

MEMORANDUM

TO: Matt Hudelson, Executive Secretary
Faculty Senate

FROM: Becky Bitter, Registrar's Office

FOR: Academic Affairs Committee

DATE: February 15, 2023

SUBJECT: Follow Up on the Proposal to Establish the BS in Pharmaceutical and Medical Sciences

Prompted by discussion of the proposal to establish the BS in Pharmaceutical and Medical Sciences at the Faculty Senate meeting of January 19, 2023, the Academic Affairs Committee requested additional information and comments from CVM, CAS, and CPPS.

On February 14, 2023, AAC discussed the documents and acknowledged the following:


- While there were conversations between the stakeholders beginning as early as 2020, the correspondence from stakeholders indicates that there wasn't enough contact to resolve concerns.
- As the comments from CVM, CAS, and CPPS show, there is disagreement about the extent to which this new degree would siphon Pullman students to Spokane (thus negatively affecting Pullman programs in SMB and SBS).
- Looking at data showing the number of students who transfer from the Spokane area to Pullman in these majors, AAC understands that the number is roughly 3-11 per year.
- Course overlap can be difficult to evaluate when the approach to teaching content has a different lens (e.g., MATH 140 and 171 both teach calculus but one focuses on life sciences and the other on engineering and the physical sciences). AAC heard that the courses in the proposed degree would focus on human health and drug related topics.

AAC recommends that the concerned academic unit administrators convene as soon as possible in order to resolve their differences as it relates to this proposal, in keeping with goals and operating principles of OneWSU.



MEMORANDUM

TO: Faculty Senate

FROM: Elizabeth S. Chilton, Provost and Executive Vice President 

SUBJECT: Create a Bachelor of Science in Pharmaceutical and Medical Sciences

DATE: October 25, 2022

The attached proposal to create a Bachelor of Science in Pharmaceutical and Medical Sciences degree has been reviewed by the Provost's Office. We support the proposal.

Please note, the proposal is a collaborative effort between the College of Pharmacy and Pharmaceutical Sciences (CPPS) and the Elson S. Floyd College of Medicine (ESFCOM). It is exceedingly rare in the United States for an undergraduate student to be able to take courses in any discipline of pharmaceutical sciences (pharmacology, medicinal chemistry, pharmaceuticals). There is a single program on the West Coast (UC Irvine) and a smattering of programs on the East Coast that provide undergraduate education in pharmaceutical sciences. However, we know of no other program in the country that is similar to the program proposed herein, which will provide undergraduate education in both the pharmaceutical and medical sciences. CPPS and ESFCOM are excited about the potential to create a unique and highly reputable program in this area.

We judge the proposal ready for the Senate review process.

PROPOSAL TO OFFER A NEW DEGREE PROGRAM OR EXTEND AN EXISTING DEGREE TO GLOBAL CAMPUS

Degree Title:	Pharmaceutical and Medical Sciences
Academic Program:	BS
Academic Plan:	
Number of Credits:	122
Department(s) or Program(s):	
College(s):	Colleges of Pharmacy & Pharmaceutical Sciences; Elson S. Floyd College of Medicine
Campus(es):	Spokane
Method of Instructional Delivery:	In-person

Contact Name:	Kathryn E. Meier, PhD	Email Address:	kmeier@wsu.edu
Contact Phone:	509-358-7631	*Proposed start date:	Fall 2023

***Proposed Start Date:** Approval must be received from the Northwest Commission on Colleges and Universities before the program may be advertised or recruited for. Financial aid may not be available until the program has been approved by the Department of Education subsequent to NWCCU approval.

SIGNATURES: The names typed below certify that the relevant academic and campus officials have reviewed and approved this proposal:

Chair Signature:		Date:	09-23-22
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Dean Signature:		Date:	09-21-22
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VP Global Campus		Date:	
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→ Submit to the Provost's Office at provost.deg.changes@wsu.edu

Everett Chancellor		Date:	
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Spokane Chancellor		Date:	9-27-22
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Tri-Cities VCAA		Date:	
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Vancouver VCAA		Date:	
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Provost Office:		Date:	
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Comments:			
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For Registrar's Office Use Only:					
Current CIP Code:		New CIP Code:		Date:	

Send completed form in Word format to: provost.deg.changes@wsu.edu

This template asks you to answer the array of questions about your proposed program that are important to your department, your college, the Faculty Senate, the State of Washington, accreditors and other external stakeholders.

