Title of Degree or Credit-Bearing Certificate (e.g., Bachelor of Arts in History):

Bachelor of Arts in Linguistics & Speech, Language, and Hearing Sciences

1. Please provide the name, title, email address, and phone number of the primary contact person for this academic program:

   Carol Neidle, Professor of French & Linguistics and Director of the Linguistics Program
   Contact: carol@bu.edu; 617-353-6218

2. Please briefly describe the proposed new degree:

   Linguistics examines fundamental properties that all languages share, and how they differ, with respect to structure (sound system, word formation), syntax, expression of meaning, acquisition, variation, and change. It includes the study of biological, social, cultural, and historical bases of language. Speech, Language, and Hearing Sciences is also concerned with language structure, how it is represented in the mind, and how it is used, but focuses more on atypical or disordered populations.

   The proposed interdisciplinary, intercollegiate major in Linguistics & Speech, Language, and Hearing Sciences will be available to students in SAR pursuing a BS degree and to CAS students pursuing a BA—with differences in the requirements beyond the major corresponding to the specifications in each college. The courses for the joint major will provide a theoretically solid, empirically oriented program of study focused on experimental approaches to language science and interactions between theoretical study of human language and clinical applications. It will take advantage of the faculty strengths and richness of course offerings in related disciplines from CAS/Linguistics and SAR/Speech, Language & Hearing Sciences (SLHS), which have considerable synergies. The joint degree, with a curriculum designed to integrate the two disciplines in a way that provides students with relevant and complementary courses from both domains, is more than just the sum of the two separate components.

   The major offers a solid foundation in both domains, breadth of coverage, and good preparation for a variety of career paths. It prepares students for graduate study in any of a
number of related areas (e.g., linguistics, psychology, neurolinguistics, cognitive science) and for graduate/professional work in speech language pathology, audiology, or more generally, for future careers in medicine, neuropsychology, language technology (e.g., speech recognition or speech synthesis), or areas of child development and education. Individual plans of study will be designed, in consultation with faculty advisors, to match the students’ interests and professional goals.

3. Please provide a rationale for the proposed new degree:

There has been considerable student interest in recent years in each of these areas separately and in combining these fields of study. The requirements of the double major, requiring participation in the dual degree program, are so demanding at the moment (fulfilling two complete majors and the requirements for two different colleges) that many students who might otherwise be interested find it to be more than they can do. Thus far, some students with overlapping interests have chosen major/minor combinations, but since these programs span two colleges, students have not taken full advantage of the possibilities. The joint intercollegiate major would enable us to provide an integrated curriculum well suited for students with such interests, taking advantage of existing strengths within the university to offer an option that many students are likely to find beneficial and exciting.

This new program will be of interest not only to current students, but also prospective BU students, who thus far have shown great interest in the existing joint degree programs in CAS that combine linguistics with the study of French, Italian, Japanese, Spanish, and Philosophy; there has also been interest expressed in the possibility of combining Linguistics with Speech, Language & Hearing Sciences (SLHS). For fall 2015, about 65% of the incoming undergraduates declaring an interest in linguistics have stated an intention to declare one of our joint majors, with 35% declaring a straight Linguistics major. As of Fall 2015, we have 5 students in the Linguistics program who are also minoring in SLHS.

Between 2007 and 2015, we had 15 graduates who earned a BA in Linguistics with a minor in SLHS, and 2 SAR graduates with a SLHS major and a Linguistics minor. Many of these students have gone on to graduate school and successful careers in clinical practice and/or research in this area. (One went on to get dual PhD's in Communication Sciences and Disorders, and Neuroscience. Another is a practicing Bilingual Speech Language Pathologist who founded a company that provides professional development and language assessment tools to schools nationwide.)

Interest in linguistics has grown significantly in recent years, both at BU and nationally. Furthermore, speech-language pathology is an area in health care that gets listed among the top professions. Substantial future growth in career opportunities in the professions of audiology and speech-language pathology is predicted. According to the Bureau of Labor Statistics, “26,000 jobs will open up for speech-language pathologists by 2022.” In other words, both of these disciplines are growth areas, and it is expected that interest in the joint major will be strong and will expand over time.
4. Please describe how the proposed new degree advances the Strategic Plans of the department, school/college, and University:

The proposed intercollegiate major creates a way for students in both CAS and SAR to combine essential theoretical foundations for the study of language with preparation for professional applications of speech sciences. The new program will also bring together the participating faculty from both colleges in ways that are likely to foster new research connections. This interdisciplinary undergraduate program will thus contribute to important goals that have been articulated at the College and University levels.

