

Budget review concerns/comments	Response
<p>1. One of the revenue sources is enrollment numbers projected in Table 4. It is not clear where they derived these enrollment numbers. It is especially important to justify these numbers since tuition revenues are key in making this program financially viable. They should have various projection enrollment scenarios (high, medium and low enrollment) and they should be able to state a contingency plan in case low enrollment occurs. It would be helpful to know if UW or OSU or MSU offer similar programs because this could help determine if their projected enrollment scenarios are realistic.</p>	<p>While it is difficult to project enrollment in a new major, we have projected numbers of new degree seekers for the Human Biology major using the following: our experience with majors in aligned programs here at WSU (Anthropology, Biology), and what some of them express in wishing they had access to within their degree programs; the phenomenal growth in the number of Biology students at the Vancouver campus; and national trends of interest in, and graduation rates of Human Biology majors.</p> <p>The format of new degree proposals, and the required budget worksheet, does not permit low/medium/high enrollment projection scenarios—it requires one set of anticipated degree enrollments by year. We have done our best to project realistic, and somewhat conservative, expected enrollments.</p> <p>In Section III A, we have provided an expanded discussion of national trends using data from the National Center for Education Statistics (nces.ed.gov), which has tracked Human Biology degrees since 2011/12, and a report generated by EMSI (“Program Overview: Human Biology in the United States, Emsi Q4 2018 Data Set,” November 2018) to quantitatively document these trends. The National Center for Education Statistics Classification of Instructional Programs (CIP Code) added a code for Human Biology (CIP Code 30.27) in 2010; prior to this time, Human Biology degrees fell within the larger CIP Code 30 for “Multi-/Interdisciplinary Studies, General.” The data show a marked increase (ca. 70%) in the number of Human Biology degrees granted across the five years for which Human Biology degree tracking data are available and this is now included in the proposal, as are listings of several programs graduating numbers of Human Biology majors.</p> <p>As noted in the proposal (see Section III C Regional Competitors), no other universities in the Pacific Northwest offer undergraduate degrees in Human Biology. Somewhat similar tracks within Biology are available at Boise State and University of Oregon, and UW has an emphasis within Biological Anthropology—but all of these differ from a degree in Human Biology. Montana State University’s Biological Sciences has many different degree tracks and options (http://catalog.montana.edu/undergraduate/agriculture/biological-sciences/), however none of these focus on Human Biology.</p> <p>Several programs at West Coast institutions (Stanford, USC, UCLA UC-San Diego, UC-Santa Cruz) offer Human Biology degrees, as do</p>

	<p>many programs across the United States. Since no other institutions in the Northwest offer this degree, we believe that this positions WSU to attract demand for this type of degree program among students both from within the state and across the region. We reiterate and reinforce this in revision (see Section III A).</p> <p>As noted in response to other questions here, and now explicitly noted in the proposal (Section IX A, last paragraph) and in the CAS letter of support (Appendix D), the College of Arts and Sciences has committed to support the degree through the third year, at which time it will review and evaluate the Human Biology degree to assess if the program in Human Biology is meeting expectations, student needs, and strategic goals. If it is not, the degree program can be discontinued.</p>
<p>2. It is not clear if there are other majors that will be impacted by this new offer. For example, will this siphon off some of BS Bio or Human ecology or whatever related field? This would be important to know</p>	<p>Our proposal notes that both units partnering on this degree, Anthropology, and the Biology and Zoology degrees offered by School of Biological Sciences, are likely to lose some potential majors to this degree (Section III B). However, it is difficult for us to know what other programs may be affected. For example, we do highlight how the Human Biology degree program is differentiated from several degrees offered by the School of Molecular Biosciences. Previous review of this proposal highlighted concern that Human Development would be impacted. After asking the Human Development leadership to review our degree proposal, Human Development leadership felt it unlikely that there would be overlap and provided a statement noting this (Appendix A).</p> <p>With the average undergraduate at WSU changing majors 2.2 times during their time as a student (Institutional Research presentation titled “College and Program Retention Data” to CAS Chairs and Directors, 11/13/18), it is difficult to identify exactly what factors drive shifts among majors in current degree programs, making it even harder to predict these in new degree programs.</p> <p>We believe that the major will attract new students, and as this becomes an option for students to declare from their arrival to WSU and as they certify after their first year (after 20 credits), this should lessen any “siphoning.”</p>
<p>3. <u>There are items missing:</u></p> <ul style="list-style-type: none"> • Letters for financial support • Plan for dissolution if the degree doesn’t succeed – maybe part of the 	<ul style="list-style-type: none"> • CAS Pullman letter of commitment attached as Appendix D. • The College of Arts and Sciences’ support letter (Appendix D) notes that the degree will be evaluated after 3 years, including its investment. Future commitments are

<p>assessment plan, which isn't included?</p> <ul style="list-style-type: none"> • Many changes to the proposal have occurred over time; I will admit to being a little confused...the more medical oriented options have been dropped, but much of the verbiage refers to medical positions – probably beyond the scope of this review, but could affect promotion/jobs/enrollment 	<p>“contingent on the degree’s success at attracting students.” CAS, the Department of Anthropology, and the School of Biological Sciences will evaluate the program’s success at the three-year point; if is not meeting expectations and strategic priorities, we will work to dissolve the degree and teach-out any students. Added paragraph explicitly stating this to proposal (Section IX A, last paragraph).</p> <p>The format for assessment and the learning outcomes associated with the Human Biology degree are presented in Section IV parts A and B, and Section IX A. This plan and the degree proposal has been reviewed positively by the Office of Assessment of Teaching and Learning (ATL).</p> <ul style="list-style-type: none"> • It is difficult to know with certainty what careers students will pursue upon graduation with a degree in Human Biology. However, almost all university websites associated with Human Biology degrees note that employment in the health/health care sector is common for graduates. They also note that many graduates choose to pursue additional study and training (e.g., professional programs in diverse health-related specialties, many of which do not have specific requirements beyond a BA/BS and GPA). <p>We have added information from the Bureau of Labor’s Occupational Outlook Handbook for additional professions frequently listed for Human Biology majors as common employment options outside of health care (Non-Governmental Organizations, social service agencies, government sector, teachers, etc.)</p> <p>See updates in Section III A</p>
<p>4. Are there contingency plans for what happens if projections are not met (e.g., what will they do if enrollments fall short? What happens if projections fall so very short that they need to cancel this proposed plan...how will they handle phasing out the program...how will they reallocate faculty)? Do not find...maybe part of the assessment plan? Not included with this proposal</p>	<p>Also addressed in response to concern #1 above.</p> <p>Support for the degree and its relative success will be evaluated in the third year of the program (if approved), as noted in the College of Arts and Sciences’ support letter (Appendix D). Should the program not meet enrollment expectations and/or a decision is made to discontinue the degree, it will be terminated and any remaining students will continue to be “taught-out” to graduation (Section IX A, last paragraph).</p> <p>As the program includes faculty already within the Department of Anthropology and the School of Biological Sciences, reallocation will not be necessary. Since all classes are already being offered by the respective units, this should require limited alteration. Teaching</p>

	<p>assignments and/or course periodicity can be adjusted, if needed, to account for the cancellation of degree, as well as any changes in the enrollment patterns of Anthropology and Biology courses driven by students in those majors or campus-wide enrollment needs and trends.</p>
<p>5. The important budget item was not justified in the proposal: how to fund the new director, the program lead, and administrative staff if the enrollment numbers fall short.</p>	<p>The College of Arts and Sciences made a funding commitment of \$9000 annually for the first three years of the program, and these funds will support the Human Biology Program Director in Pullman (Appendix D). In Vancouver, the fiscal return for new students is much greater than in Pullman, and they have projected the expense associated with a program lead and it will be covered by tuition revenue. To account for this anticipated expense, they have inserted a 10% effort for a Professor from SBS in year as a “stand in” expense until such individual is identified (Table 9, first faculty member noted as “Professor, SBS,” column for year 5). During the first two years of the program at Vancouver, as the degree builds, the program lead position is not anticipated to require substantial effort and will serve as a service role. In year 3 and beyond, the position will be formalized and compensated (again assuming that the degree is meeting expectations and attracting student interest and majors).</p>
<p>6. The letters of support from the CAS Dean and the Vancouver were not included in the packet</p>	<p>Now attached as Appendices C and D. The budget for Vancouver was prepared by Lynn Valenter, Vice Chancellor for Finance and Operations, and Amy Wharton, Director, College of Arts and Sciences, WSU-Vancouver. Thus, financial commitments for Vancouver were made with administrative approvals.</p>
<p>7. I am unclear on the source of the “internal reallocation / area reallocation” funding in the tables on page 26 and 28. The section XI narrative doesn’t mention this.</p>	<p>This is a mechanical property of the spreadsheet, requiring programs to balance by having the “internal reallocation” row, with enrollment funding and indirect costs rows, sum to the total anticipated costs. It accounts for overall costs less expected new revenue, even though the proposed Human Biology degree consists entirely of courses already being offered by the associated units, offered by faculty already employed at WSU.</p> <p>For Pullman, we have estimated the costs of offering the degree as a fraction of the effort of all faculty members in the two degree-supervising units (Anthropology, School of Biological Sciences), whether or not they offer any of the courses associated with the new degree. When this degree proposal was initially developed (January 2013), this was how we were directed to estimate costs, something we have continued in resubmissions. Were we to estimate only new expenses—costs associated with offering any new classes or new faculty hiring required to offer this degree—</p>

	<p>there would be virtually no associated costs to list since all of the classes associated with the degree are already being offered by faculty already employed. All of these faculty are already in place and are already on the university payroll. Vancouver has included faculty from these and supporting units in their calculations (Table 9).</p> <p>This approach to assessing a cost to effort creates a large apparent expense associated with delivery of this new degree, even though all of these faculty are already employed, are at the institution, and are already teaching the classes associated with the proposed degree.</p>
<p>8. The narrative indicates the potential to draw students away from other programs, particularly biology, zoology, and human development. Confirmation that this program would not interfere with human behavior was included. However, no support was provided regarding cannibalization from biology or zoology, which seems likely and particularly relevant in the case of the school of biological sciences. Further, the budget numbers are specified to be all newly recruited students, which also ignores the possibility of students switching to this new major.</p>	<p>See also response to question 2, above.</p> <p>The proposal acknowledges (Section III B) it likely that degrees offered by the two units jointly proposing this degree (Anthropology and the School of Biological Sciences [Biology and Zoology]) may lose students attracted to this degree, yet we are dedicated to offering this degree and believe it will attract new students dedicated to the Human Biology degree from the outset as it comes “online.” Human Development reviewed the proposal and does not believe it overlaps (Appendix A). The degree is differentiated from the suite of majors offered by the School of Molecular Biosciences, which do not have the complimentary focus from the Social Sciences as a component of their degree, as does Human Biology.</p> <p>The new degree proposal format requires budget calculations to include only new students; thus, we have made our projections accordingly.</p>
<p>9. The budget for Pullman in year 2 shows a decrease for the Fiscal Tech 2 from \$911 to \$640, which does not seem correct given the other amounts for support staff.</p>	<p>This error has been corrected to the \$911 value.</p>
<p>10. The budget for Pullman does not balance by the end of the last year (year 5). The remainder is made up with departmental/area reallocations. Although the</p>	<p>See also response to #7 above.</p> <p>As noted above, this an accounting reallocation rather than any real transfer of monies. As noted in your comment under part a, we have attempted to account for costs by allocating a small portion of faculty time towards this degree (across the board) in an effort to project costs associated with teaching Human Biology students in</p>

