# **Tech Initiatives Proposal Form**

Student Technology Fee – AY 2024

**Employee Due Date: March 22, 2024** (revised from March 29)

**Student Due Date: March 22, 2024**  (revised from March 29)

## **Key Proposal Information**

Note: Enter information in the expandable fields directly after the information requested.

## **Project Title:** Clinic equipment to enhance student clinical experience in balance testing, hearing aids, and instrumentation.

## **Briefly explain what you are requesting (400 characters max):** To replace broken vestibular (balance) testing equipment, outdated hearing aid verification equipment, and to obtain calibration equipment. This equipment supports our graduate and undergraduate students in Communication Sciences & Disorders by receiving hands-on training in balance testing, hearing aid fittings, and instrumentation experiences in the audiology clinic and didactic courses.

### **Principal Applicant**

Name: Anna Diedesch

Email: anna.diedesch@wwu.edu

Phone: 360-650-3172

Dept/Org Affiliation (Enter “student,” “faculty,” or “staff”): Faculty, Communication Sciences and Disorders

### **Secondary Applicant**

Name: Andrea Reed

Email: andrea.reed@wwu.edu

Phone: 360-650-6802

Dept/Org Affiliation (Enter “student,” “faculty,” or “staff”): Faculty, Communication Sciences and Disorders

## **Important Proposal Notes**

1. Student Technology Fee Mission:

The Student Technology Fee (STF) provides Western students with adequate and innovative technology experiences by:

1. Broadening/enhancing the quality of the academic experience.
2. Providing additional student access to technology.
3. Increasing integration of technology into the curriculum.
4. The STF Committee will accept only complete proposals by the announced deadline. Every section (I-VIII) and all items of this proposal form must be addressed.
5. Disallowed items: The following five items generally **do not qualify** for STF Tech Initiatives funding:
6. Computer lab upgrades. (Existing computer labs are upgraded on a rolling schedule with a separate allocation of STF funds.)
7. Software related to maintenance and/or serial payments.
8. Maintenance contracts on equipment or software.
9. Expendable supplies.
10. Equipment that will not be used directly by students, and/or non-computer equipment or furnishings that are part of the typical classroom environment (such as lighting, portable and fixed media equipment, furniture, chairs, etc.).

## **Proposal Instructions**

### **I. Relationship to STF Objectives / Impact on Student Academic Experience**

1. The STF Committee uses as its primary assessment criteria the three objectives—**quality, access, and integration**—defined in the STF mission (“Note 1” above). Given these criteria, explain how the project would provide positive benefits to students. Focus on what students would gain from the project. Specifically, answer at least one of items a, b, or c below:
2. How would this project *broaden or enhance the quality* of the student’s academic experience through the proposed technology?

Hands-on experiences with balance and hearing aid equipment in our audiology clinic and Communication Sciences and Disorders (CSD) courses significantly enhances the quality of our CSD experiences and prepares our students to serve the individuals with hearing and balance disorders in the community. The systems we are currently using are obsolete and no longer serviced or supported by the manufacturers.

As part of our audiology doctorate program, our students rotate at offsite internships in Whatcom, Skagit, and King counties, as well as complete a full year clinical externship where they practice the skills they have learned at our program. To ensure that our students obtain competitive internship and externship sites in the local and national regions, the quality of their training is questioned by local and national providers (licensed Audiologists in Washington State and across the country). Our students are expected to have mastered skills in programming and verifying hearing aids and completing balance (vestibular) testing. Those skills begin in the Audiology clinic on campus at Western, where they rotate the first two years of their doctoral program, and through their didactic courses. The ability to use modern equipment has been noted as an area of weakness in our progam, per our offsite clinical internship supervisors. Having functioning balance equipment and modernizing our hearing aid verification equipment is crucial to the quality of training we provide our CSD students.