By placing all proposals in a similar format, this template provides a common standard for comparison, ensuring that all potential programs can be evaluated in an equitable fashion. It can be used to determine whether or not a program is feasible within the university's academic and financial situation, and if it will have the resources to further the University's objective of providing high quality education and scholarship.

This template is also a framework to think about the viability of your ideas. It can thus be a tool for strengthening both your proposal and the resulting program itself, since a program that is starved for either students or resources from its inception is not likely to become a high quality program.

Here are some of the things to consider as you complete the template:

What are the aspirations for the reputation of this program – local, regional, national? What will it take to make that a reality?

Who are you trying to attract with this new program? Will it bring new students to the university, better meet the needs of current students in the department, or draw students away from other departments?

How strong is the demand for education of this kind, and in what specific careers will someone who receives such an education find meaningful employment?

How many students do you need to attract to break even, and can both the market and WSU's capacity support this number?

Providing good answers to hard questions maximizes the likelihood that a new program will not just win acceptance by the Faculty Senate and administration, but will ultimately be successful in attracting students and placing graduates. The analyses in the Demand, Financial and Library workbooks will assist you in creating a persuasive proposal. The findings in each area, and their basis or justification, should be summarized in the proposal itself.

Proposal

Mission and Core Themes (Strategic Goals):

This proposal is a collaborative effort between two WSU colleges: the College of Pharmacy and Pharmaceutical Sciences and the Elson S. Floyd College of Medicine. It is exceedingly rare in this country for an undergraduate student to be able to take courses in any discipline of pharmaceutical sciences (pharmacology, medicinal chemistry, pharmaceuticals). There is a single program on the West coast (UC Irvine) and a smattering of programs on the East coast that provide undergraduate education in the pharmaceutical sciences. However, we know of no other program in the country that is similar to the program proposed herein, which will provide undergraduate education in both the pharmaceutical and medical sciences. We believe that we can create a highly reputable program in this area with existing faculty in both colleges plus one new career-track faculty in ESFCOM and one staff to provide academic support of the program.

We had five objectives in mind for creating a new undergraduate program in pharmaceutical and medical sciences: (1) to provide a springboard for highly trained students to enter health profession schools and (2) our combined graduate program, (3) to bring new students into the WSU system, (4), to serve as a catalyst for workforce development for the growing biotech sector in Spokane County and (5) to provide a pathway for place-bound graduates of Community Colleges of Spokane (CCS) to continue their education in a public, 4-year R1 institution without leaving home. The latter two points will allow us to serve our immediate community of Spokane County and the northeastern region of the state directly, while points 1-3 will provide direct benefit to the Spokane campus and WSU system. Our target demographic for this program is comprised of graduates of CCS who have received an AA/AS degree. At present, the CCS system graduates well over 1,000 such students per year.

The COVID-19 pandemic has stressed every component of our healthcare system and revealed a shortage of primary care providers (physicians, nurses, and pharmacists), particularly in rural areas of the state. Similarly, the biotech sector in Spokane has been rapidly hiring more entry-level employees for contract production of biologics (vaccines and therapeutic monoclonal antibodies) and for manufacturing and performing diagnostic testing. We will not be able to stand up our program in time to address personnel needs for the current pandemic, but we will play a role in avoiding shortages of trained professionals for future pandemics, as well as routine delivery of healthcare in the state.

We project that the program will become revenue positive in year 3 (once we have reached 100 students in the program); this will be the second year of accepting students into the program. This assumes a cohort of 50 students per academic year in years 3 and 4 of the program. If we attract fewer than 50 students per year this timeframe will obviously be extended. We have a reasonably firm cap of 50 students due to the unavailability of large classroom space on the Spokane campus. However, we will certainly consider curricular delivery via Global Campus if demand for the program exceeds classroom space on the Spokane campus.

The proposed program will enhance the experience of undergraduate students by providing opportunities for experiential learning and strengthening collaborations with industry partners, provide graduates who will serve the public in the areas of healthcare and pharmaceutical biotechnology in a manner consistent with the mission of a land-grant University. As such, this program directly addresses goals 2 (student experience), and 3 (outreach, extension, service, and engagement) of both the WSU and CPPS strategic plans (2020-2025).

