

UNIVERSITY of WASHINGTON

Michael K. Young President

March 10, 2014

Dean Elaine Scott School of Science, Technology, Engineering and Mathematics University of Washington, Bothell Box 358538

Dear Elaine:

Based upon the recommendations of the Executive Council, the General Faculty Organization has recommended approval of a minor in Consciousness. A copy of the approval is attached.

I am writing to inform you that the School of Science, Technology, Engineering, and Mathematics is authorized to specify these requirements beginning autumn quarter 2014.

The new requirements should be incorporated in printed statements and in individual department websites as soon as possible. The General Catalog website will be updated accordingly by the Registrar's Office.

Sincerely yours,

Michael K. Young

President

Enclosure

cc:

Dr. Kate Noble (with enclosure)

Mr. Robert Corbett (with enclosure)

Ms. Virjean Edwards (with enclosure)



Control #
BST-20121210

After college/school/campus review, send a signed original and 1 copy to the Curriculum Office/FCAS, Box 355850. For information about when and how to use this form: http://depts.washington.edu/uwcr/1503instructions.pdf

College/Campus UW Date Department/Unit Science & Technology 12/10/2012 Bothell **New Programs** Leading to a Bachelor of ____ in ____ degree. Leading to a Bachelor of _____degree with a major in ____ Leading to a _____ Option within the existing major in ____ Leading to a minor in Consciousness **Changes to Existing Programs** New Admission Requirements for the Major in _____ within the Bachelor of _____. Revised Admission Requirements for the Major in _____ within the Bachelor of ___ Revised Program Requirements for the Major in _____ within the Bachelor of _____. Revised Requirements for the Option in ____within the major in ___ Revised Requirements for the Minor in _____. Other Changes Change name of program from _____ to ___ New or Revised Continuation Policy for ____ ☐ Eliminate program in ___ Proposed Effective Date: Quarter: Autumn Winter Spring Summer Year: 2013 Box: Contact Person: Kate Noble, Phone: Email: kdnoble@u.washington.edu 425-352-3455 358538 Ph.D. EXPLANATION OF AND RATIONALE FOR PROPOSED CHANGE For new program, please include any relevant supporting documentation such as student learning outcomes, letters of support and departmental handouts. (Use additional pages if necessary). Professor Kate Noble, Professor Warren Buck, and Associate Professor Steve Collins are proposing this minor on behalf of and with the full support of the Science and Technology faculty at UW Bothell. Supporting documentation attached: Description of the minor, Rationale, Educational Objectives and Outcomes, Minor requirements, Letter of support from University of Bothell Science and Technology Director on behalf of faculty OTHER DEPARTMENTS AFFECTED List all departments/units/ or co-accredited programs affected by your new program or changes to your existing the signature of the chair/director of each department/unit listed. Attach additional program and acquire page(s) if necessary. *See online instructions. Chair/Program Director: Date: Department/Unit: Date: Department/Unit: Chair/Program Director

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PROPOSED CATALOG COPY Reflecting requested changes (Include exact wording as you wish it to be	e shown in the printed catalog. Please
underline or otherwise highlight any additions. If needed, attach a separa	te, expanded version of the changes
that might appear in department publications). Please note: all copy will be edited to reflect uniform style in the General	l Catalog.
The Consciousness minor investigates the nature, dynamics, and	d functions of the mind through
the perspectives of psychology, neuroscience, physics, biology,	and contemplative practices. It
utilizes both objective and subjective methods to explore levels	of awareness, the intersection
of mind and matter, and ways to enhance individual and collect	ve well-being. The minor
consists of a minimum of 25 credits.	
APPROVALS	
Chair/Program Director:	Date:
Cail X with	12/11/12
College/School/Campus Curriculum Committee:	Date:

Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair.

POST TRI-CAMPUS APPROVAL (when need

Dean/Vice Chancellor



BOTHELL Office of the General Faculty Organization

To: Kenyon Chan, Chancellor

From: Kari Lerum, Chair, GFO Executive Council

Copy: Susan Jeffords, Vice Chancellor for Academic Affairs,

Pamela Joseph, Chair, GFO

RE: GFO Executive Council Endorsement to forward the School of STEM's minor in

Consciousness Studies proposal to the UW Registrar for Tri-campus review.

Date: January 16, 2013

The General Faculty Organization's Executive Council endorses forwarding the School of STEM's minor in Consciousness Studies proposal to the UW Registrar for Tri-campus review.

