



Request for Proposals

The Sammons Center for Innovation and Research in Occupation Based Technology invites proposals for funding awards of up to \$3000.00 for a product that will enable people to actively engage and participate in everyday occupation. These products can be devices, technology apps, teaching and learning technologies, and other innovative ideas. The Sammons Center WILL NOT fund personnel or indirect costs. The grant applicant may use funds from the award towards fees that directly support the innovation, such as consulting fees for the design of a product including mechanical, print, video, or computer based applications.

APPLICATION

Proposals are accepted throughout the year with no set deadlines. Fill out pages 1-9 and pay close attention to the comments to guide you through the application. Please submit your proposal to Dr. Holly Grieves, Co-Director, Sammons Center at holly.grieves@wmich.edu.

Ashley Medina

Occupational Therapy Student, OTS

Name(s) of Lead Innovator(s)

Credentials of Lead Innovator

A.medina@usa.edu

(214)7975163

Email Address

Preferred Contact #

Grant Proposal:

Optimizing Makeup Techniques for Women with Tenodesis: Adaptations and Ergonomic Solution

Makeup Application For Tenodesis Grasp

Ashley Medina, OTS

Occupational Therapy Student

Contact info: A.medina@usa.edu, (214)797-5163

Table of Contents

Section A. Resume or CV of lead innovator and team members

Section B. Project Description

Section C. Pictorial Demonstration of Innovation

Section D. Line-Item Budget

Section E. Implementation Plan

Section F. Evaluation Plan

Section A: Resume or CV of lead innovator and team members

Ashley Medina

I am always eager to gain new experience and knowledge, and I am looking for the desire to further my professional development

2004 Berkeley Dr. Glenn Heights, TX 75154
(214)797-5163
amedina051098@gmail.com

EDUCATION

University of St. Augustine for Health Sciences, 901 Walnut Hill Ln, Suite 210A, Irving, TX 75038 — Doctorate of Occupational Therapy

Expected Graduation: APR 2026

Doctorate of Occupational Therapy (105+ hours)

Texas Woman's University, 304 Administration Dr, Denton, TX 76204 — Bachelors in Kinesiology Pre-OT

Graduation: DEC 2022

Bachelor's Degree in Kinesiology Pre-OT (120 hours)

Cedar Valley College, 3030 N Dallas Ave, Lancaster, TX 75134 — Associates in Science

Graduation: May 2020

Associates in Science Degree (59+ hours)

Desoto High School, 600 Eagle Dr, Desoto, TX 75115 — High School diploma

Graduation: MAY 2017

SKILLS

- Fast learner
- Bilingual
- Punctual
- People-oriented
- Multitasker
- Strong interpersonal skills
- Fast-paced learner
- Adaptable
- Collaborator
- Hard-working

CERTIFICATION

- **CPR (BLS) & First AID certified MAY 2026**
- **CVA vet assistant certification MAY 2017**
- **OSHA certified SEP 2015**

LANGUAGES

- English
- Spanish

LEADERSHIP AND SERVICE

Student Occupational Therapy Association — SOTA secretary

FROM: MAY 2024- DEC 2024

Responsibilities: Several administrative and communication responsibilities to help keep students and the organization running smoothly.

- Record and maintain minutes for all SOTA meetings (general body and executive board)
- Distribute minutes to members and faculty advisors in a timely manner.
- Create and maintain the SOTA calendar of events, meetings, and deadlines.
- Keep attendance records of meetings.
- Maintained organized records and files of SOTA activities, correspondence, and documents.

Occupational Therapy Club- Jan 2022-Dec 2022 (Member)

Rising Star Club- 2017-2019 (Member)

FFA organization- 2015-2017 (Member)

PROFESSIONAL EXPERIENCE

Baylor Scott & White Cardiac Rehab Center, 411 N Washington Ave Ste 3100, Dallas, TX 75246 – Exercise Physiologist Intern

AUG 2022-SEP 2022

Priority: Taking patients' resting blood pressure and exercising blood pressure, creating a unique exercise prescription for patients, and educating patients on correct exercise form

- Checking patients into rehab and ensuring their blood pressure and glucose levels were normal for therapy.
- Creating a unique exercise prescription for patients after they were evaluated by an exercise physiologist.
- Educating patients on correct form when performing exercises while ensuring heart rate and blood pressure are at normal levels.

