

MEMORANDUM

TO: Faculty Senate

FROM: Daniel J. Bernardo, Executive Vice President and Provost

SUBJECT: Create Bachelor of Arts in Human Biology

DATE: September 26, 2018

The attached proposal to create a Bachelor of Arts in Human Biology has been reviewed by the Provost's Office review committee. This proposal has been in development for quite some time and we have worked with the proposing units to narrow and sharpen the focus of the degree. The primary issue had been designing of a curriculum that was sufficiently unique to make the degree stand out from our existing degrees in the biological sciences and the cultural sciences.

The attached is the revised document. We are satisfied that the proposal is ready for Senate review.

Merrill, Angela Lori

From: Parks, Craig
Sent: Monday, September 24, 2018 2:57 PM
To: Duff, Andrew
Cc: Merrill, Angela Lori; Carter, Patrick Andrew
Subject: RE: BA in Human Bio proposal feedback

Received. Thanks, Andrew. Yes, we will move this along to the Senate.

Craig

From: Duff, Andrew
Sent: Monday, September 24, 2018 1:34 PM
To: Parks, Craig <parkscd@wsu.edu>
Cc: Merrill, Angela Lori <awight@wsu.edu>; Carter, Patrick Andrew <pacarter@wsu.edu>
Subject: RE: BA in Human Bio proposal feedback

Craig,

Here is a modestly revised Human Biology proposal, and apologies for delay in returning this to you. The file name notes revision with today's date.

What was altered:

Goods & Services: It appears that the footnotes in the spreadsheets were leftovers, so I removed them from both the Vancouver and Pullman fiscal tables, as they did not refer to any information. Since we no longer have any commitment to goods and services in Pullman, I simply removed the paragraph that referred to this, even though Vancouver has committed some funds in this area. An earlier iteration of the proposal and commitment from the College had included support in this area. For course investments, our respective units will work with the College directly as needed, as we do now to support our current degrees.

Assessment:

Kimberly Green suggested we rename the Human Biology Advisory Committee as the Human Biology Curriculum and Assessment Committee to more explicitly recognize their charge. I have done so and replaced the name of this in references to it in the assessment section (pages 7 & 8) and later in section IX.

I am hopeful these minor alterations suitably address input from your office (and ATL) such that you are willing to forward this for Faculty-Senate review. Please feel free to contact us if you have any additional questions or would like any clarifications or updates.

Thanks, Andrew

Andrew Duff, Ph.D., RPA
Professor & Chair
Department of Anthropology
Washington State University
Pullman, WA 99164-4910
Chair's office 509-335-3441
Research office 509-335-7828

From: Parks, Craig
Sent: Wednesday, September 12, 2018 4:17 PM
To: Duff, Andrew <duff@wsu.edu>
Cc: Merrill, Angela Lori <awight@wsu.edu>
Subject: RE: BA in Human Bio proposal feedback

Andrew, following up to see what you would like us to do with the Human Bio proposal.

Craig

From: Parks, Craig
Sent: Tuesday, September 4, 2018 11:01 AM
To: Duff, Andrew <duff@wsu.edu>
Cc: Merrill, Angela Lori <awight@wsu.edu>
Subject: BA in Human Bio proposal feedback

Andrew,

Our review committee has completed its editorial review of your revised proposal for a BA in Human Biology. Some of the reviewers had read previous drafts of the proposal, and they commend you and your team on your responsiveness to their suggestions.

I have just one, minor question for which I would like your response:

There's this statement at the bottom of page 22 – "To achieve improvements in learning environments, Vancouver will invest \$5,000 per year in Anthropology and Biology courses on the Vancouver campus by year 5; Pullman courses will also require investment, but there is no specific mechanism available to support this at present." Curious that an unfunded commitment is included in the proposal? This known expense doesn't appear in the budget as far as I can tell – however, there is a footnote indicated on page 26 by the 'Goods and Services' and 'Equipment Instructional' line items. I don't see any explanation for that footnote, so maybe they talk more about it there and it didn't get included in the pdf?

