

**Department of Communication Sciences and Disorders  
COLLEGE OF ALLIED HEALTH SCIENCES**

**SUMMER RESEARCH OPPORTUNITIES  
FOR UNDERGRADUATE WOMEN**

**APPLICATION DEADLINE: March 1, 2010**

*The Department of Communication Sciences and Disorders is pleased to offer the following research project for the summer of 2010. Interested students are urged to contact the faculty member(s) directing the project that most interests them. By contacting the faculty member, you can discover more about the project, learn what your responsibilities will be and, if possible, develop a timetable for the twelve-week research period.*

**PROJECT TITLE: The Use of Ultrasound as Biofeedback during Articulation Therapy for Difficult Sounds**

**Professor: Sue Schmidlin (PI) and Suzanne Boyce (Co-PI)  
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**Project Description**

This project explores the use of ultrasound scanning technology as a tool for visual biofeedback during articulation therapy. At the U.C. Speech and Language Clinic, participants have been using ultrasound to view images of their tongue movements on the ultrasound monitor as they are prompted to make changes that result in improved production of their targeted sound(s). Most subjects are working on /r/, but some are working on /l/ or /s/. Subjects range in age from 8 to 25.

Data collection includes audio and video recordings of participants' tongue configurations over the course of therapy. Analysis of these recordings reveals specific positions of precise areas of the tongue that produce better production of targeted sounds. A student assistant for this project would gain knowledge and experience in: applying research to practice; using medical imaging as a biofeedback tool for therapy; analyzing data to demonstrate progress in therapy.