

# NEW GRADUATE DEGREE OR GRADUATE CERTIFICATE FORM D

UNIT PREPARES IN QUADRUPLICATE  
Route as indicated below under approvals. Return to the  
Registrar's Office once all signatures have been obtained.

Date: January 22, 2020

Cathy Binger

(Name of individual initiating Graduate Degree or Graduate Certificate)

Professor of Speech and Hearing Sciences; 505-263-0036

(Title, position, telephone number)

cbinger@unm.edu

(Email address)

Speech and Hearing Sciences (UNM Main Campus)

(Department/Division/Program)

\*Allow up to one year for the process to be  
completed for a certificate, and 18 months  
for a degree.

Note: Proposals for new graduate degrees or graduate certificates need to follow an approved format. Please call the Office of Graduate Studies and ask for an outline. Revisions of graduate degrees and some new certificates also may need state approval, depending on the extent of changes proposed. Please consult the Office of the Provost for advice prior to initiating this form.

Attach the following required documents:

1. Executive Summary.
2. Program Proposal (in the approved format).
3. Catalog Description (to include program curriculum).
4. Graduate Program Projected Costs (only for new degrees).
5. Library Impact Statement.

Does this new degree affect any existing program? Yes ☐ No ☒ If yes, attach statement.

Proposed date to admit new students: Term Fall Year 2021

## Required Signatures:

Department Chair

*[Signature]*

Date 1/20/2020

College Curricula Committee

*[Signature]*

Date 3/04/2020

College or School Dean

*[Signature]*

Date 3/4/20

Dean of Library Services

*[Signature]*

Date 3/16/20

Office of the Registrar—Catalog

*[Signature]*

Date 8/3/20

FS Graduate Committee

*[Signature]*

Date 09/17/2020

Dean of Graduate Studies

*[Signature]*

Date 09/17/2020

FS Curricula Committee

Angeline Delucas,  
DNP, MPH, RN

*[Signature]*

Date 10/21/2020

Office of the Provost

*[Signature]*

Date 10/23/2020

Faculty Senate

Date

Board of Regents

Date

## Additional Approvals for Degrees:

Board of Regents

Date

Council of Graduate Deans

Date

Academic Council of Higher Education

Date

Higher Education Department

Date

State Board of Finance

Date

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**Proposal for a**  
***PhD program in Communication Sciences and Disorders***  
offered by  
UNM's Department of Speech and Hearing Sciences

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## EXECUTIVE SUMMARY

### Proposal for a ***PhD program in Communication Sciences and Disorders***

offered by  
UNM's Department of Speech and Hearing Sciences

UNM's PhD in Communication Sciences and Disorders will be the only PhD program in the fast-growing discipline of speech-language pathology in the state of New Mexico, and just the second PhD program of its kind in the nation at an R1 Hispanic-Serving Institution. This program will help address the ongoing national shortage of academic PhDs in this discipline; the primary focus of our program is preparing our graduates to work in academic faculty positions. These new professors will then, in turn, help supply clinically-trained speech-language pathologists – another area of chronic workflow shortage. Speech-language pathologists play a critical role in the habilitation and rehabilitation of people across the lifespan with a wide array of disabilities – such as autism, Down syndrome, stroke, and dementia – and our graduates will play a crucial role in improving the quality of life for these individuals and their families.

#### **Description**

UNM's PhD in Communication Sciences and Disorders is an individualized, mentor-based doctoral program designed to prepare researchers and scholars to be leaders of discovery within the fast-growing discipline of speech-language pathology. This program will help meet national demands for these professionals. It includes in-depth, advanced study within each student's area of specialization, which will be enhanced by campus-wide interdisciplinary grounding and training. The Department of Speech and Hearing Sciences has a strong focus on cultural and linguistic diversity as well as numerous specialization areas such as adult speech, language, and swallowing disorders (which result from stroke, traumatic brain injury, etc.), augmentative and alternative communication, child speech and language disorders (which result from autism, Down syndrome, etc.), and fluency disorders (such as stuttering). Our mentor-based program will focus on both theory and clinical practice, offering students the opportunity to develop both clinical research and teaching skills that will position them to compete for top academic jobs at the national level.

#### **Evidence of Need**

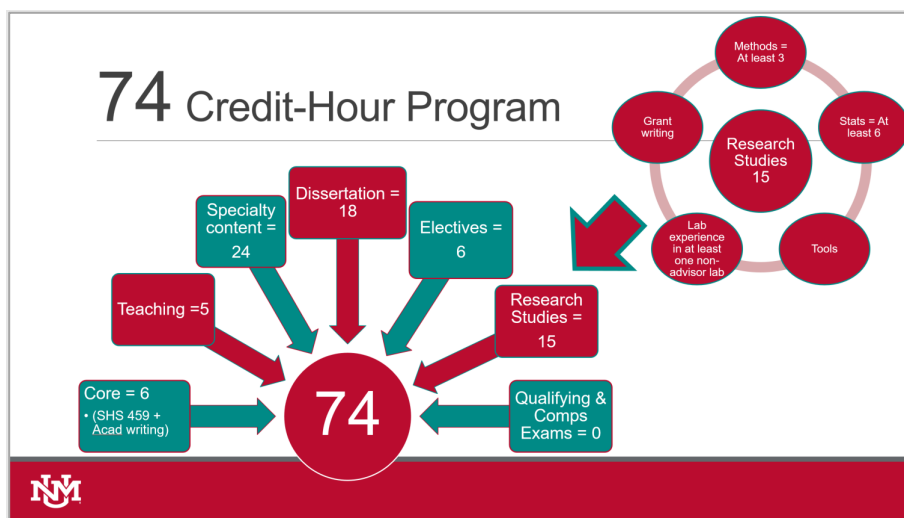
*A nationwide need for **faculty in CSD**.* A persistent, nationwide, critical shortage of PhD students in Communication Sciences and Disorders (CSD) was identified over 15 years ago by national accreditation bodies (i.e., American Speech-Language-Hearing Association & Counsel of Academic programs in Communication Sciences and Disorders). This shortage affects all regions of the United States and will continue indefinitely given current and projected demographics. Three recent reports indicated an average of 26% *faculty searches were unfilled* in the discipline and that *the rate of current PhD graduates is approximately half of the number of searches* each year. This shortage results in fewer faculty conducting cutting-edge research that leads to improved services, and negatively impacts clinical master's level admissions (ultimately reducing the number of clinical speech-language pathologists).

*National and regional needs for clinical speech-language pathologists (SLPs).* There is a shortage of clinical SLPs nationwide and particularly in the southwest. The U.S. Bureau of Labor Statistics projects an *18% growth in clinical SLP positions* between 2016 and 2026 – three times the projected overall rate of job growth in New Mexico. A recent New Mexico Department of Workforce Solutions report classifies speech-language pathology as a “high growth, high demand, supply shortage profession.” Our program addresses both short-term and long-term needs. Short-term, many of our PhD students will teach additional sections of selected undergraduate courses and provide clinical supervision for SLP master’s degree students, thereby allowing our department to admit more MS level speech-language pathology students; an average of 65% of our MS graduates remain in New Mexico. Long-term, our PhD graduates will increase the discipline’s overall capacity to train SLPs. Thus, the PhD program ultimately will help supply both state-wide and national workforce needs.

### Program Content

Our proposed curriculum was carefully crafted to align with current standards of top-tiered PhD programs in the discipline while simultaneously expressing our core values of ensuring strong research and teaching preparation. All students must secure a primary mentor within our department prior to applying to the program to ensure a good student-mentor fit.

Because of the strong international reputation of our faculty, potential PhD students are already asking when our PhD program will begin; several of us have students ‘waiting in the wings.’ We also will actively recruit PhD students from our MS student body. Students will be required to complete at least 74 credit hours, including core research, specialty, teaching and elective coursework (see figure).



Specialty coursework will depend on area of interest and will include coursework from other departments (see letters of support). All students must pass qualifying and comprehensive exams, obtain UNM’s Graduate Teaching Certificate, complete research experiences in at least two labs, and successfully defend their dissertation. The Teaching Certificate serves a dual purpose: enhancing the quality of courses taught by PhD students and greatly adding to our graduates’ teaching credentials as they apply for academic jobs.

### Evaluation and Assessment

An internal faculty member will annually perform continuous assessment of programmatic impact. The basis for annual assessment of operations will include the following: (a) student achievement of learning outcomes (as assessed in our formal program assessment), (b) cumulative data on scholarly activities, (c) a qualitative progress report by the PhD program

director on current PhD student progress towards degrees, (d) graduation rates, and (e) results of an annual survey of PhD program graduates to evaluate subsequent career placement, and subsequent academic and professional activities, including publications.

### **Existing Resources to be Leveraged**

Because UNM already has existing BS- and MS-level programs in our department, many structural resources are already in place. This includes 7 research faculty lines and 6 clinical faculty lines, existing facilities (dedicated research labs, office space, and classroom space) and existing MS graduate curricula (including classes many PhD students will take). Additionally, our students will take relevant graduate courses such as survey methods and statistics in other departments, as noted in our letters of support. Other resources include use of UNM University Libraries (which provide a wide array of research support services), the Center for Teaching and Learning (which offers teaching and writing supports), and the Graduate Teaching Academy (which will assist our PhD students in completing their teaching requirements).

### **Required Resources at UNM: To be Funded by the College of Arts & Sciences**

Dean Peceny, the current dean of the College of Arts & Sciences, has committed to funding two new tenure-track faculty lines, one half-time (0.5 FTE) administrative assistant, and 4 half-time (2.0 FTE) PhD-level graduate assistants (GAs) to support our growing program. GA positions will be distributed according to departmental policy, which we are in the process of developing. Generally speaking, GAs will – whenever possible – be awarded to students for a 4-year period (i.e., the length of the program) through a combination of college- and grant-funded positions. Additional faculty lines will allow us to offer PhD level coursework, add necessary breadth and depth to our current areas of expertise, and provide PhD students with richer, more diverse experiences. To best support department needs and values, our searches will focus on faculty diversity as well as research backgrounds with strong potential for building funded research programs. Growing our research faculty will help us grow our PhD program, which in turn helps supply the workforce. The new administrative assistant will support our current administrative staff, who already are stretched beyond a reasonable workload given the particularly complex academic and clinical demands of our program. Adding the PhD program – with its new faculty members, PhD students, subsequent increase MS students, and increases in external funding – will require additional administrative support. Using our new GAs as clinical supervisors in the UNM Speech-Language-Hearing Center will allow for admission of additional MS students. That is, our nationally accredited MS program requires direct clinical supervision of MS students; increasing the number of clinical supervisors allows us to increase the number of MS student admissions. Thus, enrolling even 2 to 3 PhD students per year will allow us to admit an additional 2 to 4 MS students per year (i.e., up to 6 enrolled students at once). Similarly, when used as teaching assistants, GAs will increase our capacity for undergrad enrollments. Dean Peceny has committed to fund these resources, with all requests included in his hiring plans and funding priorities over the next several years. Additionally, small capital outlay funds have been requested to divide an existing research lab for our new faculty. Thus, the development of this program fits within UNM's existing resource allocations.