- Ensuring all equipment was sanitized and ready for the next class of therapy.
- Translating for patients who only spoke Spanish during their nutrition appointments and evaluations.

Impact Medical and Chiropractic, 1124 W 4th St. Justin, TX 76247— Rehab Tech

APRIL 2021-DEC 2022

Priority: Billing insurance for treatment sessions, assisting patients when checking in/out, answering and making phone calls, assisting the doctor with tasks.

- Patient billing and revenue cycle management. .
- Collected insurance, looked up patients benefits, and directed patients to their destination.
- Managed phone lines and facilitated over 20+ calls/day with fielding questions patients had for the providers.
- Maintained an organized, clean professional workspace and waiting area.
- Provided excellent customer service with a helpful and friendly attitude.
- Provided administrative and clerical support via EHR systems and Microsoft Excel.
- Unpacked inventory from delivered mail services, restocked inventory, and stocked supplies.

VCA Desoto Animal Hospital, 200 N Hampton Rd, Desoto, TX 75115— Intern

SEP 2016-MAY 2017

Priority: Assisting patients

- Walked entrusted dogs in a safe and timely matter.
- Gave medication to animals as the doctor directed throughout shift.
- Took temperatures and fecal samples for doctors to test and give results to patients.
- Assisting the doctor with any needs to help with the animals (ex. Restraining animals for grooming purposes, or to give animals shots).

Section B. Project Description

Background

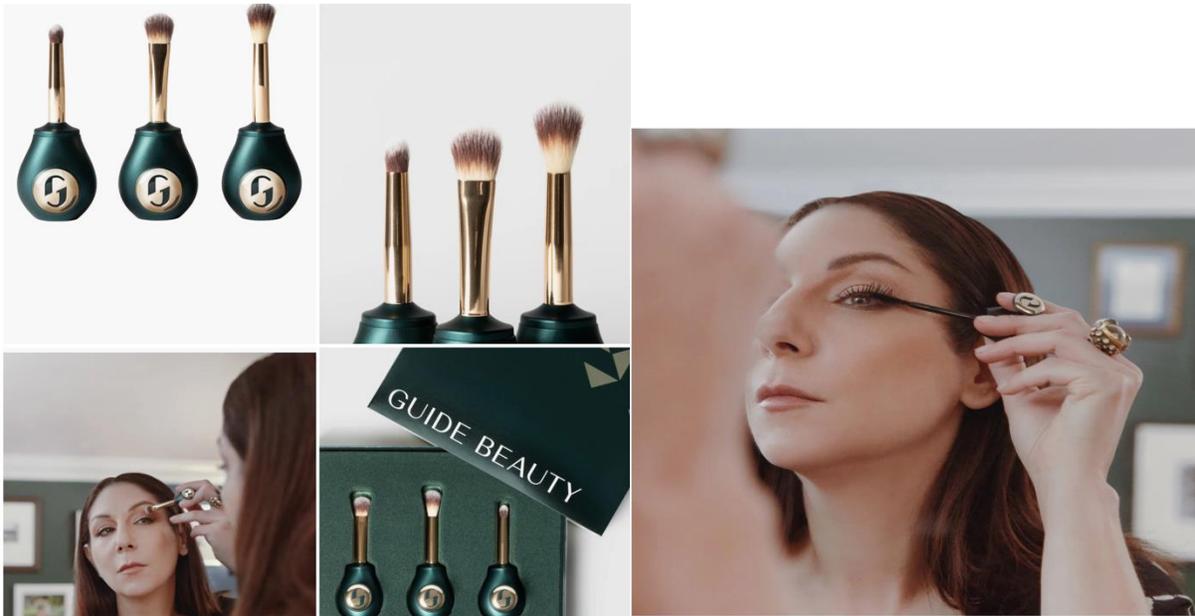
The problem this capstone addresses is that women with tenodesis grasp face significant challenges when applying makeup independently due to limitations in fine motor control and grip strength. A C6 spinal cord injury (SCI) primarily impacts motor function in the wrist; individuals can bend their elbows but are unable to extend their wrist (National Spinal Cord Injury Statistical Center [NSCISC], 2012). Individuals with a diagnosis of tetraplegia may experience loss of hand function due to spinal cord injury (SCI), specifically C6 (Wolfe et al., 2022). The inability to extend their wrist can result in considerable limitations in hand function and grip strength (NSCISC, 2012).