<p>reallocations do decrease by year 5, they are still required by the specified year that the program should be fully realized.</p> <p>a. The narrative does not discuss how the departments are intending to cover the deficit for this program or why it is allowed to exist. I would assume that it is related to the faculty time, which would make sense if both no additional classes or faculty costs are necessary as specified and the other programs in those departments continue their current enrollments to cover those costs.</p> <p>b. How will the departments split the extra costs that will be covered by the reallocation?</p>	<p>existing classes, with these Human Biology students representing a generally small fraction of enrollees in most class offerings. These classes are already being taught by faculty that are already employed. Thus, in reality—there is no “reallocation.” The revenue generated by students in the new major will contribute to the College’s ability to offer existing classes and should also cover the modest effort increases modeled. We are hopeful, however, that we might exceed our modest degree enrollment projections, and that tuition proceeds would further offset existing costs and ultimately merit investment in this area of specialty. At the level of the College of Arts and Sciences, minor shifts in teaching resources occur every term and every year, responding to changing enrollment needs of the College and institution, student demand, and institutional finances. We believe the new Human Biology degree will be a net gain for CAS.</p>
<p>11. Both programs have budgeted for graduate student assistants. Will this allow these two departments to fund more of their existing graduate student population, or would those graduate programs need to expand to fill these positions? If the latter, will the graduate programs in those departments be able to expand to accommodate them?</p>	<p>We do not anticipate needing to expand our graduate programs to have enough graduate students for these positions. With TA position allocations in a constant state of flux given budget and enrollment changes, we anticipate the ability to staff these with students from our current (and future) graduate programs.</p>
<p>12. Appendix C and Appendix D were not provided.</p>	<p>Now attached</p>
<p>13. The current proposal doesn’t provide sufficient empirical evidence to justify the projected enrollment numbers. Additional data need to be provided.</p>	<p>Addressed in answers to questions 1 and 3 above, and greater detail also added to proposal narrative (Section III A).</p>



New Program Proposal

Overview: The proposed Program in Human Biology is to be administered jointly by the Department of Anthropology and the School of Biological Sciences in the College of Arts and Sciences. The Program in Human Biology will offer a Bachelor of Arts degree in Human Biology. This expressly interdisciplinary program will meld approaches and content from social and biological sciences to provide students with a vibrant, synthetic understanding of the roles of culture, the dynamics of natural and social systems, and biological attributes responsible for shaping the human being. Our aim is to prepare students to be creative, insightful, and skillful in professions that encompass especially the arenas of health sciences, environment, societal support (such as family planning, forensics, food safety, and medical ethics), and public policy that influence the welfare of humans.

Basic characteristics

Program Title: Human Biology

Degree: **B.A. of Human Biology**

In **Human Biology**

Are you proposing a program new to WSU or extending an existing program to a new site or medium?

XXX New to WSU

Extending Existing Program

CIP Code (consult registrar): 30.27
(Classification of Instructional Programs)

Department: **Joint Supervision by Anthropology and the School of Biological Sciences**

College: **CAS**

Departmental Contact: **Anthropology**

Name: **Andrew Duff**

Title: **Professor and Chair**

Phone: **5-3871**

e-mail: **duff@wsu.edu**

Campus of Origin: **Pullman**

Starting Date: **August 2019**

Method of course delivery: (check all that apply)

Classroom

Pullman

Vancouver

Tri-Cities

Spokane

Spokane - ICN

WSU Learning Centers at: _____

WHETS or Video-conferencing System

On-line

Videotape

Flexible Enrollment (with e-mail)

Correspondence (Paper only)

Other (please describe) _____

Section I. Mission Statements

A) Washington State University

Vision

Washington State University will be recognized as one of the nation's leading land-grant research universities.

Mission

Washington State University is a public research university committed to its land-grant heritage and tradition of service to society. Our mission is threefold:

- To **advance** knowledge through creative research and scholarship across a wide range of academic disciplines.
- To **extend** knowledge through innovative educational programs in which emerging scholars are mentored to realize their highest potential and assume roles of leadership, responsibility, and service to society.
- To **apply** knowledge through local and global engagement that will improve quality of life and enhance the economy of the state, nation, and world.

B) Mission of the College of Arts and Sciences

The College of Arts and Sciences (CAS) fosters excellence in the arts, humanities, and social and natural sciences and provides a foundation for intellectual and creative experiences across Washington State University. We apply diverse perspectives to understand and transform the world, enrich lives, and meet societal needs.

Inquiry is central to our work. We address fundamental questions through research, scholarship, and creative activity. Our efforts advance the frontiers of knowledge and artistic expression, as well as the mission and strategic goals of the University.

The College is uniquely positioned to pursue liberal, broad-based learning, in which inquiry and teaching proceed in tandem. We challenge our students and ourselves to think rationally, critically, and creatively for life-long engagement in our human and natural worlds.

We are committed to outreach that promotes the common good and that empowers local, state, national, and global communities.

C) Department/School Missions

Department of Anthropology Mission

We ask and attempt to address the most basic questions about the nature of culture, its evolutionary history, and human variability by studying the interactions between our biological and our learned cultural heritages; we use this knowledge to better understand both our past and present. Through world class research, our goal is to pursue an understanding of the complex human condition in all of its diversity. The Department of Anthropology at Washington State University informs the public, students, and the profession about anthropological insights and contributes to understanding critical aspects of the human condition.

School of Biological Sciences Mission

The mission of the School of Biological Sciences is to advance and convey fundamental biological knowledge about how organisms function, interact, and evolve in a changing world—information that is critical to confront pressing problems facing our society. Faculty, students, and staff in the School are involved in this mission, which is achieved through effort in education, research, and public outreach.

D) How the Proposed Program Will Complement or Reflect These Missions

The proposed Program in Human Biology will meet the missions of the University, College of Arts and Sciences, Department of Anthropology, and School of Biological Sciences by offering an innovative, *interdisciplinary* educational program that focuses on the biology of human life. The College of Arts and Sciences in Pullman and Vancouver enthusiastically supports the BA in Human Biology (Appendices C and D). The Program in Human Biology will offer students an opportunity to explore how human biology influences and is influenced by the environment, cultural and social structures, and economic and political policies. Our program will foster in students a holistic sense of the complexities of the human condition in all of its diversity in our changing world. The goals of the program meet the mission of the School of Biological Sciences to expand knowledge about how organisms function, interact, and evolve in a changing world and the mission of the Department of Anthropology to address the most basic questions about the nature of culture, its evolutionary history, and human variability by studying the interactions between our biological and our learned cultural heritages.

Section II. Program Description

The late President Floyd's call in 2011 for a new College of Arts and Sciences emphasized the importance to "enrich instruction" and "promote interdisciplinary cooperation." The proposed Program in Human Biology, which will be administered jointly by the Department of Anthropology and the School of Biological Sciences in the College of Arts and Sciences, is an important step toward the enrichment and interdisciplinarity envisioned by President Floyd. Similarly, the 2014-2019 Washington State University Strategic Plan seeks to "foster greater collaboration across colleges, campuses, and disciplines" and calls for a "transformative student experience" in which students gain "university experience centered on student engagement, development, and success, which prepares graduates to lead and excel in a diverse United States and global society." The Human Biology major is designed to help achieve these objectives.

The Program in Human Biology aims to offer a Bachelor of Arts degree in Human Biology. The Human Biology degree program will provide a biological science underpinning for a degree program that emphasizes cultural and social science coursework (Table 2). It will offer students a vibrant, synthetic understanding of the roles of culture, the dynamics of natural and social systems, and biological attributes responsible for shaping the human being. This expressly interdisciplinary program will meld approaches and content from social and biological sciences to provide students with critical skills and knowledge to achieve professional goals in human biology. Students will gain important insights into the interplay among biology, socio-cultural structures and dynamics, and environmental forces through this program. Our aim is to prepare students to be creative, insightful, and skillful in professions, especially in the arenas of environment, health, community, society, and public policy that influence the welfare of humans.

Section III. Need and Student Demand for the Program

A) Need and Demand

This degree program aims to bridge a disconnect that lies between the social and biological sciences to provide students with a more direct avenue to address the biological basis of problems faced by human populations, cultures, and societies. The interdisciplinary Human Biology program aims to attract prospective students through its strong science foundation and focus on socio-cultural contexts. It will assist students toward careers in health, policy, service, and novel career tracks in sustainability that address the problems we face from climate change, emerging diseases, and other challenges at the interface of cultures and environments.

We perceive a strong demand for an alternative to the majors that exist currently at WSU Pullman among students seeking to develop an independent, interdisciplinary program of study. The Human Biology degree provides a structured degree program, yet one that still permits students to tailor their programs. We anticipate that the Program in Human Biology will be attractive to students who come to WSU with an interest in social sciences or a major with a human focus, but who also want more natural science or more interdisciplinary science opportunity in their programs of study than are currently available. For example, several students each year inquire about possible majors in biological or medical anthropology, and the major in Human Biology would support their goals.

We anticipate that Human Biology will attract new students to WSU on both the Pullman and Vancouver campuses because of the program's uniqueness and interdisciplinarity. We foresee considerable interest among potential students for a degree program that melds biological and socio-cultural studies. For example, the Biology degree has seen phenomenal growth on the Vancouver campus in recent years, with 263 majors in fall 2017 (Institutional Research Departmental profile, School of Biological Sciences); we anticipate that WSU Vancouver students will be attracted to an interdisciplinary program that includes the biological sciences. Human Biology will provide a new and distinctive degree option for students interested in a broad-based approach to understanding human beings. The degree will also appeal to students because it offers multiple pathways towards jobs, including innovative careers in areas such as global change, health policy, community service and sustainability that address the significant problems that lie ahead for human populations.

The potential for our proposed major can be seen nationally in the development of several programs in human biology in the past 40 years. Human biology programs exist at public research universities, such as Indiana University, University of California-San Diego, University of California-Santa Cruz, University of Texas, University of Virginia, and our peer institution Michigan State University. A very successful Program in Human Biology has been in place at Stanford University for over 40 years. Most human biology programs are interdisciplinary, and most apply faculty and courses from various departments. The University at Albany-SUNY uses an approach similar to that proposed here in having their human biology program and shared human biology degree centered jointly in the departments of anthropology and biology. As Table 1 shows, this approach has helped SUNY-Albany to be the top national producer of students earning the Human Biology degree.