The Senate Budget Committee might pick up on this and require you to address it before they are willing to move the proposal forward. That committee's composition is largely unchanged from last year, and last year they did often scrutinize proposals as the level of detail above. I am comfortable sending the proposal forward as is, so I would like you to advise me on whether you want me to do so, or if you want to address the above first.

I have also attached a copy of comments about your assessment plan. Your plan is strong and the review committee likes it very much. The comments are merely things for you to think about as you go forward, ideas for fine-tuning once the degree is up and running.

Let me know your preference for handling the issue above, and we will go from there.

Craig

Craig D. Parks
Washington State University
Associate Vice Provost, French 436, ph. 509-335-5581
Past President, APA Division 49
parksd@wsu.edu

Merrill, Angela Lori

From: Parks, Craig
Sent: Tuesday, September 4, 2018 11:01 AM
To: Duff, Andrew
Cc: Merrill, Angela Lori
Subject: BA in Human Bio proposal feedback
Attachments: BA-HumanBiology_Interdisciplinary Degree Aug2018_kgreen (002).docx

Andrew,

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I have just one, minor question for which I would like your response:

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Craig

Craig D. Parks
Washington State University
Associate Vice Provost, French 436, ph. 509-335-5581
Past President, APA Division 49
parksd@wsu.edu

Go ask Alice. I think she'll know.

Feedback on interdisciplinary degree proposal for B.A. Human Biology: assessment of student learning 8/28/18

1. Overall, the proposal for the B.A. in Human Biology is strong in relation to assessment and could provide a model for future interdisciplinary program proposals. In particular,
 - a. The assessment plan (p. 7-8) appears to be feasible given the structure of the program, including
 - clear, assessable learning outcomes, and a curriculum map
 - direct and indirect measures of student learning, including assessment at the senior-level in a capstone course & senior portfolio course
 - a faculty committee designated for conducting assessment, analyzing assessment data, and making recommendations
 - assessment archives available to faculty on both campuses
 - b. The proposal includes structural elements useful to assessment in an interdisciplinary program, specifically
 - a director with a faculty position who reports to both department leaders, with clerical support
 - a program leader in Vancouver to coordinate with the director
 - a committee of faculty members responsible for assessment, with representation from both departments and both campuses
2. A few potential adjustments could help position the HB director and faculty to succeed with some of the additional challenges found in interdisciplinary degrees and assessment, including departmental and faculty engagement / recognition as stakeholders. (These topics are not necessarily requested in the proposal form.)
 - Awareness of capstones serving the HB majors. *Instructors and advisors should be aware that Anthro and Bio capstone courses will also be serving HB majors. Capstone instructors will need to have the HB seniors and learning outcomes in mind when they design and assess culminating student projects, and as they engage students in integrating & applying their skills for this degree. (If the new HB degree had its own prefix, the various capstone courses could be cross-listed to help with this communication.)*
 - Faculty committee for HB Curriculum and Assessment. To clearly communicate faculty oversight of the curriculum and the responsibility of the faculty committee for using assessment results to make changes related to curriculum, the HB committee could be designated as the "Human Biology Curriculum & Assessment Committee," rather than as an "advisory committee," which may suggest a more limited role. Additionally, the two departmental curriculum committees could each consider having a member designated to represent the HB curriculum, or could implement another approach that fits these departments and helps keep the HB curriculum in the mix of committee considerations.
 - Explicit leadership support. Since faculty and committee members will not report to the HB director, the SBS director of SBS and the Anthro chair will be responsible for ensuring that their faculty participate in assessment and use results to make changes to their courses, and for recognizing faculty participation in annual review. Without such leadership support and recognition, engaging faculty can become, understandably, a bottleneck to assessing and improving interdisciplinary programs.

