

# SIMON FRASER UNIVERSITY

## MEMORANDUM

72-13  
For S. ~~72-8~~  
APPENDIX A

To..... Members of Senate

From..... Dr. R.W. Lardner

Chairman

..... Mathematics Department

Subject.....

Date..... January 6, 1972

The Psychology Department is proposing as part of its calendar change to alter the prerequisite of Mathematics 101-3 for Psychology 210-3 to simply a recommended status. I am attaching to this memo a syllabus for Psychology 210 which has been distributed to students for the offering this Spring semester. (It appears from this, incidentally, that the Mathematics 101 prerequisite has already been dropped in advance of Senate's permission.) It can be seen from this syllabus that the material presented in Psychology 210 now almost exactly coincides with that presented in Mathematics 101 - only the material in part four of the course description is not contained.

The original concept for Statistics courses in the University was that the basic material would be presented in Mathematics 101, to be followed by courses of applications mounted by the Departments concerned which would use the Mathematics course as a prerequisite. The change in calendar entry proposed by the Psychology Department would completely alter this concept and would result in an absurd duplication of material. This much is clear when one considers the course description. There is no question that Psychology 210 would have almost total overlap with Mathematics 101 if Senate were to approve this change.

Perhaps I should add that at no time has the Psychology Department discussed this change with the Mathematics Department and at no time have they advised us of any complaints against the way in which Mathematics 101 is taught. We have, on a number of occasions, sought the advice of the Departments whose students take this course, with very little response. Our own sampling of the students enrolled in the course (about 90% of whom are non Mathematicians) indicates that they are reasonably satisfied with its contents.



R.W. Lardner

RWL/ses

PSYCHOLOGY 210 - DATA ANALYSIS

Instructor: C. Crawford

Spring, 1972

Text: Ferguson, G. A. Statistical analysis in psychology and education. 3rd Ed. New York, McGraw-Hill, 1971.

Prerequisite: None.

Description

Covers basic descriptive and inferential techniques most appropriately applied to the various forms of psychological data.

Part One. Introduction to statistics.

The nature of statistics, uses and abuses of statistics, statistics and human variation, making decisions in the face of uncertainty.

Reading: Ferguson, Ch. 1.

Part Two. Descriptive statistics.

Simple measurement theory, descriptive techniques for increasing the understanding of psychological data.

Reading: Ferguson, Ch. 2, 3, 4 and 25.

Part Three. Elementary probability.

Elementary probability theory with emphasis on the normal curve.

Reading: Ferguson, Ch. 5 and 6.

Part Four. Correlation and prediction.

Techniques for describing the degree of relationship between variables and for predicting scores on one variable from scores on another variable.

Reading: Ferguson, Ch. 7, 8 and parts of 21.

Part Five. Making inferences from observed data, sampling, estimation, tests of significance.

Reading: Ferguson, Ch. 9, 10, 11, parts of 12.

Part Six. Introduction to the design of experiments (If time permits).

Reading: Ferguson, Ch. 14 and 15.

Labs. The two hour weekly labs will be devoted to problems in the analysis of psychological data.

## SIMON FRASER UNIVERSITY

FOR S. 72-8 72-13  
APPENDIX B

## MEMORANDUM

To..... Dr. A.L. Diamond

From..... Dr. C. Crawford

Subject..... Psychology

Date..... 5 January 1972

I am writing to you concerning the memo from Dr. R.W. Lardner, Chairman, Department of Mathematics, to Dr. B.G. Wilson, Academic Vice-President, protesting the dropping of mathematics 101-3 as the prerequisite for Psychology 210-3.

As you may recall the primary reasons for this decision were that:

1. The Psych. 210 instructors believed that dropping the Math. 101 prerequisite would not essentially lower the level of Psych. 210.

2. The department wished to encourage our students to take courses from Science departments other than mathematics and therefore decided to treat all introductory science courses the same.

The level of Psych. 210 has not been changed by the dropping of the prerequisite. A comparison of the 1967, 1968, and 1972 course outlines indicates that neither the text nor the sections studied have been changed as a result of the dropping of the prerequisite. The course, as it has been taught and as it will continue to be taught is an introduction to data analysis in psychology and not an introductory course in statistics. It differs from an introductory course in statistics in several ways,

1. A much smaller amount of time is devoted to probability.
2. A larger amount of time is devoted to correlation and regression.
3. A much larger amount of time is devoted to measurement problems.
4. A much larger amount of time is devoted to problems of experimental design, and
5. A much larger amount of time is devoted to the analysis of psychological data

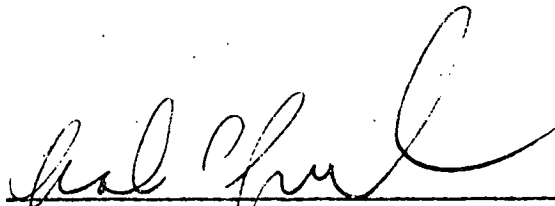
than in an introductory statistics course. The instructors of Psych. 210 have found that our students find understanding the application of elementary statistical concepts to psychological data quite difficult and the content and organization of the course reflect this fact.

The fact that the department recommends that psychology students take Math. 101 (see 1972-1973 proposed psychology calendar entry) indicates that Psych. 210 is not considered to be an introductory statistics course.

As you know the department has always encouraged its undergraduates to take science courses. When the department recommended dropping the Math. 101 prerequisite it believed that:

1. Many students would continue to take Math. 101 (it is a recommended course).
2. Students who did not take it might take another more useful and interesting (for them) science course.