1. How would this project *provide additional student access* to technological resources?

Graduate students will be able to access this equipment at any time during their 2 years of clinical rotations and coursework on campus, and in their third year while they are completing additional coursework and offsite clinic rotations. Specific courses that will utilize the equipment are CSD 462 Audiometric testing (undergraduate course), CSD 568 Audiology Practicum, CSD 506 Seminar in Professional Issues (calibration equipment), CSD 561 Advanced Audiology, CSD 590 Educational Audiology (calibration equipment), CSD 593 Balance Disorders, CSD 571 Hearing Aids I, and CSD 572 Hearing Aids II. Additionally, undergraduates will be able to observe hearing and balance patients in the clinic.

1. How would this project *increase integration* of technology into coursework?

The balance (vestibular) equipment will be integrated into CSD 593 Balance Disorders. Hearing aid verification equipment will be integrated into CSD 571 and 572 Hearing Aids courses. And calibration equipment be used to create a new graduate level instrumentation course, as well as supplement CSD 590 Educational Audiology, to measure sound levels in Whatcom county area classrooms. Equipment would be integrated into the undergraduate CSD 462 Audiometric Testing course, and other graduate CSD courses (CSD 561 Advanced Audiology, CSD 506 Topic in Professional Issues, and CSD 568 Audiology Practicum).

1. Would other departments be involved with this project? Enter “No “ or “Yes”. No

IF “Yes,” describe. IF “No,” enter “N/A”.

N/A

1. Has any part of this proposed project previously been funded by the Student Technology Fee? Enter “No” or “Yes”. No

IF “Yes,” describe. IF “No,” enter “N/A”.

N/A

1. Is the proposed project a pilot project? Enter “No” or “Yes”. No

IF “Yes,” describe. IF “No,” enter “N/A”.

N/A

### **II. Utilization**

List the anticipated number of times and duration per each use—per quarter or per academic year—that students would use the proposed technology, along with the impact of that proposed technology on students. Note: Proposals are funded after careful consideration of both the number of students that will be impacted by the technology and by the quality of that impact.

Our Doctor of Audiology (Au.D.) program has an average cohort size of 10-12 students and we have 4 cohorts enrolled each year, three of which are on campus for coursework, and two cohorts are on campus for clinic rotations and coursework. A total of 30-36 graduate students would be utilizing the equipment in a given year. Additionally, we have undergraduate and postbaccalaureate students who take the Audiometric testing course and who observe in the Audiology clinic. The cohort size for the undergrauate and postbac classes per year range from 50-75 students, totally 100-150 students across juniors, seniors, and postbacs. All of these students enroll in CSD 462 Audiometric Testing and about 10-15 students per year request to observe in the clinic.

For the balance equipment, our Audiology clinic utlizes the equipment for balance patients at least 4 hours a week, and the students practice on the equipment for 1-2 hour slots before each balance patient is seen. Graduate student clinicians see balance patients every quarter, so this equipment serves our graduate students during the first two years in the Doctor of Audiology program. The balance equipment is also used for lab exercises as part of the CSD 593 Balance graduate course. Two of the four hours of the course are spent using the equipment, and 5 hands-on clinical exercises are assigned throughout the quarter. The balance course occurs in the Fall quarter each year. This will be the busiest time for the balance equipment, estimating roughly 10 students x 5 labs x 2 hours each (~100 hours), in addition to the normal clinic use of the equipment. Throughout the rest of the academic year, the equipment is used as needed, for balance related assignments, and for practicing for the students' Clinic Levels II exam, which occurs in Spring quarter.

