

Proposal for the Restructuring of the Department of Life Sciences
into
The Department of Biological Sciences
and
The Department of Psychology
University of Toronto Scarborough

October 31, 2006

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Executive Summary

The Department of Life Sciences at the University of Toronto Scarborough currently houses faculty in both biology and psychology. This departmental structure no longer meets the needs and aspirations of the research and teaching enterprise of either group. These can be best advanced with a discipline-specific reorganization. The recognition of the need for this restructuring is based on extensive consultation and discussion within the groups as well as a recent external review of Life Sciences (March 2006). The new departments will be called: the Department of Biological Sciences University of Toronto at Scarborough and the Department of Psychology University of Toronto at Scarborough.

The new departments would be able to more effectively provide a focal point for the divergent research and teaching expertise of these two groups, as well as to provide a level of efficiency in management that is difficult to achieve with the groups combined. As such, separation will enhance the ability of the two groups to provide a strong voice for research identity and advocacy, to create new opportunities for recruiting graduate students and generating graduate programs through the work of separate discipline specific chairs and staffs, and to meet the needs of their respective undergraduate constituencies (both of which have grown dramatically over recent years). Space and budget issues will be divided according to current occupancy and resource allocations. Even under the current structure the administrative staffing complement is insufficient and will need to be increased by 2 positions (from the present 5) to allow the new departments to function effectively.

The current Department of Life Sciences is involved in two interdisciplinary programs – one in Neuroscience and one in Cognitive Science. The program in Neuroscience will be administered by the new Department of Psychology, but will continue to draw on both psychologists and biologists for its delivery, and will remain a priority for both of the new departments. The program in Cognitive Science will be unaffected by this reorganization.

The Department of Life Sciences is home to the Centre for the Neurobiology of Stress (CNS), which is a multidisciplinary research facility that was established with the support of a CFI infrastructure award (2000). The Centre will be based in the Department of Biological Sciences, but will continue to serve the needs of neuroscientists in both of the new departments, as well as other members of these departments who need access to its specialized research equipment.

The Department of Life Sciences is also principally involved in the maintenance of the animal care facility. This facility will continue to serve the research and teaching needs of the two new departments; however, it will be placed under the administration of an impartial, independent administrative structure in the Office of the Vice-Principal (Research and Graduate Studies). This structure will permit the demands of all researchers to be considered equally. The other facilities (Greenhouse/Plant Growth and Wash Sterilization) solely meet the needs of teaching and research in the Biological Sciences and the staff and facilities will be transferred there.

Preamble

This proposal arises from the recognition both within the Department of Life Sciences and outside of it that the current administrative structure is no longer viable or able to meet the needs and aspirations of the faculty in their commitment to research and teaching. The recognition culminated in a unanimous vote by both biology and psychology to separate into new departments. The preparation of this document included extensive consultation, involving the Interim Vice-President and Principal, Jonathan L. Freedman, regarding general principles as to the separation of the department; the Dean, Ragnar-Olaf Buchweitz, as to issues related to HR, funding, governance, and technical issues; and the Vice-Principal, Research and Graduate Studies, John R. Coleman, as to general principles, as well as the disposition of space and the status of the animal care facility and the Centre for the Neurobiology of Stress. The faculty, technical and administrative staff of the Department of Life Sciences has been involved throughout the process and their comments and feedback have been incorporated into this document.

In preparing the sections on Neuroscience and the Centre for the Neurobiology of Stress, open meetings were held with the relevant faculty involved in each subgroup, to ascertain their concerns regarding potential problems that might arise out of the separation given that these two programs are highly interdisciplinary and involve both biologists and psychologists. In preparing the section on animal care we met with the supervisor, and consulted with other faculty who make use of this facility. Invaluable information on enrolment in programs and in tabulating information on the research profile of life scientists was obtained from the report written by the Chair, entitled “Review of the Department of Life Sciences, University of Toronto Scarborough”, March 2006. Finally, we should note that without the help and information provided by Brenda Brown (Business Officer) and Lucy Pickering (Administrative Assistant) on all aspects of this report, and specifically in terms of budgetary, space, and staffing considerations, it would have been impossible to produce this report.

Rationale¹

The current departmental structure originated in 1970, when the Division of Science was dissolved to create the Divisions of Life Sciences and Physical Sciences. In 1970, the student enrolment at UTSC was 2,859; today the enrolment is approximately 10,000. This structure no longer reflects the needs or directions of these sciences. The University of Toronto Scarborough and the Tri-campus nature of the University of Toronto would be better served by splitting the current Department of Life Sciences and creating the Departments of Biological Sciences and of Psychology. There are four key areas that necessitate this new structure –Research Advocacy and Focus, Graduate Student Enrolment, Undergraduate Instruction, Faculty and Staff Complement.