Overview:

The proposed degree program represents a collaboration between the College of Pharmacy and Pharmaceutical Sciences (CPPS) and the Elson S. Floyd College of Medicine (ESFCOM). Courses will be offered by both colleges, utilizing their respective faculty. The curriculum is designed to prepare students for the following post-graduate degree paths: PharmD, MD, or PhD. The new degree program fulfills prerequisites for all three types of programs, as offered at WSU and at most other institutions. There is a “research track” that provides introductory research experience for students intending to apply to PhD programs. There is also a “PharmD track” that allows students to apply to the WSU PharmD program during their junior year, completing their BS electives while in pharmacy school if admitted. The program includes appropriate basic science coursework, but also has an emphasis on career development and critical discussions of current topics in the biomedical sciences. The program was developed to address the lack of such a degree program in the Spokane area, to serve the needs of local students who wish to matriculate into professional or doctoral programs on the WSU Health Sciences campus. Graduates may also consider applying to other allied health professional programs. Beyond the Spokane area, there are no similar programs in central Washington state or in states to the immediate east. In particular, there are no nearby programs that offer equivalent research experience as part of a pre-health BS degree.

Mission:

Washington State University is a public land-grant research university that is committed to the principles of practical education for all, scholarly inquiry that benefits society, and the sharing of expertise to positively impact the state and communities.

- *WSU’s educational mission is to help students become more informed, aware, engaged, and creative—a process through which the University’s graduates achieve upward social mobility. WSU strives to make its expertise available to anyone who seeks to benefit from it, regardless of where they live, where they come from, what they believe, or what their life experiences have been.*

The proposed degree program is intended to be a route for students who are place-bound, either for the first two years of their undergraduate education (various locations) or for all four years (Spokane) to receive the education needed to apply to professional degree programs in pharmacy, medicine, nursing, or allied health fields, or to apply for doctoral training in the biomedical sciences. All of these programs provide upward social mobility. In addition, members of the Industry Advisory Board for our college have expressed interest in the program because the BS graduates will be uniquely well-trained to enter jobs in the pharmaceutical sector immediately following graduation. The program is designed so that the courses needed for the freshman and sophomore years can be completed at a community college (e.g., Community Colleges of Spokane). The Spokane urban campus is already home to a diverse student body, with the support infrastructure needed to ensure the success of students from all backgrounds.

- *WSU’s scholarly mission is directed toward the betterment of human existence through the uncovering of new information, the discovery of how to use that information to solve problems, and the creative expression of human experience. The University especially seeks to address issues that impact Washingtonians, and the institution works with residents, commerce, and lawmakers to identify those issues.*

The proposed degree program is designed to train students for doctoral study or for professional training. It therefore incorporates courses in which students gain experience in analyzing the biomedical literature, discuss the ethical considerations for both research and clinical practice, and examine current challenges and controversies in pharmacy and medicine. These issues impact health care and economic development in the State of Washington.

- *WSU’s outreach mission is to serve the needs of Washingtonians by sharing its expertise and helping residents integrate that knowledge into their daily lives.*

The proposed degree program shares the expertise of accomplished faculty in the CPPS and ESFCOM with diverse undergraduate students. It is likely that these students will engage in outreach activities as they work to prepare strong applications for graduate and professional schools. The WSU Health Sciences campus in Spokane offers abundant opportunities for such activities, which are pursued by professional and doctoral degree students at this time. These activities are coordinated by the Office of Student Affairs on the Spokane campus, and are encouraged by a strong presence of the student organization ASWSUHS. It is anticipated that new outreach opportunities will emerge once the new BS program is in place, and that the establishment of new student organizations addressing the needs and interests of the undergraduate students will ensue. The students are likely to seek out leadership opportunities, incentivizing the development of these organizations.

Educational Offerings:

Describe the degree program, including the total number of credits required. Provide the four-year degree plan (undergraduate) or appropriate plan of study (graduate and professional). Please note that all courses for the degree must be approved before the degree will be reviewed by the Catalog Subcommittee.

This undergraduate program is designed for four years, with two years of prerequisite coursework followed by two years in Spokane. The total number of credits is 120.. The courses to be offered in Spokane are new, and are being submitted for consideration concomitantly with this proposal. The four-year degree plan is presented on the following three pages.