Nationally, undergraduate Human Biology degree completions have grown nearly 70% in the last five years (Figure 1). The National Center for Education Statistics Classification of Instructional Programs (CIP Code) added a code for Human Biology (CIP Code 30.27) in 2010 (<https://nces.ed.gov/ipeds/cipcode/searchresults.aspx?y=55&ca=2>); prior to this time, Human Biology degrees fell within the larger CIP Code 30.00 for "Multi-/Interdisciplinary Studies, General"

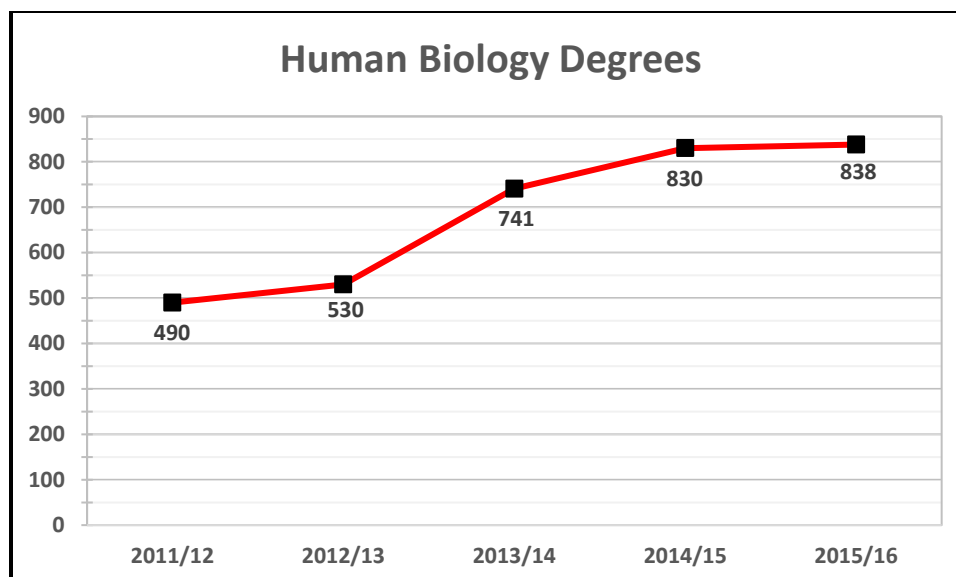


Figure 1. Human Biology Degrees by academic year (Source: Digest of Education Statistics, <https://nces.ed.gov/programs/digest/>, select year, then select table 318.30).

Table 1. Number of degree completions in Human Biology (2016) at the 10 institutions producing the largest number of Human Biology graduates (Source: “Program Overview: Human Biology in the United States, Emsi Q4 2018 Data Set,” EMSI November 2018).

Institution	Degree Completions (2016)	Undergraduate Students
SUNY at Albany	208	13,500
Stanford University	157	7,050
University of Southern California	149	20,000
University of Wisconsin-Green Bay	112	6,750
University of California, Los Angeles	59	31,000
Brown University	51	6,670
University of Kansas	42	19,400
Hamline University	26	2,100
Indiana University-Purdue University, Indianapolis	19	20,650
University of California, Irvine	12	29,300

and were not individually tracked. National Center for Education Statistics ([nces.ed.gov](http://nces.ed.gov/programs/digest/)) data reported in the Digest of Education Statistics (<http://nces.ed.gov/programs/digest/>) includes tabulations of Human Biology degrees by academic year beginning with 2011/12. These data show a marked increase in the number of Human Biology degrees granted across the five years for which tracking data are available.

A report generated by EMSI (“Program Overview: Human Biology in the United States, Emsi Q4 2018 Data Set,” November 2018) echoes these observations, and documents the number of completions in 2016 by institution. Degree completions by year are a mark of graduating seniors, while the number of majors should be at least double this number (or larger). Table 1 presents the

10 programs with the largest number of Human Biology degree recipients in 2016, the most recent year for which data are available, and we have added the approximate undergraduate student enrollment totals from institution websites (these data were reported as being from fall 2016, 2017 or 2018 depending on the institution). These data suggest that institutions roughly comparable in size to WSU can attract majors in Human Biology in the numbers of majors we anticipate. Table 1 shows that Human Biology can be an attractive major at schools of a variety of sizes, and it is among the most popular majors at Stanford (in top 3) and University of Wisconsin-Green Bay (in top 10), both of which have smaller student enrollments than WSU.

Students completing degrees in Human Biology opt for a number of post-graduate career tracks. While it is difficult to predict precisely which career opportunities Human Biology graduates will choose, the experience of Human Biology degree programs across the US suggests that many enter fields broadly associated with health care, social and community service, non-Governmental Organizations (NGOs)—both here and abroad, and some choose to pursue additional professional training or graduate school.

Based on the Bureau of Labor Statistics' *Occupational Outlook Handbook* (<http://stats.bls.gov/ooh/home.htm>), health care is expected to provide about 28% of all new jobs in the US economy in the interval to 2020. Projections for Washington State (<https://fortress.wa.gov/esd/employmentdata/reports-publications/industry-reports/employment-projections>) indicate that numbers of jobs in diverse areas of health care will increase by 1.62-2.19% between now and 2026. Well over 7,000 open jobs for diverse kinds of healthcare practitioners are anticipated in that period in Washington State, including over 2000 jobs for health technologists and about 4000 in healthcare support positions. Similarly, the Bureau of Labor Statistics' *Occupational Outlook Handbook* notes that positions in the field of Community and Social Services (encompassing Social and Human Service Assistants and Social and Community Service Managers employed at NGOs, for-profit service agencies, state and/or local governments) are projected to grow 16-18% over the 2016-2026 period, much faster than the national average (ca. 8%). Positions that require additional training or certifications, such as teachers, health educators, or community health workers, are common options for Human Biology majors, and demand for employees in these fields is expected to grow at or faster than the national average (8-16%, 2016-2026). Social science-, anthropology-, and environment-related jobs in Washington State are projected to grow by approximately 1.5% between now and 2023, and students graduating with the Human Biology degree will be prepared for many of these jobs as well as others. A BA in Human Biology will provide an important avenue to the knowledge base and skills that are essential for jobs in the field noted above and in many other areas.

B) Relationships to Current WSU Programs

The internal programs most likely to be challenged by competition from a degree in Human Biology are the two degrees, Biology and Zoology, offered by the School of Biological Sciences. Currently, the Biology and Zoology degrees are common majors for students interested in careers in health care, including those that require entry into the professional medical schools. We anticipate that certain students will be attracted to the greater emphasis on humans – both biologically and sociologically – offered by the Human Biology degree in contrast to broader training in biology and absence of sociological emphasis characteristic of current Biology and Zoology degrees. Similarly, Human Biology may attract some students from Anthropology who are seeking a firmer grounding in the sciences.

The Human Biology major is well differentiated from the Human Development degree. Human Development studies how children, youth, adults, and families develop, change, and face challenges throughout the lifespan (childhood, adolescence, adulthood). Human Development is devoted to understanding the nature of human development within the context of families, schools, and communities using an integrated “biopsychosocial” framework. Human Biology will focus on the biology of humans, including genetic diversity, physiology, ecology, and evolution, in cultural and social contexts. Human Biology will address questions such as why cultural and social frameworks influence, for example, practices of nutrition, emerging infectious diseases, and human ecology, including problems we face with creating sustainable human environments. The curriculum of Human Biology is distinct from that of Human Development, addressing different student interests and serving student audiences. Please see Appendix A for a statement from the Chair of Human Development attesting to this.

Majors offered by the School of Molecular Biosciences, including Biochemistry, Genetics and Cell Biology, and Microbiology, are more focused on subdisciplinary areas of biology than is the Human Biology major. The majors in School of Molecular Biosciences do not emphasize the cultural and social frameworks that are central to Human Biology. We foresee no negative impact on the number of students who will select majors in School of Molecular Biosciences caused by implementation of the Human Biology degree.

C) Regional Competitors

Notably, no other universities in the Pacific Northwest offer undergraduate degrees in Human Biology. Both the University of Oregon and Boise State University have areas of emphasis in human biology as a part of their biology Bachelor of Science degrees, among several degree options or tracks. The University of Washington (UW) offers students a track in biocultural anthropology as part of the Anthropology degree options. The website of the Department of Anthropology at UW describes the biocultural track as emphasizing “the integration of multidisciplinary approaches to the study of biological and behavioral diversity in modern humans and their closest living relatives . . .” In contrast, the Human Biology major at WSU is more broadly designed to address relationships among human biology, socio-cultural dynamics, and the environment. The Human Biology major at WSU will provide a very strong scientific underpinning, including a series of required courses in biology and chemistry. We believe students will be drawn more strongly to a major in Human Biology than a track in biocultural anthropology, and this will open recruiting opportunities.

The demonstrated growing interest in Human Biology degree programs (see above) and the fact that no regional programs offer a degree in Human Biology suggests that WSU will be well positioned to capitalize on this interest once the degree in Human Biology is approved. Our interdisciplinary program in Human Biology will be unique in the Pacific Northwest and serve to attract students who seek to apply biological knowledge to human problems in environmental, health, and societal realms.

D) Recruitment

Recruitment of students to the Program in Human Biology will proceed along many avenues, including each of the following:

1. We will use standard recruitment processes ongoing on both campuses in the College of Arts and Sciences, School of Biological Sciences, and Department of Anthropology. For example at campus recruitment events, we anticipate that the Program in Human Biology will have its own “table” and “poster” to call attention to the Human Biology major, its

curriculum, and program opportunities. We will develop material used by the College of Arts and Sciences, Admissions, and Marketing, such as career cards and a program slide show, to present to prospective parents and students when they visit campus.

2. A website for the Human Biology major will be developed for both campuses and linked to WSU Admissions, Anthropology, Biological Sciences and College of Arts and Sciences sites in Pullman and Vancouver.
3. The Program in Human Biology will use Facebook and/or other social media tools to connect with potential students and share information about the program.
4. Posters about the Program in Human Biology will be sent to Washington community colleges to describe opportunities of the major. Vancouver representatives from Human Biology will work directly with local community college partners to provide information about the major and to recruit students.
5. Faculty from the School of Biological Sciences regularly participate in high school visits and recruitment events in Seattle and other parts of the state, and we will include Human Biology in presentations at these events that occur outside of Pullman and Vancouver. In Vancouver, representatives from Human Biology will engage with local high schools to promote the program.
6. Representatives from Human Biology will attend *Imagine U at WSU* and other WSU recruitment activities on both campuses that target underrepresented students, such as such as MOSAIC, MESA, GEAR-UP, and Noche de Familia in Vancouver. We will offer to participate in parent-information nights as a means to demonstrate our commitment to student success and the opportunities available to families of prospective students.
7. Representatives from human biology will attend the Washington Science Teachers Association conference to present information about the Program in Human Biology and to talk with teachers about their top students. This will help to develop a network of colleagues among K-12 teachers for recruitment purposes.
8. We will include fliers on the Program in Human Biology for distribution with materials shipped to K-12 schools in Washington by the Equipment Loan Program, a popular and heavily used out-reach program through the School of Biological Sciences that loans equipment for biological studies to schools around the state. The Equipment Loan Program has been very successful in creating strong relationships between WSU and K-12 science teachers in Washington.

We address below under **Diversity** in **Section VIII** additional recruitment approaches that will be applied to diversify the body of students who major in Human Biology.