### **Required Resources at UNM: To be Funded by Other Sources**

The remaining resources needed for this program can be funded internally, including modest supports with profits of our Speech and Hearing Clinic (which updates materials in our SHS Materials Library) and expected Facilities and Administrative (F&A) returns from externally funded grants. This latter funding stream will grow with the presence of our new PhD students and new research faculty. PhD students generate new research opportunities and free up research faculty time for grant-writing. Grant funding – via direct requests in submitted grant applications – will be used to fund additional required resources such as major equipment purchases and use of the Mind Research Network’s facilities on North Campus. We estimate an increase of *\$600,000 per year in external funding direct costs by Year 6* of the program, which will generate an increase of approximately \$309,000 in F&A returns (see Budget for additional details). The small portion of these F&A funds which are returned to the SHS department will be used to support the PhD program (e.g., purchasing additional cubicles, supporting PhD student travel to conferences, etc.).

### **Projected Enrollment and Costs**

We expect to keep the program small in its early years, enrolling ~2-3 students per year. This will allow us to admit an additional 2-4 MS-level students per year starting in Year 3 (as PhD students will provide clinical supervision as part of their GA duties). Year 1 costs (~\$150,000) focus on the first faculty hire, the addition of a half-time administrative assistant, and a small capital funds request to separate a large lab into two smaller labs. The additional faculty line will be added in Year 3 (~\$80,000). These costs are modest, compared with the expected gains in terms of both student enrollment (both PhD and MS level) and external funding.

If the two new research faculty lines are not approved, projected enrollments will decrease significantly, as current research faculty are already working at capacity. In the absence of these lines, we anticipate enrolling an average of only one new PhD student per year with no increases in MS students. Notably, small PhD cohorts are common in the CSD discipline. Regardless of the program size, we will ensure a rich, interdisciplinary PhD experience for all of our students.

### **Conclusion**

UNM’s Department of Speech and Hearing Sciences, which is one of the U.S.’s highest ranked MS programs of its kind without a PhD program (according to US News & World Report), is ready to establish New Mexico’s first PhD program in Communication Sciences and Disorders. The department’s growing research program, with its steadily increasing publication and external grant funding records, is well-positioned to launch a successful PhD program which will help supply critical workforce needs. The support of multiple UNM departments such as Linguistics, Psychology, Special Education, IFCE (Individual, Family, and Community Education), and LLSS (Language, Literacy, and Social Studies) will provide our students with valuable interdisciplinary training while minimizing additional teaching demands within our department. In exchange, these students will bring depth and breadth of their own experiences to these departments. In addition, this new program will allow us to continue to recruit and retain top-notch research faculty who have the skills and drive to continue building research programs that benefit both our community as well as our nation at large.

## New Graduate Program Application

### A. General Information.

<b>Institution</b>	University of New Mexico
<b>Name and Title of Contact Person</b>	Cathy Binger, Professor
<b>Email of Contact Person</b>	cbinger@unm.edu
<b>Name of Proposed Program</b>	PhD in Communication Sciences and Disorders
<b>Name of Sponsoring Department, School, and/or College</b>	Department of Speech and Hearing Sciences; College of Arts & Sciences
<b>Level of Proposed Program (<i>master's or doctoral degree</i>)</b>	PhD
<b>Estimated Time to Complete Proposed Program</b>	4 years (full-time)
<b>Campuses to offer this degree program</b>	UNM Main Campus
<b>All Program Format(s) (<i>standard, distance education, evening, weekend and/or other</i>)</b>	Standard
<b>Anticipated Start Date</b>	August, 2021
<b>Proposed CIP code</b>	51.0204

### B. Program Curriculum.

<b>Program Description (<i>as listed in catalog</i>)</b>	The PhD in Communication Sciences and Disorders is an individualized, mentor-based doctoral program designed to prepare researchers and scholars to be leaders of discovery within the field. This is accomplished via in-depth, advanced study within each student's specialization area, enhanced by campus-wide interdisciplinary grounding and training (See <b>Appendix A</b> for letters of support). The department has a strong focus on cultural and linguistic diversity and a breadth of specialization areas such as augmentative and alternative communication, child language disorders resulting from disabilities such as autism and Down syndrome, adult neurogenic disorders (stroke, traumatic brain injury), and fluency disorders. Prospective students are expected to have a master's degree with a minimum GPA of 3.5 before applying and must submit a letter of support from their UNM SHS faculty mentor as part of their PhD application. <b>Appendix B</b> contains the official catalog program description.
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**Program Curriculum** (as listed in catalog)

Students will be required to complete a minimum of 74 credits which will include core, research, specialty, teaching, and elective coursework (see below). In addition to the dissertation, the PhD program includes only 4 new required SHS credit hours across two classes (i.e., a 3-hour research methods class + 1 credit mentored teaching). Specialty coursework will vary and depend on area of interest and may include coursework from other departments such as Psychology, Linguistics, Special Education, and Neurosciences. Additional requirements include passing qualifying and comprehensive exams, obtaining UNM's Graduate Teaching Certificate, completing research experiences in at least two laboratories, and successful defense of the dissertation. Students who do not have a master's degree in speech-language pathology or whose degree is greater than 7 years old may be required to complete additional coursework including SHS 302 (Introduction to Communicative Disorders), SHS 506 (Reading and Writing in Research) and other SHS masters' courses determined by their committee. See **Appendix C** for example programs.

<b>Core (6)</b>	SHS 459 (3) Multicultural Considerations in Communication Select one of the following: <ul style="list-style-type: none"> <li>• PEP 625 Writing for professional publication (3)</li> <li>• LLSS 610 Seminar in academic writing in education and related fields (3)</li> <li>• Alternate committee- approved writing course</li> </ul>
<b>Research (15)</b>	Required Methods (3): <ul style="list-style-type: none"> <li>• SHS 606* Research Methods in Communication Sciences and Disorders (3) (<i>new course</i>)</li> </ul> Statistics (6 min); taken in Psych, ED PY, or elsewhere Additional Methods, Statistics, Tools, Grant-Writing or Lab Experience (6 min)
<b>Specialty (24)</b>	Selected with advisor and program committee; includes SHS 651*: Independent Study in Communication Sciences and Disorders as needed
<b>Teaching (5)</b>	OILS 583 Graduate Teaching (1) ED PY 630 College Teaching Seminar (3) SHS 610* Mentored University Teaching Experience in Communication Sciences and Disorders (1) ( <i>new course</i> ) Apply for Graduate Teaching Academy Certificate
<b>Electives (6)</b>	Additional 6 credits from research methods or specialty areas; includes SHS 651: Independent Study in Communication Sciences and Disorders as needed
<b>Qualifying Exam (0)</b>	Synthesis of Research Literature completed by end of second semester
<b>Comps (0)</b>	Submittable systematic review, research study with empirical data, or major external grant application completed within 5 years of start date
<b>Dissertation (18)</b>	SHS 699* (taken each semester after admission to candidacy) completed within 3 years of passing the comprehensive exam ( <i>new course</i> )

*\*All Form B documents have been submitted electronically into UNM's Curriculum Workflow system.*

## Number of Credits Required

74

## Program Learning Outcomes

1. Students will demonstrate a solid understanding of a specific knowledge area in the field through a written synthesis of research articles on a specified topic (i.e., qualifying exam).
2. Students will demonstrate the ability to synthesize information across topics and disciplines in a written document (i.e., comprehensive exam).
3. Students will engage in and conduct original research.
4. Students will demonstrate effective teaching pedagogies in their discipline or related area

**Is there a certificate embedded in the degree program?** If so, list certificates and courses required.

No.

**If this is a master's degree, does it articulate to a doctoral degree program?** If yes, to which doctoral program?

N/A

## C. Assessment

Describe your institution's plan for periodic evaluation of program effectiveness. Include criteria that will be used to determine effectiveness.

An internal faculty member will annually perform continuous assessment of programmatic impact. This information will be presented at faculty meetings and serve as a point of discussion when needed.

The basis for annual assessment of operations and impact by the internal review committee will include:

- Student achievement of learning outcomes, as assessed in our formal program assessment (**Appendix D**).
- Cumulative data on PhD students' scholarly activities, including but not limited to:
  - Scholarly presentations
  - Publications
  - Other research products, including but not limited to grant applications
- A qualitative progress report by the PhD program director on current PhD student progress towards degrees.
- Graduation rates
- Results of an annual survey of PhD program graduates to evaluate
  - Subsequent career placement
  - Subsequent academic and professional activities, including publications

## D. Need.

The proposed program must meet one or more specified needs within the state or region. Clear and convincing evidence must be provided of the reality and extent of such need. Max 500 words.

A PhD in Communication Sciences and Disorders (CSD) at UNM will help: (1) meet national needs for PhD faculty in CSD, and (2) meet both local and national needs for clinical speech-language pathologists (SLPs).

(1) *A nationwide need for **faculty in CSD**.* A persistent, nationwide, critical shortage of research doctoral (PhD) students in Communication Sciences and Disorders (CSD) was identified over 15 years ago by the American Speech-Language and Hearing Association (ASHA) and the Council on Academic Programs in Communication Sciences and Disorders (CAPCSD). This shortage affects all regions of the United States and will continue indefinitely given current

and projected demographics. Data from the ASHA/CAPCSD Education Surveys indicate that 30% of these jobs were unfilled in the most recent year, with an average of 26% across the past 3 years. The rate of current PhD graduates is far smaller than the number of searches each year (sources cited: see **Appendix E** for additional details).

Year	# Faculty Searches	# Unfilled (%)	# SHS PhD Graduates
2015-2016	385	101 (26%)	158
2016-2017	261	59 (23%)	151
2017-2018	263	78 (30%)	132

This shortage impacts individuals with communication disorders in two ways: 1) fewer faculty are trained to conduct cutting-edge research leading to improved services, and 2) faculty shortages negatively impact master's level admissions – and MS graduates ultimately become clinical speech-language pathologists.

(2) *National and regional needs for **clinical speech-language pathologists (SLPs)***. The shortage of PhDs is a limiting factor in the capacity for training future clinical SLPs who serve individuals with communication disorders. There is a shortage of clinical SLPs nationwide and particularly in the southwest. The U.S. Bureau of Labor Statistics projects an *18% growth in clinical SLP positions* between 2016 and 2026. This growth rate is three times the projected overall rate of job growth in New Mexico, and the New Mexico Department of Workforce Solutions report indicates that speech-language pathology is a “high growth, high demand, supply shortage profession.” (See **Appendix E** for details.)