In conclusion, then, dropping Math. 101 as a prerequisite for Psych. 210 will neither lower the level of the course nor increase its overlap with Math. 101. It will make undergraduate programming more flexible and may encourage psychology majors to take other science courses.



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C. B. Crawford

CBC:gf

cc: R.W. Lardner  
B.G. Wilson

Instructor: Charles Crawford

Text:

Ferguson, G. A. Statistical Analysis in Psychology and Education. New York, McGraw-Hill Book Company, 1966.

The student is expected to have familiarity with basic ideas in statistics equivalent to that gained in Math 101-3. A brief review of basic concepts may be given at the beginning of each major section of the course.

Introduction.

An introduction to some of the basic ideas involved in the statistical analysis of psychological data.

Ch. 1. Basic ideas in Statistics

Ch. 16. Transformations: Their Nature and Purpose.

Correlation.

A discussion of the types of correlation that are useful in the analysis of psychological data.

Ch. 14. Rank Correlation Methods

Ch. 15. Other Varieties of Correlation

Experimental Design.

An introduction to the basic ideas in experimental design

Ch. 22. Selected Nonparametric Tests

Ch. 17. The Structure and planning of Experiments

Ch. 18. Analysis of Variance. One Way Classification

Ch. 19. Analysis of Variance: Two Way Classification

Additional Topics.

If time permits the analysis of covariance, partial and multiple correlation and errors of measurement may be briefly discussed.

1968

Psychology 210

Instructor: C. Crawford  
T.A.: P. Johnson

Text: Ferguson, G.A. Statistical Analysis in psychology and education.  
New York, McGraw-Hill, 1966 (2nd Ed.).

Outline

Measurement An introduction to some of the problems of measuring psychological variables.

About 6 lectures and one lab.

Ferguson Chapt. 1 and 16 sec. 1 through 6.

Correlations An introduction to determining the degree of relationship between psychological variables.

About 6 lectures and 3 labs.

Ferguson Chapt. 7, sec 1 through 6.

Chapt. 8

Chapt. 14, sec 1, 2, 3, 5 and 6.

Tests of Significance A brief review of tests of significance. Testing the significance of a correlation. Chi square and some non parametric tests of significance.

About 4 lectures and 2 labs.

Ferguson: Review Chapt. 6, 9 and 11

Chapt. 13, sec 1 through 4 and 6.

Experimental Design and the Analysis of Variance. An introduction to experimental design and the analysis of variance.

About 6 lectures and 3 labs.

Ferguson Chapt. 17, 18 and 19

Distribution of marks

Labs	30%
Mid terms	20%
Final	50%

PSYCHOLOGY 210 - DATA ANALYSIS

Instructor: C. Crawford

Spring, 1972

Text: Ferguson, G. A. Statistical analysis in psychology and education. 3rd Ed. New York, McGraw-Hill, 1971.

Prerequisite: None.

Description

Covers basic descriptive and inferential techniques most appropriately applied to the various forms of psychological data.

Part One. Introduction to statistics.

The nature of statistics, uses and abuses of statistics, statistics and human variation, making decisions in the face of uncertainty.

Reading: Ferguson, Ch. 1.

Part Two. Descriptive statistics.

Simple measurement theory, descriptive techniques for increasing the understanding of psychological data.

Reading: Ferguson, Ch. 2, 3, 4 and 25.

Part Three. Elementary probability.

Elementary probability theory with emphasis on the normal curve.

Reading: Ferguson, Ch. 5 and 6.

Part Four. Correlation and prediction.

Techniques for describing the degree of relationship between variables and for predicting scores on one variable from scores on another variable.

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Part Five. Making inferences from observed data, sampling, estimation, tests of significance.

Reading: Ferguson, Ch. 9, 10, 11, parts of 12.

Part Six. Introduction to the design of experiments (If time permits).

Reading: Ferguson, Ch. 14 and 15.

Labs. The two hour weekly labs will be devoted to problems in the analysis of psychological data.

APPENDIX C  
FOR S.72-13

UNIVERSITY	101 Introduction	201 General Experimental	210 Statistics	220 Lab Course In Learning	230 Lab Course In Perception	240 Lab Course In Motivation	401 History of Psych.	Math. Science Outside Dept.	Other Course In Psych. Dept.	Total Require- ments
Old SFU Programo	1	1	1	}	Any Two	}	1	1		8
New SFU	1	1	1				1	1	5	0
Alberta										0
Guelph	1	1								2
Laurentian	1		1						1	3
Laval	1							4	1	7
McGill	1		1							2
Loyola Montreal		1						1		3
Moncton	1							1		3
Sir George Williams	1	1		}	Any one	}	1			4
U. Victoria			1							
Waterloo	1		1						1	3
Carlton	1			}	Any one	}			1	2
Dalhousie	1	1								
U B C	1	1								2
McMaster			1							1
Manitoba	1	1	1							3



S.72-13

SIMON FRASER UNIVERSITY

(Formerly S.71-135)

MEMORANDUM

To SENATE

From

CURRICULUM AND CALENDAR CHANGES  
Subject - DEPARTMENT OF PSYCHOLOGY

Date DECEMBER 22, 1971

MOTION: "That Senate approve, as set forth in S.72-13 a, b:

a) New Courses

Psych 302-  
Psych 303-  
Psych 304-  
Psych 411-5

b) Discontinuance of Courses

Psych 220- (renumbered)  
Psych 230- (renumbered)  
Psych 240- (renumbered)

c) Changes in prerequisites and requirements as set forth on Page 1.

d) Changes in titles: Psych 101, Psych 385, Psych 485, Psych 401, Psych 410, following technicalities discussed with Registrar.

e) The calendar entry, Pages 4-11."

