Support Consortium [InTASC]). Upon completion of this course, students will have met the
following professional standards: CEC Standard 1: Learner Development and Individual Learning
Differences (InTASC 1, 2); CEC Standard 2: Learning Environments (InTASC 3); CEC Standard 4:
Assessment (InTASC 6); CEC Standard 5: Instructional Planning and Strategies (InTASC 7, 8);
CEC Standard 6: Professional Learning and Ethical Practice (InTASC 9).

Required Texts

Holbrook, M. C., & D'Andrea, F. M. (2014). *Ashcroft's programmed instruction: Unified English Braille* (5th ed.). Scalars Publishing. ISBN: 978-0-9960353-0-9.
This is the same book required for Braille Code.

Cleveland, J., Bean, J., Bird, M., Kelley, S., O'Brien, S., Osterhaus, S., Sewell, D., & Torrence, G., (2017). *Nemeth at a glance: A math resource, grade-level chart, and evaluation tool*. Texas School for the Blind and Visually Impaired.

The textbook below can be accessed via Mason's Online library (No purchase necessary, use your Mason credentials to access).

Swenson, A. (2016). *Beginning with braille: Firsthand experiences with a balanced approach to literacy* (2nd ed.). American Foundation for the Blind.

Required Materials:

- Manual Braille writer (Perkins)
- Slate & Stylus: 28 cell standard, direct slate
- Braille paper: both sizes
- Cranmer abacus
- The APH Student Starter Pack includes a slate & stylus, abacus, and paper

Recommended Texts

American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). https://doi.org/10.1037/0000165-000

American Printing House. (n.d.). *Nemeth Code reference sheet for basic mathematics.* Available in either print or embossed braille.

Rex, E. J., Koenig, A. J., Wormsley, D. P., & Baker, R. L. (1994). *Foundations of braille literacy*. American Foundation for the Blind.

Roberts, H., Krebs, B.M., & Taffet, B.(1978). *An introduction to braille mathematics*. Washington, D.C: Library of Congress. Call 1-800-223-1839 to order or download online. Please note: this publication does not include code switch information

RNIB. (2015). *Using UEB for mathematics*. Royal National Institute of Blind People. This book is available in print and braille. You do not need to buy both, just the one in your preferred format.

Wormsley, D. B. (2004). *Braille literacy: A functional approach*. AFB Press.

Wormsley, D. B. (2016). *I-M-ABLE: Individualized meaning-centered approach to braille literacy education.* AFB Press.

Required Resources

Items listed below are free and may be downloaded/accessed online.

- Nemeth Code Tutor: Free online program for Nemeth Code practice
- UEB Math Tutorial: Free online program for UEB math/science practice
- Perky Duck or other manual input electronic brailler (may not be a transcription program)

UEB Guidelines for Technical Material (GTM) in PDF print format

- UEB Guidelines for Technical format in BRF (for candidates who use electronic and/or embossed braille)
- Updates
  - **GTM 3. Signs of Operation and Comparison (PDF)** (Print access)
  - **GTM 3. Signs of Operation and Comparison (BRF)** (Refreshable brl)
  - **GTM 3. Signs of Operation and Comparison (Word)** (Screen reader)

UEB Rulebook (2013)

- Available in BRF (Check ICEB for updates)

Walton, L. B. & Taffet, B. (2017, 2020 provisional). *An introduction to braille mathematics: Using UEB and the Nemeth Code*. Library of Congress.

- BANA Guidelines for the Transcription of Early Educational Materials from Print to Braille
- Braille Formats: Principles of Print-to-Braille Transcription, 2016
- Guidance for Transcription Using the Nemeth Code within UEB Contexts
- ICEB: Updates to GTM

- The Nemeth Braille Code for Mathematics and Science Notation (1972) Please note: this publication does not include the code switch information
- Music Braille Code, 2015
- Project Math Access (TSBVI)
- Project Inspire
- Provisional Guidance for Transcribing Foreign Language Material in UEB

Additional Readings
Posted on Blackboard

Course Performance Evaluation
Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, VIA, hard copy).

VIA Performance-Based Assessment Submission Requirement
It is critical for the special education program to collect data on how our students are meeting accreditation standards. Every teacher candidate/student registered for an EDSE course with a required Performance-based Assessment (PBA) is required to upload the PBA to VIA (regardless of whether a course is an elective, a one-time course or part of an undergraduate minor). A PBA is a specific assignment, presentation, or project that best demonstrates one or more CEC, InTASC or other standard connected to the course. A PBA is evaluated in two ways. The first is for a grade, based on the instructor's grading rubric. The second is for program accreditation purposes. Your instructor will provide directions as to how to upload the PBA to VIA.