In addition to supplying PhD graduates to increase the field's overall capacity to train SLPs in the future, offering a PhD program at UNM is projected to contribute to a more immediate increase in capacity for UNM SHS undergraduate coursework and master's degree student practicum experiences in speech-language pathology. Qualified PhD students will teach additional sections of selected undergraduate courses and provide clinical supervision for SLP master's degree students completing clinical practicum experiences in our department clinic. Thus, the PhD program will result in increases in the size of our BA and MS programs, ultimately leading to an increase in the number of clinical SLPs, most of whom remain in New Mexico (i.e., mean of 65% from 2015-2018).

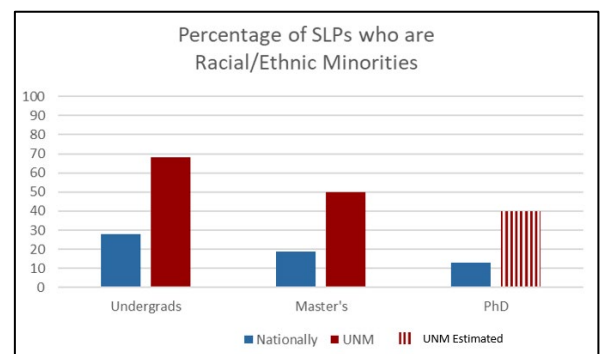
If the program fills a regional workforce need, describe collaboration between your institution and regional employers in program development. Max 500 words.

N/A

## E. Duplication.

Identify where similar degree programs are offered by other public higher education institutions in New Mexico in the box below. Max 500 words.

Our PhD program would be only the second Communication Sciences and Disorders (CSD) PhD program in the U.S. situated in a R1 (very high research activity) Hispanic-Serving Institution (HSI), and therefore would provide unique contributions to help meet pressing national needs within our discipline and in the academe for faculty who come from diverse backgrounds as well as faculty who are trained to serve diverse students. Our program has a consistent track record for supporting racially/ethnically diverse students, and we will continue this tradition in our PhD program (see graph). Additionally, only 5% of practicing professionals in our discipline in the U.S. are Hispanic (see Appendix D for sources cited); in contrast, *our current undergraduate and graduate student body consistently consists of ~40-65% Hispanic students*. We will continue to support students who are Hispanic and from other underrepresented groups in our PhD program.



Importantly, no PhD programs in CSD currently exist in New Mexico. Although both NMSU and ENMU offer master's degrees in CSD, neither offers a PhD.

It should be noted that it is currently possible through the Department of Linguistics at UNM to secure a PhD in Linguistics with a concentration in Speech and Hearing Sciences. This program is only appropriate for a small minority of students who typically seek a PhD in Communication Sciences and Disorders. Two primary reasons limit the functionality of this program for our students: (1) linguistics departments typically focus primarily on theoretical issues, but our students are also highly clinically focused; and (2) the disorders of interest in our PhD in Communication Sciences and Disorders are much broader in scope; that is, not just disorders that affect language, but also those that affect speech, swallowing, voice, and cognition. Importantly, the Department of Linguistics fully supports the SHS department's efforts to establish an independent PhD program (see letter of support in **Appendix A**). This concentration program through Linguistics will be discontinued once the SHS department's PhD program begins.

If similar programs are offered at other public higher education institutions in New Mexico, provide a rationale for offering an additional program in the box below. Max 500 words.

N/A

List any nearby non-New Mexico institutions of higher learning where the program is being planned or offered, particularly WICHE member institutions. Max 500 words.

A total of 5 WICHE member institutions list their graduate CSD PhD or related programs (i.e., Speech-Language Pathology, Speech and Hearing Sciences) as WICHE-eligible programs; **none** of these are Hispanic-Serving Institutions: UC-Boulder, Idaho State University, Utah State University, University of Utah, and University of Washington.

The following universities are WICHE member institutions, but none list their graduate CSD (or CSD-related) programs as WICHE-eligible: Arizona State University, University of Arizona, San Francisco State University, University of Montana, University of Nevada-Reno, and University of Oregon. Of these, only SFSU is a Hispanic-Serving Institution (but it is not an R1 university).

In summary: only one Hispanic-Serving Institution and WICHE member institution -- SFSU -- has a PhD program available for students with interest in Communication Sciences and Disorders. SFSU's program is a Joint Doctoral Program in Special Education involving University of California, Berkeley and would only be of interest for students narrowly focused on childhood-related issues. **Our new UNM PhD program therefore will be the only WICHE-member institution that is both an R1 and Hispanic-Serving Institution with a PhD program in Communication Sciences and Disorders.**

#### F. Enrollment and Graduation Projections.

The numbers in black assume that the SHS department will hire two new FT tenure-track research faculty members within the next several years – a plan that has the full support of the Dean of Arts & Sciences, Dean Peceny. As UNM's Office of the Provost has cautioned that these two new hires are not certain, we have also included **projected enrollments with no new research faculty hires in red**. (Table 1 on pg. 19 contains tuition generation projections.)

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>New Students (All grads)</b>	2 PhD 1 PhD	3 PhD + 2 MS 1 PhD	3 PhD + 4 MS 1 PhD	2 PhD + 2 MS 1 PhD	2 PhD + 4 MS 1 PhD
<b>Continuing Students</b>	--	2 PhD 1 PhD	5 PhD + 2 MS 2 PhD	8 PhD + 4 MS 3 PhD	8 PhD + 2 MS 3 PhD
<b>Graduates</b>			2 MS graduating	2 PhDs graduating 4 MS graduating 1 PhD graduating	3 PhDs graduating 2 MS graduating 1 PhD graduating

Annual Retention Rate Target (%)	Target Graduation Rate (%)	Target Job Placement Rate (%)
75%	75%	100%

**Institutional Readiness.** Describe the *faculty resources* that are needed to initiate the program. Will any additional faculty be needed? Max 500 words.

### New Hires

#### Existing:

Two SHS faculty members, Cathy Binger and Jessica Richardson, have co-chaired the SHS PhD Committee, with extensive contributions provided by the chair and remaining research faculty. The SHS department is committed to the ongoing support needed to build and sustain this program.

#### New:

The following new faculty resources will support our PhD program (funded via the College of Arts & Sciences):

- 2 new tenure-track research faculty in the next 4 years
- 0.5 staff (Admin 3)
- 4 half-time graduate assistants (GAs)

**Tenure-track faculty:** Two new tenure-track faculty lines will support our growing program and help meet the needs of our rapidly growing profession. With a national growth rate of 18% in speech-language pathology in the next 10 years, and a rate of growth that exceeds the overall NM growth rate by “more than 3-fold” (NM Dept. of Workforce), we are a “high growth, high demand, short supply” profession. Growing our PhD program will help to further grow our MS program, which in turn will help supply the workforce. Further, our most recent reaccreditation findings by the American Speech-Language-Hearing Association’s Council on Academic Accreditation (ASHA CAA), completed in 2019, states that our program does not have adequate tenure-track faculty. More faculty are needed to provide this program with the attention and resources it deserves.

**0.5 Admin 3:** With the busy academic and clinical components of our department, our administrative staff is already stretched beyond a reasonable workload. The addition of new faculty members and students, plus substantial increases external funding, requires additional administrative supports. Further, the 2019 ASHA CAA report states that our program does not have adequate support staff.

**GAs:** Four half-time GAs will assist with growing our program in two main ways:

(1) Qualified PhD students will provide clinical supervision in the UNM Speech-Language-Hearing Center. Once all four GAs are in place, we can enroll a total of 6 additional MS students each year, thereby generating additional tuition dollars and contribute to workforce needs. The revenues generated by added client visits will help us to self-fund the equipment and technological resources that our PhD students need.

(2) When PhD students teach undergraduate classes as part of their GA duties, this both provides the PhD students with teaching experiences and frees up research faculty time for securing external funding.

Retaining our promising, ambitious research faculty must include supporting their external funding pursuits. Having GAs teach undergraduate classes is a cost-effective way to free up faculty time to write research grant proposals.

**Workload Implications:** The additional 0.5 FTE administrative time will provide the administrative resources needed to process the new PhD and MS applications, additional grant funding, and PhD GA documentation, as well as other added administrative needs. The addition of new tenure-track faculty will help existing faculty share the overall department teaching and service workload. Notably, the PhD program adds only minimal required teaching within the department; the only new required PhD courses are a 3-credit research methods class and a 1-credit teaching certificate class. This, in addition to the fact that PhD students will teach some our undergraduate courses, will provide faculty time for the additional students. PhD mentors will take primary responsibility for advising their own doctoral students, a common and accepted practice in CSD programs. One tenure-track faculty

member will serve as the PhD coordinator to ensure adherence to program requirements. As our MS program consists of ~50 students, the existing master's degree coordinator can absorb the advisement for the additional 2-4 MS students per year.

### **No new tenure-track faculty lines**

Although UNM's Office of the Provost supports this application, they indicated that their support "should not be construed as approval for making additional faculty hires." Given that SHS faculty are currently working at or beyond a sustainable capacity, failing to hire new faculty would limit the number of PhD students we can accept until the two new lines are secured.

**GAs:** As PhD enrollment will be limited in the absence of two new research faculty lines, fewer PhD students will be enrolled at any given time. In this scenario, GA time for teaching classes will be prioritized over clinical supervision. Therefore, until no additional master's students will be admitted until our new faculty lines are secured. Fewer PhD students will also hamper efforts to secure additional external funding.

**Workload implications:** In the absence of new positions, the existing tenure-track faculty will absorb the added workload. As stated above, PhD mentors will take primary responsibility for advising their own doctoral students. The PhD coordinator's workload will be minimal, with a rolling average of only 4 PhD students per year. No master's students will be added to the program in this scenario, yielding no increases in MS advisement.

Describe the *library and other academic support resources* that are needed to initiate the program. What, if any, additional resources will be needed? Max 500 words.

#### Existing Resources:

- **UNM University Libraries**, which includes, among other relevant resources, 1) research consultation for graduate students; 2) Research Data Services, a program supporting data planning, management, preservation, discovery, and use; 3) Library Express, a document delivery service; and 4) Interlibrary Loan, an external library materials request service.
- **Center for Teaching & Learning (CTL)**, which includes the Graduate Resource Center that offers support for writing, statistics, and research support facilitated by peer consultations and workshops that help students develop strategies to be effective academics, researchers, and professionals.
- **Graduate Teaching Academy**, offered by CTL and Graduate Studies, facilitates learning about higher education pedagogy, including teaching techniques, technologies, assessment, and strategies for addressing diverse student groups.
- **SHS Materials Library** contains a range of clinical materials, including standardized tests, textbooks, clinical books, and therapy materials. This library will be fully available to our incoming PhD students. The SHS department spends approximately \$10,000/year on new materials, of which approximately \$1,000 will be of direct use to our PhD students as they serve in various capacities in the department.

New: No additional academic support resources are requested; the SHS department will continue to fund its own materials library.

Describe the *physical facilities* of the institution that will be used for the first five years of the program. Will additional space or modifications of existing space be required within the first five years of program operation? Max 500 words.