This proposal is directly in line with the goals set out in the University’s Strategic Plan, most notably:

“To continue to develop the special undergraduate educational environment that combines our commitment to a liberal arts and sciences education with professional opportunities, while creating flexible educational opportunities to leverage the depth of CAS and our other schools and colleges.”

“To increase our emphasis on interdisciplinary research... in order to expand our leadership in important fields and the collaborative atmosphere across our campuses.”

“To support and enhance a world-class faculty whose members are dedicated to teaching and engaged in research, scholarship, and their professions.”

“To expand and enhance the College of Arts and Sciences as the core of the University and our undergraduate programs...”

“To enhance our nationally recognized professional schools and colleges...”

With respect to the CAS Strategic Plan, the proposed new program will directly support this goal:

“Undergraduate education is the bedrock on which a university operates. As the liberal arts and sciences college of BU, CAS is committed to serving not only the students who pursue their degrees in this College, but all BU undergraduates who depend on CAS for developing foundational academic skills and completing general education and other critical pieces of their education. We will seek to develop the highest standards of teaching at all levels and provide new opportunities for research and experiential learning...”

as well as the goal to integrate "research and teaching in linguistics, the scientific study of language."

Likewise, this program supports the stated goals of Sargent College:

To “provide an undergraduate education that combines a strong liberal arts foundation with opportunities for exploring and preparing for a wide range of health-
related careers.”
To make “a greater contribution to the education of students from other Boston University Schools and Colleges.”
To provide “Disciplinary Training in an Interdisciplinary Context.”
To educate “practitioners who are excellent critical thinkers who are prepared for evidence-based practice”.
The proposed intercollegiate major also advances the goals of the Strategic Plans of the Linguistics Program and of the Speech, Language & Hearing Sciences Program. The Linguistics program has recently undergone reorganization to further expand interdisciplinary connections, a goal that will be advanced by the creation of this program, which will facilitate interactions among the faculty and help to promote interdisciplinary research. The further development of our successful undergraduate joint majors is included in the Linguistics Program’s Strategic Plan.

The SLHS strategic plan includes a goal of promoting high-quality research at all levels, including the undergraduate level. The joint major will expand the research options for students and allow them to benefit from interdisciplinary collaborations among the faculty.

5. Please list the program requirements for the proposed new degree (denote new courses in bold print):

Thirteen 4-credit courses, including at least five in CAS Linguistics and at least five in SAR SLHS:

(A) A basic introduction to linguistics, to be taken before all other CAS LX courses, and a basic course in Communication Disorders, to be taken before all other SAR SH courses:
- CAS LX 250 Introduction to Linguistics
- SAR SH 531 Introduction to Communication Disorders

(B) One course in phonetics -- either of the following:
- CAS LX 510 Phonetics
- SAR SH 221 Phonetics

(C) Two additional core courses in Linguistics
- CAS LX 502 Semantics
- CAS LX 522 Syntax I

(D) Two additional core courses in Speech, Language & Hearing Sciences:
- SAR SH 522 Anatomy and Physiology of the Speech Mechanism
- SAR SH 523 Introduction to Speech Science

(E) One course in language acquisition -- chosen from the following:
- CAS LX 542 Acquisition of Syntax
- CAS LX 541 Phonological Development
- CAS LX 542 Second Language Acquisition
- SAR SH 524 Language Acquisition
(F) Two additional courses in Linguistics
chosen from CAS LX courses at or above the 400-level, in consultation with an advisor

(G) One additional course in Speech, Language & Hearing Sciences -- chosen from:
- SAR SH 535 Introduction to Audiology
- SAR SH 505 Introduction to Phonological Disorders
- SAR SH 548 Introduction to Language Disorders

(H) One of the following two courses:
- SAR SH 547 Introduction to Clinical Practice
- SAR SH 640 Senior Seminar: Internship

(I) One additional elective from (E), (F), or (G) above.