Section IV. Goals, Objectives, and Student Learning Outcomes

A) Goals and Objectives

Our primary goal is to offer a program that will provide students a **Bachelor of Arts degree in Human Biology**. Students in this degree program will learn about the biology of humans by melding knowledge and approaches from social sciences and biology. The program aims to create

opportunities for students to address problems faced by humanity by developing skills and a knowledge base that spans both biological and social sciences. Our program will meet the educational needs of students who are specifically interested in diverse health careers, and biological, evolutionary, and medical anthropology; however, our interdisciplinary curriculum aims to provide students with a springboard toward novel careers that will address sustainability concerns that face human populations, such as those that result from global climate change, emerging infectious diseases, environmental degradation, and the healthcare needs of an expanding, aging, and economically poorer population.

We aim to provide a robust curriculum in the sciences and cultural studies in which students will gain a unique interdisciplinary perspective. Our programs of study will also facilitate mentoring opportunities that include research, internships, and study abroad. We will encourage experiential learning opportunities in courses that support the program.

During the first five years of the program we will conduct annual, anonymous surveys and face-to-face interviews with each student who majors in Human Biology to examine whether we are meeting our goals and the aspirations of our students. We will share results of these surveys and interviews with leadership and faculty in the Department of Anthropology and School of Biological Sciences, and instructors of our courses to assess whether changes are appropriate to better achieve our goals. Modifications to the degree program will be evaluated by the Human Biology Curriculum and Assessment Committee (see **Section IX** below) and recommended for approval to the faculty of both the Department of Anthropology and School of Biological Sciences.

B) Student Learning Outcomes

The major learning outcomes that we expect for students in the Human Biology major include the following:

1. **Attain synthetic knowledge** from biology, social sciences, human ecology, and human cultures that shapes an understanding of human beings, our diversity, our socio-cultural systems, and our influence on environments.
2. **Effectively communicate** issues of human biology, human social and ecological dynamics, and human cultures to both the scientific community and the public at large in writing, discussion, and other communication formats.
3. **Achieve scientific and cultural literacy** to analyze contemporary social, environmental, and biological issues and contribute to informed opinion about their relationship to human biology and human populations.
4. **Demonstrate critical thinking skills** to formulate logical hypotheses that address problems of humanity.
5. Demonstrate scientific **skills to design experiments or observational tests** of hypotheses and **analytical skills** to obtain robust interpretations of data.

We will use **three primary means to assess** how students meet our learning outcome expectations.

1. **Exit surveys** with seniors will be conducted prior to graduation. Graduating seniors will be asked to “self-assess” their capabilities in the learning outcomes and to identify how they developed sophistication in each outcome.
2. We will make direct measures of student success in meeting our learning outcomes by using a set of questions that will be embedded in exams taken by Human Biology majors. These questions will target specific learning outcomes, providing us with a means to assess student competence. Knowledge from the direct measures will allow us to make modifications, such as improving courses or modifying the curriculum, to meet better our outcome goals. We plan to embed questions into courses taken by majors early in their degree trajectory in core Anthropology and Biology courses, such as Anthropology 260 and Biology 106/107.
3. Each student will be directly assessed on the degree learning outcomes in the CAPSTONE course taken to satisfy degree requirements during her/his senior year. All CAPSTONE courses have substantive written assignments that will be collected and assessed using a degree-specific rubric. Assessments will be performed by the Human Biology Curriculum and Assessment Committee.

A curriculum map for the Human Biology major (Table 4) outlines the skill level development projected for the core, writing in the major, and capstone courses. Table 4 also notes where within the degree assessment activities occur.

The Human Biology Curriculum and Assessment Committee (see **Section IX** below) will be responsible for assessment activities. This committee, which will include faculty from both campuses, will coordinate collection of materials to be assessed from instructors of courses in Anthropology and Biological Sciences. They will also review materials from the CAPSTONE courses, using an assessment rubric. This committee will be responsible for the regular review of assessment approaches and implementation of improved approaches, preparation of assessment questions for exams, and evaluation of student outcomes registered through the self-assessments and exams. The program’s assessment archive will remain available to faculty on both campuses where the degree is offered.

Section V. Curriculum

The curriculum of the Program in Human Biology is grounded in the University Common Requirements (UCORE) to address WSU’s Seven Learning Goals of the Baccalaureate, provide a foundation in core areas of concern (including roots of contemporary issues, quantitative reasoning, communication, global diversity, and creative arts), allow students to engage early in human biology interests, and pursue this discipline throughout four years of study in a vertical progression of more sophisticated courses during their undergraduate programs.

The human biology program aims especially to use courses from the life, physical, and social sciences to provide students with an interdisciplinary curriculum (Table 2). Our curriculum integrates across biological and social science knowledge domains during each year of study (Table 3).

The major in Human Biology is designed to be accomplished in a period of four years, and we provide a plan to demonstrate how students can obtain degrees in that time frame. The major

builds on a common set of core courses that will provide a foundation in anthropology, biology, and statistics. The common core will also require students to complete a senior portfolio. The remaining requirements will assist students in developing breadth, expertise, and skills. The Human Biology major will be offered to students on the Pullman campus and the Vancouver campus. Both campuses currently support successful anthropology (BA) and biology (BS) undergraduate degrees; the suite of courses that support these majors enhances the ability to simultaneously offer this degree on both campuses.

The Human Biology degree (Tables 2, 3) will guide students to explore especially how humans as biological beings are influenced by socio-cultural dynamics. Students will ultimately come to appreciate the immense cultural variation (e.g. customs, languages, and beliefs) exhibited around the world and explore its interplay with the genes we inherited from our ancestors. To ensure a firm grounding in the core disciplines associated with the Human Biology degree, Human Biology majors will be required to take at least 20 credits of both Anthropology and Biology courses, a total that includes requirements; many majors will take more than this required minimum. This will prepare students aimed for advanced degrees in biological and medical anthropology and other areas of social or biological science. They will also be prepared for diverse careers in forensic science, human ecology and sustainability, and physiological psychology among others.

Major Requirements¹				
<u>Course</u>		<u>Title</u>	<u>UCORE</u>	<u>Credits</u>
ANTH	203	Global Cultural Diversity	[DIVR]	3
	260	Introduction to Biological Anthropology	[BSCI]	4
BIOLOGY	106	Introductory Biology: Organismal Biology	[BSCI]	4
	107	Introductory Biology: Cell Biology and Genetics	[BSCI]	4
	301	General Genetics (also offered as MBIOS 301)		4
STAT	212	Introduction to Statistical Methods (also offered as MATH 212)	[QUAN]	4
CHEM	101	Introduction to Chemistry	[PSCI]	4
	<i>AND</i>			
	102	Chemistry Related to Life Sciences		4
	<i>OR</i>			
	105	Principles of Chemistry I	[PSCI]	4
<i>AND</i>				
	106	Principles of Chemistry II		4

¹ Human Biology Majors must take at least 20 credits of ANTH and 20 credits of BIOLOGY, a total that includes requirements

CAPSTONE: 3 credits from the following

ANTH	464	Hormones and Human Reproduction (<i>proposed fall 2018, to be active for fall 2019, pending approval</i>)	[CAPS]	3
	473	Evolution and Society (also offered as BIOLOGY 473)	[CAPS] [M]	3
	490	Integrative Themes in Anthropology	[CAPS][M]	3
BIOLOGY	401	Plants and People	[CAPS]	3
	408	Contemporary Genetics	[CAPS]	3
	473	Evolution and Society (also offered as ANTH 473)	[CAPS] [M]	3
	483	Organisms and Global Change	[CAPS] [M]	3

Science and Society: 3 credits from the following²

ANTH	309	Cultural Ecology	[SSCI]	3
BIOLOGY	330	Principles of Conservation		3
ENVR_ SCI	402	Human Health & the Environment		3
GEOL	390	Living on the Edge: Global Climate Change and Earth History		3
PHIL	350	Philosophy of Science		3
	365	Biomedical Ethics	[HUM]	3
	370	Environmental Ethics	[HUM]	3
SOC	331	Population, Resources, and the Future		3
	332	Society and Environment	[SSCI]	3

Genetics and Evolution: 6 credits from the following²

ANTH	302	Childhood and Culture	[SSCI]	3
	463	Introduction to Anthropological Demography and Epidemiology		3
	465	Human Evolution		3
	469	Genes, Culture and Human Diversity		3
BIOLOGY	335	Genome Biology	[M]	3
	395	Evolutionary Medicine		3
	OR			

² Any ANTH or BIOLOGY course listed in the Science and Society, Genetics and Evolution, Human Behavior and Human Cultural Diversity sections that is not used to satisfy section requirements can be taken as an elective.

	403	Evolutionary Biology		3
	<i>OR</i>			
	405	Principles of Organic Evolution		3
MBIOS	423	Human Genetics		4
<u>Human Behavior: 6 credits from the following²</u>				
ANTH	268	Sex, Evolution, and Human Nature	[BSCI]	3
	381	Primate Behavioral Ecology	[BSCI]	3
	466	Evolution of Cooperation (<i>proposed fall 2018, to be active for fall 2019, pending approval</i>)		3
BIOLOGY	307	Biology of Women	[DIVR]	3
	438	Animal Behavior	[M]	3
PSYCH	230	Human Sexuality (also offered as WOMEN_ST 230)		3
	321	Introduction to Personality		3
	324	Psychology of Gender (also offered as WOMEN_ST 324)		3
	372	Biological Basis of Behavior	[BSCI]	3
<u>Human Cultural Diversity: 3 credits from the following²</u>				
ANTH	201	Art and Society	[HUM]	3
	307	Contemporary Cultures and Peoples of Africa	[DIVR]	3
	316	Gender in Cross Cultural Perspective (also offered as WOMEN_ST 316)	[DIVR]	3
	320	Native Peoples of North America (also offered as CES 377)	[DIVR]	3
	327	Contemporary Native Peoples of the Americas (also offered as CES 378)	[DIVR]	3
<u>Electives: at least 18 credits from the following²</u>				
ANTH	301	Arts and Media in Global Perspective	[ARTS]	3
	303	The Anthropology of Religious Experience		3
	304	Cross Cultural Perspectives of Mental Health and Illness	[SSCI]	3
	305	Anthropology of Epidemic Disease and Bioterrorism	[SSCI]	3
	330	Origins of Culture and Civilization		3
	331	Archaeology of the Americas	[SSCI]	3
	340	Maya, Aztec and Inca Civilizations	[M]	3
	380	Human Osteology		3
	404	Self in Culture	[CAPS]	3
	405	Medical Anthropology		3
	495	Research Practicum		v 1-6

	498	Anthropology Internship		v 1-15
	499	Special Problems		v 1-4
BIOLOGY	251	Introductory Human Physiology		4
		<i>OR</i>		
	353	Advanced Human Physiology		4
	315	Gross and Microanatomy		4
	321	Principles of Animal Development	[M]	4
	333	Human Nutrition and Health	[BSCI]	3
	340	Mathematical Biology (also offered as MATH 340)		3
	354	Human Anatomy for the Health Occupations		4
	372	General Ecology	[M]	4
	476	Epigenetics and Systems Biology		3
	495	Internship in Biology, Botany, or Zoology		v 1-4
	499	Special Problems		v 1-4
H_D	220	Human Development Theories		3
MBIOS	303	Introductory Biochemistry		4
	305	General Microbiology		3
	405	Cell Biology of Disease		3
	446	Epidemiology		3
PSYCH	320	Health Psychology		3
	361	Principles of Developmental Psychology		3
	363	Psychology of Aging		3

Table 3. Four-year plan for the Human Biology Major**Human Biology (120 Hours)**

Completion of the Human Biology major requires a minimum of 20 credits of coursework in both Anthropology (ANTH) and Biology.