Existing Facilities: The SHS department consists of its own self-contained building, located on the corner of Lomas Blvd. & University Blvd. This secured building consists of approximately 12,668 square feet, including ample office space for research and clinic faculty, research lab space for all researchers, two classrooms, 8 clinic rooms, 4 observation rooms, clinic library, grad student lounge, and a large preschool room.

New: Modest capital funds (\$25K) are requested to divide a large research lab into two labs to accommodate our new research faculty members.

Otherwise, the SHS department has adequate space to house our new PhD students. Cubicles will be added to underutilized space. Further, current plans to update the audiovisual technology for the SHS Speech and Hearing Clinic space will free up some of the space that is currently devoted to clinical observation rooms. Additionally, each SHS faculty member currently has their own devoted research lab space; PhD students will spend significant time in these existing research labs.

Describe the institution's *equipment and technological resources* needed for the first five years of the program? What, if any, additional equipment will be needed? Max 500 words.

Existing: The SHS department houses several computers, printers, and a range of additional office supplies for our masters' students, all of which currently are paid for with our internal departmental budget. Research tools in existing labs will be used, and range from EEG, noninvasive brain stimulation (NIBS), skin conductance, heart rate and variability, acoustic information, audiological equipment, AAC, etc.

New: Approximately \$1,000-\$2,000 per year will be allocated from SHS department's internal resources to update PhD equipment as needed. Any major equipment needed for new projects is expected to be grant funded.

Describe any other operating resources needed to initiate the program. Max 500 words.

N/A

Are there *existing external facilities* that will be used? Have agreements been established to ensure use of those facilities? For example, if you are offering a graduate nursing program have you established a partnership with local hospital(s) and other clinical settings? Max 500 words.

Existing External Facilities: The Mind Research Network (MRN) is an independent organization operated by the Lovelace Respiratory Research Institute, with its leadership, fiscal, and administrative organization distinct from UNM. MRN provides comprehensive non-invasive imaging resources for clinical studies on a fee-for-service basis. MRN occupies a 50,000 sq. ft. facility located on the UNM campus, and is part of Domenici Hall, adjacent to the Center for Brain Recovery and Repair. MRN resources will be utilized for MRI scanning for students involved in one of Dr. Richardson's current projects, and funds for this service are included in her project budget. PhD students working on relevant, funded projects will have access to these valuable research resources.

MRN maintains two research-dedicated MRI systems, a Siemens 3T Trio with Total Imaging Matrix (TIM) Application Suite and a Siemens Avanto 1.5 Tesla Mobile MRI Scanner installed in a trailer which can be transported to different sites and allows access to a much broader population base. A variety of MR coils are available, and both systems are capable of fMRI, DTI, and MR spectroscopy. These systems include standard patient monitoring devices (e.g., pulsed oximetry, heart rate monitor, O<sub>2</sub>, EKG). MRN maintains a large (>200 Terabyte) data storage center, with three image analysis laboratories devoted to spectroscopy, fMRI, mMRI, and MEG/EEG analysis. This system supports transparent file protocol exchange across Linux, OS X, and Window systems. The storage system uses a fiber channel network to transfer data up to 2.5 gigabytes per minute and provides instant data recovery using snapshots. MRN's IT department employs multiple backup systems and ensures long-term data storage. Domenici Hall is connected to the UNM campus via a gigabit fiber and then on to the world wide web via UNM's OC48, or 2.5 gigabits per second link, via Internet 2.

New: No funds are requested. Grant funding will cover costs for use of these external facilities.

**G. Projected Budget.** Provide a clear analysis of the projected cost of the proposed program and the sources of funding that will support it for the first five years that the program will be offered. Include a discussion how any of the needed resources discussed in **Section G** will be addressed. **Section H** should be completed in collaboration with your institution's financial office.

**Table 1, located on pg. 19,** contains all budget projections.

## **ESTIMATED REVENUES**

The *Projected Graduate Program Cost Estimates & Resources* table reflects the estimated revenues and expenses of the Department of Speech and Hearing Sciences, as applicable to the proposed PhD program in Communication Sciences and Disorders.

### **Projected University I&G: Salaries**

Two research faculty members, Cathy Binger and Jessica Richardson, are devoting approximately 20% of their time supporting the creation, growth, and ongoing management of the PhD program. The budget therefore includes 20% of their salaries for Years 1-6, with an assumed 3% raise indicated per year.

Additionally, salaries for the addition of two new research tenure-track faculty members (Years 1 & 3), 4 half-time PhD graduate assistants (2 in Year 1 + 2 in Year 2), and a half-time administrative assistant (Year 1) – all of which will be funded through the College of Arts & Sciences (see letter of support from Dean Peceny in **Appendix A**) – are included in projected university I&G salaries, including an annual 3% raise. The total projected I&G revenues for Year 6 is \$307,554.

UNM's Office of the Provost has cautioned us to not count on the two new research tenure-track faculty positions. We therefore have submitted budget numbers both with and without the new positions. The numbers and discussion of the program without the new positions are in **red**.

**Removing the two new faculty positions necessarily will reduce the number of PhD students we can admit each year (average 1 PhD student/year vs. 2-3 PhD students/year). These decreases would result in 4 half-time GA positions being added slowly across Years 1-4 (rather than Years 1-2). The total projected I&G revenues for Year 6 is \$130,818.**

### **Projected External Grants and Contracts**

The SHS department currently generates increasing but modest levels of external grant funding. The trajectory of anticipated direct costs generated by external grants is expected to increase substantially with the addition of the PhD program. PhD students greatly contribute to growing external funding opportunities for research faculty by (a) working collaboratively and directly with PhD mentors on grant applications (which also supports the research experiences of the PhD students) and (b) freeing up research faculty time, as PhD students will teach classes as part of their assistantships and overall educational experiences. Further, the presence of a strong PhD program is invaluable in attracting and retaining high quality research faculty. Thus, the addition of a PhD program is expected to increase the external funding of the SHS research faculty.

In addition, our two new research faculty hires in Years 1 & 3, funded through I&G funds by the College of Arts and Sciences (with both hires placing a priority on research potential), will further enhance our funding profile. Therefore, our current Year 1 levels of funding of \$250,000 in direct costs per year are expected to grow to \$900,000 per year by Year 6. *This is a gross revenue of expected direct funds generated by grant activity; these monies will fund SHS research projects and will not flow directly to the department.*

**Note:** *We fully understand that with the current COVID-19-related budget cuts, these hires are unlikely to happen when originally planned. Hiring delays will likely delay the projected financial gains noted in the budget and throughout this application.*

Although these numbers may appear to be optimistic at first glance, they genuinely reflect the direction of our department. When filling recent tenure-track faculty positions, the SHS department has placed a high priority on research trajectories. For example, Jessica Richardson (just promoted from assistant to associate) has recently secured multiple external awards and likely will secure a NIH R01 grant in the immediate future, and assistant professor Cindy Gevarter is currently funded by NIH and is well-positioned to secure additional research and training grants in the next several years. A PhD program will not only serve to support the research and training programs of such promising faculty members; crucially, it also will serve to retain such strong researchers here at UNM – an important part of the health of any successful department.

Increases in grant funding result in direct financial supports for the PhD program as well as increases in productivity. For example, grant applications will include funds to support PhD GAs (~\$28,000/year/student) and subsequent travel to conferences (\$2,000-\$5,000/year/student). PhD students also, of course, increase the overall productivity of research labs and departments, with PhD students publishing an average of ~1 manuscript/year (Pezzoni et al, 2016).

The absence of new faculty hires and subsequent decreases in PhD enrollment will result in substantial decreases in extramural funding. Total projected external grant funding by Year 6 = \$300,000. This reflects our ability to *sustain* current funding levels in the years to come, plus a modest increase. This is realistic, given the challenges of recruiting and retaining high quality research faculty in the absence of a robust PhD program. Top researchers need PhD students to both maximize research output, and they also have a strong desire to train future generations of researchers. We cannot expect to recruit and retain top research faculty without a PhD program.

#### **Other: Facilities and Modifications**

Capital outlay totaling \$25,000 to install a wall to separate a large research lab to make room for our new research faculty members has been requested. The source of the funds for this requested capital outlay is unspecified at this time; one possible source is legislative approval of capital outlay.

#### **Other: Client-Generated Revenue**

UNM's Speech-Language-Hearing Center (UNMSLHC) provides unique value to UNM. This clinic provides speech, language, swallowing, and hearing services to approximately 130 clients per year with a total of over 2,000 visits per year. The main purpose of the clinic is to provide our master's students with rich, in house, well-supervised clinical experiences, while simultaneously serving the greater Albuquerque community with valuable – often life-changing – services.

Clinic revenues directly fund many aspects of the SHS department, including portions of lecturer salaries as well as purchases of materials, supplies, and equipment. Current revenues are limited by two major factors: (1) the number of senior lecturers hired to supervise the service provision of our graduate student clinicians, and (2) billing practices; that is, the clinic is not currently able to bill insurance companies, as we are not formally affiliated with the UNM Medical Group.

Qualified PhD students will use part of their graduate assistantship hours to provide clinical supervision in the UNMSLHC. This will directly increase clinic revenues, as these supervisory hours directly add to the number of clients who can be seen (i.e., ~12 additional client visits/week for each .5 FTE clinical supervisor). These additional revenues, in turn, will allow the SHS department to fund portions of the PhD program. The clinic is expected to bring in an accumulated total of \$37,440 over the first six years of the PhD program.

In the absence of new faculty hires, GA positions will not be used to supervise in the clinic. With fewer PhD students in the program at any given time, GAs will be needed to teach classes and will lack time to supervise in the clinic. Therefore, **\$0** new funds will be generated through the clinic.

#### **Other: Clinic-Funded**

As noted above, the UNM Speech-Language-Hearing Center funds many of the operating costs of the SHS department. Two aspects particularly relevant to the PhD program are the funding of learning resources and equipment; by Year 6, accumulated clinic funds of \$23,000 will have been spent to support the PhD program. Details of how these funds will be spent is in the ESTIMATED EXPENSES section below, under "Learning Resources" (SHS in-house library) and "Equipment" (lab equipment).

Fewer PhD students in the program will result in fewer funds needed to support these students (\$17,000 by Year 6).

## **ESTIMATED EXPENSES**

### **Salaries for Faculty and Staff**

Existing salaries in Year 1 reflect the 20% effort of current SHS faculty members Cathy Binger and Jessica Richardson in their support of the PhD program, with Years 2-6 including their estimated salary increases. Additionally, the following new positions will be added to our program, with the support of Dean Peceny from the College of Arts & Sciences: (1) Two new research faculty members: one in Year 1 + one in Year 3; (2) One half-time (0.5 FTE) Admin 3 (Year 1); and (3) 4 half-time (0.5 FTE) graduate assistants (Years 1 & 2).

