



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

Summer 2018

EDAT 423 D01: Accessibility and Input Modifications

CRN: 40540, 3 – Credits

<b>Instructor:</b> Dr. Cindy George	<b>Meeting Dates:</b> 5/21/2018 – 7/28/2018
<b>Phone:</b> 571-230-7854	<b>Meeting Day(s):</b> N/A
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<b>Office Hours:</b> by appointment	<b>Meeting Location:</b> online
<b>Office Location:</b> Krug 105A	<b>Other Phone:</b> 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.

**Prerequisite(s):** None

**Co-requisite(s):** None

**Course Description**

Provides an overview of accessibility strategies and input modifications designed for use by individuals with disabilities. Exploration experiences enable students to locate, use and train others on the range of technologies available as well as design opportunities for constructing unique devices. Field experience may be required. Offered by Graduate School of Education. May not be repeated for credit.

**Schedule Type:** Lecture

**Advising Contact Information**

Please make sure that you are being advised on a regular basis as to your status and progress through your program. Mason M.Ed. and Certificate teacher candidates/students should contact the Special Education Advising Office at (703) 993-3670 for assistance. All other teacher candidates/students should refer to their faculty advisor.

**Course Instructional Method**

EDAT 423 is an asynchronous online course. Using Blackboard, students are expected to complete assignments weekly and be engaged in course activities throughout the semester.

## Course Delivery Method

Learning activities include the following:

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

This course will be delivered online (76% or more) in an asynchronous format via 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 Sunday, May 20, 2018, at 8 PM.

**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:  
[https://help.blackboard.com/Learn/Student/Getting\\_Started/Browser\\_Support#supported-browsers](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#supported-browsers)

To get a list of supported operation systems on different devices see:

[https://help.blackboard.com/Learn/Student/Getting\\_Started/Browser\\_Support#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/](http://www.apple.com/quicktime/download/)

### *Technical Expectations*

- 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.

### *Course Expectations*

- Course Week:
- Because asynchronous courses do not have a “fixed” meeting day, our week will start on Wednesday, and finish on Tuesday. Class begins 5/23/18.
- 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 2 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 insure accessibility must be registered with George Mason University Disability Services.

### **Learner Outcomes**

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

1. Review and locate devices, companies, organizations, and services related to input and access to technology.
2. Evaluate the importance of accessibility features.
3. Design and construct a low-tech solution for accessibility
4. Develop an instructional plan for a customized training of an input technology
5. Conduct a customized training of how to use an input technology for an individual with a disability, their family, or a professional who works with individuals.

### **Course Relationship to Program Goals and Professional Organizations**

This course is part of the George Mason University, Graduate School of Education (GSE), Assistive Technology Program. The Assistive Technology Program has developed program specific standards in accordance with NCATE requirements. The Assistive Technology Program Standards incorporate several elements within the professional standards from the Council for Exceptional Children (CEC), while also expanding upon them to meet the specific needs related to assistive technology. The primary AT Program standards that will be addressed in this class include the following: Standard 2: Knowledge and Skills and Standard 4: Practical Experience. \*NOTE: NCATE Assessments (in many but not all courses) may address additional AT Program standards.

### **Required Textbooks**

Cook, A. M. & Polgar, J. M. (2012). *Essentials of assistive technologies*. St. Louis, MO: Elsevier Mosby.