# SIMON FRASER UNIVERSITY

S71-136

## MEMORANDUM

To H. M. Evans, Registrar,

Secretary of Senate

Subject Psychology Submission S.71-135

From *Len*  
Dr. A. L. Diamond

Department of Psychology

Date December 22, 1971

With reference to my memorandum of December 15, 1971 indicating our desire to resubmit our proposed curriculum and calendar changes, I would like to expand somewhat on the reasons for resubmission at this time. There are three reasons:

1. There was discussion in Senate concerning the deletion of Psychology courses 220, 230 and 240 as requirements for Majors and Honors. Information, which was not at that time available to Senate, should perhaps now be considered. This information is taken from a representative sample of 19 psychology departments in universities across the Provinces of Canada. Of all these departments, the Psychology Department at Simon Fraser University has the greatest number of required courses at the present time. In fact, the present SFU Psychology Calendar requires more than twice as many courses as required by the "median" department in the sample.

The new program suggested in the submission S.71-135 suggests 5 required courses. Only 3 other Canadian universities out of the sample of 19 presently have 5 or more required courses for their Majors or Honors students. On the other hand, some of the better-known universities have requirements well below median; for example, U.B.C. has 2, McMaster has 1, University of Toronto, 1, and McGill, 2 required courses for Psychology Majors.

With respect to courses equivalent to our 220, 230 and 240, 17 out of the 19 universities do not require these particular courses.

The suggestion of the SFU Psychology Department therefore to change these courses from required to elective courses seems to be in keeping with the times, and, further, the total number of requirements is still high compared to other universities in Canada.

2. With respect to the re-numbering of Psychology 220, 230 and 240 to the 300 level, the Psychology Department felt that these courses were being taught at the level of 300-level courses. This, of course, is a qualitative judgment and was made as the best judgment of the Department. It should be noted, however, that re-numbering of these courses was not a critical aspect of the program's revision, should Senate feel for reasons of its own that this re-numbering should not take place.

H. M. Evans, Registrar,  
Secretary of Senate

-2-

December 22, 1971

3. Since the submission was withdrawn before it was fully considered, the remainder of the calendar modifications suggested in S.71-135 intended to make the program an up-to-date Psychology offering should also be considered by Senate.

ALD:js

cc: Dean D. H. Sullivan

# SIMON FRASER UNIVERSITY

## MEMORANDUM

To Harry M. Evans, Registrar,  
Secretary of Senate  
Subject Psychology Submission S.71-135

*Jan*  
From Dr. A. L. Diamond, Acting Chairman  
Department of Psychology  
Date December 15, 1971

With reference to our telephone conversation and your memorandum of December 9th, 1971, on behalf of the Department of Psychology, I would like to resubmit our proposed curriculum and calendar changes exactly as submitted before. The reason for the resubmission of our proposal has to do with the fact that the Department had not anticipated the questions that Senate brought forward in the last submission, and it is felt that information relevant to these questions, which had not been available to Senate before, should now be presented along with the submission.

In this respect, I would like to request that a number of individuals from the Department be allowed to attend the Senate Meeting in order to offer explanation concerning these questions.

ALD:js

SIMON FRASER UNIVERSITY

*formerly S.71-135a*  
*Now S71-13a*

MEMORANDUM

To SENATE

From SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Subject CURRICULUM AND CALENDAR CHANGES -  
DEPARTMENT OF PSYCHOLOGY

Date DECEMBER 2, 1971

The Senate Committee on Undergraduate Studies approved the submission of the Department of Psychology as set forth in SCUS 71-23 and recommends approval to Senate.



SIMON FRASER UNIVERSITY

MEMORANDUM

Formerly S.71-135  
Now S 72-13

To SENATE

From

Subject CURRICULUM AND CALENDAR CHANGES  
- DEPARTMENT OF PSYCHOLOGY

Date NOVEMBER 18, 1971

MOTION: "That Senate approve, as set forth in S.71-135

a) New Courses

Psych 302-  
Psych 303-  
Psych 304-  
Psych 411-5

b) Discontinuance of Courses

Psych 220- (renumbered)  
Psych 230- (renumbered)  
Psych 240- (renumbered)

- c) Changes in prerequisites and requirements as set forth on Page 1.
- d) Changes in titles: Psych 101, Psych 385, Psych 485, Psych 401, Psych 410, following technicalities discussed with Registrar.
- e) The calendar entry, Pages 4-11."

Calendar ChangesDEPARTMENT OF PSYCHOLOGY

At its meeting of October 14, 1971, the Faculty of Arts Curriculum Committee approved the 1972-73 Undergraduate Calendar Submission for the Department of Psychology.

The justification for the changes as submitted by the Department of Psychology is outlined below.

The Psychology Department has approved a number of changes recommended by its Undergraduate Studies Committee. The effect of these changes is to allow the student a wider range of freedom in the selection of the courses constituting the Major or Honors curriculum.

These changes required re-writing of the calendar entry. The re-written calendar entry was presented to the department and the entry as submitted has been approved.

The following are the changes reflected in the new calendar entry:

1. Course number changes - Psychology 220, 230 and 240 have been raised to the 300 level and are now numbered Psychology 302, 303, and 304 respectively. Covered in New Course statement.

Rationale: It is felt that there is no real difference in the level of these 200 level courses as compared with the level of the 300 level courses.

2. Requirements for Majors and Honors - a. Psychology 302, 303 and 304 (formerly 220, 230 and 240) are no longer required courses for Majors and Honors.

Rationale: Students are allowed greater flexibility in choice of courses at the 300 level.

b. The requirement that Honors students take 18 hours of Psychology in their first four semesters is dropped.

