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## MEMORANDUM

ATTENTION: Senate

TEL

FROM: Peter Keller, Vice-President, Academic and Provost, and Chair, SCUP

RE: Full Program Proposal for a Certificate in Philosophy and Methodology of Science (SCUP 16-49)

DATE: December 12, 2016

TIME

At its December 7, 2016 meeting, SCUP reviewed and approved the full program proposal for a Certificate in Philosophy and Methodology of Science in the Department of Philosophy within the Faculty of Arts and Social Sciences, effective Fall 2017.

**Motion:**

That Senate approve and recommend to the Board of Governors the full program proposal for a Certificate in Philosophy and Methodology of Science in the Department of Philosophy within the Faculty of Arts and Social Sciences, effective Fall 2017.

c: D. Heide

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## MEMORANDUM

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<b>ATTENTION</b>	Senate Committee on University Priorities	<b>DATE</b>	November 7, 2016
<b>FROM</b>	Mark Lechner, Acting Chair Senate Committee on Undergraduate Studies	<b>PAGES</b>	1/1
<b>RE:</b>	Faculty of Arts and Social Sciences (SCUS 16-43d)		

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Action undertaken by the Senate Committee on Undergraduate Studies at its meeting of November 3, 2016, gives rise to the following recommendations:

## Motion

That SCUP approve and recommend to Senate the Full Program Proposal for the Certificate in Philosophy and Methodology of Science in the Department of Philosophy within the Faculty of Arts and Social Sciences.

The relevant documentation for review by SCUP is attached.



FACULTY OF ARTS AND SOCIAL SCIENCES  
Office of the Dean

SCUS 16-43d

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<http://www.sfu.ca/fass.html>

**MEMORANDUM**

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**ATTENTION** Jo Hinchliffe, Secretary  
Senate Committee on Undergraduate Studies

**FROM** Catherine Murray, Chair  
Faculty of Arts and Social Sciences  
Curriculum Committee

**RE:** Curriculum Revisions: Department of Philosophy

**DATE** 24 October 2016

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At its meeting of 13 October 2016, the Faculty of Arts and Social Sciences Curriculum Committee approved the attached full program proposal (FASSCC 16-24), as submitted by the Department of Philosophy.

Full Program Proposal: Certificate in Philosophy and Methodology of Science  
(proposed effective date Fall 2017)

Please place this item on the agenda of the next meeting of SCUS.

CM:  
Att.



Department of Philosophy

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**MEMORANDUM**

<b>ATTENTION</b>	Catherine Murray	<b>DATE</b>	September 22, 2016
<b>FROM</b>	Dai Heide	<b>PAGES</b>	1
<b>RE:</b>	Philosophy Curriculum Proposals		

Dear Catherine,

At its meeting of September 16, 2016, the Department of Philosophy approved the following curricular program changes:

1. A request for B-Soc Designation for PHIL 121, effective Fall 2017
2. A request for B-Hum Designation for PHIL 131, effective Fall 2017
3. **The Full Program Proposal for a new Certificate in Philosophy and Methodology of Science**

Would you please place this proposal on the agenda of the next meeting of the Faculty of Arts and Social Sciences Undergraduate Studies Curriculum Committee?

Regards,

Dai Heide  
Lecturer and Undergraduate Chair  
Department of Philosophy  
Faculty Teaching Fellow, FASS  
Simon Fraser University



SIMON FRASER UNIVERSITY  
ENGAGING THE WORLD

## **Certificate in Philosophy and Methodology of Science**

Full Program Proposal

September 22<sup>nd</sup>, 2016  
Department of Philosophy

**1 Executive Summary**

**a) Purpose of the proposed program:**

The proposed Certificate in Philosophy and Methodology of Science is aimed at advancing SFU's core goals of innovation and interdisciplinary learning. The Certificate will encourage students already intensively studying within the sciences to explore the philosophical and methodological underpinnings and implications of science, thereby expanding their knowledge and offering them new opportunities to engage with subject matter they might otherwise not have encountered.

**b) Credential to be awarded:**

Certificate in Philosophy and Methodology of Science.

