SFU   OFFICE OF THE VICE-PRESIDENT, ACADEMIC AND PROVOST

MEMORANDUM

ATTENTION	Senate	**DATE**	September 26, 2012
FROM	Jon Driver, Vice-President, Academic and Provost, and Chair, SCUP	**PAGES**	1/1
RE:	Faculty of Arts and Social Sciences: External Review Update for the Cognitive Science Program (SCUP 12-35)		

At its September 19, 2012 meeting SCUP reviewed the External Review Update Report for the Cognitive Science Program within the Faculty of Arts and Social Sciences. The report is attached for the information of Senate.

encl.

c: G. Myers

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MEMORANDUM

ATTENTION   Jon Driver, Chair, SCUP   **DATE**   September 11, 2012
FROM   Gord Myers, Associate Vice-President,   **PAGES**   1/1
Academic and Associate Provost
CC   S. DiPaola and J. Craig
RE: External Review Update for the Cognitive Science Program

The External Review of the Cognitive Science Program was undertaken in April 2008. According to the procedures established by SCUP, the Program is required to submit an update describing its progress in implementing Senate's recommendations, which were derived from the External Review report, in the fourth year following the start of the External Review process. Please find attached this update, together with a copy of the recommendations approved by Senate for action.

Based on this midterm report, my assessment is that the Cognitive Science Program has made substantial progress toward implementing Senate's recommendations, within the constraints imposed by its budget.

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MEMORANDUM

Attn: Glynn Nicholls   Director, Academic Planning and Budgeting
From: Steve DiPaola   Director, Cognitive Science Program
Cc: John Craig   Dean, Faculty of Arts and Social Sciences
Re: External Review Update report from the Cognitive Science Program
Date: June 29, 2012

In April 2008, Cognitive Science Program underwent its last External Review and we now offer the following Update regarding Senate approved recommendations approved in February 2009.

1. Undergraduate Programmes:
   a. *Undergraduate curriculum*: The interdisciplinary program offers students the opportunity to combine particular PSYC, LING, CMPT, MACM and PHIL courses that offer the basis for, or are related to the study of cognitive science. Then to give orientation, context and depth in cognitive science, we currently have 4 COGS courses which are required by our degree seeking students and are also widely taken by students from across campus. Though there is the will to develop additional courses that will support Cognitive Science students and students outside the Program in a coherent and meaningful exploration of the field, with budget and hiring freezes over the last few years, we do not, as yet, have the faculty (new additional or CRC) or funding (faculty/Limited term, sessional/TA funding) to add new COGS courses. However, registration in our current courses has remained strong and we've increased space in our challenging COGS 100 intro and breadth course, for example, from 195 students in 2008/9 per year to 338 students in 2011/12 (increase of 42%). Each section has always filled and had a waitlist before the registration period is complete. Overall our registration in all COGS courses together (without Co-op) has increased steadily from 2008/9 to 2011/12 so that this year we are teaching 80% more students than 3 years ago.

   In the meantime, perception/vision, an area steering committee faculty flagged in 2008, is included in the COGS100 curriculum currently. In addition, regarding perception/vision or psycholinguistics, our COGS 300 Special Topics in Cognitive Science course is available to all Steering Committee and Associate Member faculty to offer topics addressing these areas in depth. We encourage any faculty member interested in developing a topic course in all relevant areas, as their expertise and availability allows. COGS 300 Special Topics courses offered since 2008 have been:

       i.   2008: COGS 300: ST-Perceptual Cognition (B. Fisher, SIAT)
       ii. 2010: COGS 300: ST -Intelligent Agents (F. Popwowich, CS)
       iii. 2011: COGS 300: ST -Metacreation: Endowing Machines with Creative Behaviour (P. Pasquier, SIAT)
       iv. 2012: COGS 300: ST-Language, Music and Cognition (N. Hedberg, CogSci/Ling)