For this proposed capstone, the population of interest is women with tenodesis grasp, ages 24-40. Tenodesis is a grasp pattern that affects upper extremity function; individuals with stiffness and spasticity may have a helpful tenodesis function. Tenodesis function allows individuals with C6-7 SCI, have wrist extension but limited finger control, to achieve a functional grasp and release. The fingers can passively flex to grasp, and when the wrist is flexes, the fingers open (Sonune et al., 2024). Patients with tenodesis range from children to older adults (Pripotnev et al., 2023). Tenodesis can also be sustained from a traumatic brain injury, degeneration of cervical myelopathy or spondylosis, and tumors (Mardani-Kivi et al., 2019). Individuals with tenodesis may strive to maintain independence in their self-care routines and decision-making process related to their health.

The purpose of the capstone project is to develop a program for women with tenodesis grasp to address the challenges of makeup application due to limitations in fine motor control and grip strength. The program will provide education, resources, and activities that introduce

adaptive tools and techniques to make the makeup application process more manageable for women with tenodesis grasp. It fosters a more inclusive and accommodating environment where everyone can participate fully in self-care activities like makeup application.

Section C. Pictorial Demonstration of Innovation



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Section D. Line-Item Budget

Item:	Cost	Use/Justification
Echo Antimicrobial Sonic Makeup Brush jcpenny.com	\$29.99 X 5	The Echo antimicrobial sonic makeup brush offers a couple of strong benefits: Its sonic vibration helps blend products evenly with less manual pressure or repetitive motion, which can ease strain on hands with limited strength or dexterity. Also, being microbacterial means it helps reduce bacterial buildup, which can lower the risk of irritation or infection, especially if hand or brush cleaning is more difficult.
Lash Wrap https://www.guidebeauty.com/collections/the-essentials/products/lash-wrap-volumizing-tubing-mascara	\$26.00 X 5	The lash wrap mascara has several features, including a ring you put between your fingers to stabilize the hand holding the applicator, reducing shake and helping control. The brush is also slim, letting individuals reach the lash base more easily, and the tubing formula wraps around the lashes to help easily remove the product from the eyelashes.
Guide Beauty Eyeliner https://www.guidebeauty.com/collections/the-essentials/products/guide-eyeliner-duo-eyeliner-and-applicator	\$50.00 X 5	The guide beauty eyeliner has a universal design, vertical shape, a built-up finger rest, and a rounded edge that allows a user to steady the hand more easily during application. The precision tip is soft and flexible, so there is less tugging of the eye or need for strong, precise fine motor control.

<p>Easy on eyes brush set</p> <p>https://www.nordstrom.com/s/easy-on-the-eyes-brush-set/</p>	<p>\$50.00 X 5</p>	<p>This brush set is designed with features that help individuals with limited hand ability. They have an ergonomic design to reduce difficulty in applying eyeshadow.</p>
<p>Bandage Wrap</p> <p>https://www.amazon.com/Cherish-tea-Adhesive-Elastic-Self-Adherent/</p>	<p>\$8.99 X 1</p>	<p>This product can be wrapped around the shaft of a makeup brush to create a larger grip/surface area. The different colors can help an individual identify a different function for the makeup brush.</p>
<p>Universal Cuff Utensil</p> <p>https://www.amazon.com/Universal-Adjustable-Adaptive-Parkinson-Equipment/</p>	<p>\$11.99 X 5</p>	<p>A universal cuff can attach to makeup brushes and other makeup tools. They create a larger, softer handle for those with limited hand dexterity, weak grip, or joint pain.</p>
<p>Total Costs: \$848.89</p>		