First Year	
<i>First Term</i>	<i>Hours</i>
ANTH 203 [DIVR]	3
BIOLOGY 106 [BSCI]	4
CHEM 101 or 105 [PSCI]	4
ENGLISH 101 [WRTG]	3
<i>Second Term</i>	<i>Hours</i>
BIOLOGY 107	4
CHEM 102 or 106	4
HISTORY 105 [ROOT]	3
STAT 212	4

Second Year	
<i>First Term</i>	<i>Hours</i>
ANTH 260	4
Arts [ARTS]	3
Communication [COMM] or Written Communication [WRTG]	3
Social Sciences [SSCI]	3
Major Elective ^{1,2}	3
<i>Second Term</i>	<i>Hours</i>
Arts [ARTS], Humanities [HUM], or Social Sciences [SSCI] ³	3
BIOLOGY 301	4
Human Behavior Requirement ⁴	3
Science and Society Requirement ⁵	3
Major Elective ^{1,2}	3
Complete Writing Portfolio	

Third Year	
<i>First Term</i>	<i>Hours</i>
Genetics and Evolution Requirement ⁶	3
Human Behavior Requirement ⁴	3
Humanities [HUM]	3
Foreign Language ⁷ , if needed and/or Major Electives ^{1,2}	6

Second Term	Hours
Foreign Language ⁷ , if needed, and/or Major Electives ^{1,2}	9
Genetics and Evolution Requirement ⁶	3
Writing in the Major [M] course ⁸	2-4

Fourth Year	
First Term	Hours
Major Electives ^{1,2}	7
Human Cultural Diversity Requirement ⁹	3
Integrative Capstone Course [CAPS] ¹⁰	3 or 4
Writing in the Major [M] course ⁸	2-4
Second Term	Hours
Major Electives ^{1,2} and/or Electives ¹¹	13
Complete School of Biological Sciences Exit Survey	

Footnotes

- ¹ Major Electives (18 credits) approved courses include: ANTH 301, 303, 304, 305, 330, 331, 340 [M], 380, 404, 405, 495, 498, 499; BIOLOGY 251 or 353, 315, 321 [M], 333, 340 [M], 354, 372, 476, 495, 499; H D 220; MBIOS 303, 305, 405, 446; PSYCH 320, 361, 363; and any ANTH or BIOLOGY course listed in the Science and Society, Genetics and Evolution, Human Behavior, and Human Cultural Diversity modules that *were not* taken to satisfy the requirement in those areas.
- ² A maximum of 4 credits of course work that are graded S,F (491, 495, 499) may be used toward fulfilling departmental or program option requirements.
- ³ An additional [ARTS], [HUM], or [SSCI] is required by the College of Arts and Sciences.
- ⁴ Human Behavior Requirement (6 credits) approved courses include: ANTH 268, 381; 466; BIOLOGY 307, 438; PSYCH 230, 321, 324, 372.
- ⁵ Science and Society Requirement (3 credits) approved courses include: ANTH 309; BIOLOGY 330; PHIL 350, 365, 370; SOC 331, 332; SOE 390, 402, 444.
- ⁶ Genetics and Evolution Requirement (6 credits) approved courses include: ANTH 302, 463, 469; BIOLOGY 335, no more than one from BIOLOGY 395, 403, or 405; MBIOS 423.
- ⁷ Two years of high school foreign language or at least two semesters of college-level foreign language are required by the College of Arts and Sciences for graduation.
- ⁸ [M] courses must be chosen from either ANTH or BIOLOGY.
- ⁹ Human Cultural Diversity Requirement (3 credits) approved courses include: ANTH 201, 307, 316, 320, 327.
- ¹⁰ Integrated Capstone [CAPS] course must be chosen from either ANTH or BIOLOGY.
- ¹¹ Electives must include sufficient 300-400 level coursework to meet the University requirement of 40 upper division credits.

Table 4. Human Biology Curriculum Map

COURSE #	CORE COURSES						WRITING IN THE MAJOR COURSES [M] - Two Required	CAPSTONE
	Anth 203	Anth 260	Biology 106	Biology 107	Math/Stat 212 OR Stat 412	Biology 301		
COURSE TITLE or #	Global Cultural Diversity	Introduction to Biological Anthropology	Introductory Biology: Organismal Biology	Introductory Biology: Cell Biology and Genetics	Introduction to Statistical Methods/Statistical Methods in Research I	General Genetics	Anth 340, 473, 490; Biology 321, 335, 372, 438, 473	Anth 464, 473, 490; Biology 401, 408, 411, 473, 483
Student Learning Outcomes								
Attain synthetic knowledge	B	D/A	B	B		D	D [Anth 340, Biology 321, 335]; M [Anth 473, 490, Biology 372, 438, 473]	M/A
Effectively communicate issues	B	D/A	B	B		D	D [Anth 340, Biology 321, 335]; M [Anth 473, 490, Biology 372, 438, 473]	M/A
Achieve Scientific and cultural literacy	B	B	B	B	D	D	D [Anth 340, Biology 321, 335]; M [Anth 473, 490, Biology 372, 438, 473]	M/A
Demonstrate critical thinking skills	B	B	B	B	B [212] D/M [412]	D	D [Anth 340, Biology 321, 335]; M [Anth 473, 490, Biology 372, 438, 473]	M/A
Demonstrate scientific skills		D	B	B	B [212] D/M [412]	D	D [Anth 340, Biology 321, 335]; M [Anth 473, 490, Biology 372, 438, 473]	M/A

KEY: B = beginning mastery; D = developing mastery; M = mastery at senior level; A = Assessed

Section VI. Uses of Technology

A) Technologies Used in Teaching

Computer technologies will be used widely in teaching the curriculum for Human Biology. Many of the courses required for the degree currently use computers for data acquisition and analysis and for simulations. The classes also use online materials including databases and maps on human genetic diseases, health, nutrition, demography, and economy from the Centers for Disease Control and Prevention, World Health Organization, United Nations and other organizations, for student assignments and projects to achieve learning goals.

B. Technologies to be Learned by Students

Students will learn methods of data acquisition used in biological sciences, ranging from molecular biological to ecological techniques, and social sciences, ranging from interviews, observation, and assembly of meta-datasets from existing sources. Analytical tools, especially using computer technologies, data analysis, statistical tests, and modelling will be central to the program.

Section VII. Delivery Methods

This program will be available on the Pullman and Vancouver campuses, where it will be conducted in face-to-face and blended classes, and in AMS coursework that may originate from either Pullman or Vancouver.

Section VIII. Students

A) Numbers to be Served

The projected number of student majors and FTE (Table 5) are based on attracting newly recruited students to the degree program each year for the Pullman campus, with modest annual growth anticipated once the degree has been established. For Vancouver (Table 5), we project that the program will see steady growth of newly recruited students from a modest beginning. Community college students likely to transfer to WSU Vancouver are especially interested in the biological sciences and careers in health fields – this is projected to be one of the strongest growth areas for the Vancouver campus.

B) Admission Requirements

Students can begin working toward certification upon entry to WSU and can certify as soon as they are eligible to do so (at 20 semester credit hours with a minimum 2.0 GPA).

Table 5. Projected number of student majors and FTE in the early years of the Program in Human Biology for the Pullman and Vancouver campuses.					
Pullman					
Number of Students	Year 1	Year 2	Year 3	Year 4	Year 5
Headcount	8	17	26	37	50
FTE	8	17	26	37	50
Vancouver					
Number of Students	Year 1	Year 2	Year 3	Year 4	Year 5
Headcount	5	12	22	30	40
FTE¹	3.75	9	16.5	22.5	30

¹ Vancouver FTE numbers based on approximately 75% of students being full time students.

C) Expected Time for Program Completion

We anticipate that most Human Biology majors on the Pullman campus will be full time. In Vancouver, we expect that one-quarter of the majors will be part-time students. The enrollment projections (Table 5) for both campuses reflect expectations based on the strong student interest and demand for students selecting Biology and our assessment that some students may find the Human Biology an attractive program; thus, we predict it will attract new students and grow modestly. As indicated in the four-year plan for the Human Biology major, the full time students should be able to complete the degree requirements in four years (Table 3).

Transfer students who select this major are likely to have had biology or social sciences coursework at other universities or colleges. If these students transfer following their freshman year, they should be able to complete the degree in four years; transfers following their sophomore year may require 4.5-5.0 years total; and transfers following the junior year or later may require a total of five or more years total to complete the degree.

D) Advising

Students who major in human biology will be assigned a professional advisor in the College of Arts and Sciences. These students will also be assigned faculty mentors to assist with career and professional planning and to learn about disciplinary training opportunities. Faculty mentors will be members of either the Department of Anthropology or School of Biological Sciences. Student interests will be assessed by the program coordinator (or equivalent on the Vancouver campus) prior to the assignment of a mentor, and an attempt will be made to find a mentor with knowledge relevant to the professional aspirations of the student. Faculty mentor assignments in Pullman will be made by the Director of the Program in Human Biology in consultation with the Chair of the Department of Anthropology and the Director of the School of Biological Sciences, and in Vancouver by the Human Biology Program Leader.

E) Diversity

Because an understanding of human diversity is one of the outcome goals of our program, we anticipate that it will attract diverse students as majors.

Our strategy to recruit diverse students, including minorities and underrepresented groups, includes the following:

1. Representatives from Human Biology will attend *Imagine U at WSU* and other WSU recruitment activities on both campuses that target underrepresented students, such as MOSAIC, MESA, GEAR-UP, and Noche de Familia in Vancouver. We will offer to participate in parent-information nights as a means to demonstrate our commitment to student success and the opportunities available to families of prospective students.
2. Representatives from Human Biology will attend the Washington Science Teachers Association conference to present information about the Program in Human Biology and to talk with teachers about their top diverse students. This will help to develop a network of colleagues among K-12 teachers for recruitment purposes.
3. The Human Biology Program will use Facebook and/or other social media tools to reach outward and address specifically the diversity aspects of the Human Biology major to reach potential students from underrepresented groups.
4. As often as possible, we will post job opportunities in the Program in Human Biology in WSU's Office of Financial Aid Spanish website (available on both campuses).
5. We will work with Marcela Pattinson to discuss the Program in Human Biology on her Spanish-language radio show, "WSU Conectándote!" ("Get Connected with WSU!"), which is carried on stations in Centralia, Skagit Valley, Seattle, and Yakima Valley. We will also contact radio programs hosted by stations that target specific underrepresented groups, such as the Spanish language radio program "Aquí en confianza" hosted by Sandra Maqueda on KXPA 1540 AM in Seattle and local radio stations in the Portland-Vancouver metropolitan area.
6. The Human Biology Program will identify a set of community colleges that have significant enrollments of ethnically and racially diverse students and work to have representatives visit these schools to develop faculty and student contacts.