MEMORANDUM

DATE: July 28, 2018
TO: Daniel Bernardo, Provost and Executive Vice President
Mel Netzhammer, Chancellor, WSU-Vancouver
Jeannette Mageo, Chair, Faculty Senate
FROM: Andrew Duff, Chair, Department of Anthropology
Patrick Carter, Director, School of Biological Sciences
Andrew Duff
Patrick A. Carter
Cc: Matthew Jockers, Dean, College of Arts and Sciences
Amy Wharton, Director, College of Arts and Sciences, WSU-Vancouver
SUBJECT: Submission of revised proposal for a new degree in Human Biology

We are pleased to submit our revised proposal for a new Human Biology degree, which pending approval would be offered on both the Pullman and Vancouver campuses beginning in Fall 2019. This cover letter begins with a brief review of the initial submissions of this degree proposal. We then summarize the feedback we received and how the revised Human Biology degree proposal addresses comments and concerns raised during the earlier consideration of the degree proposal.

History

Completed Notice of Intent forms for the Human Biology degree were submitted to the Dean of the College of Arts and Sciences, the Chancellor of the Vancouver Campus, and to the WSU Provost's office on October 31, 2012. We received approval to proceed from the Provost's office. The complete proposal was submitted through the Dean of the College of Arts and Sciences for formal consideration on January 25, 2013, with copies delivered to Provost's Office, to the Faculty Senate, and to the Chancellor's office in Vancouver. We received feedback on the original proposal from the following sources: the Catalog Subcommittee, Academic Affairs Committee, Faculty Senate; from Vancouver, we received feedback from the Office of Academic Affairs, the Vice Chancellor for Finance and Operations, and from the Director of the Library; and from the Provost's office, we received on October 1, 2013, a request from Vice Provost Jane Sherman to provide Provost Bernardo with information on how the BA in Human Biology would be consistent with, or might help move toward, recommendations made by a committee appointed by former Provost Bayly (see his memo of March 8, 2013, to Kim Kidwell, Bill Davis, Mano Manoranjan, and Bob Olsen) to provide a vision for delivering biology-related majors to undergraduates at WSU.

School of Biological Sciences Director Larry Hufford, Department of Anthropology Chair Andrew Duff, and faculty from both Anthropology and the School of Biological Sciences continued to refine and revise the proposal based on the feedback received. We resubmitted a revised proposal in October 2015, including a request to have the Human Biology degree approved for Fall 2016 on both the Pullman and Vancouver campuses. We received several comments on this proposal from the Provost's office review, but the proposal was not forwarded to the Faculty Senate. The next section contains the comments we received from the last review, as well as our responses to these. The proposal has been significantly modified from its October 2015 format, and was modified along the lines suggested in review. In short, the previous proposal had three degree tracks, and concerns were raised about two of these—with the Provost's office recommending that we instead proceed with just one of the degree tracks; the attached proposal includes a single degree option.

Feedback on BA Human Biology proposal as submitted October 2015
Comments received from resubmission of Human Biology proposal to Provost's Office 10/1/15 in black. Responses to feedback in red.

Recommendation from Provost's Office:

- Advance BA in Human Biology, Biology and Culture option only at this time. The proposal as currently constituted would not be successful in the Senate.
The resubmission contains only the single degree track originally titled "Biology and Culture" option. Since there is only one track associated with the degree, it is simply the Human Biology degree track. What were the second and third degree tracks have been dropped.
- The Provost's Office stands ready to assist in facilitating wider conversations about the future of the General Studies-sciences degree in relation to Options 2 and 3. Feedback made clear that there is strong support for certain aspects of the GenSts degree and that stakeholders want to make sure that those aspects are preserved in a new degree.
As we have removed options 2 and 3, the current resubmission does not contain options considered in competition with the General Studies-Science degree.
- If advancing the one track only at this time is acceptable, the Provost's Office will assist in editing the proposal for faster submission to the Senate.
We look forward to the assistance of the Provost's office in seeing prompt submission of our proposal to the Faculty-Senate for review.

Budget Questions:

Questions on the 'people costs' in the Pullman budget (Table 12 pages 36-38):

1. The memo of endorsement from the Dean (page 4 of the packet) indicates support for 2 new faculty positions, however the budget shows a total of four new faculty, two in each discipline (Anthro & SBS)
 - a. The Associate / Professor new hires (SBS & Anthro) in Year 2 do not include any costs for Year 2?
 - b. The SBS Assistant Professor new hire in Year 3 shows costs in all three columns, including Year 1 and Year 2--?

