



<p>1.0 Degree Title Specify the two degrees for concurrent degree programs</p> <div style="border: 1px solid black; padding: 2px; text-align: center;">B.A. and Sc.</div> <p>1.1 Major (Legacy= Subject) (30-char. max.)</p> <div style="border: 1px solid black; padding: 2px;">Cognitive Science</div> <p>1.2 Concentration (Legacy = Concentration/Option) If applicable (30 char. max.)</p> <div style="border: 1px solid black; padding: 2px; text-align: center;">NA</div> <p>1.3 Minor (with Concentration, if applicable) (30 char. max.)</p> <div style="border: 1px solid black; padding: 2px; text-align: center;">NA</div> <p>1.4 Category</p> <table style="width: 100%;"><tr><td><input type="checkbox"/> Faculty Program (FP)</td><td><input type="checkbox"/> Honours (HON)</td></tr><tr><td><input checked="" type="checkbox"/> Major</td><td><input type="checkbox"/> Joint Honours Component (HC)</td></tr><tr><td><input type="checkbox"/> Joint Major</td><td><input type="checkbox"/> Internship/Co-op</td></tr><tr><td><input type="checkbox"/> Major Concentration (CON)</td><td><input type="checkbox"/> Thesis (T)</td></tr><tr><td><input type="checkbox"/> Minor</td><td><input type="checkbox"/> Non-Thesis (N)</td></tr><tr><td><input type="checkbox"/> Minor Concentration (CON)</td><td><input type="checkbox"/> Other</td></tr></table> <p style="margin-left: 150px;">Please specify</p> <div style="border: 1px solid black; height: 20px; width: 150px; margin-left: 150px;"></div> <p>1.5 Complete Program Title</p> <div style="border: 1px solid black; padding: 2px;">Cognitive Science</div>	<input type="checkbox"/> Faculty Program (FP)	<input type="checkbox"/> Honours (HON)	<input checked="" type="checkbox"/> Major	<input type="checkbox"/> Joint Honours Component (HC)	<input type="checkbox"/> Joint Major	<input type="checkbox"/> Internship/Co-op	<input type="checkbox"/> Major Concentration (CON)	<input type="checkbox"/> Thesis (T)	<input type="checkbox"/> Minor	<input type="checkbox"/> Non-Thesis (N)	<input type="checkbox"/> Minor Concentration (CON)	<input type="checkbox"/> Other	<p>2.0 Administering Faculty/Unit</p> <div style="border: 1px solid black; padding: 2px; text-align: center;">Arts and Science</div> <p>Offering Faculty/Department</p> <div style="border: 1px solid black; padding: 2px;">Computer Science, Linguistics, Philosophy, Physiology, Psychology</div> <p>3.0 Effective Term of revision or retirement Please give reasons in 8.0 "Rationale" in the case of retirement (Ex. Sept. 2004 = 200409)</p> <p>Term</p> <div style="border: 1px solid black; padding: 2px; text-align: center;">200509</div> <p>4.0 Existing Credit Weight Proposed Credit Weight</p> <table style="width: 100%;"><tr><td style="border: 1px solid black; padding: 2px; text-align: center;">54</td><td style="border: 1px solid black; padding: 2px; text-align: center;">54</td></tr></table> <p>5.0 Description (Maximum 150 words)</p> <div style="border: 1px solid black; padding: 10px; min-height: 100px;"><p>The Faculty Program in Cognitive Science provides undergraduate B.A. & Sc. students who are interested in working in the broad area of study of mind a way to pursue a variety of specific interests and issues while still ensuring that each student explores alternatives offered by other disciplines.</p></div>	54	54
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54	54														

<p>6.0 List of existing program and proposed program</p>	
<p>Existing program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)</p> <div style="border: 1px solid black; padding: 10px; min-height: 200px;">See attached list.</div>	<p>Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)</p> <div style="border: 1px solid black; padding: 10px; min-height: 200px;">See attached list.</div>

Existing program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)

[illegible]

**7.0 Consultation with
Related Units**

☒ Yes ☐ No

Financial Consult ☐ Yes ☒ No

Attach list of consultations.