The proposal includes a “three-plus-four” year option for students who apply for the PharmD program at WSU in their sophomore year. If accepted, they will complete their junior year in the proposed BS program with a somewhat different course schedule. They will then complete their electives for the BS while in the first year of the PharmD program, using PharmD course offerings to meet the remaining elective requirements. Students in the 3 + 4 program leading to pharmacy school will accumulate a debt burden that is approximately \$12,000 lower than students in a standard 4+ 4 program, reflecting the cost of one year of tuition. In addition, the entire university experience for 3 + 4 students will be seven years, rather than eight years for 4 + 4 students. This will allow 3 + 4 students to begin earning a pharmacist salary (starting at \$120-135K) one year earlier than 4 + 4 students. Thus, the overall positive delta for 3 + 4 students will be \$132-147K, relative to a 4 + 4 student, at the end of year 8 after entering higher education. This is an important consideration because the average student debt burden of our Doctor of Pharmacy graduates is \$132K and climbing.

Provide descriptive information regarding (the) method(s) of instructional delivery (percent face-to-face, hybrid, distance, and/or competency-based).

The program is designed to be delivered 100% face-to-face. Some of the courses involve discussions and student presentations. We will use graded, rather than competency-based assessment, in this program.

**Program of Study for Proposed
BS in Pharmaceutical and Medical Sciences**

Rationale: The proposed Jr/Sr year program will prepare students for professional degree programs in Spokane, as well as for graduate school. It is anticipated that most of the students will matriculate into the program from community colleges and other universities in the Spokane area, even though the requirements for the first two years are (as required) for WSU courses offered in Pullman.

	<u>Credits</u>	<u>Course</u>
Freshman year:		
English I [WRTG]	3	Various; ENG 101
Chemistry I (with lab)	4	CHEM 105
Biology I [BSCI]	4	BIOL 106
Calculus [QUANT]	<u>4</u>	MATH 140
	15	
Statistics	4	STAT 212
Biology II (with lab)	4	BIOL 107
Chemistry II (with lab)	4	CHEM 106
[ROOTS]	3	Various
[SSCI]	<u>3</u>	Recom.
	18	
Sophomore year:		
Organic chemistry I (with lab)	4	CHEM 345
General physics [PSCI]	3	PHYSICS 101
General physics lab	1	PHYSICS 111
[HUM]	3	Various
[ARTS]	<u>3</u>	Various
	14	
Organic chemistry II (with lab)	4	CHEM 348
Human anatomy (with lab)	4	BIOL 315
Advanced human physiology	4	BIOL 353
[DIVR]	<u>3</u>	Various
	15	
Total for freshman/sophomore years = 62 credits		

“Traditional” BS degree plan

	Credits	Course
Junior year:		
Pharmacology: the science of drug action	3	PharMedS 301
Introduction to medical biochemistry	3	TMP 350
Careers: pathways in biomedicine [M]	3	PharMedS 313
Ethics: conduct and career development	3	PharMedS 323
Elective	<u>3</u>	(chosen from CPPS undergrad electives)
	15	
Biomedical literature: communicating science [COMM]	4	PharMedS 315
Pharmaceutics: delivering the treatment	3	PharMedS 320
Medicinal chemistry: developing new drugs	3	PharMedS 322
Molecular methods: biomedical techniques	<u>3</u>	PharMedS 330
	13	
Senior year		
Genomics: frontiers in human genetics	3	PharMedS 401
Human pathophysiology	3	TMP 414
Health care systems: tackling human health	3	PharMedS 415
Scientific communication: writing and speaking [M]	3	PharMedS 421
Research experience I*	<u>3</u>	PharMedS 499
<i>or</i> Elective		(chosen from CPPS undergrad electives or other approved WSU courses)
	15	
Human clinical neuropathology	3	TMP 424
Medical Microbiology: Bugs and Drugs	3	PharMedS 425
Senior seminar: capstone experience [CAPS]	3	PharMedS 490
Selective	3	(chosen from courses at WSU Spokane)
Research experience II*	<u>3</u>	PharMedS 499
<i>or</i> Elective		(chosen from CPPS undergrad electives or other approved WSU electives)
	15	
Total junior/senior credits = 58 credits		
Complete curriculum = 120 credits		
Electives:		
Toxicology: Assessing drug side effects	3	PharMedS 444
Cancer biology	3	PharMedS 445

* For students in “research track” only

BS degree plan with accelerated PharmD admission (“3+4”)

Junior year:

Pharmacology: the science of drug action	3	PharMedS 301
Introduction to medical biochemistry	3	TMP 350
Careers: pathways in biomedicine [M]	3	PharMedS 313
Scientific communication: writing and speaking [M]	3	PharMedS 421
Genomics: frontiers in human genetics	<u>3</u>	PharMedS 401
	15	