Research Advocacy and Focus

Research is a central focus of activity for our faculty. Meeting the needs and promoting the research efforts of the faculty can be best carried out with the proposed structure. The

¹ All numbers described in this section are taken from the “Review of the Department of Life Sciences, University of Toronto at Scarborough”, Department Report, November 2005, Chair: John M. Kennedy

infrastructure needs and research environment in each of the disciplines would be better served by a chair from the same discipline. The critical need to form distinctive, collaborative research strengths and clusters require the full energies and creativity of dedicated, discipline-specific chairs.

Graduate Student Enrolment

The provincial government is trying to aggressively increase graduate student enrolment by some 14,000 positions and has earmarked significant funding incentives to that end. This is particularly important from a UTSC perspective. In reality many of the additional graduate positions will come in biology and psychology and we intend to take full advantage of this opportunity. Meeting that challenge will require focused effort on the part of knowledgeable, proactive chairs. This can be best accomplished in two new departments.

Undergraduate Instruction

Life science has seen dramatic increases in course enrolments over the past 5 years at the same time that we moved much more heavily into co-operative programs with the requirement that we now operate on a tri-semester system, offering a summer teaching program as well. The complexity and scale of this situation and the teaching activity of faculty, technical staff, and administrative staff require very ‘hands-on’, knowledgeable chair that will understand the respective disciplines thoroughly and attempt to help balance the conflicting responsibilities and time pressures on the faculty and staff. In the period from 2001/02 to 2005/06, Life Science overall grew from a total of 4228.0 FCEs (16.2% of the UTSC total) to 9803.5 FCEs (22.2% of UTSC). This growth was reflected in biology FCEs (2014 to 4315 FCEs) and psychology (2022 to 5488.5 FCEs). Biology offers eight distinct programs, including specialist programs in Cell and Molecular Biology (162 currently registered students), Conservation Biology (a new program), Human Biology (230 registered students), and Integrative Biology (109 registered students), along with a major program in Integrative Biology (426 registered students), and a minor program in biology (164 registered students). Biology also offers two specialist (co-operative) programs, including Cell and Molecular Biology and Conservation Biology, containing a total of 65 registered students. Psychology currently has three programs, including a specialist program (285 currently registered students), a major program (863 registered students), and a minor program (229 registered students). Psychology also offers three specialist (co-operative) programs, including Cognition and Behavior, Public Opinion and Behavior, and Behavioral Disorders, containing a total of 65 registered students. Finally, Biology and Psychology are involved in two interdisciplinary programs, the programs in Neuroscience and in Cognitive Science. Each of these programs also services the needs of significant portions of the undergraduate population (see Program in Neuroscience and Program in Cognitive Science, respectively).

Faculty and Staff Complement

There are 19 faculty members in biology, 18 in the research stream and one in the teaching stream. There are 19.5 faculty members in psychology, 17.5 in the research stream and 2 in the teaching stream. Under the current academic plan the combined complement will grow to 42.5. The current Department of Life Sciences has a total of 5 administrative staff, 6 teaching technicians, and 6 technicians spread among the Centre for the Neurobiology of Stress, the animal care facility, wash sterilization, and the greenhouse. Although faculty complement has

grown over the past five years, hiring has not kept pace with student enrolments. In 2001/02, biology and psychology had student FCE/Faculty ratios of 144:1 and 123:1, respectively. In 2005/2006, these ratios increased to 233:1 and 272:1, respectively. Thus, the demands on both faculty and staff have increased very significantly. Dedicated, discipline-specific chairs are critically needed to deal with the challenges the faculty are experiencing as well as to proactively plan for targeted, additional growth.

Comments and Conclusions

Given the large teaching and research enterprise of the Department of Life Sciences, the primary concern for this group is one of leadership, direction, effective management and promotion. The obvious solution is for the disciplines to separate, thus producing two chairs and two administrative staffs that can respond to the diverse needs of their constituent faculties and students. The research needs are now too complex, the faculty complement is too large and the undergraduate enrollment and programs have grown too large to be effectively served by a single chair with a single administrative staff. Similarly, advocacy for research needs across biology and psychology, as well as the ability to respond to the specific research requirements of each group would be optimally accomplished by having separate chairs with intimate knowledge of their respective disciplines working full-time for the needs of their respective groups. Similarly, responsiveness to graduate student enrolment, and the potential of introducing graduate student programs based at UTSC, would be significantly enhanced by having separate departments for biology and psychology. Accordingly, we feel that the proper course is to create two independent academic units: a Department of Biological Sciences and a Department of Psychology.