Rationale: Many students, especially those making late choices of Honors found this restrictive.

3. Changes in prerequisites - a. For 300 level courses where the prerequisite has been 201-3 the prerequisite has been changed to 101-3.

Rationale: This is designed to make these courses more accessible to non-majors.

b. Psychology 210-3 change from "Prerequisite: Mathematics 101-3" to "Recommended: Mathematics 101-3".

4. Course title changes - a. Psych 101-3 - change from Historical Foundations of Contemporary Psychology to Introductory Psychology.

Rationale: This is equivalent to what is generally taught in courses entitled Introductory Psychology.

- b. Psych 385-3 and 485-5 change from Comparative Psychology to Animal Behaviour.

Rationale: This is to conform to contemporary usage in this field.

- c. Psychology 401-5 Systems of Psychology - change to History and Systems.

Rationale: To conform to usage at other universities.

- d. Psychology 410-5 Research Design - "Research Design" is changed to Research Design I.

Rationale: Because new course 411-5 Research Design II is being added.

5. New course - A new course Psychology 411-5 Research Design II is being added. This is described in New Course form.

6. Other changes - minor and editorial -

P. 173, e. 7-8 omit "at least two of Psychology 220-3, 230-3, 240-3."

P. 173; e. 9-11 change to "Majors must take Psychology 210-3 by the end of the fourth level."

P. 173, e. 30-31 omit "a minimum of 18 credits...1 four levels and"

P. 173, e. 33-34 omit "Psychology 101-3 and....subsequent courses, and"

P. 173, e. 35 omit "must be taken"

P. 173, e. 36-37 omit "220-3, 230-3, 240-3"

P. 174, e. 5 change "Language Other than English" to "Preparation for Possible Graduate Study in Psychology"

- P. 174, e.6 Place a number 2. before "Many graduate.....  
2. is preceded by "1. It is strongly advised....."  
2. is followed by "3. Early Consultation.....  
(see revised calendar text).
- P. 174, e.10 changes have been made in "Suggested Sequence  
for First Four Levels" to conform to other changes  
made.
- P. 175, 302-3 Learning (formerly 220-3) - add "Students  
who have already taken Psychology 220-3  
may not take this course *for further credit*"
- 303-3 Perception (formerly 230-3) add "Students  
who have already taken Psychology 230-3  
may not take this course *for further credit*"
- 304-3 Motivation (formerly 240-3) - add "Students  
who have already taken Psychology 240-3 may  
not take this course *for further credit*"
- P. 175, last line  
305-3 add "and scale" between test and construction.
- P. 176, e. 1-2 place period after applied and omit "with  
special reference to assessment of academic achieve-  
ment."
- P. 179, e.3 replace "200-and300-" by "lower"
- P. 179 Move 410-5 out of Upper Level Seminars so that it follows  
immediately after 401-5. Course description  
added for 410-5. New course 411-5 will follow  
directly after 410-5.

Minor changes in prerequisites for consistency with other changes made.

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P. Bakan.

PB/ns

## Course Requirements for Majors

Students who plan to study Psychology must obtain credit for courses listed below. For a major at least 30 credits in upper level Psychology courses must be taken during the last 4 levels.

Courses required for the general program with a major in Psychology must include:  
Psychology 101-3; 201-3; 210-3; 401-5.

Majors must take Psychology 210-3 by the end of the fourth level.

The instructor may permit advanced students from other programs to take certain advanced courses without the normal prerequisites.

## Course Requirements for Honors

### A. Admission

Psychology majors who contemplate undertaking an Honors program in the Department must fill out an application form requesting entry into the program. This form is obtainable from the Departmental office. The qualifications for admission to the Honors program are:

1. Completion of 60 semester hours of University course work with a cumulative grade point average of not less than 3.0.
2. Completion of at least 18 hours of course work in Psychology with an overall average of not less than 3.0 in these courses.

### B. Continuing;

To remain in the Honors Program in Psychology, the student must maintain a cumulative all-University grade point average of not less than 3.0.

### C. Overall requirements

To qualify for the Honors degree in Psychology the student must have completed 50 credits in upper level Psychology or approved related courses during the last four levels.

Students taking Honors in Psychology must take Psychology 210-3 by the end of level 4.

Specific courses in Psychology must include 101-3, 201-3, 401-5; at least two Honors seminars (exclusive of 401-5, and Directed Studies courses). Honors students are also required to take at least one Science course (other than Math 101) carrying 3 or more credit hours. If taken during the last 4 levels, this course may be counted among the 12 hours in "related courses" that may be included in the 50 required hours.

A number of courses in other Departments have relevance to certain areas of Psychology. Honors and Majors in Psychology are urged to prepare themselves broadly by taking additional courses in the Faculties of Arts, Science and Education, as recommended by their advisors.

### Preparation for possible graduate study in Psychology

1. It is strongly advised that the following courses be taken: Psychology 402-3, 303-3 and 304-3.

2. Many graduate schools require some proficiency in a language other than English. Those who contemplate graduate studies in Psychology should consider including language courses other than English in their program.
3. Early consultation with departmental advisors is suggested.

Suggested Sequence for First Four Levels

Typical Program for Majors and Honors in Psychology

Level	Courses
1	Psychology 101-3 and one other 100 level course.
2	Psychology 201-3
3	Psychology 210-3
4	Two Psychology courses at the 300 level *

Typical Program for Majors and Honors Starting Psychology in Level 3

Level	Courses
3	Psychology 101-3, 201-3
4	Psychology 210-3 and two 300 level courses. *

\* Students are reminded that 300 division courses taken during the first 60 hours of credit will not fulfill upper level requirements. (Ref. Requirements for the B.A. Degree, page 78).