For EDSE 616, the required PBA is the Literacy Plan and Intervention Project. Please check to verify your ability to upload items to VIA before the PBA due date.

Assignments and/or Examinations

Performance-based Assessment
(VIA submission required)

Literacy Plan and Intervention Project: details and rubric are posted on Blackboard.

College Wide Common Assessment
(VIA submission required)

N/A

Field Experience Requirement

A field experience is a part of this course. A field experience includes a variety of early and ongoing field-based opportunities in which candidates may observe, assist, and/or teach. Field experiences may occur in off-campus settings, such as schools (CAEP, 2016). Below are REQUIRED PROCEDURES FOR ALL STUDENTS ENROLLED IN THIS COURSE.

1. Complete the online EDSE Field Experience form. This online form will be sent to your GMU email from EDSEfld@gmu.edu on the first day of the semester. Click on the link and complete the form as soon as possible. ALL students should complete the required form, as this information is required by the state. Please direct any questions about the form to Dr. Kristen O'Brien at EDSEfld@gmu.edu.

    - If you are a full-time contracted school system employee and will complete the field experience at your worksite with administrator and instructor approval, you will be asked to specify the school at which you will be completing the field experience.

    - If you request a field experience placement, you will receive information via your GMU email about your assigned internship placement from the Clinical Practice Specialist in the College's TEACHERtrack Office. Check your GMU email regularly for important information regarding your field experience. Follow all instructions for the necessary Human Resource (HR) paperwork required to access the assigned field experience placement. Note that you may NOT arrange your own field experience placement.

2. View the EDSE Field Experience Introduction presentation. On the first week of classes and prior to representing George Mason in off-campus settings, your instructor will show a video presentation or provide a link to the presentation, which includes important information about the registration process for EDSE field experiences and tips for a successful field experience. After the presentation, sign the document provided by your instructor to indicate that you have watched the presentation and are aware of the EDSE field experience professionalism expectations.

3. Complete the GMU Experiential Learning Agreement packet (ELP). Mason requires all students completing off-campus field experiences in schools or other agencies to complete this packet. Once you have received your field experience placement, complete and submit this packet to the provided link.

4. Document your field experience hours. Your instructor may provide you with access to field experience documentation forms to use in documenting the hours and activities completed in your field experience placement. Your instructor will provide more directions on how to use and submit the documentation form.

5. Complete the field experience end-of-semester survey. Towards the end of the semester, you will receive an email from EDSEfld@gmu.edu with a link to an online survey. This brief survey asks you to report about important features of your field experience placement

Other Assignments

Complete directions and rubrics are posted on Blackboard

Participation. Active participation in synchronous classes, discussions, and other course related content is essential to master material and concepts. Each week, two participation points are available and may require submitting various materials, transcription samples, documents, live reading braille, participating in discussion board posts, and/or responding to prompts in class within the web-conference platform on one or multiple occasions. In certain weeks, no material submission may be required. Candidates who arrive late, leave early or are otherwise not present for all or part of the class may lose all or some participation points. Candidates with an unexcused absence(s) will not be permitted to make up participation points.

Abacus Assignment. This assignment will require candidates to explore the Cranmer abacus and to demonstrate proficiency skills related to basic and intermediate mathematical computation with the abacus. Directions and rubric are posted on Blackboard.

Homework Assignments. This course contains eight homework assignments that will directly relate to content and transcription work in math, literary, other special codes, abacus work, formatting, essays, surveys, group work, research, and other activities. Each homework assignment will be posted on Blackboard with specified activities and point allocation. Each homework assignment is due by the beginning of the class (4:30 pm) of the date specified on the course schedule. Transcription must be done with manual or electronic input braille programs (Perky Duck, braille writer, slate & stylus). No transcription programs may be used to produce any product in this course. Homework assignments that contain errors with less than 80% accuracy in total or on one/any section may result in not being counted for credit or returning to the student without any points awarded with the option to resubmit the assignment with up to 85% of the points possible.

Assessments. This course contains two assessments: a midterm and final. Each assessment evaluates unit proficiency (UEB math/science, Nemeth, and UEB literary). Assessment transcription will include electronic and manual braille production (brailler and slate & stylus) in addition to producing other relevant materials.