Program in Neuroscience

Summary

The Department of Life Sciences offers a specialist, specialist (co-operative) and major interdisciplinary program in Neuroscience. Faculty in psychology have been primarily responsible for maintaining the core curriculum of neuroscience (NRO) courses, although both psychology and biology faculty contribute to the overall curriculum of this program. Given this earlier responsibility, the neuroscience program will be based in the Department of Psychology, but will continue to serve the needs of the undergraduate students, faculty, and staff in the departments of biology and psychology. This program will be coordinated and administered by the undergraduate supervisor of studies for neuroscience (drawn from either biology or psychology), in consultation with a steering committee made up of representatives of both disciplines. Financial support for this program is required for curricular activities (e.g., course teaching budgets, lab supplies) as well as miscellaneous operating expenses (e.g., money for project student funding). Budget to support the NRO courses will come from a transfer of funds to biology for those courses taught by faculty in biology, and to psychology for those courses taught by faculty in psychology.

Description

Neuroscience encompasses a variety of disciplines, employing ideas and techniques drawn from anatomy, animal learning, biochemistry, molecular biology, neuropsychology, pharmacology, physiology, physiological psychology, and zoology. The goal of such work is to unravel the mysteries of the brain and the mechanisms of action.

Currently neuroscience offers specialist, specialist (co-operative), and major programs, leading to a BSc degree. Instruction in this program has been provided by a group of 7 psychologists and 5 biologists. Since its inception Neuroscience has been among the strongest programs at UTSC, providing a model for cooperation in providing an interdisciplinary program. Indeed, neuroscience has become one of the flagship undergraduate programs at UTSC. Current enrollment in the program is at an all time high, with (as of 18 September 2006) 114 registered specialists, 54 registered specialists (co-operative), and 477 registered majors. This program is in high demand by students. Given the popularity, and previous and current success of this program, it is essential to the well-being of both Departments of Psychology and Biological Sciences, as well as for the reputation of UTSC more generally, that this program have the facilities and resources it requires to remain strong. Because psychology has traditionally taken responsibility for the maintenance and administration of this program, including the staffing of the program's core courses, this program will be based in psychology.

Administration

Neuroscience will be organized with a supervisor of studies for the three undergraduate programs who will conduct the typical curricular and undergraduate business of running the program. The supervisor of studies for this program will be drawn from the Departments of Psychology or Biological Sciences, depending upon availability of faculty. A steering committee for neuroscience will be created, consisting of the supervisor of studies, two psychologists, and two biologists. This neuroscience steering committee will meet periodically (1 – 2 times per semester, or as needed), and will be responsible for the general operation and healthy functioning of the program, including overseeing the long-range planning and growth of the neuroscience program and considering all important curriculum changes. This committee will report to the chair of Psychology, who will then consult with the chair of Biological Sciences regarding any issues of relevance to the two departments.

Faculty Membership

Faculty in neuroscience will continue to be appointed to either biology or psychology.

Budgetary Implications

Funding for NRO courses (e.g., course budgets for photocopying and duplicating, laboratory expenses) will be assigned to the department in which the instructor for this course resides. Psychology and Biology faculty who supervise student projects will apply to either psychology or biology for funding of their students, respectively.

Program in Cognitive Science

Summary

The Department of Life Sciences is involved in an interdisciplinary program in Cognitive Science. This program lists 10 faculty, drawn from computer and mathematical sciences, linguistics, philosophy, and psychology, and offers a specialist program and a major program. All of the affiliated faculty teach courses in their home disciplines that are involved in the cognitive science curriculum, and there are no specific cognitive science (COG) designated courses other than supervised studies courses. This program has typically been coordinated and administered by an undergraduate supervisor of studies for cognitive science drawn from any of the affiliated faculty. There is no financial support for this program from life sciences beyond that already committed from individual psychology courses. Accordingly, continuation of this program in its current form will not be influenced by the separation of Life Science into separate Departments of Psychology and Biological Sciences, with only the Department of Psychology continuing to participate in this program.

Description

Currently cognitive science offers a specialist and a major program leading to a BSc degree. This program is made up of a specific series of courses drawn from all four of its parent disciplines. Cognitive science provides excellent training for students interested in pursuing a career in teaching in junior schools or speech pathology, as well as providing a good background for students interested in pursuing graduate studies in psychology or philosophy. Enrolment in cognitive science is modest; in the 2005/06 academic year there were 6 registered students in the specialist program and 23 registered students in the major program.

Budgetary Implications

Cognitive science has no budgetary implications, given that the courses involved in this program are drawn from existing courses being offered in each of its four parent disciplines. Accordingly, all curriculum costs for this program are already covered by the individual disciplines.

Administration

Cognitive Science will continue to be coordinated and administered by a supervisor of studies for the undergraduate programs drawn from any of the four parent disciplines.