**c) Location of program:**

The courses required for completion of the Certificate are all offered regularly at SFU's Burnaby campus, though some courses are also offered at SFU's Harbour Centre campus and/or at SFU's Surrey campus.

**d) Faculty offering the proposed new program:**

The Certificate will be administered and awarded by the Philosophy Department in SFU's Faculty of Arts and Social Sciences.

**e) Anticipated program start date:**

Fall 2017.

**f) Anticipated completion time:**

Students will be able to complete the Certificate in conjunction with their degree programs.

**g) Summary of the proposed program**

• **Aims, goals, and objectives:**

The aim of the Certificate is to provide students majoring in the sciences that are traditionally associated with natural philosophy, such as the natural sciences, mathematics, computer science, and psychology, with the opportunity to gain philosophical insight into key questions concerning the methodology and practice of science and to acquire core critical and philosophical reasoning skills while doing so.

• **Contribution to the mandate and strategic plan of the institution:**

The proposed certificate serves SFU's Strategic Vision by encouraging students to pursue connections between academic subjects not traditionally linked in SFU's curriculum and by encouraging students to seek academic breadth and core reasoning skills deemed valuable by employers.

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## Certificate in Philosophy and Methodology of Science

- **Linkages between program outcomes and curriculum design:**

The certificate aims to appeal to students who are already studying those sciences most closely associated with natural philosophy and its history – from physics to geography to psychological and computational sciences – by offering students an opportunity to strengthen and broaden their scientific knowledge through learning about the philosophical issues and methods that traditionally have been, and currently are, most relevant to the sorts of inquiry undertaken in these scientific disciplines.

- **Potential areas/sectors of employment for graduates or opportunities for further study:**

This Certificate will enhance job prospects for science students pursuing traditional career options in their fields because it will indicate to employers that students have sought to expand their understanding of the fields they have chosen and to draw connections between the study of science and other academic areas of inquiry. It will improve the writing skills of students who take it, something often mentioned by employers, especially in the STEM fields, as a skill of which they wish new employees had more.

- **Delivery methods:**

The courses required for the Certificate are comprised of existing courses in the Philosophy Dept. at SFU and other departments in the University. No new course offerings are required, and none of the courses are currently offered online.

- **Program strengths:**

The Philosophy Department has current research and teaching strength in the philosophy of science, metaphysics and epistemology. Each of these areas is closely related to the study and practice of science.

- **Level of support and recognition:**

We have received enthusiastic support from all SFU programs whose courses are associated with the proposed Certificate.

- **Related programs:**

While there are numerous programs in History and Philosophy of Science, including an undergraduate major at UBC, the aims and scope of such programs are significantly different than those of the proposed Certificate. Programs in History and Philosophy of Science are not typically aimed at students engaged in the study of science and, moreover, such programs require a significant study of the history of philosophy. The proposed Certificate, by contrast, is aimed primarily at students studying the sciences most closely associated with natural philosophy and offering them a modest philosophical background intended to supplement, rather than supplant, their scientific interests.

The only program at SFU that bears any resemblance to the proposed Certificate is the minor in Cognitive Science. However, students may complete the COGS minor without taking any courses in mathematics or philosophy. By contrast, the proposed Certificate, because it requires both, aims to help students achieve different items of knowledge and acquire a distinct set of skills. Nevertheless, we believe the two programs would complement one another nicely, not least because students completing one would very likely be able then to use some of the courses they had already completed in pursuit of the other.

**h) Contact information:**

Dr. Dai Heide  
Lecturer and Undergraduate Chair  
Dept. of Philosophy  
Simon Fraser University  
778.782.4806  
dheide@sfu.ca

**2 Curriculum/Program Content**

**2.1 Program Structure**

Students will complete the Certificate by taking four core courses in Philosophy (listed below). Students will also complete one course in mathematics (from a range listed below) and two courses in a science traditionally associated with natural philosophy (listed below). Since this Certificate is primarily aimed at students already majoring in these sciences, the math and science courses required for this Certificate are courses the students will already be taking as part of their degree programs. Accordingly, the additional course load for students wishing to earn this credential is simply the four courses in Philosophy (12 units).