Portfolio. This class requires each candidate produce a transcription portfolio based on UEB literary and STEM transcription. Formatting concepts will also be required. The portfolio is to be produced with a manual brailler and slate & stylus. These materials are to be clearly photographed and posted on Blackboard and may be

required to be mailed and postmarked by the date specified, mail tracking is highly recommended.

Graduate Student Project: STEM Teaching Tools and Technology:
Graduate Student Assignment: complete directions and rubric are posted on Blackboard

Each graduate student will select a tactile/braille device, tool, or technology for science, technology, engineering, or math (STEM) for an academic student who is a braille and tactile learner. Each candidate will create slides/a document to present on the STEM tool/technology for the class. Note: Do not purchase the tool/technology you choose. Please use online resources, tutorials, posted manuals, reviews, discussions, and published materials to create your presentation.

Presentation slides/document are to include:

- Tool/technology name and link
- Description: Provide a description of the purpose and function of the item in your own words.
    - List STEM content area(s) and the level this tool/technology can be used (e.g. high school chemistry; early computational mathematics)
    - Cost/subscription fee of the tool/technology, also include if the tool/technology is available on Federal Quota
    - Include picture(s) with an in-slide references for the source of the image
  - Tool/technology use: provide an overview in your own words on how the item is used. Include:
    - General and brief description of how to use the item
    - Accessibility and tactile features
    - Available formats (UEB, Nemeth, etc.)
    - Any alternative uses
- TBVI perspective: briefly summarize how a TBVI would integrate use of this tool/technology. Include:
  - Is specialized training needed for the TBVI and/or student to use the tool/technology?
  - Is the tool/technology something a general education teacher, instructional assistant, or parents could integrate into instruction or support or use with the student?
  - Possible limitations, if any: identify any challenges associated with the product (e.g. cost, availability, storage, transporting fragile items, difficulty of use and implementation etc.)
- References: Provide references for any websites, articles, discussion boards, pictures, manuals you referred to for this presentation.

Presentation: Presentation should be ≤10 minutes and provide a succinct overview of required elements. Slides should contain clear and meaningful information for others in the class to refer to as TBVIs. Slides/your document must be submitted one hour prior to presentation class to allow for upload to our web-conference platform.

Assignment Summary

Assignment	Points	Due
Participation 14x2	28	Weekly
Homework 8x10	80	Specified in course schedule
Assessments 2x65	130	UEB Assessment: 2/28/22 Nemeth Assessment: 4/25/22
Graduate student assignment: STEM Teaching Tools and Technology	15	3/21/22
Literary and STEM transcription portfolio	60	3/28/22
Abacus assignment	20	4/11/22
Field experience, unit plan, and presentation	70	5/2/22
Total	**403**	

Course Policies and Expectations

Attendance/Participation

Due to the rapid nature of this course, weekly attendance is necessary to master content. Only in the case of an emergency or other urgent situation will an absence be excused. Candidates must inform the instructor in advance of an upcoming, unavoidable absence, or as soon as possible if there is an emergency. It is up to the discretion of the instructor to excuse the absence, which may or may not allow makeup of participation points. Attendance and participation will be checked multiple times during each synchronous course session in varied formats.

Late Work

All work is due by the start of class on the date specified in the course schedule. All coursework must be submitted on time, as each assignment in this class builds upon previous content. A candidate who has an approved accommodation for extended time must inform the instructor in writing, in advance with documentation for this approved accommodation from the Consortium university before an assignment requiring extended time is due. In the event of an emergency, candidates must inform the instructor of the situation; it is up to the instructor to determine if a scenario may warrant a time extension. Time extensions will not be granted retroactively and in the rare event an extension is granted, it may be subjected to point reduction.

Other Requirements

Assignment completion and submission policies

All assignments must be original work completed during this semester (Spring 2022). Assignments, papers, the unit plan, portfolio, homework, and other work from previous semesters or courses may not be submitted for credit in this class.

All assignments are to be posted in the designated location on Blackboard or with the specific directions provided by the instructor. Assignments that are sent via electronic mail or posted to the incorrect assignment location may not be counted as completed or submitted for credit. Please post your final products in one attempt on Blackboard (multiple submissions are permitted in one attempt). Students must confirm their assignments have submitted properly and in full. Certain assignments might require posting video(s) photo(s) and other multi-media elements. Kaltura allows students to post video content to Blackboard, directions found on this link.

