

SIMON FRASER UNIVERSITY

*As adjusted at Senate.  
Jan 8/79*

MEMORANDUM

S.79-6

To..... Senate .....

From..... N.R. Reilly, Chairman  
Senate Committee on  
Undergraduate Studies .....

Subject... Change in Upper Division .....

Requirements for a Major in Communication Studies

Date..... 8 December, 1978 .....

Action taken by the Senate Committee on Undergraduate Studies at its meeting on December 5 gives rise to the following motion:

MOTION

That Senate approve and recommend approval to the Board of Governors that the component of the ~~upper division~~ requirements for <sup>a degree with</sup> a major or honours in Communications which states that students must normally receive credit in the following courses:

d) at least one of: S.A. 358 or PHIL. 341

be replaced by the requirement:

d) at least one of: S.A. 358, PHIL. 243, or PHIL. 341.

PHIL. 243, Studies in the Philosophy of Science, was previously offered as G.S. 201. The change in designation was approved by Senate at its meeting on December 4. The Senate Committee on Undergraduate Studies considered that it was quite appropriate to allow PHIL. 245, Studies in the Philosophy of Science as an alternative to PHIL. 341, Philosophy of Science and S.A. 358, The Philosophy of the Social Sciences. In addition, the Committee acknowledged the points put forwarded by the Department regarding the recent changes in the prerequisites for PHIL. 341.

*Norman R. Reilly*

N.R. Reilly

/kb

# SIMON FRASER UNIVERSITY

## MEMORANDUM

SCUS 78-79  
Discontinued at  
meeting

To Harry Evans, Secretary, SCUS

From William D. Richards, Chairman,  
Undergraduate Curriculum Committee  
Department of Communication

Subject *Change in Requirements  
for a Major in Communication*

Date December 5, 1978

The Communication Department lists the following as one of its requirements for a major in Communication:

"at least one of: S.A. 358 or PHIL 341."

Both of these are courses in the philosophy of science or the philosophy of social science. Some changes in the prerequisites for PHIL 341 and some difficulties with the course in S.A. have necessitated a change in our requirement. The problems and the proposed change are described below.

1. The Philosophy Department has added a prerequisite to PHIL 341. This means that our students must now take at least two courses to fill the requirement instead of one. This is unsatisfactory.
2. There have been complaints from the S.A. department that too many of our students are asking to take their 358 course without the prerequisites. This is causing problems for the professor offering that course.
3. We are proposing the following change as a way of reducing the impact of these problems:

Add to the alternatives a third course, PHIL 243. This will make the calendar read as follows:

"at least one of: S.A. 358, PHIL 243, or PHIL 341."

PHIL 243, Studies in the Philosophy of Science, was previously offered as G.S. 201. The move to the Philosophy Department changes only the number of the course, since the same instructor, Hanna Gay, is teaching the material. A copy of the course description and outline is attached. We feel that this course will provide a suitable third option for our students, thus reducing the problems that the other two departments have been experiencing due to our (relatively unprepared) students attempting to take their more advanced courses.

WDR:lgc

Additional course in the philosophy of science, transferred from General Studies

Present Calendar Description:

GS 201-3 Historical Studies in the Philosophy of Science

This course will present some of the views held by important figures in the philosophy of science including Aristotle, Galileo, Bacon, Descartes, Newton, Kant, Poincare, etc. The format will be primarily chronological and will culminate with a study of views held by leading figures in the late 19th and 20th centuries.

Prerequisite: Any 100 level course in science, mathematics, or philosophy. Students who have taken this course under its former number GS 201 may not take PHIL 243 for further credit.

This course would be transferred to the Philosophy department on the condition that funds for mounting it come from some other source other than our budget. The number of the course would be PHIL 243-3.

After an interchange of memos between the Philosophy department and the Faculty of Interdisciplinary Studies extending over several years, the Department has finally decided that the course described above is acceptable into its program. This course, under the number GS 201, has been approved by Senate and has been offered several times. I attach the original course proposal form prepared by Dr. Hannah Gay who designed the course and has taught it since its approval.

I also attach a memo from Dr. Calvert, Dean of the Faculty of Interdisciplinary Studies giving his approval of the transfer. The budget implications, as far as the Philosophy department is concerned, simply involve the need to seek funding for the course through Continuing Studies. The Department would select the instructor for the course. It should be noted in passing that in transferring GS 201 to the Philosophy department, Dr. Gay is not being added to our department. We may very well continue to select her as the course's instructor because of her (very high) qualifications, but that would be on a semester to semester basis as a Sessional Instructor. This proposal concerns only the course.

Academically, the reasons for transferring GS 201 are these: First, it is clearly a course which falls within the field of the philosophy of science. Within this field the history of science is a matter of philosophic (as well as historical) concern because the evolution of key scientific terms (Law, Theory, Mass, Energy, Matter, etc.) is intimately related to major historical philosophical debates. Not only are science and philosophy connected at the conceptual level, but the very nature of the history of science is philosophically debatable: does it change by slow evolutionary processes so there is just one view of the universe being gradually developed since the Sixteenth Century, or does science change by radical 'paradigm shifts' each comprising a different view of the universe? Second, as Dean Calvert suggests in his memo, this course may be more accessible to students in the arts and sciences faculties if they can receive Group A credit for it.