Section E. Implementation Plan

Stage Capstone Dates:	Outcome	Contributors
Nov 17, 2025- Dec 20, 2025 Jan 12, 2026- Mar 13, 2026 Stage I: Week 1-2	Complete a needs assessment at the experiential site (Able Faith).	-Jose Martinez, CEO of Able Faith -Wendy Tremaine, DCC advisor -Lee Ann Hoffman, Capstone mentor
Stage II: Week 3-4	Revision of the program based on the information collected in the needs assessment.	-Jose Martinez, CEO of Able Faith -Wendy Tremaine, DCC advisor -Lee Ann Hoffman, Capstone mentor
Stage III: Week 5-8	Select or modify makeup tools and adaptive equipment based on assessment results. Create instructional materials with visual guides, step-by-step handouts, or videos.	-Jose Martinez, CEO of Able Faith -Wendy Tremaine, DCC advisor -Lee Ann Hoffman, Capstone mentor
Stage IV: Week 9-10	Observe and collect data regarding the effectiveness of the program using interviews, surveys, and observations. Make necessary adaptations based on findings.	-Jose Martinez, CEO of Able Faith -Wendy Tremaine, DCC advisor -Lee Ann Hoffman, Capstone mentor
Stage V: Week 12-14	Thematic and comparative analysis of pre- and post-program needs to measure the effectiveness of a program. Make changes that incorporate feedback from program outcomes, DCC mentor, or site supervisor. Finalize the capstone project program manual.	-Jose Martinez, CEO of Able Faith -Wendy Tremaine, DCC advisor -Lee Ann Hoffman, Capstone mentor

Section F. Evaluation Plan

Stage Capstone Dates: Nov 17, 2025- Dec 20, 2025 Jan 12, 2026- Mar 13, 2026	Outcome	Outcome Evaluation Plan
Stage I: Week 1-2 Early Fall 2025	The proposed capstone project will begin with a needs assessment.	The needs assessment will help identify the participants' physical abilities, personal goals, and current barriers to engaging in makeup routines. The use of observations, quick DASH assessment, and semi-structured interviews will be incorporated to determine the level of assistance.
Stage II: Week 3-4 Early Fall	Revision of the needs assessment.	Results from observations, quick DASH, and semi-structured interviews will help determine what will have to be adjusted for the capstone program. An ADL checklist will also be given to participants to determine the level of difficulties they may experience in self-care/grooming tasks.
Stage III: Week 5-8 Late Fall	Introduce various makeup adaptive tools/select modify makeup tools that will be used for the capstone program.	A makeup application checklist will be given using a Likert scale to determine if the adaptive tools increase/decrease performance. Based on these results, the adaptive makeup tools will be modified.
Stage IV: Week 9-10 Early Spring	Observe and collect data regarding the effectiveness of the program using interviews, surveys, and observations. Make necessary adaptations based on findings.	The program will be structured in a series of interactive sessions. A makeup application checklist will help determine the need to adapt or modify makeup application tools to further improve the program.
Stage V: Week 12-14 Early Spring	Make changes that incorporate feedback from program outcomes, DCC mentor, or site supervisor. Finalize the capstone project program manual.	Thematic and comparative analysis of pre- and post-program needs to measure the effectiveness of a program.

References

- Mardani-Kivi, M., Keyhani, S., Ebrahim-Zadeh, M. H., Hashemi-Motlagh, K., Saheb-Ekhtiari, K. (2019). Rotator cuff tear with concomitant long head of biceps tendon (LHBT) degeneration: What is the preferred choice? Open subpectoral versus arthroscopic intraarticular tenodesis. *Journal of Orthopedics and Traumatology: Official Journal of the Italian Society of Orthopedics and Traumatology*, 20(1), 26.
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- National Spinal Cord Injury Statistical Center. (2012). *Annual report for the model spinal cord injury care systems*. Birmingham: University of Alabama.
- Pripotnev, S., Bruce, J., Novak, C. B., Kennedy, C. R., & Fox, I. K. (2023). Quantifying tenodesis hand function in cervical spinal cord injury: Implications for function. *The Journal of Hand Surgery*, 48(7), 700-710.
<https://doi.org/10.1016/j.jhsa.2023.04.004>
- Sonune, S. P., Saha, A., Joshi, N. G., Pathak, S., Bhadra, P., & Goel, G. (2024). The effect of a modified tenodesis wrist-hand orthosis on hand function in patients with tetraplegia. *Canadian Prosthetics & Orthotics. Journal*, 7(1).
<https://doi.org/10.33137/cpoj.v7i1.42879>
- Wolfe, S. W., Pederson, W. C., Kozin, S. H., & Cohen, M. S. eds (2022). *Green's Operative Hand Surgery*. Elsevier.

If your proposal is accepted, you will be required to provide an interim report (six months after funds are awarded) and final report (one year after funds are awarded). Please submit your proposal to Dr. Holly Grieves, Co-Director, Sammons Center at holly.grieves@wmich.edu.