Grading

Percent	Grade	Points
93-100	A	374-403
90-92	A-	362-373
88-89	B+	354-361
83-87	B	334-353
80-82	B-	322-333
70-79	C	282-321
≤69	F	≤281

***Note:** The George Mason University Honor Code will be strictly enforced. See Academic Integrity Site (https://oai.gmu.edu/) and Honor Code and System (https://catalog.gmu.edu/policies/honor-code-system/). Students are responsible for reading and understanding the Code. "To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work." Work submitted must be your own new, original work for this course or with proper citations.

Professional Dispositions

Students are expected to exhibit professional behaviors and dispositions at all times. See Policies and Procedures (https://cehd.gmu.edu/students/polices-procedures/). Students are expected to exhibit professional behaviors and dispositions at all times. Professional dispositions are an essential function of a special educator's job, indicating that these dispositions are critical to develop and assess in special education licensure programs. In the College of Education and Human Development, dispositions are formally and separately evaluated in at least three points in each student's program – a self-evaluation at the start of their program, a self-evaluation at the mid-point of their program, and a university supervisor's evaluation during internship. In special education

graduate licensure programs, the initial self-evaluation is completed in a designated course (EDSE 501), the mid-point self-evaluation is completed in designated courses (EDSE 627, EDSE 661, and EDSE 616), and the internship evaluation is completed by instructors in EDSE 783, EDSE 784, and EDSE 785. In addition to these three designated evaluation times, instructors may complete instructor-rated disposition assessments other times throughout the program. When dispositions are assessed, it is important that for areas where a positive disposition is rated as "not proficient," the student takes steps to grow as an educator. See https://cehd.gmu.edu/epo/candidate-dispositions.

Class Schedule
*Note: Faculty reserves the right to alter the schedule as necessary, with notification to students.

Date	Topics	Readings and assignments
Week 1 1/24/22	• Course overview • Literary braille: EBAE to UEB transition: overview and practice of changes • Introduction to UEB math/science Part I	Overview of changes from EBAE to UEB Terminology: UEB Math/Science Ashcroft Ch. 3 Exercises 3.2.1, 3.2.2, 3.2.3 GTM: pp. 8-10 and 15-17 UEB Math Tutorial: Ch. 1, lessons 1.0-1.4; Ch. 2, lessons 2.0-2.1; Ch. 3, lessons 3.0-3.1 GTM Updates GTM 3. Signs of Operation and Comparison (PDF) GTM 3. Signs of Operation and Comparison (BRF) GTM 3. Signs of Operation and Comparison (Word) *Nemeth at a Glance:* Tactile skills necessary for math: pp. 13-26
Week 2 1/31/22	Math transcription: UEB Part II • Spatial layout for UEB • Groupings • Introduction to fractions and mixed numbers	GTM: pp. 12-14, 20-25, 31-33, 40 UEB Math Tutorial: Lesson 3.2-3.3; Ch. 4; lessons 4.0-4.3; Ch 6, lesson 6.3-6.6;

Date	Topics	Readings and assignments
	• Currency and measurement • Square root and radicals • Creating braille number lines	Ashcroft Ch. 4.4: Spatial equations for addition, subtraction, and division Exercises 4.4.1, 4.4.2 Ashcroft Ch. 5 Exercises 5.1.2, 5.2.1 Ashcroft Ch. 6 Exercises 6.6.1, 6.6.2, 6.7.1 UEB Rulebook: 11.5 UEB Rulebook:16.2 **Due: Homework 1**
Week 3 2/7/22	Math transcription: UEB Part III • Percent, degrees, and angles • Superscripts and subscripts • Special symbols: lines and line segments, shape indicators **Adapting math worksheets**	GTM: pp. 12-13, 50, 58 UEB Math Tutorial: Ch. 5; Lesson 9.0 Ashcroft Ch. 7 Ashcroft Ch. 10 Exercises: 10.6.1, 10.6.2 Ashcroft Ch. 11 Exercises 11.6.1 UEB Rulebook: 11.6-7 **Due: Homework 2**
Week 4 2/14/22	• Math transcription: UEB Part IV • Roman numerals and additional math symbols • Matrices and Vectors • Advanced mathematical concepts	GTM: pp. 11, 69-73 UEB Math Tutorial: Ch. 3, Lesson 3.5; Ch. 4; Ch. 5; Ch. 7 Ashcroft Ch. 12 Exercises 12.4.2, 12.4.3 UEB Rulebook 11.8 **Due: Homework 3**
Week 5 2/21/22	• UEB review • UEB and Chemistry • Introduction to the abacus	GTM: pp. 74-82 UEB Math Tutorial: Lesson 6.2, Chs 7-10 UEB Rulebook: 11.9