More research professors mean larger graduate cohorts, and larger graduate cohorts generate tuition dollars and serve workforce needs. These new hires will support the growth of our master's program, and long-term will support the growth of our PhD program. The estimated salaries by Year 6 of \$307,554, therefore, reflect both the current commitment of the SHS faculty to devoting time to this program as well as substantial support from the College of Arts and Sciences.

**The decreases in expenses by failing to hire two new tenure-track research faculty are reflected in the budget (\$130,818 without new hires).**

### **Learning Resources**

The budget (Table 1) reflects learning resources solely within the SHS department. Current learning resources include an in-house library of clinical books and materials, including standardized testing materials and protocols as well as office supplies, some of which are recurring costs. Learning resources are paid for out of the SHS department's budget, which includes clinic revenues. The current clinic expenditures for the SHS library average approximately \$10,000/year, as reflected in Year 1 of the budget. PhD students are expected to use ~\$1,000 per year in clinic materials (e.g., use of test forms). The SHS department has the existing capacity to provide the bulk of needed learning resources for our new PhD students via I&G funds, returned F&A funds, and course fees. Increases in returned F&A through new external funding grants is expected to fund any additional learning resources. Therefore, all learning resource expenses will be paid by the SHS department.

### **Equipment**

The SHS department houses several computers, printers, and a range of additional office supplies for our masters' students, all of which currently are paid for with our internal departmental budget (including I&G funds, F&A returns, and clinic funds). Approximately \$2,000 of this equipment, funded via clinic funds, is expected to be immediately useful to our new PhD students. Additional monies in subsequent years (\$1,000/year) will be used for additional computers and other research lab equipment (again, funded via departmental clinic funds).

SHS researchers generally do not require exceptionally high dollar equipment to run their research programs. Our internal equipment needs, therefore, represent modest costs, which will be funded internally. Therefore, no funds are requested for equipment.

**Fewer PhD students will require fewer equipment resources. This is reflected in the budget.**

### **Facilities & Modifications**

The SHS department consists of its own self-contained building, located on the corner of Lomas & University Blvds. This secured building consists of 12,668 square feet, including office space for research and clinic faculty, research lab space for all researchers, two classrooms, 8 clinic rooms, 4 observation rooms, clinic library, grad student lounge, and a large preschool room. Funds totaling \$25,000 have been requested as a capital outlay request and will be used to install a wall to separate a large research lab to make room for our new research faculty members.

### **TOTAL REVENUE, EXPENSES AND COST DIFFERENCE**

The PhD program is expected to generate more revenue than expenditures, with a positive cost differential of ~\$800,000 by Year 6. Increases in revenues are expected primarily from increases in external grant funding, which will

be supported by our two new research faculty hires. New hires allow for more PhD students; more PhD students support healthy, active, funded research programs; and healthy research programs promote successful hires and retention of top talent.

Importantly, *we request no new funds, other than the funds promised by the College of Arts & Sciences for 2 new research faculty, .5 FTE Admin 3, and 4 GA positions, plus modest funds to modify our existing space.*

Failing to hire two new research faculty members will have a dramatic, negative effect on the PhD program. Although still technically possible for us to run the program, the various domino effects of failing to hire two new faculty members (i.e., lower enrollment, challenges with retention of top talent, no additional clinic funding) will reduce the projected cost difference by ~75% by Year 6 (i.e., ~\$800K vs. ~\$200K).

## **ESTMIATED IMPACT OF NEW PROGRAM**

### **FTE Enrollment**

Budget numbers (Table 1) are based on a 4-year PhD program and a 2-year MS program. Approximately 2-3 PhD students will be admitted each year. This will enable us to admit an additional 2-3 MS students per year starting in Year 2. The main restriction on our MS enrollment is the number of students who can be supervised in our clinic each semester due to a limited number of supervisors. As part of their graduate assistantships, some PhD students will be qualified to supervise MS students, thereby increasing the number of MS students we can admit. *By Year 4, we project that our program will enroll 10 PhD students plus an additional 6 MS students each year.*

An average of only 1 PhD student will be admitted each year until the two new faculty hires have been completed. No additional MS students will be admitted until we can further grow the PhD program. More robust, consistent PhD student enrollment is required to enroll additional MS students.

### **Projected Annual Credits**

Credits generated are based on 24 graduate credit hours per year for each PhD student (9 Fall + 9 Spring + 6 Summer) and 27 graduate credit hours per year for each MS student (12 Fall + 9 Spring + 6 Summer). By Year 4, we anticipate an additional 522 graduate credits per year. Credit costs reflect different rates for dissertation credits. The number of students is based on the projections in **Section F** and in the budget (Table 1).

Credit reductions reflect the decrease in the number of PhD students and absence of MS students resulting from the failure to hire additional research faculty. By Year 4, added annual credits will hit a ceiling of 120 graduate credits per year (net loss = 282 credits/year, compared with credits generated with two new faculty hires).

### **Tuition Generated**

Enrolling 10 PhD students by Year 6 – plus the additional 6 MS students – will *generate an additional \$185,070 tuition dollars per year by Year 6.*

Adding only 1 PhD student per year with a maximum of 4 PhD students enrolled at a time will result in yearly tuition generation of \$45,041 by Year 6 (net loss = \$140,029 per year, compared with credits generated with two new faculty hires).

\_\_\_\_\_  
Signature of Chief Academic Officer                      Date

\_\_\_\_\_  
Printed Name of Chief Academic Officer                      Date

\_\_\_\_\_  
Signature of Data (CIP) Coordinator                      Date

\_\_\_\_\_  
Printed Name of Data (CIP) Coordinator                      Date

HED use only

Date Presented to Advisory Committee \_\_\_\_\_

☐ Approved      ☐ Denied      ☐ Request more information

\_\_\_\_\_  
Cabinet Secretary's Signature                      Date

**Table 1.** Budget for PhD Program in Communication Sciences and Disorders.

	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		YEAR 6
REVENUES	Existing	New	Existing	New	Existing	New	Existing	New	Existing	New	Existing
Projected University I&G:	\$37,801	\$121,624	\$164,045	\$31,543	\$201,455	\$80,000	\$289,899	\$0	\$298,596	\$0	\$307,554
Salaries	<b>\$37,801</b>	<b>\$31,312</b>	<b>\$71,186</b>	<b>\$15,771</b>	<b>\$89,566</b>	<b>\$16,245</b>	<b>\$108,011</b>	<b>\$16,732</b>	<b>\$127,008</b>	<b>\$0</b>	<b>\$130,818</b>
External Grants and Contracts	\$250,000	\$0	\$250,000	\$50,000	\$300,000	\$150,000	\$450,000	\$200,000	\$650,000	\$250,000	\$900,000
	<b>\$250,000</b>	<b>\$0</b>	<b>\$250,000</b>	<b>\$0</b>	<b>\$250,000</b>	<b>\$50,000</b>	<b>\$300,000</b>	<b>\$0</b>	<b>\$300,000</b>	<b>\$0</b>	<b>\$300,000</b>
Other: Facilities & Modifications		\$25,000	\$25,000	\$0	\$25,000	\$0	\$25,000	\$0	\$25,000	\$0	\$25,000
		<b>\$25,000</b>	<b>\$25,000</b>	<b>\$0</b>	<b>\$25,000</b>	<b>\$0</b>	<b>\$25,000</b>	<b>\$0</b>	<b>\$25,000</b>	<b>\$0</b>	<b>\$25,000</b>
Other: Client-generated revenue	\$0	\$0	\$0	\$5,040	\$5,040	\$10,800	\$15,840	\$10,800	\$26,640	\$10,800	\$37,440
	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Other: Clinic-funded	\$12,000	\$3,000	\$15,000	\$2,000	\$17,000	\$2,000	\$19,000	\$2,000	\$21,000	\$2,000	\$23,000
	<b>\$12,000</b>	<b>\$1,000</b>	<b>\$13,000</b>	<b>\$1,000</b>	<b>\$14,000</b>	<b>\$1,000</b>	<b>\$15,000</b>	<b>\$1,000</b>	<b>\$16,000</b>	<b>\$1,000</b>	<b>\$17,000</b>
TOTAL REVENUE	\$299,801	\$149,624	\$454,045	\$88,583	\$548,495	\$242,800	\$799,739	\$212,800	\$1,021,236	\$262,800	\$1,292,994
	<b>\$299,801</b>	<b>\$57,312</b>	<b>\$359,186</b>	<b>\$16,771</b>	<b>\$378,566</b>	<b>\$67,245</b>	<b>\$468,011</b>	<b>\$17,732</b>	<b>\$468,008</b>	<b>\$1,000</b>	<b>\$472,818</b>
EXPENSES	Existing	New	Existing	New	Existing	New	Existing	New	Existing	New	Existing
Salaries	\$37,801	\$121,624	\$164,045	\$31,543	\$201,455	\$80,000	\$289,899	\$0	\$298,596	\$0	\$307,554
	<b>\$37,801</b>	<b>\$31,312</b>	<b>\$71,186</b>	<b>\$15,771</b>	<b>\$89,566</b>	<b>\$16,245</b>	<b>\$108,011</b>	<b>\$16,732</b>	<b>\$127,008</b>	<b>\$0</b>	<b>\$130,818</b>
Fringe	\$11,038	\$49,045	\$62,967	\$22,923	\$90,456	\$23,680	\$119,545	0	\$125,159	0	\$129,785
	<b>\$11,038</b>	<b>\$16,412</b>	<b>\$28,841</b>	<b>\$11,462</b>	<b>\$42,467</b>	<b>\$12,243</b>	<b>\$57,857</b>	<b>\$13,080</b>	<b>\$75,078</b>	<b>\$0</b>	<b>\$78,202</b>
Learning Resources	\$10,000	\$1000	\$11,000	\$1000	\$12,000	\$1000	\$13,000	\$1000	\$14,000	\$1000	\$15,000
	<b>\$10,000</b>	<b>\$1000</b>	<b>\$11,000</b>	<b>\$1000</b>	<b>\$12,000</b>	<b>\$1000</b>	<b>\$13,000</b>	<b>\$1000</b>	<b>\$14,000</b>	<b>\$1000</b>	<b>\$15,000</b>
Equipment	\$2,000	\$2,000	\$4,000	\$1,000	\$5,000	\$1,000	\$6,000	\$1,000	\$7,000	\$1,000	\$8,000
	<b>\$2,000</b>	<b>\$1,000</b>	<b>\$3,000</b>	<b>\$500</b>	<b>\$3,500</b>	<b>\$500</b>	<b>\$4,000</b>	<b>\$500</b>	<b>\$4,500</b>	<b>\$500</b>	<b>\$5,000</b>
Facilities & modifications	\$0	\$25,000	\$25,000	\$0	\$25,000	\$0	\$25,000	\$0	\$25,000	\$0	\$25,000
	<b>\$0</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>\$0</b>	<b>\$25,000</b>	<b>\$0</b>	<b>\$25,000</b>	<b>\$0</b>	<b>\$25,000</b>	<b>\$0</b>	<b>\$25,000</b>
TOTAL EXPENSES	\$60,839	\$197,669	\$256,012	\$55,466	\$321,911	\$104,680	\$440,444	\$1,000	\$455,755	\$1,000	\$470,339
	<b>\$60,839</b>	<b>\$74,724</b>	<b>\$139,027</b>	<b>\$28,733</b>	<b>\$172,533</b>	<b>\$29,988</b>	<b>\$207,868</b>	<b>\$31,312</b>	<b>\$245,586</b>	<b>\$1,500</b>	<b>\$254,020</b>
DIFFERENCE (Rev. – Exp.)	\$238,962	-( \$48,045)	\$198,033	\$33,117	\$226,584	\$138,120	\$359,295	\$211,800	\$565,481	\$261,800	\$822,655
	<b>\$238,962</b>	<b>-( \$17,412)</b>	<b>\$220,159</b>	<b>-( \$11,962)</b>	<b>\$206,033</b>	<b>\$37,257</b>	<b>\$240,143</b>	<b>-( \$13,580)</b>	<b>\$222,422</b>	<b>-( \$500)</b>	<b>\$218,798</b>
ESTIMATED IMPACT OF NEW PROGRAM	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6
FTE Enrollment	2 PHD 1 PHD		5 PHD + 2 MS 2 PHD		8 PHD + 6 Masters 3 PHD		10 PHD + 6 masters 4 PHD		10 PHD + 6 masters 4 PHD		10 PHD + 6 masters 4 PHD
Projected Annual Credits Generated	48 24		174 48		354 72		402 120		402 120		402 120
Tuition Generated	\$19,586 \$9,793		\$72,004 \$19,863		\$148,578 \$30,219		\$176,874 \$43,736		\$182,379 \$44,382		\$185,070 \$45,041