The current proposal contains no commitment for future hires linked to the degree. The positions in the original submission, completed when the College was in a better fiscal state, included a College commitment to two hires, each of which were envisioned as joint-hires who would be appointed in both Anthropology and the School of Biological Sciences (hence costs were split across both units).

2. The Dean's memo also commits funds for an academic advisor. It wasn't apparent that this new position was included in the budget.

Included in finance tables (Table 8) under Classified Staff listings and in Table 7 listing support staff associated with the degree. The College of Arts and Sciences has committed to supporting advising for the Human Biology degree on both campuses.

3. This degree does not appear to have any budget beyond salaries. Does that mean this degree program cannot have any other expenses, e.g.,

- Costs associated with assessment, such as a measure or a training, etc., or faculty professional development, or other costs
- Can the program have an annual or bi-annual faculty retreat to discuss curriculum, assessment, etc?
- Can the director travel to Vancouver, which anticipates growth in this degree?

Include sources of operating support in budget.

Both the Vancouver and Pullman budgets commit resources for "travel," and degree support and administration, including a degree program director. These are designed to facilitate regular face-to-face meetings and active collaboration between Human Biology faculty across the campuses for regular meetings about assessment, curriculum, scheduling, and other topics, as well as to directly support additional needs linked to the degree. An initial, modest commitment by CAS (in Pullman) can be supplemented in the first three years "If growth of the degree program warrants additional funding." Additionally, the budgets for both Pullman and Vancouver include listings for support personnel ranging from academic coordinator to office assistance. Please refer to Table 7 for support staff listings by title, and Tables 8 and 9 for campus-specific budgets that include these positions.

Summary of general comments:

- Reviewers perceived that the new degree duplicates the existing General Studies degree, which is viewed as a successful degree needed for various student groups.

We believe that following the Provost's Office recommendation to limit this to the single degree-track eliminates any duplication.

- Rigor of the health tracks compared to BS GenSts or BMS not persuasive to internal audiences, e.g.:

Why is this a Bachelor of Arts degree? A BA with a "robust science curriculum," which the Professional option advertises and the Health Science option has, seems contradictory. I would think we would want our majors who intend to go into a health professional degree program to apply with a BS.

The BA is not a more rigorous program than the general studies BS and students currently take a program in the General Studies degree that is specifically designed to meet their interests and needs.

The “health-track” options were removed from the proposal for the Human Biology degree, though the choice afforded students in the Human Biology degree also permits students to have a student-designed degree within the parameters defined by degree course options.

- Less efficient off-ramp for some majors than current General Studies degree—will take an additional semester or more to graduate.

The revised Human Biology coursework is designed as a stand-alone degree for those interested in its content and training, while those seeking an “off-ramp” continue to have the General Studies degree as an option.

- Curriculum offers too many choices. The impact is that that no two degrees are exactly alike as each student makes individual choices from the long lists of alternatives. The number of possible combinations would be very large, calling into question the coherence promised by giving it a name “human biology.” Recommend they put stricter limits on what they want students to take. Otherwise it is in fact general studies.

In revision, eliminating two of the tracks reduces this concern considerably. Additionally, we have significantly reduced the course options in the current degree “track” in response to this concern, though enough remain to preserve the element of student choice.

- Significant concern that General Studies degrees are being phased out, and that approval of the BA degree implies approval of such a move.

The revised Human Biology degree including only one track serves as a valuable degree choice for those it is designed to serve and who find it of interest. Its approval is unrelated to General Studies degrees.

- Process issue: no consultation with impacted departments in CAHNRS and Vet Med. Some courses outside CAS will be highly impacted by growth of this degree; budgetary needs in other areas should be addressed.

As revised, the current Human Biology degree with its single track primarily features courses from units within the College of Arts and Sciences, and especially within Anthropology and Biology—the two units administering the degree, with limited impact to courses outside of the College.