   b. *Opportunities for undergraduate research:* We continue to provide strong opportunities for undergraduates to be involved with cognitive science research both through the Cognitive Science Lab and with other labs/Associate Member faculty. We also offer students the opportunity to take COGS 300 ST as Research Project. Undergrads working as COGS 300 students, as volunteers and as paid RAs and NSERC grant recipients with the Cognitive Science Lab and with Associate Member faculty in their labs, are authors and in some cases lead authors on papers presented at conferences and published in journals. The percentage of our undergraduates who do volunteer and paid research is quite substantial and one of our great successes. Each year we honour our best undergraduate cognitive science researcher graduating with a Cognitive Science major or minor with a convocation award. Our undergraduate RAs and research projects are many, hence we illustrate the strength of the work by listing a selection of recent peer reviewed papers:
      Some Research Papers with UG:
          1. Kimberly Meier, working with Dr. Mark Blair. Undergraduate as lead author at CogSci 2011:

             Meier, K., Blair, M.R., (2011). Beyond probability gain: Information access strategies in category. Proceedings of the 33rd Annual Meeting of the Cognitive Science Society.

2. Michael Fry working with Dr. Paul Tupper. Undergraduate co-author on paper to be published in *The Sonority Controversy*, Steve Parker, ed. 2012
http://people.math.sfu.ca/~tupper/PUBLICATIONS/tupper_fry_sonority.pdf

3. Lihan Chen working with Dr. Mark Blair. Authored seven papers including:

Lihan Chen, Mark R. Blair, Kim M. Meier, & Marcus R. Watson (2012) Temporal Characteristics of Information Access in Categorization Tasks. Northwest Cognition and Memory (NOWCAM), Vancouver, BC.

Blair, M.R., Walshe, C., Barnes, J.I., Chen, L. (in press). Rethinking the role of error in attentional learning. Proceedings of the 33rd Annual Meeting of the Cognitive Science Society.

4. Faris Chebib and Allison Smith (a CogSci and an affiliate CogSci department undergrad) doing undergraduate research with the Cogs Director DiPaola, did strong research via Cogs300 culminating in a paper:

DiPaola, S, Smith A, (2012) "Formalizing An Interconnected Syntax For Picasso's Creative Process In Producing Guernica", Proceedings of Conceptual Structure, Discourse and Language.

2. Graduate Programmes
   a. *Pursuing the establishment of a Master's programme:* We planned, implemented and had passed in our Cognitive Science Steering Committee an NOI for an MSc in Cognitive Science. That NOI was presented to the FASS Faculty Graduate Committee and was passed, October 21, 2010. It has stalled recently given the current freeze on new graduates as well as general funding concerns. In general, an MSc (atypical for FASS) has received enthusiastic response from the Dean who has been supportive to find ways to move ahead with the plan. The NOI and plan was recently discussed with the Dean of Graduate Studies who was also supportive of the plan. More work needs to be done to find funding and agree on graduate intake.