For the hearing aid equipment, up to 13 hours of hearing aid clinic slots are assigned each week, and the students practice on the equipment for 1-2 hour slots prior to seeing their patients. We offer two hearing aid courses to our graduate students which occur in the Winter and Spring quarters. On average, there are 4 hearing aid hands-on experiences that are assigned for each course (CSD 571 in Winter, CSD 572 in Spring). Estimating 10 students x 4 labs x 2 hours each (~80 hours) for each Winter and Spring quarter. Similar to the balance equipment, throughout the rest of the academic year, the students will be using the equipment as needed to improve their hearing aid clinical skills, and to practice for their Clinic Levels II exam in the Spring quarter. Additionally, at Western we have a hearing aid bank where we receive donated hearing aids and fit hearing aids on low-income patients who cannot afford new amplification devices. Our students are crucial in running this program. We have designated students each year who use the hearing aid verification equipment to analyze whether the donated hearing aids are reliable enough for community members with hearing loss. The students working in the heraing aid bank find time between clinic and didactic uses of the hearing aid verification system to measure the reliability of those donated devices, and average 10 hours a week x 3 students (30 hours), with a 1/3 of that time used with the hearing aid equipment (~10 hours/week).

Instrumentation used for calibration of equipment would be used to calibrate all of the audiology equipment two times a year. That testing takes roughly two days, thus around 32 hours of calibration would be completed each year, more if the clinic decides to adopt a protocol to calibrate the equipment quarterly (64 hours a year). Additionally, the equipment will be used in several courses throughout the academic year and for measurements in classrooms across Whatcom county. The classroom measurements would mainly be during Fall quarter, during the Education Audiology course (CSD 590). The equipment would be used roughly 8 hours a week during the Fall for CSD 590. We estimate that the other applications would average out to be approximately 2 hours a week for the rest of the year for other courses and one time needs to calibrating equipment or training students on how to calibrate equipment.

### **III. Impact on Existing Resources**

Your proposal must address the project’s potential impact on existing resources. Give special attention to the impact on data transmission networks (e.g., sources accessed, networking equipment, etc.) and personnel (e.g., staffing, administrative support, faculty support, etc.).

1. Describe how existing equipment is used. Contrast this to projected use, if your proposal were funded.

The existing balance equipment and hearing aid equipment are used in the same way that is outlined above. The key issue is that both systems are out of date and no longer supported by their manufacturers. The balance equipment goggles, which are used to measure eye movements during the test battery, are currently being held together with duct tape. There have been some clinic slots and hands-on experiences that have had to be rescheduled when the equipment was not in working order. Cancellations of clinic and coursework can quickly escalate to several crucial missed opportunities for our students. Not to mention, many of our clinical experiences are regulated by our accredidation body, the American Speech-Language-Hearing Association (ASHA).

The hearing aid equipment, similar to the balance equipment, is crucial to our onsite clinical practicum experiences, as well as didactically. There have been times where the equipment just shuts off unexpectedly. Plus, all of the offsite clinic rotations that our students go to are using the newer equipment, which we are not training them on.

The calibration equipment is a new piece of equipment to the department and would help serve a hole in our current curriculum. We would be excited to increase the student experiences in participating in calibration, plus it would save our department money in the long run because annual calibration costs are about 2/3 of the cost of this equipment. We would be excited about the possibility of adding an instrumentation course to our doctorate program, which does not currently exist.

1. Is similar equipment or technology available elsewhere on campus—such as with the Student Technology Center, Classroom Services, Video Services, Western Libraries, a college lab? Enter “No or “Yes”. No

IF “Yes, describe why existing equipment does not meet the needs outlined in this proposal. IF “No,” enter “N/A”.

N/A

1. IF this project would involve the replacement of equipment, including computers:
2. Describe the “before and after” configuration changes. (A spreadsheet reflecting these changes may be attached.) Or enter “N/A”.

Replaced equipment will be kept as a backup for student practice in lab exercises as well as for our undergraduate Audiometric Testing course.

1. Describe the costs and benefits of replacing vs. upgrading. Or enter “N/A”.

Essentially, "upgrading" the equipment is equal to replacement in the case of balance and hearing aid equipment. For the calibration equipment, this will be new equipment, thus N/A.