Consciousness Minor

Science and Technology Program - UW Bothell

Contents

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I. Description of the Consciousness Minor

The Consciousness minor will provide students across UWB with the opportunity to engage the emerging field of Consciousness Studies within a context grounded in scientific method, empirical inquiry, and philosophical reflection. Consciousness Studies emphasizes broad and rigorous approaches to the study of the mind. It brings together a variety of disciplines including psychology, neuroscience, medicine, physics, biology, artificial intelligence, and contemplative and experiential traditions to explore cutting edge and controversial issues. These include the nature of consciousness, the intersection of mind and matter, and ways of exploring levels of awareness that span disciplines, cultures, and history. Consciousness Studies also examines a variety of contemplative strategies that have been demonstrated to heighten mental clarity, reduce anxiety, improve stress management, and promote psychological well-being.

The Consciousness minor at UWB will be the first of its kind at a public university in North America and, indeed, the world. It will offer students and faculty at UWB the opportunity to explore big questions and bigger mysteries that have drawn the attention of some of the most brilliant scientists, scholars, and creative minds throughout the centuries.

II. Rationale

Human understanding of the mind and its relationship to physical reality is undergoing a rapid and unprecedented shift in scientific interest and attention. This is due in part to the increasing sophistication of brain imaging technologies, advances in cardiac resuscitation, new collaborations between scientists and master practitioners of contemplative and meditative traditions, and the conceptual power of quantum physics. As these technologies and collaborations have matured, so has our awareness of the power of the mind in promoting or inhibiting psychological and physical health and well-being. But what is the mind? Is it produced by the brain's complex neurocircuitry? Is it an emergent property engendered by evolution? Or is it ontologically primary to physical matter? These questions, which have inspired centuries of debate among philosophers and religious scholars, have moved squarely into the domain of science through the emergence of the new, multidisciplinary field of Consciousness Studies. Since 1994, International organizations such as the Center for Consciousness Studies at the University of Arizona, the Society for Scientific Exploration, the Mind and Life Institute, and the Association for Contemplative Mind in Higher Education have grown from small gatherings of

like-minded scholars to major think tanks that are challenging outmoded paradigms that have dominated the study of mind for the past century. As of October 2012 two new international organizations have been formed – *The Society for Consciousness Studies* and the *Consortium for Consciousness in Higher Education* - for which Professor Kate Noble has been invited to be a founding board member.

Unfortunately, opportunities for college and university students to engage in this burgeoning conversation have not kept pace with the rapid development of the field. Currently the University of Michigan is the only public university in the United States that offers undergraduates an opportunity to study consciousness through the Consciousness and Creativity program in its School of Music. There are individual courses taught at a number of colleges and universities around the world, but to date no coherent program about Consciousness situated in a STEM department has emerged. UWB would be the first to offer such a program, thereby taking its place at the forefront of a far-reaching field of inquiry.

III. Enrollment

The Consciousness minor will be open to all UWB students in order to enrich their work in other areas of academic inquiry. Students from the other UW campuses may enroll on a space available basis. The anticipated demand for this curriculum is high. Since Autumn 2010 when BST 321 was first taught as a special topics course, enrollment has grown significantly. For Autumn 2012, the course met its enrollment cap of 30 shortly after registration began and there is a long waiting list of students who are eager to enroll. The same is true for BST 323. BST 321 is a prerequisite for BST 322, which is itself a prerequisite for BST 424 and 425. We estimate that annual enrollment in the Consciousness courses will involve 90-100 students per year, with enrollment in the minor reaching 30-50 students per year.

IV. Course Requirements

The minor in Consciousness requires completion of 25 credits.

- a. Core Requirements 15 credits
 - 1) BST 321: The Farther Reaches of Human Nature (5 cr)
 - 2) BST 322: Exploration of Consciousness (5 cr)
 - 3) BBIO 310: Brain and Behavior (5 cr) OR BST 325: Mind and Matter

b. Elective Requirements - 10 credits (Chosen from this list)

BBIO 310: Brain and Behavior (5 cr), if not taken to meet the core requirement

BST 323: The Psychology and Science of Dreams (5 cr)

BST 325: Mind and Matter (5 cr), if not taken to meet the core requirement

BST 424: Consciousness, Ethics, and the Natural World (5 cr)

BST 425: Consciousness and Well-Being (5 cr)

BST 293: Intersections of Physics and Art (5 cr)

c. Undergraduate Research - 5 credits

BST499: Undergraduate Research: After completing the minor students will be eligible to participate in undergraduate research (1-5 cr). Undergraduate research can be supervised by any interested faculty member.

