



# Fact Sheet

SCHOOL FOR GLOBAL INCLUSION AND SOCIAL DEVELOPMENT

## MEd Vision Studies: Assistive Technology Certificate in Assistive Technology

...For those who want to work in areas that enhance technological skills to enhance opportunities in a variety of settings, such as vocational, educational, independent living, and avocational settings.

### The Program

The University of Massachusetts Boston offers a Master of Education (MEd) in Vision Studies for individuals who are interested in qualifying for certification as an Assistive Technology Instructional Specialist. For those individuals with existing qualifying academic credentials or experience, two certificate options are available in Assistive Therapy as options. The Vision Studies program is offered by the UMass Boston School for Global Inclusion and Social Development and the Northeast Resource Center for Vision Education (NERCVE) through the Institute for Community Inclusion. This is a fully online program but does include required integrated field experience hours and locally-based practicum field experiences.

Students who complete the program of study qualify to sit for the national professional examination and resulting certification provided by the Academy for the Certification of Vision Rehabilitation and Education Professionals (ACVREP). Graduates of the program can expect to find employment opportunities in various settings, including state and federal agencies, private agencies, as well as public and private schools.

### Core Courses for MEd in Vision Studies and Certificate Assistive Technology Track

Program of Study	Courses	Credits
VISN 603	Braille I	3
VISN 604	Visual Functioning	3
VISN 605	Implications of Low Vision	3
VISN 660	Introduction to AT for People with VI	3
VISN 661	Assess. & Instruction for People with VI	4
VISN 662	Configuration & Exploration of AT Solutions for VI	4
VISN 663	Tech. Methods of Accessibility & Accom. for VI	4
VISN 669	Practicum in AT	4
<b>Total Credits</b>	<b>Graduate Certificate</b>	<b>28</b>

### Additional courses required for MEd

Program of Study	Courses	Credits
VISN 601	Physical & Funct. Aspects of VI	3
VISN 602	Ed. of Stud. w/VI	3
VISN 640	Psycho-Social Aspects of VI	3
<b>Total Credits</b>		<b>9</b>

The MEd in Vision Studies, Assistive Technology track requires the completion of 37 graduate academic credits. Individuals who would like to pursue the 8-course certificate in Assistive Technology must have a minimum of a bachelor's degree and complete a total of 28 credits. Requirements must also be satisfied for category 2 eligibility criteria through ACVREP. Those who have a background in visual impairment may be eligible to complete the program by earning 19 credits. Those eligible for the 5-course certificate include TVIs; those with a minimum of a bachelor's degree or higher in vision studies; or those who hold a certification through ACVREP, such as COMS, CVRT, or CLVT.

## Course Descriptions

### **VISN 603: Braille Communications I**

This course will train individuals to teach reading and writing of contracted Unified English Braille. Participants will learn read embossed braille visually and to write Unified English Braille using a Perkins Braille Writer, computer keyboard for six-key entry, and a slate and stylus. Topics include teaching techniques for reading readiness, tracking, tactile discrimination, and reading methods. Reading problems and remediation will be discussed. Techniques used in education and rehabilitation will be included. The use of technology to produce braille will be reviewed.

### **VISN 604: Visual Functioning**

This course introduces the student to the anatomy and physiology of the eye and examines refraction, clinical testing procedures, and major visual disorders. The medical component of this course provides the foundation to the remainder of the course, as it looks at the functional implications of individual eye conditions on educational and vocational services.

### **VISN 605: Implications of Low Vision**

This course is designed to train professionals to work with individuals who have low vision in both rehabilitation and educational settings.

Through selected readings and presentations on the theoretical and practical aspects of low-vision, participants will acquire a solid knowledge base and become comfortable with various low-vision concepts and methods for integrating visual needs and adapted equipment within an educational/ rehabilitation environment. In addition, small group activities, case studies, and simulation will be incorporated throughout the course to provide participants with the practical application of skills and techniques learned.