**Appendix A**  
**Letters of Support**

- A1. Dr. Pamela Cheek, Associate Provost for Curriculum and Assessment
- A2. Dean Mark Peceny, Dean, College of Arts & Sciences
- A3. Dr. Kristopher Goodrich, Chair, Department of Individual, Family, and Community Studies
- A4. Dr. Barbara Shaffer, Chair, Department of Linguistics
- A5. Dr. Ruth Luckasson, Chair, Department of Special Education
- A6. Dr. Zia Hossain, Interim Chair, Department of Language, Literacy, and Sociocultural Studies

**A1.**

To: Dr. Cathy Binger  
Re: Proposal for a Ph.D. in Speech and Hearing Sciences  
From: Dr. Pamela Cheek, Associate Provost for Curriculum and Assessment



Date: October 2, 2019

I am writing to indicate support from Office of the Provost and EVP for Academic Affairs for moving forward with preparing a full proposal for the Ph.D. in Speech and Hearing Sciences. The rationale for measured development of the program in coordination with the existing master's program and clinical work performed by the department is well-developed and compelling.

As you prepare your full proposal, I hope you and your department will consider how to balance admissions to a doctoral program with a sustainable load for your existing faculty. In general, the creation and growth of a doctoral program does not provide a rationale for addition of new faculty members to a department. Establishment of a doctoral program enhances the quality, range and profile of departments. (This approval for moving forward with the proposal should not be construed as approval for making additional faculty hires).

I look forward to reviewing the full proposal when it advances to Academic Affairs. Please don't hesitate to contact me or Dean Coonrod if we can be of any assistance as you develop the full proposal.

cc. Dr. Julie Coonrod, Dean of Graduate Studies  
Ms. Robben Baca, Graduate Academic Affairs Specialist  
Dean Mark Peceny, Dean of the College of Arts & Sciences  
Mr. Michael Raine, Associate Registrar

**A2.** *Office of the Dean*  
1/14/20

Pamela Cheek  
Associate Provost  
University of New Mexico

Dear Dr. Cheek,

I write this letter in support of the Department of Speech and Hearing Sciences' proposal to create a new Ph.D. program. Speech and Hearing Sciences offers nationally accredited professional programs that served about 140 admitted and intended undergraduate majors and 55 Masters students as of fall 2017. It is the highest ranked program in the nation among those that lack a Ph.D. program, according to the department's recent Academic Program Review, placing 53<sup>rd</sup> in the nation in a recent U.S. News and World Reports ranking. One hundred percent of their graduates pass their national board examination and gain employment in the profession. As the department's proposal makes clear, this is an area where there is a tremendous demand for faculty across the nation to train the next generation of scholars and practitioners in the field. UNM is especially well-positioned to train Ph.D. students who can conduct research on and serve bilingual communities, which will be an increasingly important concern for the discipline in the future.

To assist the department in building this new degree program, the College of Arts and Sciences plans to authorize searches to add two more faculty members to the department. We also plan to add a .5 FTE staff position (an administrative assistant 3) to assist in serving this increasingly complex program. Finally, we will increase the graduate assistant budget of the department by an amount sufficient to add four .5 FTE GA positions. We also understand that some minor capital renovations will be needed to facilitate this expansion of the program and will work with other units at UNM and with the state legislature to make these renovations possible.

We are confident that these investments will generate more resources for the institution. Adding more faculty will increase the amount of sponsored research generated by the department. Adding the GA lines will provide more individuals capable of providing clinical supervision of Masters students, which will increase the number of MA students paying tuition, including differential tuition, in the program. More importantly, these investments will make a strong department even stronger and allow it to train the next generation of leaders in a discipline that desperately needs more Ph.D. scholars and practitioners.

Sincerely,



Mark Peceny, Dean



## Department of Individual, Family & Community Education

Counselor Education • Educational Psychology • Family and Child Studies • Nutrition/Dietetics

**A3.** April 15, 2019

TO: Phyllis Palmer, PhD, CCC-SLP, Acting Chair  
Department of Speech and Hearing Sciences

FROM: Kristopher Goodrich, Chair  
Department of Individual, Family and Community Education

RE: Support for the PhD Program in Communication Sciences and Disorders

On behalf of the Department of Individual, Family and Community Education, I write in strong support of the proposal to create a PhD Program in Speech and Hearing Sciences. Both IFCE and SHS will mutually benefit from working together.

IFCE is positioned to provide ongoing, tangible support to this new degree. IFCE currently has three of the nine doctoral programs in the College of Education (Counselor Education; Educational Psychology; and Family and Child Studies). In the last few years, the Counselor Education program underwent a thorough revision of its doctorate in response to changing accreditation standards and in response to clarifying the mission of its doctorate toward the preparation of counselor educators. The work the Counselor Education faculty has done is analogous to the work the SHS faculty are currently doing, and we're most willing to share "lessons learned" and other information.

Several of the research design and statistics courses taught in the Educational Psychology Program may be of interest to these new doctoral students. Our understanding is that the SHS department plans to require their PhD students to complete a minimum of 6 graduate level statistics credits as part of the core curriculum, with many students completing this requirement by taking EDPY 511 and 603. Enrollments in these two courses, as well as any additional EDPY courses of interest, are more than welcome; having room for SHS students should pose no resource issues for IFCE. The EDPY program also offers a doctoral minor in quantitative methods in education which could be suggested or required of SHS students. The EDPY courses serve a variety of graduate programs from around UNM, including Health Science Center programs. Our coursework is thus designed and taught with a broad audience in mind. Having SHS students in our courses will expand that diversity and enrich those courses.

It is clear from my predecessor's interactions with your faculty that your department is taking a very planful and thoughtful approach to developing this new degree. We very much look forward to working together not only in getting the degree launched but also in preparing your doctoral students to be rigorous social scientists.

If there is anything else we can do to aid you in this effort, please do not hesitate to ask.

A4. April 12, 2019

To Whom It May Concern:

I write this letter in my capacity as Chair of the Department of Linguistics to express our unanimous support for a PhD program in Speech and Hearing Sciences. The Department of Linguistics has a long history of collaboration with the Department of Speech and Hearing Sciences, including a joint doctoral program allowing students interested in doctoral study to complete a Ph.D. in Linguistics with a concentration in Speech and Hearing Sciences. The faculty in the Department of Linguistics enthusiastically support the newly proposed degree program, and see this as a complementary program to those we offer in Linguistics. Indeed, the proposed degree program is likely to attract many new doctoral students to UNM who are not currently considering our PhD program, and will thus increase enrollments in our courses. We look forward to the enriched the academic discourse around language and linguistics.

We are eager to collaborate with the SHS faculty on training their doctoral students and increasing the understanding of multilingualism and language variation in the workforce that interacts with individuals with speech, language and hearing disorders. This is critically important in a linguistically diverse state such as New Mexico. It is imperative that language professionals can identify and distinguish linguistic and dialectal variation as well as the typical behaviors of multilingual communities as they relate to language mixing and code-switching in order to diagnose and treat language disorders appropriately.

UNM's linguistic department is unique nationally in approaching the study of language typologically, that is, acknowledging and incorporating cross-linguistic insights into the study of language. This is the ideal setting to support a Ph.D. program in Speech and Hearing Sciences that targets training for students who plan to investigate language in bidialectal and multilingual populations. We also document differences in majority and minority language acquisition, which can contribute to evidence-based assessment and interventions to families who are promoting a minority language in the home.

The Linguistics Department will support the new doctoral program through curriculum support, including standard introductory training in linguistics (phonological and grammatical analysis) and advanced seminars in language contact, Native American languages, socio-phonetics, signed language linguistics, childhood and adult bilingualism, as well as research methods and statistical analysis for the study of language use. Linguistics faculty will also serve in mentoring roles on doctoral students' exam and dissertation committees. Finally, we anticipate that doctoral students in the Ph.D. program in Speech and Hearing Sciences will be offered membership in the graduate student professional organization, the High Desert Linguistic Society (HDLS), which is very active at UNM, holding an international conference every two years in November. HDLS currently includes membership of graduate students in the language sciences who are pursuing

degrees in Linguistics, Spanish & Portuguese, and Language, Literacy and Sociocultural Studies.

The addition of a doctoral program in Speech and Hearing Sciences is also likely to benefit the Linguistics Department. Doctoral programs in the speech sciences are highly competitive and attract outstanding students who will contribute to the academic discourse in our department. These students will also bring unique perspectives on language and the goals of language study to our community. The proposed doctoral program, which would be the only Ph.D. program in Speech and Hearing Sciences in New Mexico, and the only Ph.D. program in Speech and Hearing Sciences at a high-research productivity Hispanic-Serving Institution, allows us to further our department mission, in which we express, “our commitment to the application of linguistics to social concerns, including minority language maintenance and empowerment of minority communities.”

Our department is fully committed to supporting the development and maintenance of this new doctoral program, and we look forward to working with the Department of Speech and Hearing Sciences, as well as with the College and other administrative units to create and sustain a highly competitive and effective doctoral program in Speech and Hearing Sciences.