As such, students who wish to earn this credential will typically be able to do so in the ordinary course of earning their degrees: since the Certificate requires only four additional courses, students may pursue these courses as a subset of their normal elective courses and thus earn an additional credential in the same amount of time required to earn a degree.

The proposed Certificate requirements will follow those defined for all certificate requirements at SFU (including number of units, GPA, etc.: <https://www.sfu.ca/students/calendar/2016/fall/fees-and-regulations/credentials-offered/definitions.html#cert>). The following requirements are specific to the proposed Certificate in Philosophy and Methodology of Science:

**2.2 Core Courses**

**PHIL 144 – Introduction to Philosophy of Science (3)**

An introduction to philosophical issues concerning the nature of science. Topics to be discussed include the distinction between science and pseudo-science, the nature of scientific method, the nature of explanation in the natural and social sciences, the phenomenon of scientific change, the relationship between scientific theory and

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## Certificate in Philosophy and Methodology of Science

observation, and the objectivity of social science. Students with credit for PHIL 244 may not take this course for further credit. Breadth-Humanities/Sciences.

### PHIL 201 – Epistemology (3)

A critical overview of recent accounts of the nature and scope of human knowledge and of justified or rational belief, and of philosophical issues that these accounts are intended to address. Prerequisite: One of PHIL 100W (or equivalent), 120W (or equivalent), 121, 144, 150, 151, or COGS 100. Students who have taken PHIL 301 cannot take this course for further credit.

### PHIL 203 – Metaphysics (3)

An examination of central problems of metaphysics such as space and time, universals and particulars, substance, identity and individuation and personal identity. Prerequisite: One of PHIL 100W (or equivalent), 120W (or equivalent), 121, 144, 150, 151, or COGS 100.

### PHIL 341 – Philosophy of Science (3)\*

A study of the nature of scientific enquiry, classificatory systems, laws and theories, the role of observation in science, the demarcation between science and non-science, causality, the status of theoretical constructs, and teleological explanation. Prerequisite: Either one of: PHIL 201 or 203; or both of PHIL 100W (or equivalent) and COGS 200.

\*Students may, with approval from the Certificate Advisor(s), replace PHIL 341 with another 300- or 400-level course on a suitable topic.

## 2.3 Additional Courses

Students complete one of:

MATH 125 – Introduction to Mathematical Methods in the Physical Sciences – I (3)  
MATH 126 – Introduction to Mathematical Methods in the Physical Sciences – II (3)  
MATH 150 – Calculus I with Review (4)  
MATH 151 – Calculus I (3)  
MATH 152 – Calculus II (3)  
MATH 154 – Calculus I for the Biological Sciences (3)  
MATH 155 – Calculus II for the Biological Sciences (3)  
MATH 157 – Calculus I for the Social Sciences (3)  
MATH 158 – Calculus II for the Social Sciences (3)

and two of:

BISC 101 – General Biology (4)  
BISC 102 – General Biology (4)  
CHEM 121 – General Chemistry and Laboratory I (4)  
CHEM 122 – General Chemistry II (2)  
CMPT 120 – Introduction to Computing Science and Programming I (3)  
CMPT 125 – Introduction to Computing Science and Programming II (3)  
EASC 101 – Dynamic Earth (3)

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## Certificate in Philosophy and Methodology of Science

EASC 210 – Historical Geology (3)  
ENSC 100 – Engineering Technology and Society (3)  
ENSC 100W – Engineering Technology and Society (3)  
ENSC 105W – Process, Form and Convention in Professional Genres (3)  
GEOG 100 – Society, Space and Environment: Introducing Human Geography (3)  
GEOG 102 – World Problems in Geographic Perspective (3)  
LING 100 – Communication and Language (3)  
LING 110 – The Wonder of Words (3)  
LING 220 – Introduction to Linguistics (3)  
LING 221 – Introduction to Phonetics and Phonology (3)  
MACM 101 – Discrete Mathematics I (3)  
MACM 201 – Discrete Mathematics II (3)  
PHYS 101 – Physics for the Life Sciences I (3)  
PHYS 102 – Physics for the Life Sciences II (3)  
PHYS 120 – Mechanics and Modern Physics (3)  
PHYS 121 – Optics, Electricity and Magnetism (3)  
PSYC 100 – Introduction to Psychology I (3)  
PSYC 102 – Introduction to Psychology II (3)

### 3 Program Resources

#### 3.1 Target audience and enrolment plan

The target audience is students majoring in the sciences that are traditionally associated with natural philosophy, such as the natural sciences, mathematics, computer science, and psychology.