The Program in Human Biology will investigate avenues to communicate with military veterans about the opportunities of our program.

Section IX. Faculty and Administrative Support

A) Administration and Management

The Program in Human Biology will be administered jointly by the Department of Anthropology and the School of Biological Sciences.

We recommend the appointment of a Director of the Program in Human Biology, who will be supervised jointly by the Chair of the Department of Anthropology and the Director of the School of Biological Sciences. The Director of the Program in Human Biology will be responsible for

administration of daily needs, program assessment, and strategic planning, supported by a financial commitment from the College of Arts and Sciences (Appendix d). We envision this Director will have a faculty position in the Department of Anthropology and/or School of Biological Sciences. The effort commitment of the Director to the Program in Human Biology should be expected to increase during the first years of its existence. By year five of the program, we anticipate that the duties of the Director will be roughly comparable to those currently held by the Associate Director the Undergraduate Program in the School of Biological Sciences, and similar compensation should be provided by the College of Arts and Sciences.

Oversight of the program in Vancouver will be provided by a faculty member in the Department of Anthropology or the School of Biological Sciences. The Vancouver program leader will work directly with the Director of the Program in Human Biology to ensure coordinated efforts related to planning, assessment, recruiting, etc. As the program grows in Vancouver, the program leader will be compensated.

We will establish a Human Biology Curriculum and Assessment Committee that will consist of three faculty from Anthropology and three faculty from Biological Sciences (and will include representation from both the Pullman and Vancouver campuses) to assist and advise the Director on needs that will include assessment activities and curriculum planning. One position on the Curriculum and Assessment Committee will be reserved for the Human Biology program leader in Vancouver.

The program will also require staff to accomplish program plans and paperwork for undergraduate majors. Initially, the work of an academic coordinator to accomplish these tasks will be part-time. This coordinator could be centered either in the Department of Anthropology or School of Biological Sciences. During at least the first five years of the program, the academic coordinator tasks might be accomplished by existing staff in either Anthropology or Biological Sciences. Clerical support and academic advising in Vancouver will be provided by College of Arts and Sciences personnel.

The College of Arts and Sciences has committed fiscal support to the Human Biology degree (Appendix D) through the third year, including committing to additional funding during this period if growth in the degree warrants such investment. Towards the end of the third year of the degree, the College of Arts and Sciences, the Department of Anthropology, and the School of Biological Sciences will meet to determine if the Human Biology degree is meeting the needs of its students, if it is consistently attracting majors, and the degree to which the program in Human Biology warrants continued or further investment. In the event that the Human Biology degree is not meeting expectations, attracting students, and furthering the strategic goals of the College, we will develop a plan for discontinuing the degree and “teaching out” any students in the program through completion of their degrees.

B) Faculty

The faculty of the program will consist of all tenure track and clinical faculty of the Department of Anthropology (Table 6) and the School of Biological Sciences (Table 7). The administrative and support staff for the program will consist of those staff currently in the Department of Anthropology and the School of Biological Sciences, and selected staff in the College of Arts and Sciences on the Vancouver campus (Table 8).

**Table 6. Faculty Committed to Human Biology
in the Department of Anthropology**

PULLMAN CAMPUS			
Name	Rank	Status	% Effort in Program
Kohler, Tim	Regents' Professor	T	1.5%
Duff, Andrew	Professor	T	3%
Mageo, Jeannette	Professor	T	3%
Quinlan, Robert	Professor	T	3%
Blackwell, Aaron	Associate Professor	T	3%
Cassaniti, Julia	Associate Professor	T	3%
Grier, Colin	Associate Professor	T	3%
Meehan, Courtney	Associate Professor	T	3%
Premo, Luke	Associate Professor	T	3%
Quinlan, Marsha	Associate Professor	T	3%
Pisor, Anne	Assistant Professor	T	3%
Thornton, Erin	Assistant Professor	T	3%
Tushingham, Shannon	Assistant Professor	T	1.5%
Total Pullman FTE Faculty in Program:			0.36
VANCOUVER CAMPUS			
Name	Rank	Status	% Effort in Program
Hagen, Edward	Professor	T	3%
Hewlett, Barry	Professor	T	3%
Weber, Steven	Professor	T	3%
Wilkinson, Clare	Associate Professor	T	3%
Bonnie Hewlett	Clinical Assistant Professor	N	3%
Nichole Hess	Instructor	N	3%
Total Vancouver FTE Faculty in Program:			0.18
Abbreviations: T = Tenured/Tenure track; N = Not tenure track			

**Table 7. Faculty Committed to Human Biology Program
in the School of Biological Sciences**

PULLMAN CAMPUS			
Name	Rank	Status	% Effort in Program
Beerman, Kathy	Professor	T	3%
Carter, Patrick	Professor	T	3%
Cousins, Asaph	Professor	T	3%
Evans, R. Dave	Professor	T	3%
Gomulkiewicz, Richard	Professor	T	3%
Hufford, Larry	Professor	T	0%
Knoblauch, Michael	Professor	T	3%
Roalson, Eric	Professor	T	3%

Schwabl, Hubert	Professor	T	3%
Skinner, Michael	Professor	T	3%
Storfer, Andrew	Professor	T	3%
Tegeder, Mechthild	Professor	T	3%
Busch, Jeremiah	Associate Professor	T	3%
Cavagnetto, Andy	Associate Professor	T	0.45%
Dybdahl, Mark	Associate Professor	T	3%
Hellmann, Hanjo	Associate Professor	T	3%
Kelley, Joanna	Associate Professor	T	3%
Lee, Ray	Associate Professor	T	3%
McCubbin, Andrew	Associate Professor	T	3%
Schwartz, Elissa	Associate Professor	T	3%
Verrell, Paul	Associate Professor	T	3%
Brunner, Jesse	Assistant Professor	T	3%
Cornejo, Omar	Assistant Professor	T	3%
Crespi, Erica	Assistant Professor	T	3%
Kunz, Hans-Henning	Assistant Professor	T	3%
Carloye, Lisa	Clinical Associate Professor	N	3%
Ankrah, Nii	Clinical Assistant Professor	N	3%
Johnson, Ed	Clinical Assistant Professor	N	3%
Monk, Daniela	Clinical Assistant Professor	N	3%
Ritchie, Sian	Clinical Assistant Professor	N	3%
Total Pullman FTE Faculty in Program:			0.845
VANCOUVER CAMPUS			
Bishop, John	Professor	T	10% (year 5)
Bollens, Stephen	Professor	T	0%
Portfors, Christine	Professor	T	0%
Rollwagen-Bollens, Gretchen	Associate Professor	T	10% (year 5)
Schultz, Cheryl	Associate Professor	T	0%
Piovia-Scott, Jonah	Assistant Professor	T	10% (year 5)
Porter, Stephanie	Assistant Professor	T	10% (year 5)
Mike Berger	Clinical Professor	N	10% (year 5)
Wilmington, Deb	Instructor	N	10% (year 5)
Sayer, Pat	Instructor	N	10% (year 5)
Thomas, Duncan	Instructor	N	10% (year 5)
Total Vancouver FTE Faculty in Program:			0.80
Abbreviations: T = Tenured/Tenure-track; N = Not tenure-track clinical appointment			

Table 8. Administrative and Support staff in the Department of Anthropology and School of Biological Sciences

<u>Pullman</u>			
<u>Department of Anthropology</u>			
<u>Name</u>	<u>Title</u>	<u>Responsibilities</u>	<u>% Effort in Program</u>
Kam Spelman	Academic Coordinator	Program support	5% (year 5)
Jo Bonner	Office Assistant	Program support	2% (year 5)
Erin Collins	Finance/Budget Manager	Program support	2% (year 5)
Annette Bednar	Manager	Program support	2% (year 5)
<u>School of Biological Sciences</u>			
<u>Name</u>	<u>Title</u>	<u>Responsibilities</u>	<u>% Effort in Program</u>
TBD	Academic Coordinator	Scheduling and program coordination	5% (year 5)
Kara McClanahan	Instructional Lab Supervisor	Lab support	8% (year 5)
Ed Johnson	Clinical Assistant Professor	Lab support for physiology labs that involve living animals	2% (year 5)
<u>New</u>			
<u>Name</u>	<u>Title</u>	<u>Responsibilities</u>	<u>% Effort in Program</u>
Not Yet Appointed	Director	Oversight & planning; instruction	11% (year 5)
TBD (year 3)	Program assistant	Clerical support	10% (year 5)
TBD	Fiscal specialist	Budget management	5% (year 5)
TBD	Advisor	Academic advising	20% (year 5)
<u>Vancouver</u>			
<u>College of Arts and Sciences</u>			
<u>Name</u>	<u>Title</u>	<u>Responsibilities</u>	<u>% Effort in Program</u>
Not Yet Appointed	Program Leader	Oversight & planning; instruction	10% (year 5)
Emily Earhart	Academic Coordinator	Academic Advising	15% (year 5)
Josh Olson	Technician	Lab support	8% (year 5)
Various	Program Assistant	Clerical support	8% (year 5)
Min Kuang	Fiscal Analyst	Budget management	8% (year 5)

Section X. Facilities

A) Teaching and Research

The Program in Human Biology is not anticipated to require any new teaching or research facilities, or to have any upfront costs to equip new laboratories or facilities. Because the program will consist of faculty in the Department of Anthropology and the School of Biological Sciences, and will use existing courses to achieve the goals of the degree, we do not anticipate that new faculty will be hired specifically for the program at its inception. We do not anticipate needs for research laboratories or office space for faculty assigned only to the Program in Human Biology. No new tenure-line faculty are needed to offer the Human Biology major in Vancouver.

Because some majors in Human Biology are anticipated to transition from existing degrees where these students are already enrolled in most of the science courses associated with Human Biology, we project that most courses to be used in the program have the capacity to meet enrollment needs. With the projected increase in newly recruited students per year in the first five years, the upper division courses have the capacity to meet enrollment needs in existing sections.

Human Biology majors in Vancouver are likely to come initially from related majors offered on campus. However, the program is expected increasingly to attract new students to the campus. For the first three years, new enrollments can be absorbed into existing course sections.

Selected courses on both campuses will be impacted by the increased enrollment from Human Biology and may require additional laboratory and lecture sections to be taught in about three years after the inception of the program. In Pullman, both Anthropology 260 and Biology 251 are heavily enrolled and would likely need additional laboratory sections. Biology 106 may be one of the most impacted courses on both campuses. Vancouver may need to add an additional laboratory section for this course in Year 3 of the major. In Pullman, recent enrollment increases have resulted in two sections of this class in the fall term. In Pullman the addition of new laboratory sections in courses such as Anthropology 260, Biology 106, and Biology 251 will require additional teaching assistants and funding to support these students. In Vancouver, Biology 354 is currently close to capacity and its enrollment will likely increase with the addition of Human Biology.