### **Recommended Textbooks**

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

## Required Readings

Apple Computer. Accessibility. Retrieved May 4, 2018, from <http://www.apple.com/accessibility>

Microsoft Corporation. Enable. Retrieved May 4, 2018, from <http://www.microsoft.com/enable>

## Additional Equipment & Materials

This course requires students participate in constructing various input devices. To do so, both electronic equipment as well as project materials are needed. Reviewing the assignments and device options available for construction Low-Tech Modules will provide both equipment and materials needs. If you find you are in need of the electronic equipment required by these assignments, a suggested 'electronic kit' can be purchased at:

[http://www.robotshop.com/en/elenco-tk-14-technician-kit.html?gclid=CjsKDwjw0cXIBRCxjqnE3K3sHhIkAL1LezRFHZN4xT0LqNP07kCJzxbjLBCD4bHdlySIZCVj6jFfGgK-BvD\\_BwE](http://www.robotshop.com/en/elenco-tk-14-technician-kit.html?gclid=CjsKDwjw0cXIBRCxjqnE3K3sHhIkAL1LezRFHZN4xT0LqNP07kCJzxbjLBCD4bHdlySIZCVj6jFfGgK-BvD_BwE)

## Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, Tk20, hard copy).

### Tk20 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 Tk20 (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 Tk20.

For *EDAT 423*, the required PBA is Adapted Input Device Instruction Project. Failure to submit the assignment to Tk20 will result in reporting the course grade as Incomplete (IN). Teacher candidates/students have until five days prior to the University-stated grade change deadline to upload the required PBA in order to change the course grade. When the PBA is uploaded, the teacher candidate/student is required to notify the instructor so that the "IN" can be changed to a grade. If the required PBA is not uploaded five days prior to the University-stated grade change deadline and, therefore, the grade not changed, it will become an F. Please check to verify your ability to upload items to Tk20 before the PBA due date.

## **Assignments and/or Examinations**

### **Performance-based Assessment (Tk20 submission required)**

The signature assignment(s) for this class is the *Adapted Input Design Instruction Project*.  
Please see specific assignment description below.

### **College Wide Common Assessment (TK20 submission required)**

N/A

### **Performance-based Common Assignments (No Tk20 submission required)**

N/A

## **Class Assignments**

### **Online Modules (40 points)**

Students must access online class on Blackboard during modules and complete readings and posted activities for all classes. Posted activities will include text readings, PowerPoint presentations of content, Internet search/research assignments, video exploration and viewing, community exploration, response tasks and construction activities. All activities are due by the last day of the module timeframe.

### **Low-Tech Designs (20 points)**

Students are to select one of the low-tech device from each of the 2 Low Tech Modules and create a PowerPoint presentation to include:

- The name and purpose of the device
- A description of potential users for the device
- Pictures taken of the device construction during each step

### **Adapted Input Device Instruction Project (40 points)**

Students are required to create and implement an instruction project for training the use of an adaptive input device. The purpose of the plan is to introduce the use of this device to a potential user (i.e., individual with disability, their parent or other family member, or a professional working with a individual with a disability). The designated input device is to be approved by the instructor. This plan itself should be submitted as a text document and include the following:

- a. Device Overview: Provides a description of the adapted input device. The description should include the purpose of the device, its features, and its vendor/contact information.
- b. User Characteristics & Needs: Provides a rationale for selecting the user/individual(s) for which they are designing the training. A listing of the user's prerequisite skills as well as the needs they have for potentially using the device will be outlined. Consideration of diverse needs of both the user in training as well as those that make be affected by the training should be addressed.
- c. Training Plan: Designs a training plan customized specifically for the user that is to be trained. The plan should include: goal(s) of the 1-hour training, objectives for each section or topic being trained and allocated timeframe for each, a listing of training materials, procedural steps for the training that integrate evidence-based strategies and data collection, and additional resources for the user to take with them following the training.
- d. Community Impact: Discusses the potential impact their Input Device Training could have on individuals with disabilities, their families, and communities across environments, settings and life span.