No maximum target enrolment has been set, but the Philosophy Department has already received significant interest from science students in its lower-division courses (e.g., especially PHIL 144) and, upon approval of the certificate, intends to engage in a widespread campaign to attract students. Numerous colleagues in departments whose courses are included here have indicated that they believe many of their students would be interested in such a Certificate on both intellectual and practical grounds and have offered to support it if and when it is approved.

#### 3.2 Resources

The Certificate is resource-neutral insofar as it requires only existing SFU courses taught by current SFU faculty. The impact on existing programs will thus be minimal: since the Certificate aims to attract students already majoring in the sciences, we expect no impact on associated science and math programs in the university. Any increased demand for enrolment in PHIL courses will be modest and easily accommodated.

### 4 Program Review and Academic/Administrative Oversight

The proposal is for a new credential awarded by the Philosophy Dept. As such, the Certificate will be reviewed every seven years alongside the rest of the Philosophy program during the department's regular external reviews.

### 5 Program Consultation

Every department whose courses are included as fulfilling requirements for the credential has been consulted and has approved their inclusion in the requirements for this credential. Please see attached memos in Appendices, §8.4. Furthermore, a Notice of Intent has been passed by FASS Curriculum Committee, SCUS and SCUP.

**6 Evidence of Student Interest and Labour Market Demand**

We assess demand in two ways, first in terms of student demand for this certificate, and second in terms of employer demand for the skills acquired by students in gaining this certificate. The skills that students acquire in philosophy courses, which our courses emphasize and teach, are usually those mentioned as most desirable by employers. We teach students how to *read* a wide range of material, at varying levels of complexity and in a wide range of styles, in order to distill out and critically assess key lines of reasoning. We teach students how to *write* clearly, precisely, and concisely. We teach students how to use *discussion* as a tool to make progress in understanding and solving difficult problems. Effective verbal communication is a learned skill that we actively develop. This includes the ability to carefully listen to and respond to complex points made by others, and to participate oneself in a manner that is respectful and productive by making to the point, carefully formulated, and concise contributions.

**Student demand:** Based on informal surveys in our introductory Philosophy of Science course (Phil 144), which is often taken by science students for a Breadth-Humanities credit, there is relevant student demand for this credential. Students in the sciences have expressed concern that there are limitations to the teaching of certain skills within their own degree programs, such as clear writing or complex reading skills. The intention of our certificate is to provide interested science students with additional critical thinking skills that will enhance their work in their fields of research, and help them to think about it in more complex ways, to write more concisely and clearly, and to more effectively express themselves in discussion. Students recognize that these are useful job skills and recognize that our program is well-suited to teach them. They have expressed interest in this certificate as a way to both gain these skills and to stand out among a crowd of job applicants with similar qualifications.

**Employer demand:** There is ample evidence that employers seek students who have the kinds of critical thinking skills that are developed in these Philosophy courses. The courses in this certificate will provide the skills to students with science training to critically think about and assess various aspects of their own work. They will also be, on average, far more effective writers, and better able to work in teams with effective verbal communication skills. “Employers complain that colleges are not producing graduates who can solve problems and connect the dots on complex issues,” and this is what our certificate will provide evidence of to prospective employers. (quoted from <http://www.wsj.com/articles/bosses-seek-critical-thinking-but-what-is-that-1413923730>), and this is what our certificate will provide evidence of to prospective employers.

For instance, the top five of these top 10 skills that employers look for as ones that will be enhanced by this certificate: <http://www.forbes.com/sites/susanadams/2014/11/12/the-10-skills-employers-most-want-in-2015-graduates/>.