Biomedical literature: communicating data [COMM]	4	PharMedS 315
Pharmaceutics: delivering the treatment	3	PharMedS 320
Medicinal chemistry: developing new drugs	3	PharMedS 322
Human pathophysiology	3	TMP 414
Medical Microbiology: Bugs and Drugs	<u>3</u>	PharMedS 425
	16	

Senior year/PY1 of PharmD curriculum

PharmD or PharMedS courses as electives	24	various
Senior seminar: capstone experience [CAPS]	<u>3</u>	PharMedS 490
	27	

Total junior/senior credits = 58 credits

Complete curriculum = 120 credits

For all options, the 3 credit “elective” is a course selected from offerings developed by CPPS, or a WSU course approved as an elective for the program. The 3-credit “selective” is a course selected from approved undergrad courses offered by WSU in Spokane (see below).

Courses with designations in brackets satisfy WSU UCORE requirements.

Potential “selectives” from other colleges in WSU Health Sciences:

These are suggestions for a 3 credit “selective” to be chosen from selected undergrad courses offered in Spokane (Nursing, SHS, NEP, etc.). The courses listed below appear to be open to undergrad students from other colleges, based on the WSU catalog.

- NEP 200 Place and Health (also satisfies UCORE “SSCI”)
- NEP 477 Human Health Behavior and Behavioral Interventions
- SHS 479 Neuroanatomy
- NURS 323 Nursing in the Genome Era
- NURS 455 Cultural Safety and Social Justice in Global Society
- NURS 471 Foundations of Occupational and Environmental Health Practice
- NURS 476 Health Law: Application to Practice

Assessment of Student Learning and Student Achievement

* For graduate programs, please contact the Graduate School before completing this section.

Please provide a list and description of expected student learning outcomes.

Graduates shall:

- 1) Have a mastery of fundamental biological and chemical concepts and the ability to integrate these concepts to address topics in the biomedical sciences;
- 2) Use critical thinking, quantitative reasoning, and scientific skills to analyze and solve problems in human biomedical sciences;
- 3) Effectively communicate biomedical problems, findings, and solutions to professional audiences as well as the public-at-large in writing and in oral discussion;
- 4) Effectively utilize the scientific literature in the biomedical sciences to identify knowledge gaps, and to analyze contemporary social and cultural issues relevant to human medicine;
- 5) Apply knowledge of the variety of approaches used in basic and clinical sciences to propose ways to address biomedical problems;
- 6) Use knowledge of ethics, research practices, and biomedical careers to make informed decisions in a humanistic manner in research and/or professional fields.

For undergraduate programs, provide the department's plan for assessing student learning outcomes. Describe briefly how information on student learning will be collected and incorporated into existing processes for evaluating student learning in the department. Please attach the plan and a curriculum matrix.

Student learning outcomes will be assessed through exams, written assignments, oral presentations, and in-class participation. The rubrics for the non-exam assessments are include within each course syllabus.

A curriculum matrix for the program is provided [Appendix 1].

Please indicate as appropriate:

- Assessment of this program will be incorporated into the existing assessment plan for _____ . Please attach a copy of the existing plan.
- A draft assessment plan is attached.
- A curriculum matrix is attached.

Planning:

Describe plans and include descriptions which provide evidence of:

1. The need for the change

The plan is to add an entirely new BS program to the College of Pharmacy and Pharmaceutical Sciences. The program has been developed to address the lack of such a degree program in the Spokane area, and to serve the needs of local students who wish to matriculate into professional or doctoral programs on the WSU Health Sciences campus. Graduates may also consider applying to other allied health professional programs in the region. Beyond the Spokane area, there are no similar programs in Washington State and few in the western half of the country. The BS program will bring new students into the WSU system, serving as a catalyst for workforce development for the growing biotech sector in Spokane County. It will provide a pathway for place-bound graduates of Community Colleges of Spokane (CCS) to continue their education in a public, 4-year R1 institution without leaving home.

2. The student population to be served

Provide realistic justification for the projected FTE.

How can transfer students articulate smoothly into the program and complete it with approximately the same number of total credits as students who enter WSU as freshmen?

Please describe specific efforts planned to recruit and retain students who are persons of color, disabled, or whose gender is underrepresented in this discipline.