Human Biology Major, Professional Option

This option was removed from the proposal for the Human Biology degree

Reviewer comment:

“This degree is not that different from the General Studies – biological sciences degree. They have added core Anth courses which otherwise do not exist in the General Studies degree as a requirement, and they have appropriately added statistics. There are

some additional requirements (psych courses and an additional semester of physics). Otherwise, they have a long list of courses that students can choose from in various categories. The rationale for the long list of courses and the various categories is not really apparent. Choose 12 credits from a list of 30+ courses (Professional option) vs choose from approved biological science courses (General Studies degree) seems to be a very small difference from what already exists.

Notably, in the long list of course choices in the professional option, they no longer allow biological science courses from CAHNRS (which were allowed in the General Studies degree), and they have limited the choice of MBioS and neuroscience courses to the absolute minimum (not limited in the General Studies degree). Why are biology course like general ecology and principles of animal development approved courses but CAHNRS courses like animal growth and development and physiology of reproduction? The long list of course choices is also deceiving. If you select Soc 342, you must first take Soc 101, which surprisingly is not on the list.”

We did however remove courses from outside of Anthropology and Biology that had pre-requisites from the suite of options unless those prerequisites were also part of the degree.

Professional Option and Health Sciences Option:

This option was removed from the proposal for the Human Biology degree

Reviewer comments:

“These two options are specifically targeted to students interested in the health care professions. There is no best major for students entering most health care professions, and implying otherwise with degree options is a disservice to the students. Even more important, because students do not fully understand their choices, students think the university is directing them to the “best choices” and for many reason that choice may be very wrong for them. What this all means is that degree options like this “professional” and “pre-health” degree option are often more detrimental than helpful to student success. Students are set up to believe they should choose a major. The choice they feel directed to may result in low GPAs or a collection of classes that are not what they need for their goals. This can prevent students from becoming competitive candidates for the professional programs they seek.”

Specific comments from Animal Sciences faculty:

- The core curriculum requirements, and even the option requirements, are somewhat soft on science and may not prepare students for vet school as well as other majors. Even within the Professional option, courses like biochemistry, cell biology and immunology are listed as options among MANY others.
- We noted that AS has only one course listed in any of the options, while MBIOS has many. We also have several courses that would be of interested to Human Biology majors (AS285, AS314, AS350/351, AS440, AS488, AS485), especially those students who may get turned on to vet school as sophomores and juniors.

Assessment

Strengths:

The assessment plan (p. 9-10) appears to be feasible given the structure of the program, specifically including

- clear, assessable learning outcomes

- a plan and faculty designated for conducting assessment and analyzing assessment data
- provision for assessment archives available to faculty on both campuses

We concur (appears on pages 7-8 of revised proposal).

The proposal includes structural elements (p. 30) useful in facilitating assessment in an interdisciplinary program, specifically

- a director with a faculty position who reports to both department leaders
- a program leader in Vancouver to coordinate with the director
- a committee of faculty members responsible for assessment, with representation from both departments and both campuses
- clerical support

We agree and note that this reviewer point recognizes the cross-campus strengths, and the inclusion of budget items to implement the degree, its assessment, and its success (appears on pages 18-19 of revised proposal).

Weaknesses:

The proposed senior portfolio course seems to stop short of synthesis of learning in this major (cf. accreditation requirements for “a coherent design with appropriate depth, breadth, sequencing of courses, and synthesis of learning”). While self-assessment in the portfolio can be an important reflective, indirect measure, it appears not to be a synthesis of learning and demonstrated mastery; papers from a variety of courses that are not focused on this unique major are unlikely to show mastery at a capstone level of mastery unless the syllabi in those courses are adjusted so that HB majors do a different assignment in recognition of their different major and faculty are teaching in a way that asks for synthesis and senior-level mastery. Given the complexity of the curriculum and the many options, this is difficult to envision.

We have revised the assessment plan, and it no longer includes having the senior portfolio with work potentially derived from several different courses. The plan still includes a component of self-assessment by majors of their capabilities on specific learning outcomes gathered through an electronic exit-interview, but work demonstrating mastery will be directly assessed from Human Biology majors' work in their Capstone requirement courses, with assessed materials submitted directly to the Human Biology assessment committee.