Similarly, of these four key skills, two of them are clearly developed in this certificate, most especially that of effective communication: <http://www.forbes.com/sites/worldeconomicforum/2016/01/06/the-four-skills-you-need-to-become-a-global-leader/>.

Finally, further evidence that employers selecting students with scientific backgrounds also seek a background in the humanities is provided here: <http://www.scientificamerican.com/article/stem-education-is-vital-but-not-at-the-expense-of-the-humanities/>.

## 7 Appendices

### 7.1 Calendar Entry

A minimum grade of C- is required in all courses that are used to fulfill the requirements of the certificate. An overall Simon Fraser University cumulative grade point average (CGPA) of 2.25 must be maintained. All upper division philosophy courses must be completed at Simon Fraser University.

#### Core Courses

Students complete all of:

PHIL 144 – Introduction to the Philosophy of Natural and Social Science (3)  
PHIL 201 – Epistemology (3)  
PHIL 203 – Metaphysics (3)  
PHIL 341 – Philosophy of Science (3)\*

\* Students may, with approval from the Certificate Advisor(s), replace PHIL 341 with another 300- or 400-level course on a suitable topic.

#### Additional Courses

Students complete one of:

MATH 125 – Introduction to Mathematical Methods in the Physical Sciences-I (3)  
MATH 126 – Introduction to Mathematical Methods in the Physical Sciences-II (3)  
MATH 150 – Calculus I with Review (4)  
MATH 151 – Calculus I (3)  
MATH 152 – Calculus II (3)  
MATH 154 – Calculus I for the Biological Sciences (3)  
MATH 155 – Calculus II for the Biological Sciences (3)  
MATH 157 – Calculus I for the Social Sciences (3)  
MATH 158 – Calculus II for the Social Sciences (3)

and two of:

BISC 101 – General Biology (4)  
BISC 102 – General Biology (4)  
CHEM 121 – General Chemistry and Laboratory I (4)  
CHEM 122 – General Chemistry II (2)  
CMPT 120 – Introduction to Computing Science and Programming I (3)  
CMPT 125 – Introduction to Computing Science and Programming II (3)  
EASC 101 – Dynamic Earth (3)  
EASC 210 – Historical Geology (3)  
ENSC 100 – Engineering Technology and Society (3)  
ENSC 100W – Engineering Technology and Society (3)

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## **Certificate in Philosophy and Methodology of Science**

**ENSC 105W – Process, Form and Convention in Professional Genres (3)**  
**GEOG 111 – Earth Systems (3)**  
**GEOG 213 – Introduction to Geomorphology (3)**  
**GEOG 214 – Weather and Climate (3)**  
**GEOG 215 – Biogeography (3)**  
**LING 100 – Communication and Language (3)**  
**LING 110 – The Wonder of Words (3)**  
**LING 220 – Introduction to Linguistics (3)**  
**LING 221 – Introduction to Phonetics and Phonology (3)**  
**MACM 101 – Discrete Mathematics I (3)**  
**MACM 201 – Discrete Mathematics II (3)**  
**PHYS 101 – Physics for the Life Sciences I (3)**  
**PHYS 102 – Physics for the Life Sciences II (3)**  
**PHYS 120 – Mechanics and Modern Physics (3)**  
**PHYS 121 – Optics, Electricity and Magnetism (3)**  
**PSYC 100 – Introduction to Psychology I (3)**  
**PSYC 102 – Introduction to Psychology II (3)**

### **7.2 Consultation comments and letters of support**

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Certificate in Philosophy and Methodology of Science



DEPARTMENT OF  
BIOLOGICAL SCIENCES

Erin Barley  
Senior Lecturer  
Chair, Departmental Undergrad  
Curriculum Committee

Simon Fraser University  
Department of Biological Sciences  
8888 University Drive,  
Burnaby, BC, Canada  
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FAX: 778-782-3496  
ebarley@sfu.ca

October 6, 2015

RE: Philosophy new program

Dear Dai Heide,

I've spoken with Emelia Kirkwood, the Undergraduate Program Advisor for Biological Sciences about your new certificate in Philosophy, Methodology and Science. This looks like an interesting option for Science students who want to broaden their background in Philosophy, and we don't anticipate any logistical problems at our end.