Our projected class size is 50 students and our target audience already resides in Spokane County. Currently, the CCS system graduates well over 1,000 students per year who have received an AA/AS degree that will provide them with the prerequisites to continue in the BS program. It is unlikely that we will attract students from other undergraduate degree programs on any campus within the WSU system.

Student transferring into the program having already completed their AS/AS degree will be able to complete the BS program in two years. Transfer equivalents for students in the Community Colleges of Spokane are provided below:

TRANSFER EQUIVALENCIES FOR SPOKANE COMMUNITY COLLEGES

<u>WSU Course</u>	<u>CCS Equivalent</u>
ENG 101	ENGL& 101
PSYCH 105	PSYC& 100
MATH 140	MATH 152 (pre-req. is MATH 151)
STAT 212	MATH& 146
CHEM 105	CHEM& 161 and CHEM& 162
CHEM 106	CHEM& 161 and CHEM& 163
CHEM 345	CHEM& 241/251
CHEM 348	CHEM& 241/251
BIOL 106	BIOL& 223
BIOL 107	BIOL& 222
BIOL 315	BIOL 241 & 242 together satisfy BIOL 315 and 353
BIOL 353	"
PHYSICS 101	PHYS 101
PHYSICS 111	PHYS 101 satisfies PHYSICS 101 and 111

We will recruit throughout the area teaming up with the counselors and advisors at the regional schools, providing visitation/camp opportunities at our campus and in the local high schools, and emphasizing the diversity of our faculty and the benefits available within our program and the WSU Health Sciences campus. We will engage our own students to help in the recruitment process and share real stories across many platforms – through our web site, social media, and in-person. Retention will be enhanced through student engagement with on-campus organizations and the support for creation of additional organizations directly related to bachelor degree students.

3. Procedures used in arriving at the decision to change (e.g., consultation with advisory boards, input from industry or employers, commissioned studies, faculty task force, etc.).

Discussions regarding the proposed program began after Dean Leid assumed leadership of CPPS in July 2020. In the course of year-long decision making, multiple people have been consulted both inside and outside WSU. In WSU central administration, these include: Provost, Assistant Vice Provosts, Dean of the Elson S. Floyd College of Medicine, Dean of Arts & Sciences, Dean of Veterinary Medicine, Dean of Honors College, Senior Assistant Registrar, Vice President for Health Sciences and Chancellor (Spokane), and Vice Chancellor for Academic Affairs (Spokane). The WSU Spokane librarian was also consulted for input. Within the CPPS, the plan has been discussed in the Executive Committee, all-college faculty meetings, departmental faculty meetings, and with individual faculty members as the courses were developed. Outside of WSU, we have consulted with Spokane Community Colleges and Columbia Basin College. A meeting was held to discuss the program in September 2021 that included the Deans of Pharmacy and Pharmaceutical Sciences, Veterinary Medicine, and Arts and Sciences along with the Chairs of Translational Medicine and Physiology (ESFCOM) and Pharmaceutical Sciences (CPPS), Associate Dean for Undergraduate Education (VetMed), and others. Feedback from this meeting was incorporated into the proposed

curriculum. As evidence of these extensive discussions, letters of support from community partners are included in this proposal [Appendix 6].

4. Organizational arrangements required within the institution to accommodate the change.

There are no major organizational arrangements required. Since the proposed program is a collaboration between CPPS and ESFCOM, the curriculum includes new courses from both colleges. Revenue from the program will be divided between the two colleges based on the number of courses offered by each unit.

CPPS has an MOU with Honors College concerning completion of Honors College theses and degrees on the Spokane campus for students entering the PharmD program. Once the program is approved, an additional MOU will be discussed to formalize the option for Honors College students to complete their degrees in the new PharMedS program.

There are already undergraduate students enrolled on the Spokane campus (NEP, Nursing). We will continue our ongoing communication with Chancellor Daryll Dewald to ensure that central resources for the additional undergraduate students are available and transparent.

5. Lay out a three-year timetable for implementation, including hiring plans, partnership contracts if needed, facilities modification, recruiting, and other elements of implementation. Provide dates for each step.

Fall 2022: Submit proposal to Faculty Senate, including submission of all the new courses.

Spring/Fall 2022: Work with Faculty Senate committees to fine-tune the curriculum and courses.

Fall 2022: Obtain Faculty Senate approval of the new degree program.

Late Fall 2022: Begin recruitment for an administrative staff member to handle recruitment, marketing, and advising.

Late Fall 2022: Solicit applications for admission from students.