V. Course Descriptions

Thus far, seven permanent courses for the Consciousness minor are in place and are listed in the UWB general catalog. Five are taught on an annual basis by Professor Noble: BST 321 (The Farther Reaches of Human Nature), BST 322 (Explorations in Consciousness Studies), BST 323 (The Psychology and Science of Dreams), BST 424 (Consciousness, Ethics, and the Natural World), and BST 425 (Consciousness and Well-Being). These courses fulfill both *Natural World* and *Individuals and Societies* Areas of Knowledge and are also taught as "W" courses, thereby facilitating progress toward graduation for UWB students in S&T and other departments. Professor Collins will offer BST 325 (Mind and Matter) on an annual basis beginning Spring Quarter 2013, and BBIO 310 (Brain and Behavior) will also be offered on an annual basis by a member of the Biology faculty.

We anticipate several offerings from Physics coming on line in 2012-2013, as well as new offerings from Biology. We also expect that as additional faculty become involved with the minor, the course list will evolve and include neuroscience, biopsychology, and creative approaches to complex problem solving.

The anticipated demand for this curriculum is high. Since Autumn 2010 when BST 321 was first taught as a special topics course, enrollment has grown significantly. For Autumn 2012, the course met its enrollment cap of 30 shortly after registration began and there is a long waiting

list of students who are eager to enroll. The same is true for BST 323. BST 321 is a prerequisite for BST 322, which is itself a prerequisite for BST 424 and 425. We estimate that annual enrollment in the Consciousness courses will involve 90-100 students per year, with enrollment in the minor reaching 30-50 students per year.

VI. Educational Objectives

(What students should be able to do at graduation)

The minor in Consciousness will provide an intellectual space for students to:

- Understand the ways in which contemporary scientists, philosophers, and contemplative scholars are collaborating to investigate the psychology, biology, phenomenology, and physics of consciousness.
- 2. Analyze complex models of consciousness from scientific, philosophical, historical, and contemplative perspectives.
- 3. Consider the role of different states of consciousness in facilitating creative processes, inventions, and scientific discoveries.
- 4. Examine the influence and limits of scientific paradigms, as well as their ethical implications.
- Comprehend the ways in which thoughts, emotions, and contemplative practices change the anatomical and physiological structure and functioning of the brain.
- 6. Explore the role of meditation and contemplative practices in expanding our knowledge about the mind and conscious awareness.
- 7. Offer students opportunities to participate in research at the leading edge of an emerging field.
- 8. Provide a platform for students to explore their own consciousness, heighten mental clarity, and improve individual and collective well-being.

VII. Educational Outcomes

(What students should be able to do after graduation)

The minor addresses issues that are highly relevant to many areas of undergraduate education:

 It will bring students into contact with multidisciplinary approaches to the study of the mind from many fields, including psychology, neuroscience, biomedical research, physics, and contemplative science.

- 2. It will prepare students to apply the scientific method as well as psychological and philosophical analyses in exploring the complex relationships among mind, brain, and body. Students will be immersed in age-old conversations about the relationship of mind and matter between contemporary scientists and contemplative scholars, comparing and contrasting different approaches, and assessing their strengths and limitations.
- 3. It will teach students contemplative practices demonstrated to help them concentrate more clearly, increase their motivation and persistence, enhance their higher order thinking skills, and achieve a greater sense of equanimity. These practices have also been shown to help individuals cope with the increasingly complex problems of the contemporary world and contribute creatively to their solutions.
- 4. It will encourage students to become more reflective, compassionate, insightful, and tolerant by cultivating their self-awareness and appreciation for the relationship of the mind to physical reality. As a result, students will experience a greater sense of meaning and purpose, which research has clearly shown leads to greater academic success.
- 5. A student completing the Consciousness minor will bring a heightened appreciation for the role of consciousness to their professional lives. They will have an enhanced capacity to draw upon and integrate different forms of knowledge and a heightened ability to draw on inner resources to solve problems at work, home, and community.
- 6. Students who complete the Consciousness minor will be able to pursue academic, professional, and/or research careers in many areas of inquiry. Current contributors to the field have expertise in the following disciplines: psychology, medicine, nursing, health sciences, neuroscience, pharmacology, engineering, environmental sciences, veterinary medicine, botany, physics, philosophy, anthropology, education, music, and computer science.

VIII. Budget Impact

Currently there is one full professor in S&T who is teaching five courses annually in the minor, including two core courses and three of the elective courses, as well as supervising undergraduate research. One elective course each is offered annually by a Professor, an Associate Professor, and an Assistant Professor in S&T. We estimate that annual enrollment in the Consciousness courses will involve 90-100 students per year, with enrollment in the minor reaching 30-50 students per year. The minor can be launched immediately by current faculty.