### **VISN 660: Introduction to AT for People with VI**

This fully online course will provide an introduction to the profession of Assistive Technology Instructional Specialist for People with Visual Impairments. Students will learn through demonstrations, hands-on activities, and independent learning exercises about a variety of assistive technology solutions for people of all ages who are blind or visually impaired, including: screen magnification software, screen reading software, OCR software, braille technologies, low vision devices, smart phone and tablet accessibility features, as well as other specialized devices designed for people with visual impairments. The benefits and limitations of accessibility features that are built-in to mainstream technologies compared to specialized assistive technology devices and software will be discussed. Techniques for determining the most appropriate assistive technology solutions will also be discussed. The course explores strategies for integrating assistive technology in different settings, such as in schools, homes, colleges/universities, jobsites, and avocational settings.

## **VISN 661: Assistive Technology Assessment and Instruction for People with Visual Impairments**

This fully online course provides participants with a thorough overview of assessment and instruction techniques for teaching assistive technology to people with visual impairments of all ages. Topics include: Task analysis; lesson and training plan development; learning development and evolution of assistive technology skills during instruction; learning theories as applied to children and adults; instructional strategies for assistive technology; conducting assistive technology assessments; making decisions regarding appropriate devices; choosing appropriate learning modalities; justifying recommendations; applying different AT assessment techniques, such as HAAT, WATI, and SETT; ethical issues related to AT assessment and services; and writing AT assessment reports. We will explore ethical issues in AT, evaluating the effectiveness of AT services, using AT with productivity platforms on different operating systems, developing curriculum for teaching screen magnification and screen reading software on different operating systems, developing curriculum for teaching accessible apps on mobile devices, as well as developing curriculum for teaching accessible stand-alone devices, accessible third-party applications, and built-in accessibility features.

## **VISN 662: Configuration and Exploration of Assistive Technology Solutions for People with Visual Impairments**

This fully online course will assist participants in understanding and applying configuration and exploration strategies for mainstream and assistive technologies. We will explore a variety of topics, including: Operating systems and computing devices, various PC components, operational procedures for professionalism and effective communication, technical support resources for accessibility for major operating systems, tools used for computer maintenance and repair, installing software and operating system updates, setting up and using built-in accessibility features in different operating

systems, operating system maintenance procedures, setup and configuration of systems and devices for remote training, determining if remote training and support is appropriate, conferences and educational opportunities to keep up-to-date with various technologies, computer maintenance tools and procedures, disabling and removing of unnecessary or inaccessible third-party software, troubleshooting computing technology, virtualized operating systems, display technologies, options for self-teaching and continuing education to remain current with various technologies, local networking, wireless networking, wireless communications technologies, connecting to the internet, configuring email, troubleshooting internet issues, portable and mobile computing technology, and security measures for computing technology.

## **VISN 663: Technological Methods of Accessibility and Accommodations for People with Visual Impairments**

This fully online course will provide an overview of best practices for providing assistive technology services to people with visual impairments, as well as digital accessibility and usability, accommodations, and universal design in educational, vocational, avocational, and home environments. Students will learn through demonstrations, hands-on activities, and independent learning exercises about strategies for creating accessible instructional materials in a variety of formats and learning modalities, customizing screen readers on various operating systems for compatibility with third-party applications, and personalizing assistive technology options. This course explores a variety of assistive technologies, techniques, and strategies for working with people who have visual impairments, as well as additional disabilities.

### **VISN 669: Assistive Technology for People with Visual Impairments Practicum**

The Assistive Technology for People with Visual Impairments Practicum consists of a supervised practicum for pre-service professionals within the Assistive Technology Program working with students who are visually impaired, ranging from school aged students to adult vocational and geriatric populations. Pre-registration for the Assistive Technology for People with Visual Impairments Practicum is required one semester prior to enrollment, along with documentation of completion of all required courses and successful completion of a minimum of 25 integrated field hours for assistive technology experiences. The practicum site must be approved by the Program Coordinator. In addition to the field-based experience, students are expected to obtain a passing score on the national professional Certified Assistive Technology Instructional Specialist for People with Visual Impairments (CATIS) examination through the Academy for Certification of Vision Rehabilitation and Education Professionals (ACVREP).