Late Fall 2022: Work with CPPS Student Services to train advisors to advise students entering the new program. Late

Fall 2022: Convene the new Undergraduate Program Committee, which will work with CPPS Student Services to establish policies for admission policies and procedures.

Late Fall 2022: Identify a current faculty member to manage and teach in the program.

Late Fall 2022: Begin advertising the new program so that students can be recruited.

Late Fall 2022: Reach out to advisors at local Spokane colleges/universities to provide them with information appropriate for advising of transfer students.

Late Fall 2022: Work with assessment experts in CPPS to review and implement the assessment plan.

Spring 2023: Work with Spokane campus scheduling to reserve rooms for Fall 2023 courses.

Late Fall/early Spring 2023: Review student applicants and transmit admission decisions.

Spring 2023: Work with the Bookie to initiate textbook orders for Fall 2023 courses.

Summer 2023: With new program director in place, organize instructors for Fall teaching.

Fall 2023: Initiate delivery of the new program and begin search for ESFCOM part-time faculty to be hired in FY25.

Budget:

Attach the Financial Worksheet with five-year FTE, revenue and expenditure projections. Fully account for costs such as staff support, training, library, facilities and so on.

Please describe the funding picture narratively, including funding sources, department, college and/or campus commitments, investments already made, one-time costs, facilities costs (labs, classrooms, offices, telecom etc.) and library costs.

Please see attached 5 year Financial Worksheet. Two year (junior and senior level) BS program funded with the state tuition calculated return using the standard \$4,000 EBB model return of tuition to CPPS and ESFCOM distributed proportionately based on credits taught in the program. ESFCOM will have expenses associated with a faculty and the program will require an academic coordinator. Otherwise, the colleges will be able to cover the work with existing faculty. With the decline in the PharmD enrollment, CPPS will have existing faculty freed up to teach in the UG program. Year one reflects the year before students will enroll. Costs in year one will be covered by the colleges consisting of approximately \$50,000 for marketing and minor additional miscellaneous needs plus the hire of an academic coordinator. Total costs for the program will grow from approximately \$170,000 in year one to approximately \$350,000 in year 3. Revenues will grow to \$400,000 per year by year 3 which will cover our costs. Enrollment will reach maximum in year 3. Assuming maximum enrollment of 50 students each semester in both years of the program, the program will reach an annual positive net return in year three.

Library needs and facility needs are available on the Health Sciences campus. No additional costs will need to be covered.

Student Services:

Describe the capacity of student support services to accommodate the change at this location. Include a description of admissions, financial aid, advising, library, tutoring and other services specific to this request.

Admissions: An admissions procedure will be developed using our experience with PharmD and PhD student admissions. The plan will include an admissions committee that includes faculty members from both CPPS and ESFCOM. Numerous support services are already available on the Spokane campus, including Financial Services, Registrar staff, a Diversity Center, Health Service, Off-campus Housing Title IX, Student Organizations, and a Success Center with staff available to help with access, career advice, counseling, learning issues, and writing support. We plan to have CPPS Student Services provide student advising, with the addition of new staff to handle the increased load.

Describe the implications of the change for services to the rest of the student body.

This is the first undergraduate degree for CPPS. We plan to hire a new staff member to provide sufficient staff support, and will utilize faculty members who currently have capacity to increase their responsibilities to fill the needs for program management, teaching, and research mentoring. Thus, we do not anticipate that the new program will have a negative effect on services to the rest of the student body.

A positive change will be the opportunity for our PhD students to have more impactful teaching assistantship experiences, as well as more opportunities to help mentor undergraduates in the research labs. Additionally, we will have increased opportunity for student co-curricular and interprofessional education and engagement.

Physical Facilities and Equipment:

Outline the provision/s made for physical facilities and equipment at the proposed location that will support the program and its projected growth. Include videoconferencing and other technologies that support course delivery as well as classrooms, labs, and office space.

The Spokane campus has excellent facilities for videoconferencing and other learning technologies. Research facilities and equipment are available to support students electing to take 499 courses as part of their curriculum. CPPS has a longstanding Summer Undergraduate Research Fellowship (SURF) program that has given the faculty considerable experience in designing and supervising undergraduate research projects. Office space for the faculty and staff is already in place, with sufficient space to accommodate the proposed new faculty and staff hires.

Library and Information Resources:

Using the Library Analysis form, describe the availability and adequacy of library and information resources for this degree, degree level, and location. Note plans to address gaps.