A feature of this program is the desire to bring in experts to address the strategic aspects of the minor. The need for additional courses will be necessary within 3 years to accommodate the expected growth in student enrollment as well as to replace existing faculty during sabbaticals and course releases. We would like to develop courses that connect the expertise of local

institutes and industries to this minor. Given the number and proximity of world renown think tanks such as the Whidbey Institute and Bastyr University, as well as biomedical device, imaging, computing, and biopharmaceutical firms and integral psychology doctoral programs, we anticipate building partnerships with local experts and inviting them to teach topical courses in such areas as brain imaging, neuropharmacology, artificial intelligence, and the psychology of consciousness. Adding this minor will also increase the workload of the S&T Student Advisor and we propose that additional advising staff be retained. The Consciousness minor does not require lab space at this time, nor does it have any special IT needs.

UW Bothell

Routing: Form 1503

This routing form and a copy of the proposal should accompany the Program Proposal Form 1503.

- I. Committee and/or Department Approval
- II. GFO Executive Council
- III. Academic Council

Proposal: Consciousness Minor	
I. PROGRAM	•
Program Director: Elaine Scott	
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Signature	Date
II. GFO EXECUTIVE COUNCIL	
Chair: Pam Josephs Kar. Lerun	
Signature	
1/1	1-17-2017 Date
Jano	
III. ACADEMIC AFFAIRS	
Vice Chancellor : Susan Jeffords	
Signature	
	Date

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Jean Kružich	An important and relevant addition to the unv	lersity curriculum.				
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This is a timely and strong interdisciplinary minor. Congratulations. I agree with another earlier comment on the strong role of science. At the same time, I note an ornission of a course and/or faculty in philosophy, eventhough philosophy features in the description of the minor and in its educational objectives. It is possible that the core course on ethics includes philosophy, but I would expect philosophy to be strongly present in the curriculum given its role in educational objectives. I see now that Philip noted the same issue.

Best, Nives Dolsak

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I have two reservations, which coho concerns raised by others. First, most of the courses are being taught by a single faculty member. Second, although the proposal says that students will consider philosophical perspectives on consciousness. I don't see any reference in the syllabi of the core or elective courses to any of the standard views on this topic advocated by either analytic or continental philosophers.

Michael Rosenthal (Chair, Dept. of Philosophy, UW-Seattle)

Add to this conversation:

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Common formatting keyboard shortcuts:	
Control Shift B sets text to bold Control Shift I sets text to italic Control Shift U underlines text Control Shift I eligns text left Control Shift I centers text Control Shift I aligns text right Control Shift I aligns text right Control Shift L adds an HTML link To exit this text editor use the keyboard shortcut Control + Shift + ESC.	
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MEMO

To:

Undergraduate Curriculum Review

UW Bothell GFO EC

From:

Annette Anderson

Date:

1/21/2014

Re:

Proposal for Consciousness Minor: Response to Comments

The proposal for the Minor in Consciousness received 8 comments. Comments 1-4 do not require additional information. The response to comments 5-8 requiring additional information is attached as an addendum to the proposal.

Comment 5

I'd be nervous that this minor relies heavily on one faculty member. That would be unusual for a minor, in my experience.

Comment 6

This is a timely and strong interdisciplinary minor. Congratulations. I agree with another earlier comment on the strong role of science. At the same time, I note an omission of a course and/or faculty in philosophy, even though philosophy features in the description of the minor and in its educational objectives. It is possible that the core course on ethics includes philosophy, but I would expect philosophy to be strongly present in the curriculum given its role in educational objectives. I see now that Philip noted the same issue.

Comment 7

I have two reservations, which echo concerns raised by others. First, most of the courses are being taught by a single faculty member. Second, although the proposal says that students will consider philosophical perspectives on consciousness, I don't see any reference in the syllabi of the core or elective courses to any of the standard views on this topic advocated by either analytic or continental philosophers.

Comment 8

I agree with Dr. Rosenthal. While the idea of a course of study on the current state of understanding the nature of consciousness sounds appealing on the surface there are many pitfalls to consider. The most dangerous is the very definition (if one is even possible) of the topic. It is true that the field of consciousness studies is burgeoning (as described) there are still many more questions than answers about what it is and how the brain (presumably of humans) produces it. The biggest questions remain in the realm of philosophy simply because the science is still in its infancy and not likely to produce answers any time soon. A minor (or even a major) that focuses on the questions (e.g. what are qualia?) and then links whatever science is available to show how we are going about answering such questions would be a worthy approach, in my opinion.

