UNIVERSITY *of* VIRGINIA | SCPS

**School of Continuing & Professional Studies**

**Course Title:** PSED 6002: **Neuro-education: Application of Research on the Brain and Learning in the K-12 Classroom**

**Credit Hours:** Three graduate credit hours

***Instructor***: Course Instructor: Sarah Armstrong, Ed. D. [srs4a@virginia.edu](mailto:srs4a@virginia.edu)

***Class Session:*** Face-to-Face Classes at Zehmer Hall, UVA: Friday, Sept. 27 (6:00-9:00); Saturday, Sept. 28 (8:30-4:00); Saturday, November 9 (8:30-4:00). Synchronous on-line dates: Mondays Sept. 23, 30; Oct. 21 (4:00-6:00). All other classes asynchronous on-line.

***Class Description:*** Connecting neuroscience to educational practice (neuro-education) in the classroom has been an important development in the last decade. New research in the neurological and cognitive sciences has generated a new frontier of knowledge on how the brain processes, stores, and retrieves information. These advances in neuroscience provide insight into how educational and learning experiences reshape brain structure and function in ways that can support or hinder a student’s achievement, performance, and/or skill development. Using what we know about the brain and learning can help transform practice; however, we need more highly knowledgeable advocates in the field who can teach students and coach colleagues. This course will equip participants with research-based practices and strategies to train and guide learners with an emphasis on K-12, but with recognition of applications for learners of all ages. It is intended for teachers, instructional coaches, professional developers, and administrators who teach and/or provide professional development.

**Learning Outcomes:** Students will:

* Gain knowledge of research from neuroscience and cognitive research associated with a wide range of education practices and concerns
* Understand how education and insights about brain diversity help shape cognition and learning
* Explore and learn ways that family structure, teachers and culture influence brain development
* Discuss the effects of stress, socioeconomics and adversity on achievement
* Incorporate brain research to inform lesson design that meets the instructional needs of a wide range of K-12 learners, as well as, adult learners
* Review and evaluate strategies to improve child and adolescent memory, reading, and math
* Identify neural differences and apply strategies for teaching diverse, special education, and inclusion classes
* Develop a critical view of the literature and claims related to the brain and teaching techniques
* Participate in an interactive, robust learning environment in a hybrid (face-to-face and on-line format) with modeled strategies