Date	Topics	Readings and assignments
	• Tactile games and interactive braille lessons	**Due: Homework 4**
Week 6 2/28/22	• Abacus • UEB Assessment	**Due: UEB Assessment**
Week 7 3/7/22	**Tactile Graphics** • Methods to create tactile graphics • Techniques and tools for science and math instruction • Accessible calculators • Accessible graphing calculators • Transcription of electronic information (Computer notation) **Formatting** • Techniques for transcribing various materials, worksheets, tables, charts, special formatting, etc.	GTM: pp. 83-87 Ashcroft Ch. 4: Electronic addresses Ch. 8: # and other special symbols Ch. 12: dashes, backslash UEB Rulebook: 11.10 Braille Formats: Principles of Print-to-Braille Transcription BANA Guidelines for the Transcription of Early Educational Materials from Print to Braille BANA Graphing Calculator Guidelines (PDF) BRF, and BRF for downloading
3/14/22	**Spring Break**	**No course meeting**
Week 8 3/21/22	**Special codes:** • World languages • Music braille Graduate student STEM tool and technology presentations	UEB Rulebook: Section 13 and Section 14 for music braille UKAAF Braille Music Music Braille Code, 2015 UEB Rulebook: 3.18 Provisional Guidance for Transcribing Foreign Language Material in UEB Braille Formats Appendix D Foreign Language Symbols

Date	Topics	Readings and assignments
		Foreign Material in English Context: 1.16 **Due: Graduate students only:** STEM Teaching Tools and Technology Presentation: please post your presentation at least one hour before the start of class to allow for uploading to our web-conference platform.
Week 9 3/28/21	**Introduction to Nemeth Code** **Code switching** **Nemeth Code within UEB text** • Nemeth numbers • Nemeth symbols: commas, decimals, signs of operation	Guidance for Transcription Using the Nemeth Code within UEB Contexts *Nemeth at a Glance:* Examples of using Nemeth in UEB: pp. 105-108 *Nemeth at a Glance:* Early numeracy, pp. 27-35 Nemeth Tutorial: Chapters 1, 2.1, 3.1, 3.2 Nemeth Code: Rules I, II, XIX **Due: UEB transcription portfolio (postmarked and/or posted by this date)** **Due: Homework 5**
Week 10 4/4/22	**Nemeth** • Spatial arrangements • Fractions • Grouping • Algebra	*Nemeth at a Glance:* Spatial arrangements and fractions pp. 37-43 Nemeth Tutorial Chapters 3.4, 3.7, and 7.1 Nemeth Code: Rules X, XII, XXIV, Rule XVIII, Nemeth Code: pp. 75

Date	Topics	Readings and assignments
		Due: Homework 6
Week 11 4/11/22	**Nemeth** • Signs and symbols of comparison • Shapes • Super and subscripts Braille transcription programs Transcription techniques for TBVIs ASCII	*Nemeth at a Glance:* pp. 53-54 Nemeth Tutorial: Chapters 5.1, 10 Nemeth Code: Rules XIII, XVI, XVIII, XXI, **Due: Homework 7** **Due: Abacus overview assignment**
Week 12 4/18/22	**Nemeth** • Modifier, radicals, formatting • Advanced math transcription • Nemeth and Chemistry **Overview of MathSpeak**	*Nemeth at a Glance:* Modifiers, pp. 49-52; 102-104 **Nemeth Tutorial Chapter 11.5-11.6** Nemeth Code: Rule XV MathSpeak **Due: Homework 8**
Week 13 4/25/22	**Nemeth Assessment**	**Due: Nemeth Assessment**
Week 14 5/2/22	**Unit plan presentations**	Due: Unit plans
Week 15 5/9/22	Course conclusion	

Core Values Commitment
The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles: See Core Values (http://cehd.gmu.edu/values/).

GMU Policies and Resources for Students

Policies

- Students must adhere to the guidelines of the Mason Honor Code. See Honor Code and System (https://catalog.gmu.edu/policies/honor-code-system/).

- Students must follow the university policy for Responsible Use of Computing. See Responsible Use of Computing (http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/).

- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.

- Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor. See Disability Services (https://ds.gmu.edu/).

- Students must silence all sound emitting devices during class unless otherwise authorized by the instructor.

Campus Resources

- Support for submission of assignments to VIA should be directed to viahelp@gmu.edu or https://cehd.gmu.edu/aero/assessments.

- Questions or concerns regarding use of Blackboard should be directed to Blackboard Instructional Technology Support for Students (https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/).

Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking:

As a faculty member, I am designated as a "Non-confidential Employee" and must report all disclosures of sexual assault, interpersonal violence, and stalking to Mason's Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason's confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance from Mason's Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu.

For additional information on the College of Education and Human Development, please visit our website College of Education and Human Development (http://cehd.gmu.edu/).

Appendix
Assessment Rubric(s)

Assessment 5: EDSE 616 Literacy Plan and Intervention Project
Rubric for VIA; Grading Rubric Posted Separately on Blackboard

	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3
Learner Development and Individual Learning Differences CEC/B&VI Standards 1 The candidate will provide learner background information	The candidate provides partial information about learner's background omitting relevant information about student experiences and educational strategies currently being employed or information about learner characteristics.	The candidate provides general information about learner's background and educational experiences, highlighting individualized strategies that are currently being used to enhance language development and teach communication skills to learner with visual impairment. The candidate provides general information on learner characteristics, including visual condition and the effects of the learners' visual impairment on learning and experience.	The candidate provides detailed information about learner's background and educational experiences, highlighting the extent to which tactile skills have been taught and individualized strategies that are currently being used to enhance language development and teach communication skills to learner with visual impairment. The candidate provides detailed information on learner characteristics, including visual condition and the effects of the learners' visual

	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3
		Candidate describes the perspective of cultural and linguistic differences on growth and development.	impairment on 1) learning and experience and 2) receptive and expressive literacy and communication. Candidate describes the perspective of cultural and linguistic differences on growth and development.
Learning Environments CEC/B&VI Standard 2 The candidate will design a learning environment description with identified supports of lesson integration is placement setting. The candidate describes the use of multisensory learning environments that encourage student participation and materials/technology needed for the learner with a visual impairment. The candidate provides	Candidate describes the learning environment in which in the intervention took place, specifying the age, grade level, subject matter of the learner with visual impairment and the school/program in which the student is enrolled. Candidate provides cursory description of the learning environment that encourage	Candidate describes the learning environment in which in the intervention took place, specifying the age, grade level, subject matter of the learner with visual impairment and the school/program in which the student is enrolled. Candidate identifies supports needed for lesson integration into various program placements Candidate	Candidate describes the learning environment in which in the intervention took place, specifying the age, grade level, subject matter of the learner with visual impairment and the school/program in which the student is enrolled. Candidate describes the extent to which the learning environment encourages active participation in individual and group activities

	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3
for incidental learning opportunities.	active participation in individual and group activities	describes the use of multisensory learning environments that encourage active participation in individual and group activities Candidate describes the classroom organization needed to accommodate materials, equipment, and technology for student with visual impairment.	Candidate describes and supports needed for lesson integration into various program placements Candidate designed and clearly described multi-sensory learning environments that encourage active participation in group and individual activities Candidate describes the classroom organization needed to accommodate materials, equipment, and technology for student with visual impairment. Candidate describes access to incidental learning experiences.
Content Area Lesson Plan	Overarching concept of unit plan is unclear or context for unit plan is not adequately	Candidate describes the overarching concept that is being developed and the context	Candidate describes the overarching concept that is being developed and the context

	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3
CEC/B&VI Standard 5 The candidate will prepare lesson plans, Prepare and organize materials to implement daily lesson plans, provide strategies for teaching new concepts	described. The scope and sequence of unit plan is incoherent or no rationale for progression of skills is described. Candidate fails to make an explicit connection between literacy and instructional concepts of unit.	for the unit plan (prioritized area of the general education curriculum) Candidate describes the overall purpose of the unit plan that is being designed to promote positive learning results in the general curriculum. Candidate describes the integration of literacy skill instruction for the unit plan, which may include narrative or expository materials or vocabulary and comprehension instruction to promote understanding of the content area concepts. Candidate describes strategies for teaching new concepts. Candidate provides instructional strategies	for the unit plan (prioritized area of the general education curriculum). Candidate describes the overall purpose of the unit plan that is being designed to promote positive learning results in the general curriculum. Candidate provides a rationale for the progression of skills (scope and sequence) covered in unit and the expected achievement for overall unit. Candidate describes the integration of literacy skill instruction for the unit plan, which may include narrative or expository materials or vocabulary and comprehension instruction to promote understanding of content area