Implementation issues:

- How can a major not have any courses of its own?
The new interdisciplinary degree will not have even one class it controls as a degree-specific course. At some point, does a degree need at least one or two classes, one near entry or midpoint, and one near exit/capstone? How are students making sense of this curriculum? Does a degree need a class with its designation and faculty who identify with that degree? Where is faculty ownership?

The degree, jointly supervised by the Department Anthropology and School of Biological Sciences, has several required courses controlled by its faculty, and a number of modules where the bulk of the options originate from these two units, if not from them exclusively. We also anticipate that a large number of the degree majors will also take courses from each unit across the progression of the degree, in the electives segment for example (where 25 of the 34 options are from

Anthropology or Biology), in addition to their capstone course. Students will make sense of the curriculum through their advisor and faculty mentor, with their mentors drawn from the faculty of the two supervisory units, aligned with the stated interests and emphasis of the degree-seeking students.

- How can an interdisciplinary program make adjustments to courses in its curriculum, when it does not control the courses for the degree?

Although there is an interesting plan for using direct measures of student competence in Anthropology and Biology lower-division core courses, it is unclear how adjustments to the courses can happen, given that the courses are owned by three different departments with separate curriculum and assessment committees. What is the working arrangement for altering courses that serve multiple degrees?

The degree is overseen jointly by the Department of Anthropology and the School of Biological Sciences, with a well-defined structure for management and regular assessment of the degree, and with the bulk of the courses offered coming from these two units—including six of the nine requirements and all of the degree Capstones. Additionally, the degree requires that Human Biology majors take a minimum of 20 credits from each Anthropology and Biology; it is likely that most majors will take more than this minimum from each unit. The ability to make adjustments to the curriculum is within the control of the two departments overseeing the degree. The Human Biology Advisory Committee will also address these issues.

17-012



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 Biological Sciences and Anthropology** 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)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Classroom | <input checked="" type="checkbox"/> WHETS or Video-conferencing System |
| <input checked="" type="checkbox"/> Pullman | <input type="checkbox"/> On-line |
| <input checked="" type="checkbox"/> Vancouver | <input type="checkbox"/> Videotape |
| <input type="checkbox"/> Tri-Cities | <input type="checkbox"/> Flexible Enrollment (with e-mail) |
| <input type="checkbox"/> Spokane | <input type="checkbox"/> Correspondence (Paper only) |
| <input type="checkbox"/> Spokane - ICN | <input type="checkbox"/> Other (please describe) _____ |
| <input type="checkbox"/> WSU Learning Centers at: _____ | |

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 (Attachments 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 1). 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, 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, 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.

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 1.75-2.40% between now and 2023. 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. A BA in Human Biology will provide an important avenue to the knowledge base and skills that are essential for these jobs in health care. 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 in health-related fields.

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, and 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, 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.

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 seeking a firmer grounding in the sciences from Anthropology.

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, although 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. 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.

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 3) outlines the skill level development projected for the core, writing in the major, and capstone courses. Table 3 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 1). Our curriculum integrates across biological and social science knowledge domains during each year of study (Table 2).

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 1, 2) 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.

Table 1. Curriculum for the Human Biology Major

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
<u>CAPSTONE: 3 credits from the following</u>				
ANTH	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
<u>Science and Society: 3 credits from the following²</u>				
ANTH	309	Cultural Ecology	[SSCI]	3
BIOLOGY	330	Principles of Conservation		3
ENVR_ SCI	402	Human Health & the Environment		3

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

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.

