

## ONE REQUIRED COURSE

### **Introduction to Assistive Technology: Principles and Practice (3 credit hours)**

An examination of best clinical practices and state-of-the-art Assistive Technology devices, including Augmentative Communication, Cognitive Technologies, Computer Access, Environmental Modification, Job Accommodation, Seating and Wheeled Mobility, Funding, and Outcomes Measurement.

## ONLINE ELECTIVES

**Assistive Technology Consideration, Assessment and Documentation in the PreK-12 Educational Setting (3 credit hours)** This course is an in-depth introduction to the delivery of AT devices and services in the preK-12 educational setting. Students use a case study project to apply the steps of consideration, assessment and documentation. Topics include data design, assessment protocols, and the legal mandates of IDEA. A basic understanding of AT devices is a prerequisite as the emphasis in this course is the service delivery process.

### **Assistive Technology for Infants and Toddlers (2 credit hours)**

This course is designed for therapists, educators and service coordinators involved in the assessment and training of assistive technology for children birth to 3 years. Covered topics include assessment and intervention, EI policies and procedures, and an overview of aids and strategies for augmentative communication, adapted play and computer access.

### **AAC for Individuals with Autism Spectrum Disorders (2 credit hours)**

This course addresses how AAC can meet the unique communication needs of individuals with autism spectrum disorders. Content emphasizes evidence-based modalities and intervention strategies. Topics include supports for social interaction and participation, assessment, and a range of intervention approaches including PECS, visual supports, aided language stimulation, and LAMP.

### **Intro to Microcontrollers in Assistive Technology (1 credit hour)**

In the spirit of DIY projects, this class will introduce you to the use of entry-level electronics utilizing microcontrollers such as the Arduino board. You'll be guided in constructing projects with an Assistive Technology focus. Project options include making an adaptive switch to operate a computer game, creating an alternate input control for accessing the computer and/or building a basic EADL/ECU control. No previous experience with microcontrollers required only a proficiency with computer use.

### **Manual Wheelchair Technology (1 credit hour)**

This course offers an in depth look at the styles and components of manual wheelchairs designed for children and adults with physical disabilities. Content includes information on frame materials and features to guide the manual wheelchair selection process. Emphasis is placed on identifying the appropriate technology to match consumer needs. Performance adjustments, transportation standards and applicable research are also covered.

### **Mobile Technology and Computers: Built-in Accessibility Features (1 credit hour)**

This course explores the built-in accessibility features that are available in Macintosh, iOS, Android and Windows PC operating systems.

### **New Trends in Assistive Technology for Education and Independent Living (1 credit hour)**

This course explores new and emerging technologies such as the internet of things, DIY, 3D printing, telepresence, robotics, wearable technology home automation, and contextual computing. Applications in educational and community living environments will be discussed.

### **Powered Wheelchair Technology (1 credit hour)**

This course offers an in depth look at the styles and features of powered wheelchairs designed for children and adults with physical disabilities. Emphasis is placed on identifying the appropriate technology to match consumer needs. Content includes information on assessment, access methods, powered seat functions, electronics, programming and applicable research.

## ONLINE ELECTIVES continued

### **Seating and Positioning for Wheelchair Mobility I (1 credit hour)**

This course focuses on seating and positioning assessment for functional use of a manual or powered wheelchair for children and adults with physical disabilities. Emphasis is placed on identifying the appropriate technology to match consumer needs. Course content includes an in depth look at assessment procedures, seating and positioning technology selection and applicable research.

### **Supporting AAC in Educational Settings (3 credit hours)**

This course focuses on instruction and intervention for students who use augmentative and alternative communication systems (AAC) in the K-12 setting. Content emphasizes strategies that are classroom based and can be used in inclusive settings to aid the students' language and educational growth. Topics include assessment, literacy, social relationships, collaboration, and academic adaptations.

### **Using Mobile Technology for Augmentative Communication (1 credit hour)**

The course will include best practice guidelines for assessment and consideration of mobile technology (such as iPad/iPods and tablets) to meet augmentative communication needs; an overview of ways to adapt the technology for alternate access; and a feature-based analysis of apps for expressive communication.

## LAB-BASED ELECTIVES taught at UIC

### **Computers, Communication and Controls in Rehabilitation Technology (3 credit hours)**

This is an Assistive technology course exploring different methods for evaluating access methods and controls used to operate computers, communication devices and powered wheelchairs. Instruction also addresses device features and integration factors. Hands-on Labs.

### **Augmentative Communication Assessment (3 credit hours)**

This course covers a range of augmentative communication assessment strategies and evaluation materials utilizing case examples for discussion of specific approaches for different ages, disabilities, and settings. Students work directly with a wide range of speech-generating devices to conduct feature analyses of systems and to gain hands-on experience using a variety of access methods, rate enhancement techniques and vocabulary expansion tools. Hands-on Labs.

### **Adaptive Equipment Design and Fabrication (3 credit hours)**

This course covers design theories, idea generation, fabrication machines, hand tool techniques, and appropriate materials that relate to custom design and custom fabrication of low-tech adaptive equipment. Students work in the ATU shop during practice sessions, and in completing an individual project based on actual consumer request.

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## Interested in the UIC Assistive Technology Certificate Program?

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To register for individual courses, visit the Office of Continuing Education website at [www.oce.uic.edu](http://www.oce.uic.edu).