On behalf of the Biological Sciences Undergraduate Curriculum Committee, we are pleased to support this certificate.

Sincerely,

Erin Barley

## Certificate in Philosophy and Methodology of Science

From: Vance Williams vancew@stu.ca  
Subject: Re: Certificate in Philosophy, Methodology and Science  
Date: October 1, 2015 at 3:05 AM  
To: dhelds@stu.ca



Dear Dr. Helds,

Chemistry has no objections to CHEM 121 and CHEM 122 being included in the list of courses for the proposed Certificate in Philosophy, Methodology and Science.

Sincerely,  
Vance Williams,  
Acting Chair of Undergraduate Studies, Chemistry

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## **Certificate in Philosophy and Methodology of Science**

**From:** John Edgar johnwil@sfu.ca  
**Subject:** Certificate in Philosophy, Methodology and Science  
**Date:** October 1, 2015 at 8:12 PM  
**To:** Dal Hilde dhilde@sfu.ca  
**Cc:** handerse@sfu.ca

**Attention:** Faculty of Arts and Social Sciences

**Re.** Certificate in Philosophy, Methodology and Science

The School of Computing Science has no objection to the inclusion of the listed lower division Computing Science courses in the disjunctive list of required additional courses pertaining to the Certificate in Philosophy, Methodology and Science.

--

**John Edgar**  
Undergraduate Program Director  
School of Computing Science

## Certificate in Philosophy and Methodology of Science

From: Shahin Dashtgard [sdashtgard@gmail.com](mailto:sdashtgard@gmail.com)  
Subject: Re: Request from Philosophy  
Date: January 13, 2016 at 8:06 AM  
To: Dal Heide [dheide@sfu.ca](mailto:dheide@sfu.ca)

Hi Dal,

Yes, I am happy with the changes made, and I approve the Certificate program on behalf of EASC.

Shahin

On Fri, Jan 8, 2016 at 5:35 PM, Dal Heide <[dheide@sfu.ca](mailto:dheide@sfu.ca)> wrote:  
Hi Shahin,

I'm writing to follow up on our discussion about the Philosophy, Methodology and Science certificate that we discussed back in October. I set this aside for the rest of fall semester, but as our curriculum deadline draws near, I'm getting my ducks in a row. Indeed, your suggestion in the below email is well-taken and we have adjusted the certificate accordingly. I have attached the latest version.

If this is now to your liking, would you be so kind as to send me a memo indicating your approval of the certificate?

All the best,

Dal

On Oct 3, 2015, at 4:44 PM, Shahin Dashtgard <[sdashtgard@gmail.com](mailto:sdashtgard@gmail.com)> wrote:

Hi Dal,

A question was raised by a UCC member as to why you guys selected EASC 201 and 202 rather than our two lowest level Majors classes: EASC 101 and 210? They asked because the classes selected in the other science disciplines are first year courses and it makes sense to use the same courses for EASC. Would you be open to a friendly amendment of replacing EASC 201 and 202 with EASC 101 and 210?

Thanks,

Shahin

On Wed, Sep 30, 2015 at 3:31 PM, Dal Heide <[dheide@sfu.ca](mailto:dheide@sfu.ca)> wrote:  
Dear Shahin,

I'm writing in my capacity as Undergraduate Chair of SFU's Philosophy Dept. We are currently in the process of proposing a new certificate in Philosophy, Methodology and Science aimed specifically at SFU's science students who are perhaps seeking to distinguish themselves with a non-science credential upon graduation.

The proposal requires that students complete three non-philosophy courses: one math course (chosen from a wide range of calculus-level courses) and two science courses (chosen from a broad list - these are courses that would already be required by the students' major programs). Accordingly, students seeking this credential would not be required to take any science or math classes beyond what their major programs already require. I have attached the NOI, which includes the proposed certificate requirements on pp. 2-3.

The reason I'm writing is that in order for the certificate to proceed through FASS, I am required to seek approval from each department whose courses could fulfill a requirement for our certificate. So I'm hoping you'll have a look at the attached NOI - and, if you think it's necessary, consult with your undergraduate committee - and then be able to provide me with a memo indicating that your department does not object to having the relevant courses included in the disjunctive list of required courses for our certificate.

