CECS 5900: Understanding and Teaching the Child with Autism Spectrum Disorders (ASD)

3 Credit Hours

**Audience:**
Undergraduate and Graduate Students, Parents/Caregivers, Pre and In-Service Teachers (General Ed. & Special Ed.), School Psychologists, School Counselors

**Course Description:**

In order for a parent or teacher to work effectively with a child in the Autism Spectrum, he or she must understand several things:

1. sensory integration dysfunction,
2. behavior as a method of communication,
3. scaffolding content through successful experiences, coaching, and facilitation,
4. co-morbid conditions may exist with ASD,
5. visual queues and scenarios are tremendously helpful, and
6. technology is a valuable aid.

Understanding more about these areas can make both the parent/teacher and the student more comfortable in the classroom or home environment and produce an atmosphere that is more conducive for learning. Florescent lights, overhead projectors, other children, and even the A/C in the building may be perceived by the student with ASD, and his/her inability to filter these sounds appropriately can cause the student to become frightened, anxious, or repetitive in an effort to cope. A sensory system that is hypersensitive (overly active) or hyposensitive (under active) can cause the student to have difficulty perceiving and interpreting sensory input. Students with ASD are not bad children, they are children who have deficits in language and communication, and their deficits in these areas make it impossible for them to effectively initiate, sustain, and maintain appropriate verbal communication. Their behaviors are the tools they use to try to interact with others and get their needs met. Even negative behavior is an attempt to communicate something – a dislike, a need, or register a complaint. Students with ASD may bite, strike others, or respond in inappropriate ways, not because they hate the person they struck, but because they are extremely frustrated and have no other way to communicate. They revert to primitive patterns of flight or fight in the absence of functional language.

Vygotsky’s concept of scaffolding works with students in the Autism Spectrum. They need a bridge between the information they recall and the information they are trying to learn. The bridge is built when the teacher or parent by uses what is known and attaches new information in chunks. This approach can be used to help the student learn math facts, bits of conversation, directions, and other things. Reinforcement and rehearsal are important tools to solidify the new content and make it more accessible. The student within the Autism Spectrum may have other problems that exist with ASD: attention deficit, AD/HD, anxiety disorders, OCD, as well as physical issues – severe allergies or sensitivities to foods or seasonal elements, gastrointestinal problems, and other issues. It is important to be sensitive and communicate often with parents.
and caregivers to determine whether or not a student’s behavior is the result of an unmet physical need or physical problem – hunger, pain, gastrointestinal issues, headaches, low blood sugar, etc… Realizing that other factors are at play can help the parent or teacher better meet the needs of the student. Many students with ASD are visual learners. They tend to understand concepts when visual illustrations or stimuli are present. As a result, it is important to pair auditory, visual, and tactile input to help a student with ASD learn a new concept or remember an action or phrase. Simple and direct instructions coupled with visuals help a student understand and process inputs. One great visual is the computer. It has tremendous visual advantages as well as locus of control that gives students choice and the ability to follow paths of instruction that branch depending on the student’s ability. Many forms of instructional software (drill & practice, simulations, tutorials, instructional games, and ILS) can help students with ASD learn concepts in a psychologically safe learning environment.

Student Learning Outcomes:

Understanding the Child with Autism Spectrum Disorders is designed to help teachers, prospective teachers, parents, caregivers, school psychologists, and school counselors understand and interact positively with children diagnosed with ASD. Examines some of the major problems of students with ASD and poses solutions. Course participants will learn the following:

1. Strategies for scaffolding content for children in the Autism Spectrum,

2. Ways applications of technology can ease transitions, aid organization, support language, assist with academic preparation, and provide entertainment and relaxation,

3. Strategies for creating visual aids from technology tools

4. Common characteristics of children with Autism Spectrum

5. Sensory Diets and how to apply them in a classroom setting

6. Research basis for sensory integration, Applied Behavior Analysis, and Occupational Therapy and their use in ASD

Course Instructor:

Demetria Ennis-Cole, Ph.D. (Demetria.Ennis-Cole@unt.edu) is an Associate Professor in the Department of Technology and Cognition at the University of North Texas. She has degrees in Computer Science and Curriculum & Instruction (emphasis area: Computer Education). She worked in industry as a Programmer for International Business Machines, and she worked as a Computer Analyst at Louisiana State University before accepting a faculty position with The University of North Texas. Ennis-Cole is included in Outstanding Young Women of America, and she is a Patricia Roberts Harris Fellow, an Image Award Recipient, a recipient of the TCEA Area 10 Excellence with 21st Century Tools Award, and a recipient of ISTE’s Inspire by Example Award. She is a member of several organizations including The Easter Seals North Texas Autism Advisory Board, The Autism Society of America, The International Society for Technology in Education, The Autism Society of Collin County, and others. Her research interests include Technology Utilization by Special Populations (Mature Adults, pre-and-secondary students, and students with Autism Spectrum Disorders), Preservice Teachers and Technology Training, Software Evaluation, and Artificial Intelligence in Education. She added students with Autism Spectrum Disorders after working with her son, who was diagnosed with Autism ten years ago.

Course Overview:

I. An Overview of Autism Spectrum Disorders

   a. What is included in the Autism Spectrum? How is a diagnosis made?

   b. Autistic Disorder, Asperger, PDD-NOS, Retts Disorder, Childhood Disintegrative Disorder and associated profiles
c. Possible Causes

d. Profiles of Children with ASD

II. Technologies Useful for students with Autism

a. Visual Schedules, PECS
b. Educational Software (Instructional Games, Simulations, Tutorials, Drill & Practice)
c. Voice Queues
d. Augmentative Devices
e. E-books, Ipods, PDAs
f. Talking Photo Albums
g. Reading Systems
h. Interactive Comic Strip Conversations
i. Applications Software
j. Natural Language and Voice Recognition
k. Expert Systems

III. Sensory Integration Dysfunction

a. Hyperactive sensory systems
b. Hyposensitive sensory systems
c. Research Basis for Sensory Integration Dysfunction
d. Muscle tone, touch, auditory processing and sensory systems

IV. Profiles of Children with ASD

a. Diagnosis
b. Functional Level
c. Family Support
d. Evidence-based Interventions
e. Assistive and Adaptive Technologies
f. Parental Concerns
g. Educational Needs of the Child with Autism
h. Social Needs of the Child with Autism
j. Visual System Problems

V. Specific Needs of Students with Autism Spectrum Disorders

VI. Understanding the Behaviors of Students with ASDs.