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
<u>Genetics and Evolution: 6 credits from the following²</u>				
ANTH	302	Childhood and Culture	[SSCI]	3
	463	Introduction to Anthropological Demography and Epidemiology (title change submitted 6/2018)		3
	465	Human Evolution		3
	469	Genes, Culture and Human Diversity		3
BIOLOGY	335	Genome Biology	[M]	3
	395	Evolutionary Medicine		3
	OR			
	403	Evolutionary Biology		3
	OR			
	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
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 2. Four-year plan for the Human Biology Major

First Year	
First Term	Hours
BIOLOGY 106 [BSCI]	4
CHEM 101 or 105 [PSCI]	4
Written Communication [WRTG]	3
HISTORY 105 [ROOT]	3
Second Term	Hours
BIOLOGY 107	4
CHEM 102 or 106	4
ANTH 203 [DIVR]	3
STAT 212 [QUAN]	4
Second Year	
First Term	Hours
ANTH 260	4
Communication OR Written Communication [COMM][WRTG]	3
Creative and Professional Arts [ARTS]	3
Social Sciences [SSCI]	3
Elective ^{1,9}	3
Second Term	Hours
BIOLOGY 301	4
[SSCI], [HUM], OR [ARTS] CAS additional requirement ⁶	3
Science and Society Requirement ²	3
Human Behavior Requirement ³	3
Electives ^{1,9}	3
Complete Writing Portfolio	
Third Year	
First Term	Hours
Genetics and Evolution Requirement ⁴	3
Humanities [HUM]	3
Human Behavior Requirement ³	3

Electives ^{1,9}	6
Second Term	Hours
Genetics and Evolution Requirement ⁴	3
Electives ^{1,9} and/or Foreign Language	7-8
Electives	2-6
[M] Course ⁷	3-4
Fourth Year	
First Term	Hours
Human Cultural Diversity Requirement ⁵	3
[M] Course ⁷	4
Electives ^{1,9}	4
Integrative Capstone [CAPS] ⁸	4
Second Term	Hours
Electives ^{1,9} or Electives	13
<p>¹Electives include: ANTH 301, 303, 304, 305, 330, 331, 340, 380, 404, 405, 495, 498, 499; BIOLOGY 251 or 353, 315, 321, 333, 340, 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 above that <i>were not</i> taken to satisfy the requirement in those areas.</p> <p>²Science and Society Requirements include: ANTH 309; BIOLOGY 330; ENVR_SCI 402, 444; GEOL 390; PHIL 350, 365, 370; SOC 331, 332.</p> <p>³Human Behavior Requirements include: ANTH 268, 381; BIOLOGY 307, 438; PSYCH 230, 321, 324, 372.</p> <p>⁴Genetics and Evolution Requirements include: ANTH 302, 463, 465, 469; BIOLOGY 335; 395 OR 403 OR 405; MBIOS 423.</p> <p>⁵Human Cultural Diversity Requirements include: ANTH 201, 307, 316, 320, or 327.</p> <p>⁶An additional [SSCI], [ARTS], or [HUM] course is required by the CAS.</p> <p>⁷ [M] Courses must be chosen from either ANTH or BIOLOGY.</p> <p>⁸ [CAPS] course must be chosen from either ANTH or BIOLOGY.</p> <p>⁹A maximum of 4 credits of coursework that are graded S, F (491, 495, 499) may be used toward fulfilling departmental or program option requirements.</p>	

Table 3. 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	Biology 493		
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	Senior Portfolio	Anth 340, 473, 490; Biology 321, 335, 372, 438, 473	Anth 473, 490; Biology 401, 408, 411, 473, 483
Student Learning Outcomes									
Attain synthetic knowledge	B	D/A	B	B		D	M/A	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	M/A	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	M/A	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	M/A	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	M/A	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 4) 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 4), 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 24 semester credit hours with a minimum 2.0 GPA).

Table 4. 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 4) 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 2).

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. 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.

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. Funds will need to be provided to support the work of a part-time academic coordinator to accomplish these tasks. 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 increasing the appointment of 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.

B) Faculty

The faculty of the program will consist of all tenure track and clinical faculty of the Department of Anthropology (Table 5) and the School of Biological Sciences (Table 6). 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 7).