3. Faculty
   a. *CRC Search:* After many disappointments and near hires the search for a CRC in Cognitive Science was closed this January. Some of our challenges included matching the benefits successful senior candidates had at their current institutions, and a serious health issue that lead to one of our successful candidates withdrawing after accepting the offer. The consequence of not having this position at SFU and within the Program is far reaching for our unit as in addition to being a valuable member of the cognitive science community at SFU and internationally, we had expected the CRC faculty member to play a major role in the development and subject area emphasis of the graduate program. However, we will pursue the addition of junior faculty with regard to teaching and research contribution for both the graduate program and further development of the undergraduate curriculum.
   b. *New faculty appointments to Cognitive Science:* The need for one or two junior faculty to complete the original hiring plan of 4 cognitive science faculty, originally in the 4 streams the program curriculum is drawn from, now possibly also drawn from any of the additional areas that steering committee faculty are contributing from, is especially felt given the loss of the CRC position. In light of this, I have raised a request for consideration in meetings with our Dean regarding this recommendation from the external review.
   c. *Encouraging Member departments to hire in cognitive science areas:* In the last few years, we have seen the hire of new faculty in both Philosophy and Linguistics. Both areas interviewed cognitive science related candidates. Hired in 2009, Holly Andersen, Assistant Professor, Area: Philosophy of Science, Philosophy of Cognitive Science/Psychology. Hired in 2012, Associate Professors Ashley Farriss-Trimble (starts May 2013) in Phonology and Keir Moulton (starts Sept 2012) in Syntax. Moulton addresses issues in Language and cognition and as he uses controlled experimental methodology to obtain relevant data, his research methodology intersects well with Cognitive Science. Additionally, Cognitive Sceince related hires have occurred at SIAT including Associate Member Bernhard Rieke and Philippe Pasquier.
   d. *Seeking ways to facilitate the availability Associate faculty to teach within the Program:* –
      i. Re negotiating teaching of associate members to teach, for example cogs 100, climate has chilled as budget restraint and hiring freeze impacted partner departments as they try to cover their basic teaching needs within their departments.
      ii. Where a faculty member from a member department has taught COGS 300 for example, we have been successful in cross-listing COGS 300 with a department course or listing only as as COGS 300 and waiving cogs prereqs for students with appropriate background to take the course for credit in the member department, for example Linguistics. And in these cases, we have negotiated with the academic advisor for students to count the course for credit toward their Linguistics credential required UD credit.

iii. The program office developed a draft associate membership policy for discussion in 2011 that is before the steering committee for discussion and feedback. The aim of policy is to formalize a level of commitment of associate members regarding their service given outside their home department so that their service can be demonstrated clearly both for both their tenure and promotion committees and their chairs. This approach should make it easier for departments to recognize the relationship the faculty member and their areas of research have to the area of cognitive science both within their departments and contributing to the cognitive science community. This can form the basis of new discussions in the current environment regarding partnerships to teach cognitive science courses.

4. Research
   a. *Facilitating the development of Cognitive Science related labs at SFU:* success of cogsci lab and other cogs research (Phonology?)
      i. RE Cognitive Science Lab, founded by Dr. Mark Blair and CRC in Cognitive Science, Jeff Pelletier (Retired, 2009, CRC replacement search underway from 2009 to 2012). The Program released Dr. Blair from service for the year before and current year during his study leave. During that time, he has continued to develop his work in the Cognitive Science Lab and built a very active and productive research unit. The culture of the lab is one that supports skill building, exploration and hard work – a context that provides outstanding experience for undergraduate and graduate student researchers, and cognitive science related faculty collaboration.
      ii. The Program office initiated and organized a Cognitive Science Faculty Symposium in June 2011, for all associate member faculty to present their research to each other, build community, explore opportunities for collaborations, exchange information across disciplines regarding grant funding opportunities. Faculty continue to build on the experience building relationships with each other.
      iii. According to the interest of Associate Member faculty, COGS students have been involved in working successfully with Yue Wang (Neurolinguistics Lab), Philippe Pasquier (Metacreation Lab), Steve DiPaola (iViz Lab), Mark Blair (Cognitive Science Lab). The results of student research have become part of published academic papers. Although nothing specific has developed with John Alterete's Phonology Lab yet, John has introduced Paul Tupper (Math) as a COGS associate member, and teaches our COGS 200 class.
      iv. The Program has continued to encourage faculty who are doing research in the wide array of cognitive science areas to become associate member faculty. Recent associate member faculty since the review include: Bernhard Rieke, SIAT (iSpace Lab (Spatial Cognition)), and Paul Tupper, Math Dept. (Mathematical modeling in Linguistics).