A potential impact of the Program in Human Biology may be that the frequency at which some courses are offered currently would need to increase. For example, some courses may need to shift from being offered only in alternate years to being offered every year to accommodate student needs as the number of student majors increases, or that effort assigned in Tables 6-8 may need to be redistributed to other faculty and staff. This change could require that additional faculty be hired to accommodate the increased teaching need. We anticipate this need may be realized after the first three years of the program.

B) Library

As an interdisciplinary major, Human Biology, can be adequately served by existing library resources that facilitate teaching need in core disciplines of the new major—biology and anthropology—and the supplemental disciplines including environmental science, human health, psychology, and sociology. Please see attached letter of support from the libraries on the Pullman and Vancouver campuses (Appendix B) that indicates the libraries will not need to acquire new serials, monographs, media, technology, or personnel to support the Human Biology degree.

Section XI. Finances

The program will generate revenues through tuition and course fees paid by students. Costs of the program are estimated in Table 9 for Pullman and Table 10 for Vancouver. These tables assume no salary increases for faculty or staff during the five years (as we were advised to assume by the University's Budget Office). At full enrollment on the Pullman campus, estimated to be 50 students in year five. We estimate the Program in Human Biology will generate \$187,500 in Pullman in year five, using the average of current revenue shared to the College of Arts and Sciences for Sciences (\$4000/FTE) and Liberal Arts (\$3500/FTE), or \$3750 per FTE, above the established baseline. There is no baseline for the Human Biology degree; thus, we are assuming a zero baseline in these revenue calculations. For Vancouver, with a different tuition revenue model, we have used the figure of \$7633/FTE (calculated from \$8980 [operating revenue only portion of tuition] less central financial aid, student services and institutional funding of 15% [$8980 \cdot 0.85$] = \$7633/FTE). In year 5 at Vancouver, the estimated revenue from tuition is \$228,990 for the 30 FTE students.

Table 8. Pullman Financial Data							
Human Biology WSU Pullman							
11/21/2018							
	1st	2nd	5th	1st	2nd	5th	
	FTE	FTE	FTE	Academi	Academi	Academi	
				c	c	c	
				Year	Year	Year	
Total Student HDC				8	17	50	
Total Student AAFTE				8	17	50	
<i>↑Enrollment values linked to Table 1↑</i>							
Personnel	Annual	<i>↓Insert employee FTE by job title↓</i>			<i>↓Insert annual salaries by job title↓</i>		
Faculty	rate						
Professor, Anthropology	129,313	0.015	0.015	0.015	1,940	1,940	1,940
Professor, Anthropology	92,524	0.03	0.03	0.03	2,776	2,776	2,776
Professor, Anthropology	89,057	0.03	0.03	0.03	2,672	2,672	2,672
Professor, Anthropology	85,536	0.03	0.03	0.03	2,566	2,566	2,566
Associate Professor, Anthropology	77,000	0.03	0.03	0.03	2,310	2,310	2,310
Associate Professor, Anthropology	73,977	0.03	0.03	0.03	2,219	2,219	2,219
Associate Professor, Anthropology	76,007	0.03	0.03	0.03	2,280	2,280	2,280
Associate Professor, Anthropology	81,362	0.03	0.03	0.03	2,441	2,441	2,441
Associate Professor, Anthropology	71,118	0.03	0.03	0.03	2,134	2,134	2,134
Associate Professor, Anthropology	72,187	0.03	0.03	0.03	2,166	2,166	2,166
Assistant Professor, Anthropology	64,000	0.03	0.03	0.03	1,920	1,920	1,920
Assistant Professor, Anthropology	67,097	0.015	0.015	0.015	1,006	1,006	1,006
Assistant Professor, Anthropology	66,660	0.03	0.03	0.03	2,000	2,000	2,000
Professor, SBS	84,776	0.03	0.03	0.03	2,543	2,543	2,543
Professor, SBS	97,945	0.03	0.03	0.03	2,938	2,938	2,938
Professor, SBS	99,317	0.03	0.03	0.03	2,980	2,980	2,980
Professor, SBS	100,221	0.03	0.03	0.03	3,007	3,007	3,007
Professor, SBS	97,672	0.03	0.03	0.03	2,930	2,930	2,930
Professor, SBS	103,680	0	0	0	0	0	0
Professor, SBS	104,718	0.03	0.03	0.03	3,142	3,142	3,142
Professor, SBS	99,258	0.03	0.03	0.03	2,978	2,978	2,978
Professor, SBS	89,324	0.03	0.03	0.03	2,680	2,680	2,680
Professor, SBS	166,544	0.03	0.03	0.03	4,996	4,996	4,996
Professor, SBS	110,270	0.03	0.03	0.03	3,308	3,308	3,308
Professor, SBS	133,519	0.03	0.03	0.03	4,006	4,006	4,006
Associate Professor, SBS	80,934	0.03	0.03	0.03	2,428	2,428	2,428

Associate Professor, SBS	86,570	0.005	0.005	0.005	390	390	390
Associate Professor, SBS	72,271	0.03	0.03	0.03	2,168	2,168	2,168
Associate Professor, SBS	87,964	0.03	0.03	0.03	2,639	2,639	2,639
Associate Professor, SBS	82,592	0.03	0.03	0.03	2,478	2,478	2,478
Associate Professor, SBS	79,404	0.03	0.03	0.03	2,382	2,382	2,382
Associate Professor, SBS	77,478	0.015	0.015	0.015	1,162	1,162	1,162
Associate Professor, SBS	73,037	0.03	0.03	0.03	2,191	2,191	2,191
Associate Professor, SBS	73,209	0.03	0.03	0.03	2,196	2,196	2,196
Assistant Professor, SBS	76,815	0.03	0.03	0.03	2,304	2,304	2,304
Assistant Professor, SBS	80,156	0.03	0.03	0.03	2,405	2,405	2,405
Assistant Professor, SBS	89,408	0.03	0.03	0.03	2,682	2,682	2,682
Assistant Professor, SBS	81,096	0.03	0.03	0.03	2,433	2,433	2,433
Clinical Associate Professor, SBS	61,183	0.03	0.03	0.03	1,835	1,835	1,835
Clinical Assistant Professor, SBS	54,944	0.03	0.03	0.03	1,648	1,648	1,648
Clinical Assistant Professor, SBS	45,492	0.03	0.03	0.03	1,365	1,365	1,365
Clinical Assistant Professor, SBS	49,486	0.03	0.03	0.03	1,485	1,485	1,485
Clinical Assistant Professor, SBS	58,808	0.03	0.03	0.03	1,764	1,764	1,764
Subtotal		1.19	1.19	1.19	99,892	99,892	99,892
<u>Exempt</u>							
Manager	70,700	0.02	0.02	0.02	1,414	1,414	1,414
Academic Coordinator	45,000	0.02	0.03	0.05	900	1,350	2,250
Subtotal		0.04	0.05	0.07	2,314	2,764	3,664
<u>Classified</u>							
Instructional Lab Tech	54,170	0.02	0.04	0.08	1,083	2,167	4,334
Academic Advising	45,000	0.01	0.02	0.20	450	900	9,000
Lab Support	60,656	0.01	0.01	0.02	607	607	1,213
Program Coordinator	41,232	0.01	0.01	0.05	412	412	2,062
Program Assistant (new)	32,000	0.01	0.02	0.10	320	640	3,200
Office Assistant III	27,486	0.01	0.02	0.02	275	550	550
Fiscal Specialist 1 (new)	42,000	0.01	0.02	0.05	420	840	2,100
Fiscal Tech 2	45,540	0.02	0.02	0.04	911	911	1,822
Subtotal		0.10	0.16	0.56	4,478	7,026	24,280
<u>Graduate</u>							
Teaching Assistants	34,930	0.50	1.00	3.00	17,465	34,930	104,790
Subtotal		0.50	1.00	3.00	17,465	34,930	104,790
Total Personnel		1.83	2.40	4.82	124,149	144,612	232,625
Benefits					<i>↓ Insert benefits based on current benefit rates ↓</i>		
Faculty					29,268	29,268	29,268

Exempt		789	943	1,249
Classified		2,140	3,359	11,606
Graduate		2,288	4,576	13,727
Total Benefits		34,486	38,145	55,851
Link to current benefits model rates				
Goods and Services¹		0	0	0
Travel		1,500	1,500	4,000
Equipment (Instructional)¹		0	0	0
Total Direct Costs		160,134	184,257	292,476
Total Indirect Costs	35%	86,226	99,215	157,487
Total Costs		246,360	283,472	449,963
One-Time Costs		0	0	0
Recurring Costs		246,360	283,472	449,963
Total Costs		246,360	283,472	449,963
<i>User inputs one-time costs→</i>				
<i>Formula calculates recurring costs→</i>				
Calculated total cost per student AAFTE:				
		30,795	16,675	8,999
Calculated direct cost per student AAFTE:				
		20,017	10,839	5,850
Revenue				
Internal Departmental /Area Reallocation		130,134	120,507	104,976
Enrollment Funding (estimated at \$3750/AAFTE)		30,000	63,750	187,500
New State Funds		0	0	0
WSU Allocation (Institutional reallocation)		0	0	0
Indirect Allocation (Central reallocation for support services)		86,226	99,215	157,487
Other <>		0	0	0
Total Revenue		246,360	283,472	449,963
		TRUE	TRUE	TRUE
		↑ Total costs must equal total revenue↑		
<i>*Note on Year "N": Please replace the letter "N" with the year in which you expect the program to reach full enrollment.</i>				

Table 9. Vancouver Financial Data							
Human Biology WSU Vancouver							
11/21/2018							
		1st	2nd	5th	1st	2nd	5th
		FTE	FTE	FTE	Academic	Academic	Academic
					Year	Year	Year
Total Student HDC					5	12	40
Total Student AAFTE					3.75	9	30
<i>↑Enrollment values linked to Table 1↑</i>							
Personnel	Annual	<i>↓Insert employee FTE by job title↓</i>			<i>↓Insert annual salaries by job title↓</i>		
Faculty	rate						
Professor, Anthropology (.80 FTE)	76,109	0.03	0.03	0.03	2,283	2,283	2,283
Professor, Anthropology	79,713	0.03	0.03	0.03	2,391	2,391	2,391
Professor, Anthropology	80,545	0.03	0.03	0.03	2,416	2,416	2,416
Associate Professor, Anthropology	72,837	0.03	0.03	0.03	2,185	2,185	2,185
Clinical Assistant Professor, Anthropology	61,364	0.03	0.03	0.03	1,841	1,841	1,841
Instructor, Anthropology	50,043	0.03	0.03	0.03	1,501	1,501	1,501
Assistant Professor, Psychology	72,837	0.015	0.03	0.1	1,093	2,185	7,284
Assistant Professor, Psychology	72,630	0.015	0.03	0.1	1,089	2,179	7,263
Professor, SBS	89,118	0	0	0.1	0	0	8,912
Professor, SBS	144,769	0	0	0	0	0	0
Professor, SBS	129,753	0	0	0	0	0	0
Associate Professor, SBS	79,101	0	0	0	0	0	0
Associate Professor, SBS	86,400	0.015	0.03	0.1	1,296	2,592	8,640
Assistant Professor, SBS	80,514	0.015	0.03	0.1	1,208	2,415	8,051
Assistant Professor, SBS	80,199	0.015	0.03	0.1	1,203	2,406	8,020
Clinical Professor, SBS	52,236	0.015	0.03	0.1	784	1,567	5,224
Instructor, SBS	45,126	0.02	0.04	0.1	903	1,805	4,513
Instructor, SBS	47,259	0.02	0.04	0.1	945	1,890	4,726
Instructor, SBS	45,243	0.02	0.04	0.1	905	1,810	4,524
Instructor, Psych	49,095	0.02	0.04	0.1	982	1,964	4,910
Clinical Asst. Professor, Chem	49,104	0.02	0.04	0.1	982	1,964	4,910
Adjunct	28,200	0.02	0.04	0.1	564	1,128	2,820
	Subtotal	0.39	0.60	1.48	24,571	36,524	92,414
Exempt							
Academic Coordinator	46,260	0.03	0.05	0.15	1,388	2,082	6,939
	Subtotal	0.03	0.05	0.15	1,388	2,082	6,939
Classified							