On the claim that meditative practices have been shown to have multiple benefits I think we need to be cautious. I am a practitioner of a meditative practice which has been touted as having "scientific evidence" of effectiveness. However, I have examined many of these claims and find they are shallow or procedurally flawed. My own personal experience with the practice leads me to endorse it but I would not promote its use on the basis of these supposed scientific claims. For example, a popular claim has to do with the practice producing coherent brain wave patterns. Then it is suggested that this is the cause of the benefits. Unfortunately no one knows what coherence in those particular brain waves actually means nor even if coherence is a healthy state. I'd suggest much less emphasis on the "science" of meditation and treat it as a subjective experience, ancedotally.

So while I endorse the idea of bringing the subject into the realm of academic study I'd suggest a different structure, and perhaps focus. Start with the major open questions, a philosophical scaffolding, with a review of the various "theories" of consciousness down through the ages. Then make links to neurobiology, psychology, etc. to show how scientists are going about trying to answer those questions. The subject of contemplative and meditative approaches to "increasing" consciousness should be set in this sort of framework.

I would also suggest that more assessment of this proposal would benefit from a reading list and course syllabi (I will attempt to find such on-line for the existing courses).

RESPONSE: Kathleen Noble, Professor of Consciousness, School of STEM

I am grateful to the faculty who took the time to consider the proposed Minor in Consciousness and very much appreciate their enthusiastic support. Two issues were raised that I will address below: these are sustainability and the addition of standard philosophical perspectives to the curriculum.

- 1. The issue of sustainability of the minor is of paramount importance. Currently there are four STEM faculty at UWB who are available to teach one or more of the core and elective courses, and at least one core and one elective course are offered every quarter including summer quarter. In the short run the minor is sustainable with these faculty. However, in the long run the minor will need at least one additional full-time faculty member who has expertise in the study of consciousness and who can teach the core courses that I am currently teaching and create new electives. This will require the commitment of additional resources, either internally or externally generated. I also anticipate that after the minor is launched, current faculty who understand and are interested in the study of consciousness and who are eager to participate will make themselves known.
- 2. The minor was created by faculty in STEM and course offerings reflect the expertise of the STEM faculty, all of whom are scientists. I address philosophical and ethical issues from a psychological perspective in the courses that I currently teach through the texts that I use. However, there is no philosopher currently on the STEM faculty and thus standard philosophical models of consciousness—albeit important—are not included at this time. As the minor grows the inclusion of a course about models of consciousness from a philosophical perspective will receive serious consideration.

UNIVERSITY CAMPUSES UNDERGRADUATE PROGRAM REVIEW PROCEDURES** CHECKLIST

	Title of Proposal: Minor in Consciousness
	Proposed by (unit name): School of STEM
	Originating Campus:
	UW, Seattle
	X_UW, Bothell
	UW, Tacoma
i.	Phase I. Developed Proposal Review (to be completed by Originating Campus' Academic Program Review body)
	A. Review Completed by: (list name of program review body)
	Chaired by:
	01/30/13Date proposal received by originating campus's review body
	11/26/13 Date proposal sent to University Registrar
	12/06/13 Date proposal posted & email sent to standard notification list
	01/27/14 Date of originating campus's curriculum body approval (Note: this date must be 15 business days or more following date of posting)
	B. 7 Number of comments received. Attach the comments and a summary of the
co	nsideration and responses thereof: (1-2 paragraphs)
11.	Phase II. Final Proposal Review (to be completed by FCTCP)
	A. Review Completed by: _x_FCTCP subcommittee FCTCP full council Chaired by: William Erdly
	2/11/14 Date request for review received from University Registrar 3/6/14 Date of FCTCP report
	B. Review (see attached)

	YES NO
	_x Was notice of proposal posted on UW Website for 15 business days? _x Was notice of proposal sent to standard mailing list 15 business days in advance of
	academic program review? _x Were comments received by academic program review body? _x Was response to comments appropriate? (explain, if necessary) x_ Was final proposal reviewed by FCTCP within 14 days of receipt? _x Was there adherence to the University Campuses Undergraduate Program Review Process? (explain, if necessary)
	Report slightly delayed as a high volume of proposals received.
	C. Recommendation
	_x_Forward for final approvalForward to Provost because of University Issues (Explain)Return to campus council because of insufficient review (Explain).
*E	ndorsed by Faculty Senate Executive Committee, 1/10/05, modified 1/31/06; These procedures apply to v undergraduate degrees, majors, minors (and certificates) and substantive changes to same

Review:

Some concerns were still expressed regarding the responsiveness to questions related to the balance of the degree from scientific and philosophic viewpoints. Further work with faculty/commenters expressing these concerns is encouraged.