	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3
		considered to individualize instruction for impairment.	concepts, incorporating evidence-based literacy strategies into direct instruction. Candidate describes evidence-based instructional strategies considered to individualize instruction for learner with visual impairment.
Three Lesson Plans Instructional Planning & Strategies CEC/B&VI Standards 5 The candidate prepares lesson plans using evidence-based practices validated for specific characteristics of learners and settings in instructional planning. The candidate uses communication strategies and resources to	Candidate prepares incomplete lesson plans for instructional unit and does not include evidence-based teaching methods and strategies appropriate to the needs of learners with visual impairment. Candidate does not prepare lessons which make a clear connection between content area	Candidate prepares comprehensive lesson plans for instructional unit. Candidate includes specific strategies to teach critical lesson content and vocabulary. The procedure includes a description of teaching strategies used to build the content area concepts with a clear connection to literacy skills. Candidate includes explicit instruction in content area	Candidate prepares comprehensive lesson plans for instructional unit. Candidate includes specific evidence-based strategies to teach critical lesson content and vocabulary. The procedure includes a description of evidence-based literacy strategies used to build the content area concepts with a clear connection to literacy skills. Candidate includes explicit instruction in

	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3
facilitate understanding of subject matter for individuals with exceptionalities whose primary language is not the dominant language.	literacy skills and concepts.	literacy, which may include age appropriate narrative and expository texts in accessible format or vocabulary and reading comprehension strategies to promote understanding of text. Candidate clearly and accurately documents: 1. Measurable lesson plan objective(s) 2. Lesson plan materials. 3. Pre-instructional set 4. Lesson plan method/procedure (task analysis) 5. Lesson data collection methods 6. Closure Candidate lists and briefly describes 2-Evidence-based practices validated for specific	content area literacy, which may include age appropriate narrative and expository texts in accessible format or vocabulary and reading comprehension strategies to promote understanding of text. Candidate clearly and accurately documents: 1. Measurable lesson plan objective(s) 2. Lesson plan materials. 3. Pre-instructional set 4. Lesson plan method/procedure (task analysis) 5. Lesson data collection methods 6. Closure Candidate lists and briefly describes at least 2 evidence-based strategies, practices validated for specific

	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3
		characteristics of learners and settings and uses APA style references. Candidate develops comprehensive lesson plans that are written with high levels of detail such that a substitute TVI could carry them out. Candidate describes strategies for teaching learner who is a non-native English speaker.	characteristics of learners and settings and uses APA style references. Each evidence-based practice also contains a clear rationale for incorporating strategy. Candidate develops comprehensive lesson plans that are written with high levels of detail such that a substitute TVI could carry them out. Candidate includes clear plans for connecting the concepts from one lesson to the next throughout the unit and strategies for integrating student initiated learning (critical thinking, problem solving). Candidate describes strategies for teaching learner who is a non-

	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3
			native English speaker.
Assessment Plan for the Unit CEC/B&VI Standard 4 The candidate creates and interprets formal and informal assessment methods embedded in the unit.	Candidate does not to embed or interpret formal and informal assessment methods in the unit. Candidate does not demonstrate ability to create and maintain accurate records of student learning.	Candidate creates a formal assessment, including one test, focusing on literacy and concept development, for the overall unit. Each lesson plan includes informal assessment procedures, including an assessment form/worksheet for collecting data on student learning to conduct self-evaluation of instruction. Candidate documents ability to create and maintain accurate records of student learning.	Candidate creates a formal assessment, including one test, focusing on literacy and concept development, for the overall unit, connecting the concepts from one lesson to the next throughout the unit and strategies for integrating student initiated learning (critical thinking, problem solving). Each lesson plan includes informal assessment procedures, including an assessment form/worksheet for collecting data on student learning to

	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3
			conduct self-evaluation of instruction. Candidate demonstrates ability to create and maintain accurate records of student learning.
Tactile Models, Diagrams, or Drawings Instructional Planning & Strategies CEC/B&VI Standard 5 The candidate will select and adapt materials in tactile/accessible format. The candidate provides strategies for teaching tactual perceptual skills.	Tactile materials are not well designed or materials used to prepare materials are not appropriate. Tactile materials do not represent the concept/skill being taught in a logical or sequential order. Tactile materials do not accurately represent the concept/skill being taught. Strategies for teaching tactual perceptual skills are not	Tactile materials are well designed. Candidate selected appropriate materials and provided clear rationale for selection of materials, including considerations of the unique characteristics of the student with visual impairment. Tactile materials clearly communicate concept/skill taught in a sequential and logical order. Strategies for teaching tactual perceptual skills are included as needed. Tactile materials accurately depict	Tactile materials are well designed. Candidate considered: size, scale, density, use of symbols, labels and legend, if appropriate. Candidate selected appropriate materials and provided clear rationale for selection of materials, including considerations of the unique characteristics of the student with visual impairment. Tactile materials clearly communicate concept/skill taught in a sequential and logical order. Tactile materials accurately depict