8.0 Rationale

We are adding a Neuroscience stream, two new research courses, and four new courses to the Psychology list. We added Physiology to the list of participating departments. All changes are highlighted in bold. Because the rapid pace of neuroscience discoveries plays an increasingly important role in cognitive science, it was felt timely and necessary to introduce a neuroscience stream into this Faculty Program. The proposed research courses (401, 402) will give Cognitive Science students a chance to become involved in original research under the supervision of McGill Faculty members, in a manner consistent with Boyer report on the importance of discovery-oriented undergraduate education. The founding Committee for the Cognitive Science Program had the intention to introduce a Neuroscience stream and Research Courses from the beginning, but did not have time to do this properly when the Faculty Program was first proposed.

9.0 Approvals

Routing Sequence	Name	Signature	Date
Department	J. McGilvray, PHIL		
Curric/Acad Committee			
Faculty 1			
Faculty 2			
Faculty 3			
SCTP			
GS			
APPC			
Senate			

Submitted by

Name

Thomas Shultz, Psychology

Phone

398-6139

Email

thomas.shultz@mcgill.ca

Submission Date

November 17, 2004

To be completed by ARR:

CIP Code

Existing program- Faculty Program in Cognitive Science

Required Courses

(3 credits)

PSYC 532 Cognitive Science (3)

Complementary Courses

(51 credits)

3 credits selected from:

MATH 318 Mathematical Logic (3)

PHIL 210 Intro to Deductive Logic 1 (3)

18 credits from List A in one of Computer Science, Linguistics, Philosophy, or Psychology.

12 credits from List A in one of the remaining four areas.

18 credits, at least 12 at the 400-level or higher, chosen from Lists A and/or B in Computer Science, Linguistics, Philosophy, and/or Psychology.

Note: Students are responsible for ensuring that they meet all pre- and co-requisites for all their courses.

Computer Science

List A

MATH 240 Discrete Structures 1 (3)

COMP 206 Intro to Software Systems (3)

COMP 250 Intro to Computer Science (3)

COMP 251 Data Structures and Algorithms (3)

COMP 302 Programming Lang & Paradigms (3)

COMP 424 Top:Artificial Intelligence 1 (3)

COMP 426 Automated Reasoning (3)

List B

MATH 222 Calculus 3 (3)

MATH 223 Linear Algebra (3)

MATH 328 Computability&Math Linguistics (3)

COMP 360 Algorithm Design Techniques (3)

COMP 490 Intro to Prob Anal Algorithms (3)

COMP 526 Probabilistic Reasoning and AI (3)

COMP 531 Theory of Computation (3)

COMP 538 Person-Machine Communication (3)

COMP 558 Fund. of Computer Vision (3)

Linguistics

List A

LING 201 Introduction to Linguistics (3)

LING 230 Phonetics (3)

LING 331 Phonology 1 (3)

LING 355 Language Acquisition 1 (3)

LING 370 Introduction to Semantics (3)
LING 371 Syntax 1 (3)
LING 390 Neuroscience of Language (3)
LING 419 Linguistic Theory 1 (3)
LING 451 Acquisition of Phonology (3)
LING 455 Second Language Syntax (3)

List B

LING 440 Morphology (3)
LING 531 Phonology 2 (3)
LING 555 Language Acquisition 2 (3)
LING 560 Formal Methods in Linguistics (3)
LING 571 Syntax 2 (3)
LING 590 Lang. Acquisition & Breakdown (3)

Philosophy

List A

PHIL 304 Chomsky (3)
PHIL 306 Philosophy of Mind (3)
PHIL 310 Intermediate Logic (3)
PHIL 341 Philosophy of Science 1 (3)
PHIL 360 17th Century Philosophy (3)
PHIL 370 Problems in Analytic Phil (3)
PHIL 415 Philosophy of Language (3)
PHIL 419 Epistemology (3)
PHIL 441 Philosophy of Science 2 (3)
PHIL 506 Seminar:Philosophy of Mind (3)
PHIL 507 Seminar:Cognitive Science (3)