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

~~NEW COURSE PROPOSAL FORM~~

1. Calendar Information

Department: N/A

Abbreviation Code: GS Course Number: 201 Credit Hours: 3 Vector: 2-1-0

Title of Course: Historical Studies in the Philosophy of Science

Calendar Description of Course: This course will present some of the views held by important figures in the philosophy of science including Aristotle, Galileo, Bacon, Descartes, Newton, Kant, Poincare, etc. The format will be primarily chronological and will culminate with a study of views held by leading figures in the late 19th and 20th centuries.

Nature of Course Lecture/Tutorial

Prerequisites (or special instructions): Any 100 level course in science, mathematics, or philosophy

What course (courses), if any, is being dropped from the calendar if this course is approved: None.

2. Scheduling

How frequently will the course be offered? Yearly

Semester in which the course will first be offered? Fall 1975

Which of your present faculty would be available to make the proposed offering possible?

3. Objectives of the Course

See attached

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty 1/4 sessional lectureship, on an annual basis

Staff

Library See attached resource list

Audio Visual

Space

Equipment

4. Approval

Date: \_\_\_\_\_ October 9/74. \_\_\_\_\_

N/A  
Department Chairman

[Signature]  
Acting Dean

\_\_\_\_\_  
Chairman, SCUS

### 5. Objectives of the Course

a) The object of this course is to acquaint the student with important historical views in the philosophy of science. The format will be primarily chronological though reference to related contemporary ideas will be made throughout. Readings will be selected primarily from original philosophical writings though in some cases, Newton for example, scientific texts will be studied so that comparisons between actual practice and methodological accounts can be made. The following nine sections will be assigned approximately equal times (weighted in favour of the late 19th and early 20th centuries) from which it can be seen that the course will give an overall introductory picture rather than a detailed analysis of any particular philosophy.

#### Outline

##### 1) Introduction to classical views

- a) Aristotle - the inductive-deductive method; non-logical requirements for scientific explanation.
- b) The pythagorean view of nature.
- c) The classical origins of the tradition of 'saving the appearances'.
- d) Euclid: deductive systems the model for empirical systems?

##### 2) 16th and 17th century philosophy of science

- a) Anti-Aristotelian philosophies: the Hermetic, neo-platonist and magical world views.
- b) Galileo's version of Aristotelian methodology: his Platonic ideas of abstraction and idealisation in science.
- c) Francis Bacon; methods of induction and exclusion; crucial experiments. The rejection of teleological explanation.
- d) R. Descartes; the rationalist viewpoint: mechanical world views.

##### 3) Newton

- a) Newton's account of his methods and of the structure of scientific theory.
- b) Newton's rules of reasoning.
- c) Interpretations of 'Hypotheses non-fingo'.
- d) Criticisms of Newton's account of science.

##### 4) 18th century philosophy of science

- a) D. Hume; the principle of empiricism.
- b) I. Kant; the Kantian view of mathematics and of Newtonian mechanics.

##### 5) Early 19th century philosophy of science; theories of scientific procedure

- a) J. Herschel; the continuation of the empirical tradition; the distinction between the discovery and justification of scientific theories.
- b) W. Whewell; the Kantian tradition; the philosophy of science based on historical studies.
- c) Naturphilosophie - the Divine plan of Nature: anti-materialism.

6) Inductivism; pro and con

- a) J.S. Mill; Inductivism.
- b) S. Jevons; the hypothetico deductive model for scientific explanation.
- c) C. Hempel; continuation of the deductive scheme.

7) Mid-Late 19th century philosophy of science

- a) Darwinism; its effect on the Platonic doctrines of ideal form and on Aristotelian final causes.
- b) Helmholtz; 19th century neo-Kantianism; the psychological school.
- c) E. Mach; sensationalism, conventionalism, the critique of Newtonian philosophy.
- d) K. Pearson; radical empiricism.
- e) P. Duhem; axiomatics; historical approaches to positivism; the conventionalist view.
- f) H. Poincare; the Kantian philosophy of arithmetic; the conventionalist philosophy of science and geometry.
- g) C. Pierce; indeterminism in physical theory; anti-inductionism.

8) Early 20th century views

- a) N.R. Campbell; analysis of science without reference to traditional philosophies; the roles of analogy and measurement in science.
- b) P.W. Bridgman; the influence of Duhem and Einstein; operationalism.
- c) Einstein's later neo-Kantian account of methodology in science.
- d) Planck's realism and Bohr's instrumentalism.
- e) J. Watson; behaviourism.
- f) Organismic arguments in Biology, Woodger and Haldane.
- g) H. Bergson's "creative evolution".

9) Mid 20th century views; a brief summary

- a) Modern empiricism; Kuhnian 'irrationality'; neo-Kantian philosophy.
- b) Problems of reduction in the physical and biological sciences: is quantum mechanics an anti-reductionist theory?
- c) Teleology and goal directed organization in biological systems.