Description of Courses

101-3 Introductory Psychology

Acquaints the student with the major problems in contemporary psychology and considers the historical antecedents. Special reference is made to classical studies and significant experiments. The course provides an integrated perspective to the many aspects of psychology. Required of all majors.

(2-1-0)

105-3 Differential Psychology

A consideration of the bases for individual differences in learning, performance, personality, and social behaviour. Some attention is given to the assessment and interpretation of these differences.

(2-1-0)

106-3 Social Issues

Relates contemporary knowledge from psychology to current social problems. The course provides relevant information from studies pertaining to problems of attitude development, prejudice, race relations, and cultural differences.

(2-1-0)

### 150-3 Psychological Factors in Performance

A contemporary account of factors which influence human performance, focusing on problems related to human engineering, job training, work efficiency and consumer preference.

(2-1-0)

### 180-3 Brain and Behaviour

A general introduction to the role of the central nervous system in understanding some of the most important phenomena of behaviour and experience. Considers such questions as the physiological basis of memory storage; the neurophysiological basis of hunger, thirst, sex drives, sleep, dreaming and emotional reactions. As a minimal background, the student should have had at least one high school or university course in biology. This course is intended for non-Psychology majors.

(2-1-0)

### 201-3 General Experimental Psychology

Considers problems of research and experimentation with illustrations from the major areas of psychology. Topics include: formulation of testable questions; control or elimination of extraneous influences; measurement of effects; evaluation of results; choice of variables which most appropriately represent the concepts under study; instrumentation.

(2-0-2)

Prerequisite: Psychology 101-3.

### 210-3 Data Analysis in Psychology

Covers basic descriptive and inferential techniques most appropriately applied to the various forms of data from psychological research. Must be completed by majors and honors before the end of Level 4.

(2-0-2)

Recommended: Math 101-3.

### 302-3 Learning

Conditions, principles, and theories of learning. Consideration of the acquisition and extinction of behaviour.

(2-0-2)

Prerequisite: Psychology 101-3.

Students who have already taken Psych 220-3 may not take this course *for further credit.*

### 303-3 Perception

Conditions, principles, and theories of perception. Consideration of the apprehension of stimuli.

(2-0-2)

Prerequisite: Psychology 101-3.

Students who have already taken Psych 230-3 may not take this course *for further credit.*

### 304-3 Motivation

Conditions, principles and theories of motivation. Consideration of the initiation, direction and regulation of behaviour. Animal and human data and the physiological bases of motivation are considered.

(2-0-2)

Prerequisite: Psychology 101-3.

Students who have already taken Psych 240-3 may not take this course *for further credit.*

### 305-3 Test Construction

Considers purposes of testing. Basic principles of test and scale construction are illustrated and applied. Advantages and limitations of different types of questions, methods of item analysis, and item specifications required for effective measurement are discussed.

Prerequisite: Psychology 101-3.

(2-0-2)

Recommended: A prior course in statistics.

### 310-5 Theory of Measurement

Deals with basic problems in the quantification of psychological variables. Theoretical formulations of the concepts of reliability and validity, and the applicability of these formulations to experimental and observational data. Implications of measurement theory for the design of experiments and studies, and introduction to contemporary methods in different content areas.

Prerequisites: Psychology 101-3 and 210-3.

(3-0-2)

### 315-3 Survey Design and Sampling Methods in Social Science

Considers theory and methods of survey and sample design in social science. Deals with selection of population elements included in a sample, estimation of sample statistics, identification and reduction of selection bias and non-sampling error, relative efficiency of alternative designs, and evaluation of limits of inference and applicability of sample results with specific reference to problems in social science.

Prerequisites: Psychology 101-3 and Psychology 210-3 or equivalent.

(2-0-2)

### 320-3 Cognitive Processes

Deals with method and theory relevant to thinking and related processes. Includes the status of cognitive variables as logical and scientific constructs, concept formation and attainment, problem solving, and the relation of language to thought.

Prerequisite: Psychology 101-3.

(2-0-2)

### 325-3 Memory and Conscious Content

Examination of the phenomena of memory and the retention and reproduction of conscious content. Considers the conditions and principles of retention and recall in short and long term memory.

Prerequisite: Psychology 101-3.

(2-0-2)

### 330-3 Situation Perception

Considers perception in the context of complex situations and includes consideration of selective attention, and event, person and social perception and perception involving interactions among persons or objects.

Prerequisite: Psychology 101-3

(2-0-2)

Recommended: Psychology 230-3 or 302-3.



### 345-3 Sensation

Considers the capabilities of the sensory system, and the sensory bases of experience with reference to the characteristics of stimuli, the receptor mechanisms, the processes of transmission, and the concomitant neurophysiological processes. Consideration is also given to the problems of response indicators and the measurement of sensory magnitudes.

(2-0-2)

Prerequisite: Psychology 101-3.

### 340-3 Psychopathology

Centers on the elaboration and evaluation of theoretical and research models. Deals with: problems of definition and classification of pathological behaviour; identification and measurement of relevant variables; problems of research design; factors involved in the development of specific symptoms; considerations of outcomes of therapy.

Prerequisite: Psychology 101-3.

(2-0-2)

Recommended: Psychology 304-3.

### 345-3 Feeling and Emotion

Considers the conditions, principles, and theories of the experiential and behavioural aspects of feeling and emotion as these relate to motivation, learning, perception, personality, psychosomatics, and social behaviour.

(2-0-2)

Prerequisite: Psychology 101-3.