1. Would this equipment be available to students outside of your department? Enter “No” or “Yes”. Yes

IF “Yes,” describe the following (in the field below the a-d list). IF “No,” enter “N/A”.

1. How students would gain access.
2. How equipment availability would be publicized.
3. The hours per week when equipment would be available.
4. Any costs that would result from a-c.

a. Our department and the clinic spaces are open 8-5pm Monday through Friday. Students need to coordinate with the clinic director and instructors re: timing for use of equipment, but the rooms will be open and available and professors and clinical supervisors' offices are located on the same floor (3rd floor of Academic Instruction).

b. By word of mouth. If students from other departments wish to collaborate with our department (Psychology, Linguistics, Data Science, etc.), they would be allowed to use the equipment with permission from their CSD mentor and coordination with the clinic director.

c. There are schedules outside of the Hearing Aid and Balance rooms indicating hours that the space is open.

d. No, but students may be asked to sign a waiver to ensure proper use of the equipment, since it is crucial to the training of our students and accredidation of our program.

1. Would this project involve the check-out of equipment to students? Enter “No” or “Yes”. Yes

IF “Yes,” discuss whether the Student Technology Center/ATUS Loan Pool could be assigned this task. IF “No,” enter “N/A”.

No - this would stay in house. Only the calibration equipment would be available to check out.

1. Does the department have adequate operating funds to provide ongoing maintenance and support? Enter “No” or “Yes”. Yes

IF “No,” describe the funding situation. IF “Yes,” enter “N/A”.

We lack funds to purchase new equipment but have the ability to support maintenance of the proposed equipment.

1. Does the department have adequate personnel to provide ongoing staff support for the project? Enter “No” or “Yes”. Yes

IF “No,” describe the staffing situation. IF “Yes,” enter “N/A”.

N/A

### **IV. Space and Site Information**

1. What is the location for installation of equipment or technology? Be as specific as possible.

Western Washington University's Hearing Clinic and Audiology Program within the Communication Sciences and Disorders department (3rd floor of Academic Instruction East). AI 391 for the balance equipment (clinic room), AI 348 for the hearing aid equipment (clinic room), and AI 334 for the calibration equipment (IT managers office).

1. Is this space/location currently assigned to your department or unit? Enter “Yes” or “No”. Yes

IF “No,” describe the current control of the space. IF “Yes,” enter “N/A”.

N/A

1. Would site modification be required? Enter “No” or “Yes”. Yes
Note: “Site modification” addresses site alteration—beyond specific equipment installation addressed in section V, Budget Estimate Table, line 13. Site modification significantly impacts infrastructure. This could include addition/integration of other systems required by the equipment install, such as electrical, air, lighting, security, network access, etc.; conversion of a lab or office; etc.

IF “Yes,” describe the site modification required. IF “No,” enter “N/A”.

In the balance room (AI 391), a new TV monitor would be installed. This installation cost is included in the provided quote of this proposal.

1. Conditional Step 4: If you answered “no” to #2 above, or “yes” to #3 above:

You *may* need to submit a [Space Modification Request](https://app.e-builder.net/public/Processes/StartProcess.aspx?ProcessID=849829b0be0d47c4b6e270345a265b73&PortalTypeID=7) to Capital Planning and Development. The STF Committee will determine if this is necessary during proposal review, and will let you know. The results of the Space Modification Request form would affect lines #15 and #18 of the Budget Estimate Table.

### **V. Project Budget Estimate**

This section details the estimated cost of the project.