Honors program

Honors students in both colleges fulfill essentially the same requirements: the 13 4-credit courses required for the standard major plus 8 additional credits, including 2 semesters of independent Honors research (for a total of 4 or 8 credits) and up to 4 additional elective credits (a CAS LX or SAR SH course at or above the 500-level) chosen in consultation with the student’s academic advisor.¹

Slight differences in procedures reflect the norms for honors programs in the two colleges². Nonetheless the expectations for acceptance into the honors program and the standards for successful completion are comparable in the two colleges, and the mentor for the honors research can be any faculty member affiliated with this intercollegiate program (either in CAS or SAR).

The required Senior Honors Research is normally undertaken in the senior year. Students are expected to begin discussions with faculty advisors about the project by March of their junior year, and are required to submit an approved proposal along with their application to the honors program by May 15 of their junior year.

Qualifications for admission into the honors program include a GPA of at least 3.65 -- and a minimum GPA of 3.7 in the set of courses satisfying requirements for the major -- that the student has taken at the time of application.

The student will need to have a GPA of 3.7 in the major and a grade of at least A- on the honors project in order to graduate with honors in the major.

¹ SAR guidelines require a minimum of 2 credits per semester of Honors research for two semesters. We will propose to allow the comparable CAS honors research courses, CAS LX 401/402, likewise to be taken for either 2 or 4 credits per semester.
Deadlines:

• May 15 of Junior year: Deadline for application to the honors program
• October 15 of Senior year: Submission of thesis outline with annotated bibliography
• Last day of Fall Semester: Submission of written progress report on first semester activities
• Jan 1: Decision on continuation of research to be conveyed to student by mentor
• March 1: First Draft of written thesis is due to mentor
• May 1: Final version of written thesis due to mentor
• Early May (exact date TBA): Oral presentation of research

6. Please list program learning outcomes:

1. An understanding of the fundamental questions that drive modern linguistic research, concerning formal structure, universals, acquisition, historical change, variation, and social dimensions of use.
2. Foundational knowledge in the core areas of linguistic theory, including phonetics, syntax, and semantics.
3. Foundational knowledge in the areas that form the basis for research and clinical work in speech, language and hearing sciences.
4. The ability to identify and describe with precision the empirical patterns found in sets of language data, and to construct well-reasoned analyses by formulating, testing, and refining hypotheses about these patterns.
5. The ability to apply their coursework in Linguistics and SLHS either in research or in clinical or other professional experiences, demonstrating integrative reasoning to interpret data in relation to published research, justifying the scope of their analyses, supporting their conclusions, and presenting a coherent summary of the relevant facts and of their reasoning.

7. For master’s or professional doctorate degrees, please describe what this program prepares students for after they have graduated:

DNA
8. Please describe how the proposed new degree relates to existing programs at the University:

The proposed new joint intercollegiate major takes advantage of existing resources in CAS/LX and SAR/SLHS. It integrates a variety of approaches to the study of human language, building on the solid foundation of courses offered through the two programs and incorporating an experimental approach. We have a strong presence of language sciences in both CAS and SAR. This proposal leverages existing strengths to create a novel, cutting-edge program to benefit students in both colleges. This joint program could also serve as a springboard for development of new research foci and generate new areas of integrated research at BU.

9. Please place the proposed program in the context of comparable programs at peer institutions:

Of the peer and peer-plus institutions that have strong Linguistics departments, relatively few also have undergraduate programs in Speech Science. To that extent, BU can offer “value added” that is not available at the other institutions. For example, of our aspirational peers in Linguistics, almost none has a program anything like the existing Speech, Language & Hearing Sciences program that is already established at BU (there is no comparable undergraduate program at Harvard, UC Santa Cruz, or Rutgers). MIT does have significant academic strength in both domains, but places little emphasis on undergraduate education in these areas (with only 3 BS graduates in Linguistics in May 2015, for example). Conversely, there are a few programs with strength in Speech Science but less strength in Linguistics (consider Temple University, for example, where a Linguistics major is offered within the Department of Communication Sciences and Disorders).