5. Administration
   a. The nature of the issues regarding course scheduling that existed at the time of the review have changed since set meeting patterns were introduced by the scheduling office. The manager keeps in touch with all units throughout the year. It is understood that some course conflicts will occur but standardized meeting patterns has reduced the difficulty in addressing some critical conflicts.
   b. The Program office has a built a strong relationship with Linguistics and meets regularly with the Linguistics manager regarding class scheduling and reserving seats for Cognitive Science students. They are in touch regularly with all member department managers to invite their students and faculty to Cognitive Science events and talks such as the Defining Cognitive Science series, and to discuss individual student cases. The program offers pre-requisite waivers to students with appropriate background to take COGS courses for credit in their program areas and cross promotes all courses of interest to cognitive science students, offered by member departments as part of our on-going relationship. Interdisciplinary undergraduate programs face challenges regarding securing space availability for students not declared in majors where required constituent courses are offered where there is high demand for limited space and departments therefore restrict space for a variety of department specific reasons.
   c. Partner department areas link to the cognitive science program from their websites as we do from ours.
   d. The administrative contribution of the Cognitive Science director is acknowledged but the formal negotiation of administrative and/or teaching release since Director, Fred Popowich (Computing, FAS) completed his term, has depended on the home department and faculty that the director has come from. Phil Hanson (Philosophy, FASS) (one year term) came from within FASS, the current Director, Steve DiPaola comes from SIAT, FCAT. Going forward we will document the agreements made to date to assist future negotiations.

The Cognitive Science Program continues to be a strong in offering valued interdisciplinary undergraduate degrees for undergraduate students and research opportunities for undergraduate and graduate students from a variety of departments and faculties across campus.
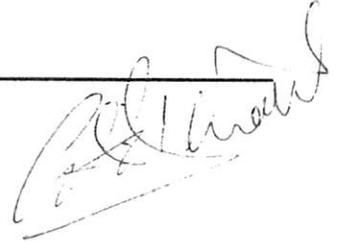
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MEMORANDUM

ATTENTION	Steve DiPaola, Program Director	**DATE**	April 30, 2012
FROM	Glynn Nicholls, Director, Academic Planning and Budgeting	**PAGES**	1/2
CC	John Craig, Dean, Faculty of Arts and Social Sciences		
RE:	External Review Update for the Cognitive Science Program		

In 2004 the Senate Committee on University Priorities endorsed procedures for reviewing a department's progress in implementing the recommendations approved by Senate as a consequence of the previous external review (which takes place normally once every seven years). The last review of your Program occurred in April 2008. This is to advise you that the External Review Update for the Cognitive Science Program is due at this time.

On February 2, 2009 Senate approved the following recommendations:

1. **Undergraduate Programmes**

    o   Consider the revision of the undergraduate curriculum with the addition of a perception/visual cognition course, a psycholinguistics course and the inclusion of opportunities for undergraduate research.

2. **Graduate Programmes**

    o   Pursue the establishment of a Master's programme.

3. **Faculty**

    o   Continue to search for a CRC chair as advertised.
    o   When funding allows, seek from the Dean of Arts & Social Sciences, an additional appointment in the Programme.
    o   Continue to encourage member Departments to hire in Cognitive Science areas when searching for faculty.
    o   Continue to seek ways of facilitating the availability of associated faculty to teach within the Programme.

4. **Research**

    o   Continue to facilitate the development of the Phonology and Cognition laboratory and increase the involvement of the Spatial Cognition and Interactive Expertise in Natural and Computational Environments laboratory in training students in perception and cognition.

5. Administration

o   Formalize the roles and commitments among member units and institute regular meetings to discuss scheduling and other administrative issues that may arise.

Please provide **a one to two page** progress report by Friday, May 25, 2012 on the actions that your Department has taken in response to the recommendations approved by Senate on February 2, 2009.

Please contact me at 26702, gnicholl@sfu.ca or Bal Basi at 27676, bbasi@sfu.ca if you have any questions or concerns regarding the external review update process.

Thank you.