Budget Estimate Notes:

1. The STF Committee recognizes your proposed budget as an estimate. Final funding for successful projects will be established after thorough technical review. Some costs may need adjusting due to price changes.
2. The STF Committee may impose special conditions on a proposal before approval. (If interested, see *STF Tech Initiatives Proposal Guidelines, section V, Proposal Modifications*. This document is on the STF website.)
3. Funding is not provided directly to departments for purchases. All purchasing is done via the Office of the VPIT/CIO, and savings are retained in the Student Technology Fee fund.
4. For assistance in preparing your budget, please consult with relevant campus support departments. Four are listed here:
* Academic Technology & User Services (Director), 650-6538
* Budget and Financial Planning Office, 650-4762
* Space Planning and Administration Program Manager, 650-3935
* Purchasing, 650-3340, [Getting Started in the Western Marketplace](https://www.wwu.edu/bservices/purchasing/software.shtml)
1. What funding or contributions are available from your department or other sources? Enter dollar amount, or “N/A”. N/A

Note: The STF Committee encourages matching funds/funding support. “Contribution” is defined as a monetary contribution. For example, a vendor discount is not considered a contribution.

1. *IF you have more than seven line-item expenses,* create a separate spreadsheet of items to purchase, with a subtotal. (You will attach the spreadsheet to this form later, before submitting.)
2. Complete the **Budget Estimate Table** below.

**IMPORTANT:** To complete the Budget Estimate Table (an Excel sheet) within this form, follow these substeps:

1. Double-click anywhere in the table:
	1. For Macs, the table will open in a new window.
	2. For PCs, the table will open in place.
2. Complete the blue-shaded areas only. The remainder of the form will autofill.
3. *IF you have more than seven line-item expenses*, key the “Items to Purchase” area of *this* Budget Estimate Table as follows:
	1. Item to Purchase: “Subtotal from attached spreadsheet”
	2. Quantity: “1”
	3. Item Cost: [the subtotal from the attached spreadsheet]
4. To exit the table area of this form, single-click anywhere outside of the table.



1. Could this project be divided into discrete elements that could be funded separately? Enter “No” or “Yes”. Yes

IF “Yes,” summarize and prioritize project elements with a cost estimate for each. IF “No,” enter “N/A”.

Listed in order of priority: 1) Balance equipment: approximately $40,000.00; 2) Amplification equipment: approximately $16,000.00; 3) Calibration equipment: approximately $17,000.00

Note: A “no” response to question 3 creates an “all or nothing” proposal. That is, if the STF Committee decides not to fund your entire proposal, it will not consider any elements for partial funding. If elements could be funded separately, the applicant is responsible for prioritizing them before submitting the proposal.

1. Are course or lab fees charged for any of the courses that will use this equipment? Enter “No” or “Yes”. Yes
Note: The total funding requested from the Student Technology Fee must consider the amount collected from course fees for equipment replacement and/or equipment acquisition.

IF “Yes,” describe the course fees. IF “No,” enter “N/A”.

Course fees go primarily to partially fund the annual calibration costs and for clinic equipment, such as disposible ear tips, etc, for our clinic patients and student labs.

### **VI. Project Schedule**

Describe your overall implementation schedule. Note that project awards are announced during spring quarter (usually May), and that projects are to be substantially completed by the end of the calendar year.
IF any site modifications are determined to be involved (see section IV, Space and Site Information), your project schedule will be aligned with the schedule provided by Capital Planning and Development.

After funds are released, purchasing will be conducted immediately through three separate vendors. Presuming delivery times are not delayed, all equipment should arrive, be installed (conducted by the manufacturer), and training completed for implementation of new equipment for faculty and staff use during Summer quarter, and by students for training by Fall of the academic calendar.

### **VII. Constraints**

List or describe any external or internal factors/constraints that could affect your project schedule, project objectives, or the project budget (e.g., if external approval is required for curricular changes, or if funding must be received by a certain date.)

None

### **VIII. Submitting the Proposal / Routing Instructions**

1. Access the e-form [Student Tech Fee Proposals: Routing Form](https://esign.wwu.edu/forms/CIO/_student_tech_fee_proposals_routing_1.aspx) and complete the form as instructed.
2. Attach this completed proposal form to the completed e-form.
3. Attach any supporting materials for your proposal to the e-form.
4. Route the e-form as instructed.