### 347-3 Motivation and Work

Considers requirements of a theory of motivation adequate for continuing, long-term situations having "real" demands as exemplified by the world of work. Begins with classification of occupations followed by study of the motivational significance of occupational choice in relation to individual differences, satisfaction, performance, task demands, intentions, expectations, commitment of effort, initial personal values and changes in values as a function of task experience.

Prerequisite: Psychology 101-3.

(2-0-2)

### 351-3 Child Psychology

Considers the physical and psychological aspects of human development, emphasizing those environmental and biological factors that affect the course of development.

Prerequisite: Psychology 101-3.

(2-0-2)

Students who have already taken Psychology 350-3 may not take this course.

### 355-3 The Psychology of Adolescence and Youth

Considers human development from the end of childhood to the beginning of the adult stage, from a bio-social point of view. Included among the topics are psychological effects of sexual maturation, choice of vocation and marriage partner, effects of participation in the gang and youth organization, cultural variations in the patterns of growth.

(2-0-2)

Prerequisite: Psychology 101-3.

### 360-3 Social Psychology

Deals with methodology and content in the areas of social stratification, role theory, socialization, language, personality and society, attitudes, group dynamics and crowd behaviour.

(2-0-2)

Prerequisite: Psychology 101-3

### 305-3 Psycholinguistics

Treats language behaviour from a linguistic point of view to provide an integrated study in terms of both structural and functional aspects. Included among the topics covered are first language acquisition, second language learning and bilingualism, linguistic relativism, speech disorders, and social determinants of speech.

Prerequisites: Psychology 101-3, and English 111-3 or 212-3.

(2-0-2)

Recommended: Linguistics 220-3.

### 370-3 Theories of Personality

Examination of concepts used in the study of personality. Emphasis will be on normal rather than abnormal behaviour and particular attention will be paid to experimental investigations of personality variables.

(2-0-2)

Prerequisite: Psychology 101-3.

### 380-3 Physiological Psychology

The physiological bases of behaviour and experience. Emphasis on the human organism with some consideration of the behaviour and physiological functioning of lower animals.

Prerequisite: Psychology 101-3

(2-0-2)

Recommended: Biology courses in Physiology or Genetics.

### 385-3 Animal Behaviour

Considers psychological processes across infra-human species, and includes consideration of the neuro-physiological bases and the description and analysis of behaviour as these relate to the study of human behaviour.

(2-0-2)

Prerequisite: Psychology 101-3.

Recommended: Biology 101-4, 102-4.

### 401-5 History and Systems

Considers the historical schools and contemporary theoretical systems of psychology. Attention is given to model and theory construction and the logical and experimental consistency of the various systems. Required of all honors and majors.

(0-5-0)

Prerequisite: Psychology 201-3 and permission of the instructor.

### 410-5 Research Design I

Reviews the basic logic of controlled experimentation, and focuses on analysis of variance designs commonly used in psychological research. Particular emphasis is given to the relative merits of the several designs when there are multiple research questions to be answered.

(0-5-0)

Prerequisite: Psychology 201-3 and 210-3.

### 411-5 Research Design II

Focuses on multivariate regression and correlation models. Deals with ways of answering questions when direct experimental manipulation is not feasible, and demonstrates the utility of the principles involved for solving problems other than those for which they were first proposed.

(0-5-0)

Prerequisite: Psychology 201-3 and 210-3.

Recommended: Psychology 410-5.

## Upper Level Seminars

The seminars offer advanced treatment of selected topics covered more generally in lower level courses.

In addition to intensive reading and discussion, students ordinarily will be expected to undertake individual projects under supervision. Honors students must take at least two of these seminars.

A minimum of fifth level standing is required for admission. Admission to any upper level seminar requires permission of the instructor.

415-5 Measurement Prerequisite: Psychology 310-5.	(0-5-0)
420-5 Learning Prerequisite: Psychology 220-3 or <u>302-3</u> .	(0-5-0) X
425-5 Language and Thinking Prerequisite: Psychology 320-3.	(0-5-0)
430-5 Perception Prerequisite: Psychology 230-3 or 303-3.	(0-5-0)
435-5 Sensation Prerequisite: Psychology 230-3 or 303-3.	(0-5-0)
440-5 Motivation Prerequisite: Psychology 240-3 or 304-3.	(0-5-0)
450-5 Developmental Psychology Prerequisite: Psychology 350-3 or 351-3 or 355-3.	(0-5-0)
460-5 Social Psychology Prerequisite: Psychology 360-3.	(0-5-0)
470-5 Personality Prerequisite: Psychology 370-3.	(0-5-0)
480-5 Physiological Psychology Prerequisite: Psychology 380-3.	(0-5-0)
485-5 Animal Behaviour Prerequisite: Psychology 385-3.	(0-5-0)
493-3 Directed Studies Independent reading or research in topics selected in consultation with the supervising instructor. Prerequisite: Psychology 201-3 and permission of the instructor.	(0-3-0)
494-3 Directed Studies Independent reading or research in topics selected in consultation with the supervising instructor. Prerequisite: Psychology 201-3 and permission of the instructor.	(0-3-0)

495-3 Directed Studies

Independent reading or research in topics selected in consultation with the supervising instructor.

(0-3-0)

Prerequisite: Psychology 201-3 and permission of the instructor.

496-5 Directed Studies

Independent reading or research in topics selected in consultation with the supervising instructor.

(0-5-0)

Prerequisite: Psychology 201-3 and permission of the instructor.

497-5 Directed Studies

Independent reading or research in topics selected in consultation with the supervising instructor.