### **VISN 601: Physical & Functional Aspects of Visual Impairment**

The student is introduced to the structure and function of the main systems of the human body and to those chronic conditions which may affect these systems. Emphasis will be placed on disabilities most frequently seen in conjunction with visual impairments and how the combined impact will affect instruction for individuals with visual impairment. Having covered these areas, each of the sensory systems will also be explored with the mechanics of locomotion and psychomotor factors influencing mobility.

### **VISN 602: Education of Students with Visual Impairments**

This course examines the philosophical, historical and legal foundations of special education services to students with visual impairments. This course overviews the wide array of services and resources available to support students with visual impairments. Topics include legislation, service

systems, roles and responsibilities of specialized service providers and the impact of visual impairment on child development.

### **VISN 640: Psycho-Social Aspects of Visual Impairment**

This course is designed to train professionals to work with individuals who have low vision in both rehabilitation and educational settings. Through selected readings and presentations on the theoretical and practical aspects of low-vision, participants will acquire a solid knowledge base and become comfortable with various low-vision concepts and methods for integrating visual needs and adapted equipment within an educational/rehabilitation environment. In addition, small group activities, case studies, and simulation will be incorporated throughout the course to provide participants with the practical application of skills and techniques learned.

### **The Application Process**

Apply to the UMass Boston Assistive Technology track by completing the standard graduate application provided in the Graduate Studies Bulletin or at [UMass Boston \(umb.edu/admissions/grad\)](http://UMassBoston.umb.edu/admissions/grad), where you can print out an application or apply online with a credit card. Specify that you are applying to the MEd in Vision Studies Assistive Technology track or the Assistive Technology Certificate. Applicants are accepted into the program one time a year for the fall semester.

**The Application Deadline for the fall semester is June 1<sup>st</sup>.**

**As part of the application process for the university, you are also required to:**

- Obtain three letters of recommendation, using the forms provided by the Office of Graduate Admissions. Emphasis should be placed on academic and professional references.
- Complete all testing required by the university. If you do not have a master's degree, you will be required to take the Graduate Record Examination (GRE), Miller Analogy Test (MAT), or the Massachusetts Test for Educator Licensure (MTEL).
- Submit an official transcript from each institution attended; a minimum cumulative undergraduate GPA of 3.0 is required for admissions to a master's degree program.
- Complete your statement of interest and intent by submitting a two-part essay where you will:
  1. Explain your reasons for wishing to pursue graduate studies (approximately 300 words).
  2. Indicate your specific interest and discuss the type of work you would like to do in your intended field (at least 1,200 words).

Please note that this statement will be reviewed for both your overall message and your ability to write at the graduate level. Proofread your writing carefully; it is ranked according to its clarity, grammar, and syntax.

**About UMass Boston**

With a growing reputation for innovative research addressing complex urban issues, the University of Massachusetts Boston, metropolitan Boston's only public university, offers its diverse student population both an intimate learning environment and the rich experience of a great American city. UMass Boston's ten colleges and graduate schools serve nearly 16,000 students while engaging local, national, and international constituents through academic programs, research centers, and public service activities.

**To learn more about UMass Boston, visit [UMB.edu](http://UMB.edu).**

For more information about the Assistive Technology program, visit [nercve.org](http://nercve.org).

The Northeast Resource Center for Vision Education (NERCVE) is an established center within the Institute for Community Inclusion and is academically affiliated with the School for Global Inclusion and Social Development at UMass Boston. NERCVE is dedicated to improving the education and rehabilitation of children and adults with visual impairments through regionally accessible professional educator training, technology, and research.