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%
Tushingam, 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 6. 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 7. 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>			
College of Arts and Sciences			
<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 filled Biology 106 to capacity in the one lecture section of the course that is offered in fall and spring semesters (summer session continues to have enrollment capacity). To better facilitate enrollment in Biology 106 to meet needs of recent enrollment increases and also the addition of Human Biology, we recommend that an additional lecture section of the course be taught each fall semester in Pullman. 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 5-7 may need to be redistributed to other faculty and staff. This change would likely 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 8 for Pullman and Table 9 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% [$8980 \cdot .85$] = \$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 7/28/2018

		1st	2nd	5th	1st	2nd	5th
		FTE	FTE	FTE	Academic	Academic	Academic
		Year	Year	Year	Year	Year	Year
Total Student HDC					8	17	50
Total Student AAFTE					8	17	50
↑Enrollment values linked to Table 1↑							
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	640	1,822
Subtotal		0.10	0.16	0.56	4,478	6,755	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	144,341	232,625
					<i>↓Insert benefits based on current benefit rates↓</i>		
Benefits							
Faculty					29,268	29,268	29,268
Exempt					789	943	1,249
Classified					2,140	3,229	11,606
Graduate					2,288	4,576	13,727

Total Benefits			34,486	38,015	55,851
Link to current benefits model rates					
Goods and Services			0	0	0
Travel			1,500	1,500	4,000
Equipment (Instructional)			0	0	0
Total Direct Costs			160,134	183,856	292,476
Total Indirect Costs	35%		86,226	98,999	157,487
Total Costs			246,360	282,856	449,963
<i>One-Time Costs</i>		<i>User inputs one-time costs→</i>	0	0	0
<i>Recurring Costs</i>		<i>Formula calculates recurring costs→</i>	246,360	282,856	449,963
<i>Total Costs</i>			246,360	282,856	449,963
Calculated total cost per student AAFTE:			30,795	16,639	8,999
Calculated direct cost per student AAFTE:			20,017	10,815	5,850
Revenue					
Internal Departmental /Area Reallocation			130,134	120,106	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	98,999	157,487
<i>Other <></i>			0	0	0
Total Revenue			246,360	282,856	449,963
			TRUE	TRUE	TRUE
			↑Total costs must equal total revenue↑		
*Note on Year "N": Please replace the letter "N" with the year in which you expect the program to reach full enrollment.					

Table 9. Vancouver Financial Data
Human Biology WSU Vancouver 7/28/2018

		1st	2nd	5th	1st	2nd	5th
		FTE	FTE	FTE	Academi c Year	Academi c Year	Academi c Year
Total Student HDC					5	12	40
Total Student AAFTE					3.75	9	30
					↑Enrollment values linked to Table 1↑		
Personnel	Annual						
Faculty	rate	↓Insert employee FTE by job title↓			↓Insert annual salaries by job title↓		
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
<u>Graduate</u>							
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 Services					5,000	5,000	5,000
Travel					1,000	1,000	1,000
Equipment (Instructional)					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
One-Time Costs					2,000	0	0
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
<i>Other <WSU Vancouver Funds></i>							
Total Revenue					103,392	161,801	325,309

****By Year 5, tuition revenue will allow us to redirect most indirect costs to other campus areas**

**Note on Year "N": Please replace the letter "N" with the year in which you expect the program to reach full enrollment.*

TRUE TRUE TRUE
↑Total costs must equal total revenue↑

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
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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 Griner
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

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Professor and Chair, Human Development
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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.

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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.

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 [QUAN]	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

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Foreign Language⁷, if needed and/or Major Electives^{1,2} 6

Second Term **Hours**

Foreign Language⁷, if needed, and/or Major Electives^{1,2} 9

Genetics and Evolution Requirement⁶ 3

Writing in the Major [M] course⁸ 2-4

Fourth Year

First Term **Hours**

Major Electives^{1,2} 7

Human Cultural Diversity Requirement⁹ 3

Integrative Capstone Course [CAPS]¹⁰ 3 or 4

Writing in the Major [M] course⁸ 2-4

Second Term **Hours**

Major Electives^{1,2} and/or Electives¹¹ 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, 491, 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 (ANTH 498, 499; BIOLOGY 491, 495, 499) may be used toward fulfilling Major Electives.

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 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 464, 473 [M], 490 [M], BIOLOGY 401, 408, 473 [M], 483 [M].

¹¹ Electives must include sufficient 300-400 level coursework to meet the University requirement of 40 upper division credits.