(0-5-0)

Prerequisite: Psychology 201-3 and permission of the instructor.

498-5 Directed Studies

Independent reading or research in topics selected in consultation with the supervising instructor.

(0-5-0)

Prerequisite: Psychology 201-3 and permission of the instructor.

FACULTY OF ARTS

NEW COURSE PROPOSAL

September 1971

1. CALENDAR INFORMATION

Department: Psychology Course Number: 302-3 Title: Learning.

Sub-title or Description:

Conditions, principles and theories of learning. Consideration of the acquisition and extinction of behaviour.

Credit Hours: 3 Vector Description: 2-0-2

Pre-requisite(s): 101-3 (Psych)

*Students who have already taken Psych 220-3 may not take this course for further credit.*

2. ENROLMENT AND SCHEDULING

Estimated Enrolment:

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):

When will course first be offered?

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

Course is same as 220-3 in all respects. This is a renumbering. 220-3 will be dropped.

B. What is the range of topics that may be dealt with in the course?

2.

C. How does this course fit the goals of the department?

D. How does this course affect degree requirements?

E. What are the calendar changes necessary to reflect the addition of this course?

F. What course, if any, is being dropped from the calendar if this course is approved?

Psych 220-3

G. What is the nature of student demand for this course?

H. Other reasons for introducing the course.

4. BUDGETARY AND SPACE FACTORS

- A. Which faculty will be available to teach this course?
- B. What are the special space and/or equipment requirements for this course?
- C. Any other budgetary implications of mounting this course:

Approval:

Curriculum Committee:

Dean of Faculty:

Senate Undergraduate  
Studies Committee:

Senate:

FACULTY OF ARTS

September 1971

NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Psychology Course Number: 303-3 Title: Perception  
Sub-title or Description: Conditions, principles and theories of  
perception. Consideration of the apprehension of stimuli.

Credit Hours: 3

Vector Description: 2-0-2

Prerequisites:

Psych 101-3

*Students who have already taken Psych 230-3 may not take  
this course for further credit*

2. ENROLMENT AND SCHEDULING

Estimated Enrolment:

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall  
and Spring):

When will course first be offered?

3. JUSTIFICATION

A. What is the detailed description of the course including  
differentiation from lower level courses, from similar courses  
in the same department, and from courses in other departments  
in the University?

Course is same as 230-3 in all respects. This is a renumbering.  
Psychology 230-3 will be dropped.

B. What is the range of topics that may be dealt with in the  
course?



2.

C. How does this course fit the goals of the department?

D. How does this course affect degree requirements?

E. What are the calendar changes necessary to reflect the addition of this course?

F. What course, if any, is being dropped from the calendar if this course is approved?

Psych 230-3

G. What is the nature of student demand for this course?

H. Other reasons for introducing the course.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

B. What are the special space and/or equipment requirements for this course?

C. Any other budgetary implications of mounting this course:

Approval:

Curriculum Committee:

Dean of Faculty:

Senate Undergraduate  
Studies Committee:

Senate:

FACULTY OF ARTS

September 1971

NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Psychology      Course Number: 304-3      Title: Motivation

Sub-title or Description: Conditions, principles and theories of motivation. Consideration of the initiation, direction and regulation of behaviour. Animal and human data and the physiological bases of motivation are considered.

Credit Hours: 3      Vector Description: 2-0-2

Pre-requisite(s):

Psychology 101-3

*Students who have already taken Psych 240-3 may not take this course for further credit*

2. ENROLMENT AND SCHEDULING

Estimated Enrolment:

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):

When will course first be offered?

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

Course is same as 240-3 in all respects. This is a renumbering. Psychology 240-3 will be dropped.

B. What is the range of topics that may be dealt with in the course?

- C. How does this course fit the goals of the department?
- D. How does this course affect degree requirements?
- E. What are the calendar changes necessary to reflect the addition of this course?
- F. What course, if any, is being dropped from the calendar if this course is approved?  
Psych 240-3
- G. What is the nature of student demand for this course?
- H. Other reasons for introducing the course.

4. BUDGETARY AND SPACE FACTORS

- A. Which faculty will be available to teach this course?
- B. What are the special space and/or equipment requirements for this course?
- C. Any other budgetary implications of mounting this course:

Approval:

Curriculum Committee:

Dean of Faculty:

Senate Undergraduate  
Studies Committee:

Senate:

FACULTY OF ARTS

November, 1969

NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Psychology Course Number: 411 Title: Research Design II  
Sub-title or Description: Focuses on multivariate regression and correlation models. Deals with ways of answering questions when direct experimental manipulation is not feasible, and demonstrates the utility of the principles involved for solving problems other than those for which they were first proposed.  
Credit Hours: 5 Vector Description: (0-5-0)  
Pre-requisite(s): Psychology 201-3 and 210-3  
Recommended: Psychology 410-5

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 5  
Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):  
every Spring  
When will course first be offered? Spring 1972

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

This course already exists as Psychology 911, which is required of all incoming M.A. candidates.

B. What is the range of topics that may be dealt with in the course?

Partial, and multiple regression and correlation; canonical regression and correlation; component analysis; factor analysis; discriminant analysis; analysis of general covariance structures

2.

a. How does this course fit the goals of the department?

It allows honours students (and, in general, students who are planning to do graduate work) the opportunity to acquire skills which are necessary for the conduct of methodologically sound research at an advanced level.

b. How does this course affect degree requirements?

No effect.

c. What are the calendar changes necessary to reflect the addition of this course?

None other than the insertion of the course name, number, and description.

d. What course, if any, is being dropped from the calendar if this course is approved?

None.

e. What is the nature of student demand for this course?