In universities that do have strength in both areas (e.g., NYU, Northwestern, U Texas Austin, U Iowa), the situation is generally complicated by structural differences in the two programs (e.g., they may reside in different schools within the institution, or they may be associated with different types of degrees -- BA vs. BS) making it relatively difficult for students to combine the two majors. At the University of Maryland, there is a fair amount of interaction between Hearing and Speech Sciences (HESP) and the other language-related departments, but they have no joint major in Linguistics & HESP.

In summary, although there are universities that have strength in one or both of these areas, there are very few outside programs that are directly comparable to the intercollegiate major we are proposing. The uniqueness of the BU program would be a distinction for the university and is likely to be attractive to students.

The closest offering might be Indiana University’s interdepartmental major in Speech and Hearing Sciences and Linguistics:

http://bulletins.iu.edu/iub/college/2012-2013/departments/speech-hearing/interdepartmental-linguistics.shtml

This program is similar with respect to the requirements: five 3-credit courses in Speech and Hearing Sciences, five 3-credit in Linguistics—covering the same essential areas that our
requirements include—plus one course in computer science and additional electives, totaling 40 credit hours.

We understand from colleagues that NYU is in the process of developing a joint major similar to the one we are proposing here. It is likely to require about 6 linguistics courses and 6 courses in Communicative Sciences and Disorders (CSD). The Linguistics requirements would include: an introductory linguistics course; Sound and Language; Phonological Analysis; Grammatical Analysis; and one or two linguistics electives. The CSD courses would include an introductory course; plus Neuroanatomy and Physiology of Communication; Anatomy and Physiology of the Speech and Hearing Mechanism; Introduction of Audiology; Audiology: Intervention; and Speech and Language Development. There have been significant obstacles to the development of such a program, however, stemming from the fact that the two programs are in different schools (CSD is in Steinhardt, the former education school, and Linguistics is in Arts and Sciences).

There are, however, a variety of other ways in which other universities allow for combining study of these two areas. Quite a few universities offer specific tracks or concentrations within the Linguistics major, including one or more options in Speech Sciences. For example, Rice University offers concentrations in Language; Cognitive Science; Language, Culture, and Society; Second Language Acquisition; as well as three different concentrations in Speech Sciences, including one with a medical focus and one with a technology focus. However, in the past few years, Rice has had trouble putting students through the Speech Sciences track because the required courses haven’t been offered regularly enough. The University of Rochester offers Speech as one of six recommended concentrations within the Linguistics major. At the University of Saskatchewan, there are two possible streams: “Linguistics – General and Applied Linguistics” and “Linguistics – Language and Speech Sciences.” At the University of Southern Maine, “Speech and Language Science” is likewise one of two concentrations offered within the Linguistics major.

Yet other universities offer a general option within the Linguistics major to combine linguistics with a “related field” (i.e., specific fields are not explicitly specified), as Harvard does, for example, but in such cases options are obviously limited by availability of course offerings in the area of Speech Sciences.

The University of Calgary offers a special minor in Speech Sciences specifically for Linguistics majors. The University of North Carolina at Chapel Hill and UC San Diego offer detailed recommendations with respect to recommended course work for Linguistics majors interested in pursuing Speech Sciences at the graduate level. Others (e.g., Macquarie University) offer majors in Speech Sciences that incorporate a substantial amount of course work in Linguistics. Simon Fraser University offers a Certificate in the Linguistics of Speech Science for Linguistics majors. And yet others offer various specific combinations of majors and minors in these two fields (e.g., the University of British Columbia offers what is essentially a double major in Linguistics and Speech Science, in addition to a Major in Speech Sciences with a Minor in Linguistics).
The bottom line is that there is strong interest in combining these areas of study, and the BU program will offer a unique intercollegiate major, which will constitute a distinctive offering and an asset to the university.

10. Please list the program’s faculty:

The program will be jointly administered by:

- **Carol Neidle** (Professor of French and Linguistics and Director of the Linguistics Program (CAS))
- **Sudha Arunachalam** (Assistant Professor of Speech, Language & Hearing Sciences and Linguistics (SAR))

Participating faculty will also include:

- **Jonathan Barnes**, Associate Professor of Linguistics (CAS)
- **Charles Chang**, Assistant Professor of Linguistics (CAS)
- **Diane Constantino**, Clinical Associate Professor of Speech, Language & Hearing Sciences (SAR)
- **Paul Hagstrom**, Associate Professor of Linguistics (CAS)
- **Elizabeth Hoover**, Clinical Associate Professor of Speech, Language & Hearing Sciences (SAR)
- **Karole Howland**, Clinical Associate Professor of Speech, Language & Hearing Sciences (SAR)
- **Alexander Nikolaev**, Assistant Professor of Classical Studies and Linguistics (CAS)
- **M. Catherine O'Connor**, Professor of Education and Linguistics (SED)
- **Barbara Oppenheimer**, Clinical Associate Professor of Speech, Language & Hearing Sciences (SAR)
- **Tyler Perrachione**, Assistant Professor of Speech, Language & Hearing Sciences (SAR)
- **Cara Stepp**, Assistant Professor of Speech, Language & Hearing Sciences (SAR)
- **Kristine Strand**, Clinical Associate Professor of Speech, Language & Hearing Sciences (SAR)

11. Please provide an administrative plan for the proposed new degree:

The program will be jointly administered by the Director of the Linguistics program and Prof. Sudha Arunachalam, representing the SAR Speech, Language & Hearing Sciences program. There will be full collaboration and consultation between the two units on routine matters and any other issues that should arise.

12. Please provide an advising plan for the proposed new degree:

When a student has declared the major, students in either college will be assigned two advisors: one from the CAS Linguistics program (based on the student's preferences to the extent possible) and one in SAR (where a designated individual will advise all of the students in this program).
13. For a proposed graduate program, please provide the admissions standards involved:

DNA

14. Please document any implications that the formation of the proposed new degree has on professional accreditation or licensure at the program or school/college level:

DNA

15. Please provide the bulletin copy (exactly as it will appear) for the proposed new degree including program goals/outcomes:

For the CAS Bulletin: first sentence --

The intercollegiate BA Program in Linguistics & Speech and Hearing Sciences is offered by the College of Arts and Sciences in conjunction with the College of Health & Rehabilitation Sciences: Sargent College.

For the SAR Bulletin: first sentence --

The intercollegiate BS Program in Linguistics & Speech and Hearing Sciences is offered by the College of Health & Rehabilitation Sciences: Sargent College in conjunction with the College of Arts and Sciences.

Continuation of Bulletin Copy for both colleges:

It is designed for students interested in studying human language from a variety of perspectives and in gaining an understanding of language acquisition and communication disorders. The program provides a solid grounding in linguistics through examination of the structure, use, acquisition, and development of languages of the world. The intercollegiate joint major focuses on experimental approaches to the study of language as well as interactions between theoretical study of language and clinical applications.

Students completing this program may pursue careers in research, education, medicine, public health, or the law. The joint major prepares students for graduate study in any of a number of related areas (e.g., linguistics, psychology, neurolinguistics, cognitive science) and for graduate/professional work in speech language pathology, audiology, or more generally, for future careers in medicine, neuropsychology, language technology (e.g., speech recognition or speech synthesis), or areas of child development and education. Students work with advisors in both colleges to design individual programs of study that match each student’s interests and professional goals.
Undergraduates should note that employment as a certified speech-language pathologist or audiologist is not possible with only a bachelor’s degree. An advanced degree in speech-language pathology or audiology is required for certification by the American Speech-Language-Hearing Association (ASHA) as well as for licensure in most states. Boston University’s graduate program in speech-language pathology is accredited by the Council on Accreditation in Audiology and Speech-Language Pathology (CAA). The BU Master of Science program enables students to fulfill the requirements for professional certification by the ASHA in speech-language pathology, as well as for Massachusetts state licensure and teacher certification.

**Learning Outcomes**

Students completing this program will achieve and demonstrate:

1. An understanding of the fundamental questions that drive modern linguistic research, concerning formal structure, universals, acquisition, historical change, variation, and social dimensions of use.
2. Foundational knowledge in the core areas of linguistic theory, including phonetics, syntax, and semantics.
3. Foundational knowledge in the areas that form the basis for research and clinical work in speech, language and hearing sciences.
4. The ability to identify and describe with precision the empirical patterns found in sets of language data, and to construct well-reasoned analyses by formulating, testing, and refining hypotheses about these patterns.
5. The ability to apply their coursework in Linguistics and SLHS either in research or in clinical or other professional experiences, demonstrating integrative reasoning to interpret data in relation to published research, justifying the scope of their analyses, supporting their conclusions, and presenting a coherent summary of the relevant facts and of their reasoning.