List B

PHIL 410 Advanced Topics in Logic 1 (3)
PHIL 411 Topics in Phil of Logic & Math (3)
PHIL 421 Metaphysics (3)
PHIL 470 Topics in Contem Analytic Phil (3)
PHIL 474 Phenomenology (3)
PHIL 510 Seminar:Advanced Logic 2 (3)
PHIL 511 Sem: Phil of Logic & Math (3)
PHIL 519 Seminar:Epistemology (3)
PHIL 521 Seminar: Metaphysics (3)
PHIL 560 Sem: 17th Century Phil (3)

Psychology

List A/B

PSYC 212 Perception (3)
PSYC 213 Cognition (3)
PSYC 301 Learning (3)
PSYC 305 Statistics for Exper Design (3)
PSYC 308 Behavioural Neuroscience 1 (3)
PSYC 311 Human Cognition and the Brain (3)
PSYC 318 Behavioural Neuroscience 2 (3)

PSYC 340 Psych of Language (3)
PSYC 343 Language Learning in Children (3)
PSYC 352 Laboratory in Cognitive Psych (3)
PSYC 353 Laboratory in Human Perception (3)
PSYC 410 Sp Topics in Neuropsychology (3)
PSYC 413 Cognitive Development (3)
PSYC 470 Memory and Brain (3)
PSYC 472 Scientific Thinking & Reasoning (3)
PSYC 522 Neurochemistry and Behaviour (3)
PSYC 526 Advances in Visual Perception (3)
PSYC 529 Music Cognition (3)
PSYC 561 Methods:Dev Psycholinguistics (3)

Proposed Program - Faculty Program in Cognitive Science
(revisions highlighted in bold)

Required Courses

(3 credits)

PSYC 532 Cognitive Science (3)

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(51 credits)

3 credits selected from:

MATH 318 Mathematical Logic (3)

PHIL 210 Intro to Deductive Logic 1 (3)

18 credits from List A in one of Computer Science, Linguistics, Philosophy, or Psychology.

12 credits from List A in one of the remaining three areas.

18 credits, at least 12 at the 400-level or higher, chosen from Lists A and/or B in Computer Science, Linguistics, **Neuroscience**, Philosophy, Psychology, and/or **Research Courses**.

Note: Students are responsible for ensuring that they meet all pre- and co-requisites for all their courses.

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PSYC 340 Psych of Language (3)
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PSYC 353 Laboratory in Human Perception (3)
PSYC 410 Sp Topics in Neuropsychology (3)
PSYC 413 Cognitive Development (3)
PSYC 470 Memory and Brain (3)
PSYC 472 Scientific Thinking and Reasoning (3)
PSYC 503 Computational Psychology (3)
PSYC 522 Neurochemistry and Behaviour (3)
PSYC 526 Advances in Visual Perception (3)
PSYC 529 Music Cognition (3)
PSYC 537 Advanced Seminar in Psychology of Language (3)
PSYC 561 Methods:Dev Psycholinguistics (3)

Neuroscience

List A/B

ANAT 321 Circuitry of the Human Brain (3)
BIOL 530 Neural Basis of Behaviour (3)
BIOL 531 Neurobiology Learning Memory (3)
BIOL 588 Molecular/Cellular Neurobiology (3)
NEUR 310 Cellular Neurobiology (3)
PHGY 311 Intermediate Physiology I (3)
Or **BIOL 306 Neurobiology and Behavior (3)**
PHGY 314 Integrative Neuroscience (3)
PHGY 520 Ion Channels (3)
PHGY 556 Topics in Systems Neuroscience (3)
PSYC 308 Behavioural Neuroscience 1 (3)
PSYC 311 Human Cognition and the Brain (3)
PSYC 317 Genes and Behaviour (3)
PSYC 318 Behavioural Neuroscience 2 (3)
PSYC 410 Sp Topics in Neuropsychology (3)
PSYC 522 Neurochemistry and Behaviour (3)

Research Courses

COGS 401 Research in Cognitive Science 1 (6)
COGS 402 Research in Cognitive Science 2 (6)

NOTE: B.A. & Sc. students who take Faculty Programs must take at least 30 credits in Arts and 30 credits in Science across their Faculty Program and their Minor or Minor Concentration.

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17 November 2004
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