Sincerely,



Barbara Shaffer, Professor & Chair  
Department of Linguistics



Department of Special Education  
College of Education  
MSC05 3045  
1 University of New Mexico  
Albuquerque, NM 87131-0001

**A5.** April 3, 2019

Phyllis Palmer, Ph.D., CCC-SLP  
Associate Professor and Acting Chair  
University of New Mexico  
Speech and Hearing Sciences  
1 UNM, MSC01 1195  
Albuquerque, NM 87131

Dear Dr. Palmer:

I am pleased to write this letter of support for your proposed PhD in Speech and Hearing Sciences (SHS). I believe that this new PhD would not only serve New Mexico and regional community needs, but would also position UNM and its Speech and Hearing Sciences (SHS) department to create a unique scholarly niche for future development and pursuit of grant and contract support.

The Special Education Department would be pleased to help support the SHS doctoral program in a variety of ways as needed, including allowing SHS graduate students to enroll in special education graduate courses, sharing our experiences and successful practices working with PhD students, serving on program of studies and dissertation committees as appropriate, and generally offering guidance to faculty as might be useful.

I have reviewed your plans and I believe that the SHS department has worked diligently and thoroughly to explore this important step, and has made a convincing argument that SHS is well prepared for the PhD program development.

Sincerely,

*Ruth Luckasson*

Ruth Luckasson, J.D.  
Chair, Department of Special Education  
Distinguished Professor  
Regents' Professor and Professor of Special Education



*Department of Language, Literacy, and Sociocultural Studies*

**A6.** Date: April 3, 2019

To: Phyllis Palmer, PhD, CCC-SLP  
Associate Professor and Interim Chair  
Department of Speech & Hearing Sciences, UNM

Re. Support for a Ph.D. program in Speech & Hearing Sciences

On behalf of the Department of Language, Literacy and Social Studies (LLSS), I am writing in strong support of your proposal to create a Ph.D. Program in Speech & Hearing Sciences (SHS). Given your program's strong focus on cultural and linguistic diversity, literacy, and bilingualism within the field of speech-language pathology, LLSS is particularly well- positioned to support this initiative.

We were interested to learn about the long-standing shortage of doctoral candidates for faculty positions in SHS. Given the great need for doctoral level faculty in your field, and the unique opportunity for your program to offer a Ph.D. in Speech and Hearing Sciences in a Hispanic-Serving, highest research activity level (R1) institution, it is clear that your program would prepare doctoral students to conduct research addressing the needs of an increasingly culturally and linguistically diverse population, and to address the pressing need for educating future speech-language pathologists.

Our Department believes that a Ph.D. program in SHS would complement our own doctoral programs and our LLSS faculty would welcome SHS Ph.D. students in our courses. Based on preliminary meetings with your faculty, LLSS and SHS faculty have created a list of courses that are particularly likely to be of interest to SHS Ph.D. students with interests in bilingualism, cross-cultural diversity, language and literacy acquisition, as well as research methods courses (for example, LLSS 502: Introduction to Qualitative Research and LLSS 605: Advanced Qualitative Research Methods). We already have experienced the benefits of having SHS master's degree students taking selected LLSS courses; the SHS students contribute new perspectives and enrich our own students' experiences. We look forward to including your Ph.D. students in our courses in the future.

In summary, we enthusiastically support the proposed Ph.D. program in Speech and Hearing Sciences. We anticipate benefits to both our departments as you create and implement your proposed high-quality Ph.D. program.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Zia Hossain', with a stylized flourish at the end.

Zia Hossain, PhD  
Chair, Department of Language, Literacy, and Sociocultural Studies  
Professor of Family and Child Studies & Regents' Lecturer  
143 Hokona Hall, MSC 05 3040  
Phone: 505-277-0703; E-mail: [zhossain@unm.edu](mailto:zhossain@unm.edu)

## **Appendix B**

### **PhD Program in Communication Sciences and Disorders**

#### **Program Description**

This is the information for our revised “Graduate Programs” page of the UNM Catalog.

### **Graduate Program**

#### **Application Deadlines**

February 1, for both the M.S. and Ph.D. programs

Only applications received by this deadline will be considered for a Fall Semester start date of the same year.

#### **Degrees Offered**

- Master of Science in Speech-Language Pathology (MS)
- Doctor of Philosophy in Communication Sciences and Disorders (PhD)

#### **Master of Science in Speech-Language Pathology**

(All verbiage to remain the same)

#### **PhD in Communication Sciences and Disorders**

The PhD in Communication Sciences and Disorders is an individualized mentor-based doctoral program designed to prepare researchers and scholars to be leaders of discovery within the field. All applicants are required to submit a letter of support from a mentor from the department who is willing to serve as the student’s primary advisor throughout the student’s program. To gain entry to the program, minimum requirements include: (1) minimum master’s level GPA of 3.50, and (2) completion of a master’s degree in Speech and Hearing Sciences or a related discipline (e.g., linguistics, special education, psychology). Applications must include a letter of support from a UNM SHS mentor, 3 letters of recommendation, a letter of intent, GRE scores, additional academic writing samples, and a current curriculum vitae.

The PhD program requires a minimum of 74 credit hours total. At least 50% of the students total credit hours must be completed at UNM.

#### **Requirements**

Each student’s individual program plans will be determined by the student’s PhD committee, in consultation with the student. Requirements for students who have completed a master’s degree in speech-language pathology within the past 7 years include:

Core (6)	<ul style="list-style-type: none"> <li>• <i>SHS 459</i>: Multicultural Considerations in Communication (3)</li> </ul> <p>Select one of the following:</p> <ul style="list-style-type: none"> <li>• <i>PEP 625</i>: Writing for professional publication (3)</li> <li>• <i>LLSS 610</i>: Seminar in academic writing in education and related fields (3)</li> <li>• Alternate committee-approved writing course</li> </ul>
Research (15)	<ul style="list-style-type: none"> <li>• <i>SHS 606</i>: Survey of Research Methods in CSD (3)</li> <li>• Statistics (6 minimum)</li> <li>• Additional Methods, Statistics, Tools, Grant-Writing and/or Lab Experience (6 minimum)</li> </ul>
Specialty (24)	Selected with advisor and program committee
Teaching (5)	<ul style="list-style-type: none"> <li>• <i>OILS 583</i>: Graduate Teaching (1)</li> <li>• <i>ED PY 630</i>: College Teaching Seminar (3)</li> <li>• <i>SHS 610</i> : Mentored Teaching Experience in SHS (1)</li> <li>• Apply for Graduate Teaching Academy Certificate</li> </ul>
Electives (6)	Additional 6 credits from research methods or specialty areas
Qualifying Exam (0)	Synthesis of Research Literature completed by end of second semester
Comprehensive Exam (0)	Submittable systematic review, research study with empirical data, or major external grant application completed within 5 years of start date
Dissertation (18)	<i>SHS 699</i> : Taken each semester after admission to candidacy

Students who completed speech-language pathology master's degrees more than 7 years prior to their PhD program start date are encouraged to complete *SHS 506* and may have additional coursework assigned. Students with a master's degree in a discipline other than speech-language pathology are also required to take *SHS 302* (Introduction to Communication Disorders), *SHS 506* (Reading and Writing in Research), and 9 additional graduate level credits (specific courses to be determined by committee), plus any prerequisites for those courses (some of which may be undergraduate level courses).

Before advancing to candidacy (also known as *All But Dissertation*, or *ABD*), students must have successfully completed all of their non-dissertation coursework and passed their comprehensive exams.

**Appendix C**  
Sample Program Plans\*

	<b>Example area of interest: <i>Autism and Developmental Disabilities</i></b>	<b>Example Area of Interest: <i>Neurorehabilitation</i></b>	<b>Example Area of Interest: <i>Bilingual Assessment and Intervention</i></b>
<b>Core (6)</b>	<ul style="list-style-type: none"> <li>SHS 459 (3) Multicultural Considerations in Communication</li> <li>Select one of the following: <ul style="list-style-type: none"> <li>PEP 625 Writing for professional publication (3)</li> <li>LLSS 610 Seminar in academic writing in education and related fields (3)</li> <li>Alternate committee- approved writing course (3)</li> </ul> </li> </ul>		
<b>Research (15)**</b> Required SHS Survey of Research Methods in CSD + at least 6 credits in statistics + additional courses in research methods, stats, tools, lab experiences, grant writing	<b>Required Methods (3):</b> <ul style="list-style-type: none"> <li>SHS 606 <i>Survey of Research Methods in CSD</i> (3)</li> </ul>	<b>Required Methods:</b> <ul style="list-style-type: none"> <li>SHS 606 <i>Survey of Research Methods in CSD</i> (3)</li> </ul>	<b>Required Methods:</b> <ul style="list-style-type: none"> <li>SHS 606 <i>Survey of Research Methods in CSD</i> (3)</li> </ul>
	<b>Statistics (6 credits minimum)</b> <ul style="list-style-type: none"> <li>ED PY 511 Introductory Educational Statistics (3)</li> <li>ED PY 603 Applied Statistical Design and Analysis (3)</li> </ul>	<b>Statistics (6 credits minimum)</b> <ul style="list-style-type: none"> <li>PSYC 501 Advanced Statistics (3)</li> <li>PSYC 502 Design and Analysis of Experiments (3)</li> </ul>	<b>Statistics (6 minimum)</b> <ul style="list-style-type: none"> <li>ED PY 511 Introductory Educational Statistics (3)</li> <li>ED PY 603 Applied Statistical Design and Analysis (3)</li> </ul>
	<b>Additional Methods, Statistics, Tools, Grant-Writing or Lab Experience (6 credits minimum)</b>  Select from: <ul style="list-style-type: none"> <li>SPCD 619 Single Case Research design (3)</li> <li>ED PY5 505 Conducting Quantitative Research (3)</li> <li>ED PY 515 Survey and Questionnaire Design and Analysis (3)</li> <li>LING 590 Methods in Language Research (3)</li> <li>PSYC 502 – Design and Analysis of Experiments (3)</li> </ul>	<b>Additional Methods, Statistics, Tools, Grant-Writing or Lab Experience (6 credits minimum)</b>  Select from: <ul style="list-style-type: none"> <li>PSYC 541 Intro to functional neuroimaging (3)</li> <li>PSYC 644 Advanced EEG Analysis in Matlab (3)</li> <li>PSYC 601 Multivariate statistics (3)</li> <li>SHS 651 Grad Topics – EEG/fNIRS Analysis</li> <li>BIOM 557 Measurement in Clinical and Translational Research (1-6)</li> <li>ECE 510 Medical Imaging (3)</li> <li>ECE 511 Analysis methods in fMRI (3)</li> </ul>	<b>Additional Methods, Statistics, Tools, Grant-Writing or Lab Experience (6 credits minimum)</b>  Select from: <ul style="list-style-type: none"> <li>LING 590 Methods in Language Research (3)</li> <li>LLSS 505 Advanced Qualitative Research (3)</li> <li>EDPY Conducting Quantitative Research (3)</li> <li>EDPY 515 Survey and Questionnaire Design and Analysis (3)</li> <li>SPCD 619 Single Case Research Design (3)</li> <li>BIOM 557 Measurement in Clinical and Translational Research (1-6)</li> </ul>