**Requirements**

Thirteen courses, including at least five in CAS Linguistics and at least five in SAR Speech, Language & Hearing Sciences:

(A) A basic introduction to linguistics, to be taken before all other CAS LX courses, and a basic course in Communication Disorders, to be taken before all other SAR SH courses:

- CAS LX 250 Introduction to Linguistics
- SAR SH 531 Introduction to Communication Disorders
(B) One course in phonetics -- either of the following:
- CAS LX 510 Phonetics
- SAR SH 221 Phonetics

(C) Two additional core courses in Linguistics
- CAS LX 502 Semantics
- CAS LX 522 Syntax I

(D) Two additional core courses in Speech, Language & Hearing Sciences:
- SAR SH 522 Anatomy and Physiology of the Speech Mechanism
- SAR SH 523 Introduction to Speech Science

(E) One course in language acquisition -- chosen from the following:
- CAS LX 542 Acquisition of Syntax
- CAS LX 541 Phonological Development
- CAS LX 542 Second Language Acquisition
- SAR SH 524 Language Acquisition

(F) Two additional courses in Linguistics
chosen from CAS LX courses at or above the 400-level, in consultation with an advisor

(G) One additional course in Speech, Language & Hearing Sciences -- chosen from:
- SAR SH 535 Introduction to Audiology
- SAR SH 505 Introduction to Phonological Disorders
- SAR SH 548 Introduction to Language Disorders

(H) One of the following two courses:
- SAR SH 547 Introduction to Clinical Practice
- SAR SH 640 Senior Seminar: Internship

(I) One additional elective from (E), (F), or (G) above.

*Students intending to apply to graduate programs in Speech-Language Pathology or Audiology will need to include the following courses as part of their undergraduate curriculum: General Psychology (CAS PS 101), Human Anatomy (CAS BI 106), Physics of Health Professions (CAS PY 104), Statistics (CAS MA 113, MA 115, or PS 211), and Language Acquisition (SAR SH 524).

Honors in the Major

Students with a sufficient GPA overall (at least 3.65) and in the major (at least 3.7) can apply to participate in the Honors program, which will require 2 additional semesters of Honors Research beyond the 13 courses required for the standard major. An application, including a research proposal, needs to be submitted and approved by the end of the junior year. Further details are available from the program website.
16. Please provide sample pathways through the new degree or certificate:

Sample curriculum*

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<tr>
<th>Year</th>
<th>fall</th>
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<tr>
<td>1</td>
<td>CAS LX 250</td>
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<td>SAR SH 531</td>
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*Students intending to apply to graduate programs in Speech-Language Pathology or Audiology will need to include the following courses as part of their undergraduate curriculum: CAS PS 101 General Psychology, CAS BI 106 Human Anatomy, CAS PY101 Physics, CAS MA113, 115, or PS 211 Statistics, and SAR 524 Language Acquisition.

17. If the new program includes a new course or courses, please indicate who will teach the course and how the rest of that faculty member’s course load will be affected (courses(s) redistributed to other faculty, taught less frequently, no longer taught, etc.). Please be specific about affected courses. This information should be reflected in the budget form that accompanies the proposal, e.g. the cost for a new faculty member to teach the new course or a redistributed course:

DNA

18. Please list other resources needed including new staff, IT, technology enhanced classrooms, office space, and other facilities. This information should be reflected in the budget:

DNA
19. What charges (tuition, fees, etc.) are to be applied to this program? How will the charges be structured?

Standard tuition charges for CAS and SAR undergraduates

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<th>Tuition/Fee Item</th>
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20. Please describe the proposed enrollment or the enrollment required to cover the start-up costs of the proposed new degree:

We anticipate that 4-5 CAS students, as well as 4-5 SAR students, will declare this intercollegiate major during its first year, and that this number will grow gradually over time.

21. Please submit a complete budget for the new program or credit-bearing certificate, using the appropriate budget template, even if no additional resources are needed.

No additional resources are required. This will make use of existing faculty and courses.

NOTE: The Library Impact Statement is required for the review of a new degree program. Proposers should contact the Library as early in the proposal development process as possible.