I'd be more than happy to answer them. If a reasonably quick response is possible, it would be very much appreciated. But if it is not, then I'll look forward to hearing back from you at your convenience.

Please don't hesitate to be in touch if you have any questions about the certificate or about our intentions.

All the best,

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## Certificate in Philosophy and Methodology of Science

**From:** ENSC UCC [ensucc@sfu.ca](mailto:ensucc@sfu.ca)  
**Subject:** RE: Request from Philosophy  
**Date:** January 6, 2016 at 8:14 PM  
**To:** Dal Helde [dhelde@sfu.ca](mailto:dhelde@sfu.ca)

Hi Dai

Thanks for the follow up email. I had inquired internally with the instructors for ENSC 100 and 105, but neglected to follow up with you.

Please see the thread below indicating that there is no objection. (you may also enjoy the light humour of my typographical error, from breadth elective to 'bread' elective).

Cheers,

Marinko

-----Original Message-----

**From:** ENSC UCC [<mailto:ensucc@sfu.ca>]  
**Sent:** Friday, October 02, 2015 12:39 PM  
**To:** 'Mike Sjoerdsma' <[mhs@sfu.ca](mailto:mhs@sfu.ca)>; 'John Jones' <[jones@sfu.ca](mailto:jones@sfu.ca)>  
**Cc:** [whitmore@sfu.ca](mailto:whitmore@sfu.ca); 'Ugrad Assistant ENSC' <[enscugra@sfu.ca](mailto:enscugra@sfu.ca)>  
**Subject:** RE: Request from Philosophy

Hi John and Mike

Thanks for your rapid responses. Also glad that you can accept my typographical error in good humour.

Cheers,

Marinko

-----Original Message-----

**From:** Mike Sjoerdsma [<mailto:mhs@sfu.ca>]  
**Sent:** Thursday, October 1, 2015 9:30 AM  
**To:** John Jones <[jones@sfu.ca](mailto:jones@sfu.ca)>  
**Cc:** ENSC UCC <[ensucc@sfu.ca](mailto:ensucc@sfu.ca)>; [whitmore@sfu.ca](mailto:whitmore@sfu.ca); Ugrad Assistant ENSC <[enscugra@sfu.ca](mailto:enscugra@sfu.ca)>  
**Subject:** Re: Request from Philosophy

Hi Marinko,

I'm also fine with Philosophy using ENSC 105W as a bread and butter elective.

Mike



**DEPARTMENT OF GEOGRAPHY**

**Department of Geography  
Simon Fraser University**

**STREET ADDRESS  
Robert C. Brown Hall 7123  
Burnaby BC V5A 1S6**

**MAILING ADDRESS  
8888 University Drive  
Burnaby, BC V5A 1S6  
Canada**

**TEL: 778.782.4599  
FAX: 778.782.5841  
EMAIL: emccann@sfu.ca**

**To: Dai Heide, Dept of Philosophy**  
**From: Eugene McCann, Chair, Undergraduate Studies Committee, Geography**  
**Re: Philosophy, Methodology and Science certificate**  
**Date: Jan 14 2016**

The Department of Geography Undergraduate Studies Committee has reviewed your proposed Philosophy, Methodology and Science certificate. We are happy to give it our approval in its current form.

## Certificate in Philosophy and Methodology of Science

Dear Dal,

The UCC of Linguistics has met and we have no objection to the inclusion of LING 220 and LING 221 in the disjunctive list of required courses for our certificate.

You may want to consider LING 290 as well. If you decide to include it, just go ahead, no need to ask us again. Will this do, or do you need a more formal response?

Panos

Panayiotis Pappas  
Associate Professor  
Chair, Undergraduate Curriculum Committee  
Department of Linguistics, SFU  
Chair, Senate Committee on University Teaching and Learning (SCUTL)  
Burnaby BC V5A1S6  
ppappas@sfu.ca  
778-782-5514  
RCB 9217

On Sep 30, 2015, at 3:31 PM, Dai Heide <dheide@sfu.ca> wrote:

Hello,

I'm writing in my capacity as Undergraduate Chair of SFU's Philosophy Dept. We are currently in the process of proposing a new certificate in Philosophy, Methodology and Science aimed specifically at SFU's science students who are perhaps seeking to distinguish themselves with a non-science credential upon graduation.