## Grading Rubric

Assignment Requirements	Points	Comments
Device approval ..... 4 pts		Due 6/25/18

### Instructional Training Plan (Due 7/26/18)

<b>Device Overview</b>	Description & Purpose.....3 pts		
	Features.....3 pts		
	Vendor/Contact info .....2 pts		
<b>User Characteristics</b>	Rationale.....3 pts		
	Prerequisite skills.....3 pts		
	Needs ..... 3 pts		
	Considerations ..... 2 pts		
<b>Training Plan</b>	Goal(s) & Objectives .....3 pts		
	Materials .....3 pts		
	Procedural steps.....3 pts		
	Data collection .....2 pts		
	Additional resources .....2 pts		
<b>Community Impact..... 4 pts</b>			
<b>Total Points (out of 40 possible)</b>			



## Course Policies and Expectations

### Attendance/Participation

Students are expected to actively engage in ALL weekly course activities throughout the semester, which include viewing of all course materials, completing course activities and assignments, and participating in course discussions and group interactions. Please note that while only certain learning elements are assessed through “grades”, the instructor can still assess student involvement and engagement using other measures. Blackboard enables the instructor to view such data as login dates, duration of time spent online, access to specific content elements, and more. The instructor will use this data along with course grades to ensure that students are actively engaged in the course.

### Late Work

All weekly module work submitted late will automatically receive ½ credit unless arrangements are made in advance with the instructor. *Work will **not** be accepted if work is submitted a week past the due date.* All final project work will receive a response cost unless arrangements are made in advance with the instructor.

### Grading Scale

Evaluation will be based upon a point system.

The point value for each assignment is as follows:

Online Modules.....	40
Low-Tech Designs .....	20
Adapted Input Device Instruction Project.....	40
<b>TOTAL POINTS.....</b>	<b>100</b>

The following grading scale will be used at the Undergraduate level:

> 100% = A+
95-100% = A
90-94% = A-
87-89% = B+
83-86% = B
80-82% = B-
77-79% = C+
74-76% = C
70-73% = C-
60-69% = D
< 60% = F

\*Note: The George Mason University Honor Code will be strictly enforced. 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 or with proper citations (see <https://catalog.gmu.edu/policies/honor-code-system/>).

## Professional Dispositions

Students are expected to exhibit professional behaviors and dispositions at all times. See <https://cehd.gmu.edu/students/polices-procedures/>

## Class Schedule

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

	Topic	Readings & Assignments
<b>Module 1</b> 5/23 – 5/27	Introduction & Computer Accessibility	<u>Reading/Review:</u> <b>Cook &amp; Polgar (2012)</b> Chapters 1 & 2 <a href="http://www.apple.com/accessibility">http://www.apple.com/accessibility</a> <a href="http://www.microsoft.com/enable">http://www.microsoft.com/enable</a> <u>Assignment:</u> Online Module 1
<b>Module 2</b> 5/28 – 6/2	Software /Apps Accessibility	<u>Reading:</u> <b>Cook &amp; Polgar (2012)</b> Chapter 5 <b>Robitaille (2010)</b> 123-129; 135-140 <u>Assignment:</u> Online Module 2 Software Demos
<b>Module 3</b> 6/3 – 6/8	Alternative Keyboards & Mice	<u>Reading:</u> <b>Cook &amp; Polgar (2012)</b> 112-122, 124-126, 135-142 <u>Assignment:</u> Online Module 3
<b>Low-Tech:</b> <i>Computer Access Solutions</i> 6/9 – 6/13		<u>Review:</u> Low-Tech Computer Access Websites <u>Assignment:</u> Low Tech Constructions
<b>Module 4</b> 6/14 – 6/19	Head Access	<u>Reading:</u> <b>Cook &amp; Polgar (2012)</b> 117, 122-126 <u>Assignment:</u> Online Module 4