	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3
	included as needed.	concept/skill and include essential elements.	concept/skill and include essential elements, avoiding extraneous information. Strategies for teaching tactual perceptual skills are included as needed and described in depth.
Direct Instruction Reflection CEC/B&VI Standard 6 The candidate will reflect on one's practice to improve instruction and guide professional growth.	Candidate does not write a self-evaluation of instruction or does not reflect on the practice to improve instruction and guide professional growth. Candidate does not describe specific considerations for improving the lesson unit; or Candidate fails to describe the ease with which the	Candidate writes a general self-evaluation of instruction and reflects on the practice to improve instruction and guide professional growth. Candidate describes specific considerations for improving the lesson unit. Candidate describes the ease with which the student was able to interpret the tactile materials. Candidate	Candidate provides an in-depth self-evaluation of instruction and reflects on the practice to improve instruction and guide professional growth. Candidate describes specific considerations for improving the lesson unit. Candidate describes the ease with which the student was able to interpret the tactile materials and discusses

	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3
	student was able to interpret the tactile materials; or Candidate fails to describe the next steps to promote further understanding of concepts/skills.	describes the next steps to promote further understanding of concepts/skills.	potential adaptations for improving them. Candidate describes the next steps to promote further understanding of concepts/skills in general education curriculum.

VI Consortium Syllabi Addendum

Disability Accommodations

Students with disabilities who seek accommodations in VI Consortium courses must be registered with their university disability services office and provide documentation of approved accommodations privately to instructors in a timely manner each semester. No accommodations will be implemented before official notification from the student's home Consortium university is received. Accommodations will be implemented as stated in the official notification from the university.

Honor Code

All students participating in BVI courses must adhere to their university honor code and will be asked to pledge adherence to the honor code. Additionally, all work submitted must be the students' own work and contain proper citations and any work submitted for a grade must be completed during the academic semester in which it is submitted for grading. Any deviations from the home university honor code will be reviewed by that university's governing body. The VI Consortium agrees to accept the actions or sanctions imposed by the home university's governing body.

Field Experiences

Many VI Consortium courses require field and practical experiences in schools or other settings. Students may not arrange their own field experiences. All students must comply with their home university protocol for participation in field experiences, including:

- Immediate and timely correspondence with the home university field placement office to submit field placement request procedures by home university deadlines;
- Timely compliance with submitting applications, documentation, background checks, and credentialing by the university and participating school system and/or agency for field work within the required deadlines; and
- Compliance with provisions and protocol for engaging in field experiences with the selected school, student(s), teachers, and administration.

No field experience placements will be made until all Consortium and home university requirements have been successfully met. Students may be removed from field placement settings if deemed necessary by the Consortium or home university.

Identification, Course, and Resource Access

While students apply to and register through their Consortium universities, all Consortium BVI courses operate through Mason and all VI Consortium students are given Mason credentials and a Mason G number. Students must keep record of their Mason G number, as this will serve as their identification should they ever pursue education or employment directly through Mason. All courses require Mason

credentials to log on, as does access to the electronic library and other resources used in courses. All students are also given Mason electronic mail accounts. Please activate and maintain this account, as course and program information are supplied through this account.

Advising
All students taking BVI courses must have current advising and a program of studies to ensure course enrollment follows the advised program for individual candidate circumstances.

Copyrighted Material and Intellectual Property
Materials (e.g., case studies, technology, books, articles, videos, and other media) shared through BVI courses may contain those with copyright and/or intellectual property protections. Students may not share any materials or media outside of this course, on social media, or other means. References with proper citations may be made to refer to these materials and media in all uses, whether in class or elsewhere.

Live Course Sessions and Course Recordings
Generally, synchronous courses are recorded and stored for future access should students experience a disruption to internet or power service during live sessions. Under no circumstances are these recordings to be shared with anyone. Likewise, live sessions and recordings may not be audited, observed, or accessed by individuals not currently enrolled in the specified courses. All students must ensure the confidentiality of others in the class. Please also do not disclose personal information about yourself or anyone else during live and recorded sessions, including messages submitted in chat functions. Any personal information needing to be relayed to the instructor must be done so privately.

Full Attention
Students must give 100% of their attention during synchronous class meetings and are expected to be fully engaged. Students may not drive or supervise others during class time or engage in non-course related activities that divert their attention away from the class.