The proposal requires that students complete three non-philosophy courses: one math course (chosen from a wide range of calculus-level courses) and two science courses (chosen from a broad list - these are courses that would already be required by the students' major programs). Accordingly, students seeking this credential would not be required to take any science or math classes beyond what their major programs already require. I have attached the NOI, which includes the proposed certificate requirements on pp. 2-3.

The reason I'm writing is that in order for the certificate to proceed through FASS, I am required to seek approval from each department whose courses could fulfill a requirement for our certificate. So I'm hoping you'll have a look at the attached NOI - and, if you think it's necessary, consult with your undergraduate committee - and then be able to provide me with a memo indicating that your department does not object to having the relevant courses included in the disjunctive list of required courses for our certificate.

I'd be more than happy to answer them. If a reasonably quick response is possible, it would be very much appreciated. But if it is not, then I'll look forward to hearing back from you at your convenience.

Please don't hesitate to be in touch if you have any questions about the certificate or about our intentions.

All the best,

Dai Heide  
Lecturer and Undergraduate Chair  
Philosophy Dept.  
Simon Fraser University

<NOI for Certificate in Philosophy, Methodology and Science September 2015.docx>

## Certificate in Philosophy and Methodology of Science

From: Jeffrey McGuirk jmcguirk@sfu.ca  
Subject: Re: Request from Philosophy  
Date: September 30, 2015 at 11:06 PM  
To: Dal Heide dheide@sfu.ca

Dear Dai,

The Physics Department has no concerns about this program. It seems an interesting opportunity for students, and these are appropriate introductory physics classes. You might even consider including our other equivalent intro courses PHYS 140, 141, 125, 126.

I'm away from campus traveling for the next few weeks with mobile access only. Perhaps this email can serve your purposes. Otherwise I'm afraid an officially formatted memo will have to wait.

Best,  
Jeff

On Sep 30, 2015 3:31 PM, "Dal Heide" <dheide@sfu.ca> wrote:  
Dear Jeffrey,

I'm writing in my capacity as Undergraduate Chair of SFU's Philosophy Dept. We are currently in the process of proposing a new certificate in Philosophy, Methodology and Science aimed specifically at SFU's science students who are perhaps seeking to distinguish themselves with a non-science credential upon graduation.

The proposal requires that students complete three non-philosophy courses: one math course (chosen from a wide range of calculus-level courses) and two science courses (chosen from a broad list - these are courses that would already be required by the students' major programs). Accordingly, students seeking this credential would not be required to take any science or math classes beyond what their major programs already require. I have attached the NOI, which includes the proposed certificate requirements on pp. 2-3.

The reason I'm writing is that in order for the certificate to proceed through FASS, I am required to seek approval from each department whose courses could fulfill a requirement for our certificate. So I'm hoping you'll have a look at the attached NOI - and, if you think it's necessary, consult with your undergraduate committee - and then be able to provide me with a memo indicating that your department does not object to having the relevant courses included in the disjunctive list of required courses for our certificate.

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Please don't hesitate to be in touch if you have any questions about the certificate or about our intentions.

All the best,

Dal Heide  
Lecturer and Undergraduate Chair  
Philosophy Dept.  
Simon Fraser University

Certificate in Philosophy and Methodology of Science



DEPARTMENT OF PSYCHOLOGY

MEMORANDUM

REBECCA J COBB, PHD  
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ATTENTION: Jane Pulkingham, PhD  
RE: Philosophy Certificate Program

DATE: November 11, 2015

The psychology undergraduate studies committee has reviewed the proposal from Philosophy for a certificate in Philosophy, Methodology and Science, and we have unanimously approved on October 8, 2015.

Sincerely,

Rebecca J. Cobb

A handwritten signature in black ink, appearing to read "Rebecca J. Cobb".

Undergraduate Studies Chair, Psychology