<p><b>Module 5</b> 6/20– 6/25</p>	<p>Switch Access</p>	<p><u>Readings:</u> <b>Cook &amp; Polgar (2012)</b> 126-134, 142-152  <b>Robitaille (2010)</b> Chapter 5  <u>Assignment:</u> Online Module 5</p> <p><i><b>Training Device Approval</b></i>  ~ Due 6/25 ~</p>
<p><b>Low-Tech:</b>  <i>Access to Independent Living</i>  6/26 – 6/30</p>		<p><u>Review:</u> Accessing Home/Community Websites  <u>Assignment:</u> Low Tech Constructions</p>
<p><b>Module 6</b> 6/31 – 7/6 July 4th Holiday</p>	<p>Wheelchair Seating for Access</p>	<p><u>Reading:</u> <b>Cook &amp; Polgar (2012)</b> Chapter 4  <u>Assignment:</u> Online Module 6</p>
<p><b>Module 7</b> 7/7 – 7/12</p>	<p>Vehicle Access</p>	<p><u>Reading:</u> <b>Cook &amp; Polgar (2012)</b> Chapter 13  <u>Assignment:</u> Online Module 7</p>
<p><b>Module 8</b> 7/13 – 7/18</p>	<p>Access to Homes</p>	<p><u>Reading:</u> <b>Cook &amp; Polgar (2012)</b> Chapter 14  <u>Assignment:</u> Online Module 8</p>

<p><b>Module 9</b> <b>7/19 - 7/28</b></p>	<p>Final Assignments</p>	<p><u>Assignment:</u> Input Device Instructional Plan</p> <p><b><i>Input Device Instructional Plan: Written Project</i></b> ~ Due 7/26 ~</p> <p><b><i>Final Class Survey</i></b> ~ Due 7/27 ~</p> <p><b><i>Tk20 Submission of Plan</i></b> ~ Due 7/28~</p>
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### 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: <http://cehd.gmu.edu/values/>

### GMU Policies and Resources for Students

#### Policies

- Students must adhere to the guidelines of the Mason Honor Code (see <https://catalog.gmu.edu/policies/honor-code-system/>).
- Students must follow the university policy for Responsible Use of Computing (see <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 <http://ods.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 Tk20 should be directed to [tk20help@gmu.edu](mailto:tk20help@gmu.edu) or <https://cehd.gmu.edu/aero/tk20>. Questions or concerns regarding use of Blackboard should be directed to <http://coursesupport.gmu.edu/>.
- For information on student support resources on campus, see <https://ctfe.gmu.edu/teaching/student-support-resources-on-campus>

For additional information on the College of Education and Human Development, please visit our website <https://cehd.gmu.edu/students/>.

## Appendix

### TK20 Assessment Rubric

	<b>Assessment Criteria</b>	<b>Does Not Meet Expectations</b>	<b>Approaches Expectations</b>	<b>Meets Expectations</b>
Device Overview  AT Program Standard 2.4	<b>Indicator 2.4:</b> In conjunction, candidates possess a repertoire of evidences-based strategies to develop personalized supports for individuals with exceptional needs across environments, settings, and the life span.	Candidate fails to identify an input device developed to provide personalized supports for individuals with exceptional needs.	Candidate identifies input device(s) but is limited on knowledge as to how the device(s) can provide personalized supports for individuals with exceptional needs.	Candidate identifies and introduces input device(s) designed to provide personalized supports for individuals with exceptional needs.
User Characteristics and Needs  AT Program Standard 1.1	<b>Indicator 1.1:</b> Candidates understand the similarities and differences in human development	Candidate fails to identify characteristics specific to those with exceptional needs as it	Candidate identifies some salient characteristics of those with exceptional needs as it	Candidate identifies salient characteristics of those with exceptional needs as it

	<b>Assessment Criteria</b>	<b>Does Not Meet Expectations</b>	<b>Approaches Expectations</b>	<b>Meets Expectations</b>
	and the characteristics between and among individuals with and without exceptional needs.	relates to typical human development.	relates to typical human development.	relates to typical human development.
User Characteristics and Needs AT Program Standard 1.2	<b>Indicator 1.2:</b> Candidates understand how exceptional conditions can interact with the domains of human development and consider the impact of utilizing specific features of assistive technology devices and strategies to increase, maintain, or improve functional capabilities of individual with exceptional needs.	Candidate fails to identify specific and related characteristics of users who could benefit from input device(s).	Candidate identifies some related characteristics of users who could benefit from input device(s).	Candidate identifies specific characteristics of users who could benefit from input device(s).
User Characteristics and Needs	<b>Indicator 1.3:</b> Candidates understand	Candidate fails to consider how issues of	Candidate considers how some issues of	Candidate considers how issues of