The current library collections, equipment, personnel and services available at the Spokane campus library are adequate to meet the needs of the proposed program, as described in more detail in Workbook 1. The collection and accessible serials are already supporting the work of research-intensive faculty, clinical faculty, graduate students, and professional students in multiple biomedical degree programs. The undergraduate students in the proposed program are anticipated to access the available collections less than any of the current students, even though some of their coursework does involve discussion of journal articles. The articles can be provided to the students by the instructor if necessary. Overall, the use of the library by the undergraduates is expected to have a minimal impact on library operations, even with a class of 50 students per year.

Faculty:

List the educational and professional qualifications of the faculty relative to their individual teaching assignments.

List the anticipated sources or plans to secure qualified faculty and staff.

Existing, well-qualified, faculty are currently named on the course syllabi for both PharMedS and TMP courses. If new faculty members are hired, we will be able to adjust the teaching assignments and loads based on qualifications and expertise. All of the faculty listed have PhD or PharmD degrees and have experience in teaching the subjects to which they are assigned. Since the proposed curriculum covers a broad range of topics in the pharmaceutical sciences, we have already identified faculty members with expertise that will allow them to contribute to teaching in the Bachelor's curriculum. The non-tenure track faculty member being recruited by ESFCOM will ideally be a person with considerable teaching experience.

Impact on Other Locations/Programs:

Briefly describe any impacts on other WSU programs and locations, and how you came to these conclusions (who was consulted?). If there are potential adverse impacts, describe how these will be addressed. Consider such things as: reallocation of faculty time, reallocation of AMS courses, impact of blended courses, internal competition, "cannibalization" of other programs, curricular effects for other degrees, effects on recruitment markets for other campuses. Indicate how such problems will be addressed for each campus or department affected.

With respect to impact, the major concern has been whether the proposed program will "cannibalize" undergraduate degree programs offered on other campuses within the WSU system, such as the STARS program in CVM. This is not the intention of the proposed program. Although the proposal is written using WSU courses for the first two years, as required, we anticipate that most of the students will matriculate from Spokane or other parts of Washington State. For example, we are working together with Community Colleges of Spokane (CCS) to create an articulation agreement that would provide a pathway for CCS graduates to continue their education without leaving the Spokane area (see letter from Thayne Lacy in Appendix 6). Thus, the overall intent is to grow the total enrollment in the WSU system by providing a program that is easily accessible for transfer students (especially from community colleges) in the Spokane area to meet local hiring needs as well as to boost the number of well-qualified applicants for the PharmD program and graduate school. In response to discussions with Arts & Sciences and VetMed, we made curricular adjustments so that there is no duplication of courses between undergraduate programs. Naturally there will always be some duplication at the level of individual lecture topics within courses, as preparation for PharmD, PhD, MD, and allied health careers necessarily requires coverage of certain subject areas. However, the courses were designed to be unique in their focus, and distinct from other courses offered at WSU.

Sustainability

What are the plans for continuing the program past 5 years if the goals for enrollment are not met, or other circumstances prevent the execution of the plan described here?

If we are unable to meet our enrollment targets after five years or if we are unable to financially cover the costs of this program by then, we will eliminate the program. We have no intention of providing a program that will be a drain on the system or our colleges. We will actively evaluate the program in an on-going manner to assess its continued viability and success.

External Reviews

If this program is new to the Washington State University system, please provide the names and addresses of 2-3 external experts from similar institutions who could be contacted to provide reviews of this program.

Name	Contact Information (email, phone, address)
Emily Scott, PhD Professor, Medicinal Chemistry and Pharmacology University of Michigan Medical School	scottee@umich.edu ; 734-764-3530
Brian Cummings, PhD Dean, Eugene Applebaum College of Pharmacy and Health Sciences Wayne State University	briancummings@wayne.edu ; 313-577-1574
Shelley Hooks, PhD Interim Associate Department Head for Research and Faculty Development, Pharmaceutical and Biomedical Sciences University of Georgia College of Pharmacy	shooks@uga.edu ; 706-542-2189

Attachments:

- Financial Worksheet
- Four-Year Degree Plan (undergraduate); curriculum overview (graduate and professional)
- Curriculum Map (undergraduate)
- Assessment Plan
- Letters of financial commitment
- Contracts or MOUs if applicable

Send in Word format to: provost.deg.changes@wsu.edu