Instructional Lab Tech	37,680	0.02	0.03	0.08	565	1,130	3,014
Clerical	35,050	0.02	0.03	0.08	701	1,052	2,804
Fiscal analyst	32,100	0.02	0.03	0.08	642	963	2,568
Subtotal		0.06	0.09	0.24	1908	3145	8386
Graduate							
Teaching Assistants	34,930	0.50	1.00	1.50	17,465	34,930	52,395
Subtotal		0.50	1.00	1.50	17,465	34,930	52,395
Total Personnel		0.98	1.74	3.37	45,332	76,680	160,135
					<i>↓ Insert benefits based on current benefit rates ↓</i>		
Benefits							
Faculty					7,199	10,701	27,077
Exempt					473	710	2,366
Classified					912	1,503	4,009
Graduate					2,288	4,576	6,864
Total Benefits					10,873	17,490	40,316
Link to current benefits model rates							
Goods and Services¹					5,000	5,000	5,000
Travel					1,000	1,000	1,000
Equipment (Instructional)¹					5,000	5,000	5,000
Total Direct Costs					67,205	105,171	211,451
Total Indirect Costs 35%					36,187	56,631	113,858
Total Costs					103,392	161,801	325,309
					<i>User inputs one-time costs →</i>		
One-Time Costs					2,000	0	0
					<i>Formula calculates recurring costs →</i>		
Recurring Costs					101,392	161,801	325,309
Total Costs					103,392	161,801	325,309
Calculated total cost per student AAFTE:					27,571	17,978	10,844
Calculated direct cost per student AAFTE:					17,921	11,686	7,048
Revenue							
Internal Departmental /Area Reallocation					49,490		
Enrollment Funding					28,624	68,697	228,990
New State Funds					0	0	0
WSU Allocation (Institutional reallocation)					0	0	0
Indirect Allocation (Central reallocation for support services)**					25,278	93,104	96,319
Other <WSU Vancouver Funds>							

Total Revenue	103,392	161,801	325,309
	TRUE	TRUE	TRUE
**By Year 5, tuition revenue will allow us to redirect most indirect costs to other campus areas			
<i>*Note on Year "N": Please replace the letter "N" with the year in which you expect the program to reach full enrollment.</i>			
		<i>↑ Total costs must equal total revenue↑</i>	

Section XII. External Reviews

Potential external reviewers for the Program in Human Biology at WSU include the following individuals:

Klaus Kaltoff, Professor of Molecular Cell and Developmental Biology
 Department of Molecular Cell and Developmental Biology
 University of Texas at Austin - ICMB
 1 University Station A6700
 205 W. 24th St.
 Austin, TX 78712-1095
 kkaltoff@mail.utexas.edu

Katherine Preston, Associate Director, Program in Human Biology
 Program in Human Biology
 Stanford University
 450 Serra Mall, Building 20, Room 22F
 Stanford, CA 94305-2160
 kpreston@stanford.edu

Lawrence M. Schell, Professor of Anthropology
 Department of Anthropology
 University at Albany
 Arts & Sciences Room 116
 1400 Washington Avenue
 Albany, New York 12222
 518-442-4714
 lmschell@albany.edu

Andrea Wiley, Professor of Anthropology and Director, Human Biology
 Department of Anthropology
 Indiana University
 Student Building 130
 701 E. Kirkwood Avenue
 Bloomington, IN 47405-7100
 wileya@indiana.edu

APPENDIX A

Statement from Chair of Human Development (E-mailed letter)

From: [Hill, Laura Grner](#)
To: [Duff, Andrew](#)
Subject: RE: For our call
Date: Wednesday, October 19, 2016 4:31:46 PM

Hi Andrew,

The Human Biology major sounds great, and I don't see any significant overlap or competition with our major in Human Development. Your proposed emphasis on biology, physiology, and ecology is rarely a primary interest of our majors, and although some of our courses touch on those topics, they are not a primary focus in any of our classes. I wish you luck with the proposal; it will be a good addition to the WSU undergraduate offerings.

Best wishes,
Laura

.....
Laura G. Hill
Washington State University
Professor and Chair, Human Development
Prevention Science Graduate Faculty
Johnson Tower 501
Pullman, WA 99164-4852
P: (509) 335-8478
laurahill@wsu.edu

APPENDIX B

Statement of Library Support

We are writing to state that the existing collections and services of the WSU Libraries are able to fully support the proposed Program in Human Biology as put forward by the School of Biological Sciences and the Department of Anthropology. Because the program mainly uses existing courses from the life, physical, and social sciences and the humanities (courses already supported by the libraries), any impact of the new program on WSU Libraries' collections, services and personnel should be minimal and existing personnel and services can support the program.

The focus of this program is well in keeping with areas of research and teaching in the biological sciences and in anthropology currently supported by the Libraries' collection policies (<http://www.libraries.wsu.edu/sites/default/files/cd-biological-sciences.docx>, <http://www.libraries.wsu.edu/sites/default/files/cd-anthropology.docx>). Again, because of the program's focus and emphasis on classes already being offered at WSU, existing library collections – both physical and digital – are currently able to support the program's research and teaching without additional funding.

As stated above because the program mainly uses existing courses, the impact on the WSU Vancouver Library will be minimal. Most access to journals and all access to databases needed to support this program are licensed system-wide so that Vancouver students and faculty have immediate access to the needed electronic resources. WSU and the other members of the Orbis-Cascade Alliance (NW consortium of academic libraries) have courier and electronic delivery programs in place to provide timely access to materials not owned by the Vancouver Library. The Vancouver Library has an active library liaison program and has librarians already designated to provide support in Biology and Anthropology.

Should students take WSU Online classes to fulfill program requirements in Human Biology, those students would have access to databases in the WSU Libraries collections as well as to book delivery and other library services available to all WSU Online students (for more information, see the Library Services for WSU Global Campus website, here: <http://libguides.libraries.wsu.edu/global>).

The WSU Libraries are currently well able to support the proposed BA in Human Biology, and we wish to convey our thanks and appreciation to Larry Hufford of the School of Biological Sciences and to Andrew Duff of the Department of Anthropology for their mindful consultation with the Libraries during the process of proposing this program.

Erica Carlson Nicol
Librarian for Anthropology
Holland Library 361B
Washington State University,
Pullman
509.335.8614
eacarlson@wsu.edu

Betty Galbraith
Science Librarian
Owen Science Library
509.335.7930
bettyg@wsu.edu

Karen Diller
Library Director
WSU Vancouver Library
360.546.9179
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APPENDIX C

**Letter in Support of Human Biology degree,
College of Arts and Sciences, Vancouver**



February 22, 2018

Letter of Support for the Human Biology Degree

On behalf of the College of Arts and Sciences at WSU Vancouver, I'm writing to endorse the creation of a B.A. in Human Biology on the Vancouver and Pullman campuses. As the proposal describes, this new interdisciplinary major will be unique in the Pacific Northwest and offer our students a range of employment options in the rapidly expanding and increasingly diversified health care industry. Health care is a thriving sector of the Vancouver economy, where most of our students live and work. In addition to its benefits for students, this degree is appealing from a resource standpoint because it draws almost exclusively from existing courses.

The B.A. in Human Biology is an excellent fit for the Vancouver campus. WSU Vancouver currently offers undergraduate degrees in biology and anthropology, two of the core areas of the program. Biology is among the most popular programs on campus, with almost 300 majors. The General Science degree is not offered in Vancouver, so we expect that Human Biology will provide a new and distinctive option for students interested in exploring links between the biological and social sciences. This broad-based approach will also appeal to our many pre-health students, as it is consistent with national efforts to enhance the behavioral and social science content of health education. The interdisciplinary nature of Human Biology also makes this program a good value for the campus and our students. Degrees that span several disciplines and offer multiple ways to satisfy requirements provide flexibility and choice for students, especially those who are balancing school schedules with work and/or family commitments. The program's reliance on courses that are already offered through existing campus programs enables us to enhance our curriculum and provide a new and unique degree in a cost-effective way.

In sum, CAS at WSU Vancouver fully endorses the proposal to create a B.A. in Human Biology at WSU. The proposal has the strong support of WSU Vancouver faculty in the School of Biological Sciences and the Department of Anthropology, as well as the full support of campus leadership.

Sincerely,

Amy S. Wharton
Director and Associate Dean, College of Arts and Sciences
Professor of Sociology

APPENDIX D

**Letter in Support of Human Biology Degree,
College of Arts and Sciences, Pullman**



College of
Arts and Sciences

MEMORANDUM

TO: Andrew Duff, Chair, Department of Anthropology
Patrick Carter, Director, School of Biological Sciences

FROM: Larry Hufford, Interim Dean
College of Arts and Sciences

A handwritten signature in black ink, appearing to read "Larry Hufford".

DATE: July 25, 2018

SUBJECT: Support for Interdisciplinary Degree in Human Biology

I offer my support for the proposed new degree in Human Biology. This joint effort between the Department of Anthropology and the School of Biological Sciences provides an exemplary model for collaborative, interdisciplinary efforts that will create exciting new learning and post-graduation opportunities for Washington State University students. Interdisciplinary degrees such as Human Biology have the potential to attract new students to Washington State University and to provide them with education and training for careers that will address significant challenges that lie ahead for human populations.

To further the goals of the proposed program, the College of Arts and Sciences will commit to support the degree with \$9,000 annually for three years upon degree approval. These funds may be used to support a Human Biology degree director, who will also have responsibility for coordinating program assessment, support student advising for the degree, administrative and clerical support of the degree, and travel between Pullman and Vancouver for coordinating degree implementation, course offerings, planning and assessment. If growth of the degree program warrants additional funding in the first three years, this will be granted. Following the three-year commitment, the financial needs of the program will be reassessed, and future commitments to support the degree will be contingent on the degree's success at attracting students.

Interdisciplinary collaborations, training, and degree offerings are consistent with the strategic plans of the College of Arts and Sciences and University. The College is pleased to support this endeavor to position WSU to contribute to the economic health and vitality of Washington State and to enhance opportunities for our students.