Students are currently enrolling in this course by signing up for Directed Studies, under several numbers, or for 410 or 415.

f. Other reasons for introducing the course.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

L. M. Kendall, R. F. Koopman, C. B. Crawford

B. What are the special space and/or equipment requirements for this course?

None

C. Any other budgetary implications of mounting this course:

None

Approval:

Curriculum Committee:

Dean of Faculty:

Senate:



# SIMON FRASER UNIVERSITY

## MEMORANDUM

To SENATE

From D. A. MEYERS

DIRECTOR OF SECRETARIAT SERVICES

Subject ATTACHMENTS TO PAPER S.72-14

Date JANUARY 7, 1972

The attached Appendix A and Appendix B outline the new course proposals as set forth in Proposals III and IV of the above Senate paper.

APPENDIX A TO  
S.72-14

FACULTY OF SCIENCE

NEW COURSE PROPOSAL

I CALENDAR INFORMATION

Department: Mathematics Course Number: 253-4 Title: Calculus III

Sub-title or Description:

Sequences and series. Conditional, absolute and uniform convergence. Differentiation and integration of series. Vector calculus. Analytic geometry in three dimensions. Functions of several variables, multiple and line integrals, partial derivatives.

Credit Hours: 4 Vector Description: (4-1-0)

Pre-requisite(s): Mathematics 152-3 or permission of the department. Students who have obtained credit for Mathematics 251-3 cannot receive credit for Mathematics 253-4.

II ENROLMENT AND SCHEDULING

Estimated Enrolment: Fall - 50; Spring - 30; Summer - 20; 100 per year

Semester Offered (e.g. Yearly, every Spring; twice yearly, Fall and Spring):

Every semester

When course will first be offered: Fall 1972

III JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department and from courses in other departments in the University?

No similar course is offered in this or any other department within the University.

B. What is the range of topics that may be dealt with in the course?

Infinite series, three dimensional analytic geometry, calculus of several variables, vector calculus.

C. How does this course fit the goals of the department?

This course forms part of the lower level degree requirements for students in Mathematics, Chemistry and Physics. It is an essential prerequisite to most of the 300 and 400 level Mathematics courses.

D. How does this course affect degree requirements?

This course is required for all Mathematics, Chemistry and Physics majors and honors students.

E. What are the calendar changes necessary to reflect the addition of this course?

New entry.

F. What course, if any, is being dropped from the calendar if this course is approved?

Mathematics 251-3.

G. What is the nature of student demand for this course?

It provides necessary background for upper level courses in Mathematics, Physics and Chemistry.

H. Other reasons for introducing the course.

(See attached)

IV BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

All Mathematics faculty.

B. What are the special space and/or equipment requirements for this course?

No special requirements.

C. Any other budgetary implications of mounting this course:

Since this course will replace Mathematics 251-3, the teaching commitment can be met from existing resources. The additional hours of teaching load is covered by the reduction in offering of some of the other lower level Mathematics courses which are no longer required for all Math students.

Mathematics 253-4    (Calculus III)

- H. (a) The inclusion of infinite series in Mathematics 152-3 has resulted in severe limitations on the time spent on applications of integration. The proposed change would permit more applications of calculus of one variable to be taught in Mathematics 151-3 and 152-3 and allow a fuller exposition of infinite series in Mathematics 251-4 for those students (particularly in Mathematics, Physics, and Chemistry) whose work requires this topic.
- (b) It would ease transfer arrangements for students coming from junior colleges, since infinite series are not taught in first year calculus courses in many colleges.

FACULTY OF SCIENCE

NEW COURSE PROPOSAL

I CALENDAR INFORMATION

Department: Mathematics Course Number: 311-4 Title: Methods I

Sub-title or Description:

Topics in advanced calculus including further study of functions of several variables, multiple integrals, infinite series, improper integrals, vector field theory.

Credit Hours: 4 Vector Description: (4-1-0)

Pre-requisite(s): Mathematics 253-4. Students who have received credit for Mathematics 411-4 cannot receive credit for Mathematics 311-4.

II ENROLMENT AND SCHEDULING

Estimated Enrolment: 30 per offering

Semester Offered (e.g. Yearly, every Spring; twice yearly, Fall and Spring):

Twice yearly, every Fall and Spring

When course will first be offered: Fall 1972

III JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department and from courses in other departments in the University?

There are no similar courses offered in this or other departments within the University.

B. What is the range of topics that may be dealt with in the course?

Advanced calculus of several variables, line and multiple integrals, Gauss and Stoke's Theorems, improper integrals, infinite series, Vector field theory.

C. How does this course fit the goals of the department?

It provides background for many of the upper level courses in applied mathematics.

D. How does this course affect degree requirements?

The course is required for Mathematics honors students as well as for majors and honors students in Physics.

E. What are the calendar changes necessary to reflect the addition of this course?

New entry.

F. What course, if any, is being dropped from the calendar if this course is approved?

Mathematics 411-4

G. What is the nature of student demand for this course?

This is a replacement course replacing the present Math 411-4.

H. Other reasons for introducing the course. The reason for this request, (the deletion of Math 411 and the introduction of Math 311) is that students will be encouraged to take this course early in their upper level course work, which is particularly desirable for applied mathematics students since this course is a prerequisite to many upper level courses in applied mathematics. In addition, this course will be an alternate prerequisite for Math 422 which will provide more flexibility for Physics students.

IV

BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

All Mathematics faculty members.

B. What are the special space and/or equipment requirements for this course?

None

C. Any other budgetary implications of mounting this course:

Since this is a replacement course, no additional hours of teaching are required.