	<b>Assessment Criteria</b>	<b>Does Not Meet Expectations</b>	<b>Approaches Expectations</b>	<b>Meets Expectations</b>
AT Program Standard 1.3	how issues of human diversity can impact individuals, families, communities, and cultures, and how these complex human issues in the delivery of assistive technology.	human diversity can impact individuals, families, communities, and cultures, and how these complex human issues can interact with issues in the delivery of input device(s).	human diversity can impact individuals, families, communities, and cultures, and how these complex human issues can interact with issues in the delivery of the input device(s).	human diversity can impact individuals, families, communities, and cultures, and how these complex human issues can interact with issues in the delivery of the input device(s).
Customized Training Plan AT Program Standards 2.4	<b>Indicator 2.4:</b> In conjunction, candidates possess a repertoire of evidences-based strategies to develop personalized supports for individuals with exceptional needs across environments, settings, and the life span.	Candidate fails to identify and match appropriate input device(s) based on individual and environmental needs.	Candidate identifies appropriate input device(s) but does not necessarily match that device based on individual and environmental needs.	Candidate identifies and matches an input device(s) to potential users based on individual and environmental needs.
Customized Training Plan AT Program Standards 3.7	<b>Indicator 3.7:</b> Candidates develop and report plans to implement and	Candidate fails to develop and report plans to implement and monitor	Candidate's plans to implement and monitor outcomes of	Candidate develops and reports a plan to implement the use of the

	<b>Assessment Criteria</b>	<b>Does Not Meet Expectations</b>	<b>Approaches Expectations</b>	<b>Meets Expectations</b>
	monitor outcomes of interventions and reevaluate and adjust the system as needed.	outcomes of interventions and reevaluate and adjust the input device(s) as needed.	interventions are limited and do not necessarily plan to reevaluate and adjust the input device(s) as needed.	input device(s) and monitor its outcomes; considering the possibility for needing adjustments and reevaluation.
Customized Training Plan AT Program Standards 2.4	<b>Indicator 2.4:</b> In conjunction, candidates possess a repertoire of evidences-based strategies to develop personalized supports for individuals with exceptional needs across environments, settings, and the life span.	Candidate fails to utilize evidence-based strategies to develop personalized supports for individuals with exceptional needs.	Candidate utilizes limited strategies to develop personalized supports for individuals with exceptional needs.	Candidate utilizes evidence-based strategies to customize supports for individuals with exceptional needs.
Customized Training Plan AT Program Standards 3.3	<b>Indicator 3.3:</b> Candidates identify placement of devices and positioning of the individual to optimize the	Candidate does not identify physical placement of device(s) and positioning of the individual to optimize the use the input device(s).	If applicable, candidate identifies placement of devices and positioning of the individual to optimize the use of the input device(s).	If applicable, candidate identifies the physical placement of device(s) and positioning of the individual to optimize the



	<b>Assessment Criteria</b>	<b>Does Not Meet Expectations</b>	<b>Approaches Expectations</b>	<b>Meets Expectations</b>
	use of assistive technology.			use of the input device(s).
Community Impact AT Program Standard 1.3	<b>Indicator 1.3:</b> Candidates understand how issues of human diversity can impact individuals, families, communities, and cultures, and how these complex human issues in the delivery of assistive technology.	Candidate fails to discuss the impact input device(s) can have on individuals with exceptional needs within various cultures and communities.	Candidate provides a limited discussion that does not specifically address the impact input device(s) can have on individuals with exceptional needs within various cultures and communities.	Candidate discusses the impact input device(s) can have on individuals with exceptional needs within various cultures and communities.