<p><b>Specialty (24)*</b> Selected with advisor and program committee</p>	<p>Select from</p> <ul style="list-style-type: none"> <li>• SHS 539 Autism and DD (3)</li> <li>• SHS 532 AAC (3)</li> <li>• SHS 651 Independent study in Autism and DD (1-3)</li> <li>• SPCD 519 Intro to ABA (3)</li> <li>• SPCD 584 Research and Teaching Intervention in Autism Spectrum Disorders (3)</li> <li>• SPCD 527 Assessment for Intellectual or severe disabilities (3)</li> <li>• SPCD 582 Teaching students with intensive communication needs (3)</li> <li>• FCS 502 Developmental issues in families (3)</li> <li>• FCS 584 Multicultural issues working with families (3)</li> <li>• FCS 576 Teaching and learning through play (3)</li> <li>• PSY 539 Child Psychopathology (3)</li> <li>• LING 560 Child Language (3)</li> </ul>	<p>Select from:</p> <ul style="list-style-type: none"> <li>• PSYC 540 Biological Bases of Behavior (3)</li> <li>• PSY 565 Seminar in Thought and Language (3)</li> <li>• PSY 567 Psychology of language (3)</li> <li>• LING 569L Experimental Psycholinguistics (3)</li> <li>• SHS 651 Independent study in Cognitive-linguistic outcomes in adult populations (3)</li> <li>• PSY 641 Seminar in cognition brain, and behavior (2)</li> <li>• STAT 520 (or ECE 620) Topics in Interdisciplinary Biological and Biomedical Sciences (3)</li> <li>• SHS 651 Independent study in Noninvasive brain stimulation 1 (3)</li> <li>• SHS 651 Independent study Noninvasive brain stimulation 2 (3)</li> </ul>	<p><b>LINGUISTIC ASPECTS</b> <i>At least 3 cr from any of the following</i></p> <ul style="list-style-type: none"> <li>• LING 504 Phonological Analysis (3)</li> <li>• LING 522 Grammatical Analysis (3)</li> <li>• LING 531 Language in Society (3)</li> <li>• LING 512 Morphosyntax (3)</li> <li>• LING 525 Semantic Analysis (3)</li> <li>• LING 559 Language in Culture (3)</li> <li>• LING 515 Native American Languages</li> </ul> <p><b>CULTURAL ASPECTS</b> <i>At least 3 cr from any of the following</i></p> <ul style="list-style-type: none"> <li>• FCS 615 Human Development in Cultural Contexts (3)</li> <li>• LLSS 524 Critical Race Theory (3)</li> <li>• LLSS 529 Race, Ethnicity, and Education (3)</li> <li>• LLSS 558 Literacy across Cultures (3)</li> <li>• LLSS 559 Second Language Literacy (3)</li> <li>• LLSS 560 Language and Education in Southwest Native American Communities (3)</li> <li>• LLSS 561 Reading, Writing, and Diversities</li> </ul> <p><b>BILINGUAL PRACTICES</b> <i>At least 3 cr from any of the following</i></p> <ul style="list-style-type: none"> <li>• SHS 539 Biling Acquisition: Clinical Implications (3)</li> <li>• LLSS 579 The Teaching of Reading in the Bilingual Classroom (3)</li> <li>• LLSS 568 Alternative Assessment Practices</li> </ul>
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			for English Language Learners (3) <ul style="list-style-type: none"> <li>• SPCD 517 Assessment of Diverse Students with Learning and Behavior Exceptionalities (3)</li> </ul>
<b>Qualifying Exam (no credits)</b>	Synthesis of Research Literature completed by end of second semester		
<b>Teaching (5)</b>	<ul style="list-style-type: none"> <li>• OILS 583 Graduate Teaching (1 credit)</li> <li>• ED PY 630 College Teaching Seminar (3 credits)</li> <li>• SHS 610 Mentored Teaching Experience in SHS (1 credit)</li> <li>• Apply for Graduate Teaching Academy Certificate</li> </ul>		
<b>Electives (6)*</b>	Additional 6 credits from research, specialty area, <i>or</i> other LING/SHS such as: <ul style="list-style-type: none"> <li>• SHS 539 Biling Acquisition Clinical Implications (3)</li> <li>• LING 504 Phonological Analysis (3)</li> <li>• LING 525 Semantic (3)</li> </ul>	Additional 6 credits from research <i>or</i> <ul style="list-style-type: none"> <li>• BIOM 566 Grantsmanship in clinical and translational research (1-3)</li> </ul>	Additional 6 credits from specialty areas <i>or</i> <ul style="list-style-type: none"> <li>• SHS 651 Independent study in cultural and linguistic diversity (1-3)</li> <li>• PSY 565 Seminar in Thought and Language (3)</li> <li>• LLSS 614 Vygotsky Seminar (3)</li> </ul>
<b>Comps (no credits)</b>	Submittable systematic review, research study with empirical data or major external grant application completed within 5 years of start date		
<b>Dissertation (18)</b>	SHS 699 (taken each semester after admission to candidacy)		

\*These are **examples** of possible ways students could complete their 74 hours. These are NOT required specialization area plans; students with similar interests may have different programs of study as determined via committee.

\*\*\* Students are responsible for completing any prerequisite courses.

**Appendix D**  
**Learning Outcomes**

**SHS PhD Formal Assessment Plan**

**STUDENT Learning Outcome Measures**

1. **BROAD GOAL:** PhD students will successfully progress through program milestones.
  - a. **Student Learning Outcome #1:** Students will demonstrate a solid understanding of a specific knowledge area in the field through a written synthesis of research articles on a specified topic (i.e., qualifying exam)
    - i. Assessment Measure
      1. DIRECT
        - a. Review students' performance on qualifying exam.
          - i. *Performance Benchmark*
            1. 100% will pass the qualifying exam by the end of their second semester.
          - ii. *Student Population*
            1. 100% will be sampled
    - b. **Student Learning Outcome #2:** Students will demonstrate the ability to synthesize information across topics and disciplines in a written document (i.e., comprehensive exam).
      - i. Assessment Measure
        1. DIRECT
          - a. Review students' performance on comprehensive exam.
            - i. *Performance Benchmark*
              1. 80% of students will pass their comprehensive exam within five years of initial enrollment.
            - ii. *Student Population*
              1. 100% will be sampled
    - c. **Student Learning Outcome #3:** Students will engage in and conduct original research.
      - i. Assessment Measure
        1. DIRECT
          - a. Completion of and successful defense of the dissertation.
            - i. *Performance Benchmark*
              1. 80% of students in the program will successfully complete the dissertation project
            - ii. *Student Population*
              1. 100% will be sampled
    - d. **Student Learning Outcome #4:** Students will demonstrate effective teaching pedagogies in their discipline or related area
      - i. Assessment Measure
        1. DIRECT

- a. Students grades on SHS 610 (Mentored Teaching Experience)
  - i. *Performance Benchmark*
    - 1. 80% of full-time students will receive a B or higher
  - ii. *Student Population*
    - 1. 100% will be sampled

## Appendix E

### Speech-Language Pathology/ Communication Sciences and Disorders Workforce Needs

#### National Need for PhDs in Communication Sciences and Disorders (CSD)

##### *American Speech-Language-Hearing Association (ASHA)*

- [30% of CSD research faculty jobs went unfilled](#) in the most recent year these data have been reported (2017-2018), with a mean of 26% over the past three years.
- [Low percentages of CSD students](#) are racially/ethnically diverse

#### National Need for Clinical Speech-Language Pathologists (SLPs)

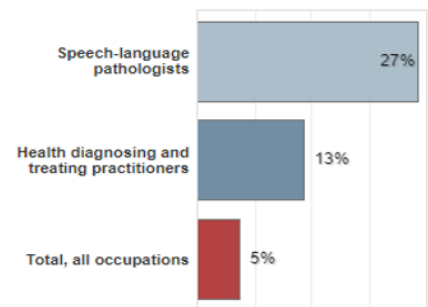
##### *Bureau of Labor Statistics*

- The SLP profession enjoys a strong job outlook nationally, with a [27% growth rate](#) in current long-term projections, which is “much faster than the average for all occupations.”

##### *American Speech-Language-Hearing Association (ASHA)*

- In 2018, [ASHA reported](#) a total of 1306 ASHA-certified speech-language pathologists in New Mexico (including those certified in both SLP and audiology)
- [Employers in NM](#) include the following:
  - o 56% educational facilities
  - o 35% health care facilities
  - o 9% other

**Speech-Language Pathologists**  
Percent change in employment, projected 2018-28



Note: All Occupations includes all occupations in the U.S. Economy.  
Source: U.S. Bureau of Labor Statistics, Employment Projections program

<https://www.bls.gov/ooh/healthcare/mobile/speech-language-pathologists.htm>

#### New Mexico Need for Clinical SLPs

##### *New Mexico Department of Workforce Solutions*

- The most recent growth rates [as reported by the NMDWS](#) indicate speech-language pathology growth rates of over 20% throughout various regions of NM
- Speech-language pathology is one of the NMDWS' "Top 10" ranked job openings in New Mexico for professions that require at least a master's degree and enjoys one of the highest projected job growth areas in the state.

##### *Projections Central: State Occupational Projections*

Note: Bureau of Labor Statistics links to this site

- Although [Short-term growth](#) needs in New Mexico (from 2018-2020) are currently being met, 12.5% growth is expected in current [long-term projections](#) (from 2016-2026)

##### *Zippia*

Career website that compiles data from multiple sources

- Reports that in 2019, speech-language pathology is the [5<sup>th</sup> fastest growing job in NM](#)



*University Libraries*

March 10, 2020

Dr. Phyllis Palmer  
Chair, Department of Speech and Hearing Sciences  
College of Arts & Sciences  
University of New Mexico

Dear Dr. Palmer,

The University Libraries has reviewed the Department of Speech and Hearing Sciences' proposal for a Ph.D. degree in Communication Sciences and Disorders. The UNM Libraries has long been supporting research in Speech and Hearing, as well research in Linguistics, and we believe that we have the resources (books, journals, databases and data resources) to support the proposed new degree program.

As new faculty are hired at UNM it is possible that new and/or additional library resources will be needed to support their specific research areas. Since we operate with very limited resources the library may need to cancel some existing resources to meet the need for new resources. We will work closely with the Department of Speech and Hearing to identify not only new resources but also potential cancellations of existing resources as the need arises.

Sincerely,

Susanne K. Clement  
Director of Collections  
University Libraries  
[sclement@unm.edu](mailto:sclement@unm.edu)  
505-277-5176

cc:

Richard Clement, Dean of Libraries  
Dr. Mark Emmons, Associate Dean of Public Services, University Libraries