Centre for the Neurobiology of Stress

Summary

The Centre for the Neurobiology of Stress (CNS) is a multidisciplinary university research facility located at the University of Toronto Scarborough (UTSC) that was established with the support of a CFI infrastructure award (2000). The CNS was formed by a group of NSERC supported faculty members in the Department of Life Sciences to provide a state-of-the-art environment for the multi-disciplinary investigation of the response of the nervous system to stressful stimuli. The Centre falls most closely in the University of Toronto Extra Departmental Unit category D (new designation). It will be based in the Department of Biological Sciences, but it will continue to serve the needs of neuroscientists in both new Biological Sciences and

Psychology Departments, as well as other members of these two departments who need access to its specialized research equipment. It will be administered by a Director (see below) and a steering committee of major users. Financial support of the Centre is required for three main needs – technician salaries (2), equipment service contracts, and miscellaneous operating expenses. Budget to support these areas will come from the following: transfer of funds from the Department of Life Science to Biological Sciences, which are currently used to support the Centre for technicians and for miscellaneous operating expenses; user fees (major users paying an annual use fee whereas minor users paying fees based on equipment use); and UTSC central support for service contracts. Biology administrative staff will have responsibility for managing the financial accounting aspects of the Centre.

Description

The CNS is by far the largest research institute at UTSC and the Strategic Research Plan of the tri-campus University of Toronto assigned three Canada Research Chairs to this effort. The Centre provides a stimulating and technologically sophisticated environment that has attracted graduate students, postdoctoral fellows and research collaborators from across Canada and around the world. In addition, it has served as a powerful magnet for attracting a cohort of nine new faculty members of international caliber and is an anchor point for retaining existing world-class faculty.

The CNS is composed of five linked state-of-the-art research suites that permit researchers and trainees to apply an integrated, multidisciplinary approach to the neurobiology of stress that includes molecular, cellular, physiological and whole organism levels of analysis. The facility is organized around the following research suites, with all but the last one being located on the 2nd floor of the Science Wing at UTSC (two small behavioural testing rooms are on the 6th floor):

1. The Molecular Neurobiology Facility contains equipment for the analysis of stress-induced changes in gene expression and protein function.
2. The Cellular Neurobiology Facility is equipped with a tissue culture laboratory and a wide range of advanced microscope technologies (EM, confocal, fluorescence, and Apotome microscopes) to permit visualization of the response of neurons and glial cells to stressful stimuli.
3. The Neurophysiological Facility contains equipment for manipulating and recording the effects of stress on preparations ranging from single brain cells to the whole organism.
4. The Behavioural Facility permits the videotaping and digital analysis of animal behaviour in models of Parkinson's disease, ischemia, epilepsy, drug addiction and cognitive decline.
5. The Field Research Facility, located at the Arctic Institute of North America Base at Kluane Lake in the Yukon, allows the study of stressors in mammals in their natural environment in northern Canada.

Establishment and Budgetary Structure

The Centre was formed by a major infrastructure award (2000) from the Canadian Foundation for Innovation (CFI), the Ontario Innovation Trust and the University of Toronto Scarborough. The total award was \$4.2 million of which UTSC provided 20%. This included \$600,000 for extensive laboratory renovations that permitted the establishment of the research Centre.

Renovations of four large rooms, modification of the EM suite, and purchase of all the equipment were completed by late-2004.

Operating funds to run the Centre are required for three purposes:

- a. Technician Salaries: Two technicians are needed for the facility to facilitate its use, maintain the equipment, and train new users (faculty, graduate students, post-doctoral students, and visiting scientists). One technician, a microscopy specialist, looks after the Cellular Neurobiology laboratory and the Neurophysiology laboratory. A second technician looks after the Molecular Neurobiology laboratory, the tissue culture laboratory, the computer laboratory for data analysis and the ultra freezer facilities.
- b. Service contracts to maintain equipment.
- c. Miscellaneous costs: These include software and hardware upgrades, repair of equipment in case of failure, etc. All consumables required by individual users are the responsibility of the user.

Operating funds to run the Centre will come from three sources:

- a. Funds currently allocated by the Department of Life Sciences to the CNS will be transferred to the Department of Biological Sciences. These include the following: i. 100% of the salary of the Cellular Neurobiology and Neurophysiology Technician; ii. that portion of the salary for Molecular Neurobiology Technician not covered by major users fees; iii. Annual departmental funds to assist in the running of the Centre (\$10,000/year)
- b. Major and Minor User Fees: Biologists and psychologists will be treated equally with respect to the fee structure. Each major user is currently assessed an annual fee. This allows these users unlimited access to the equipment in the facility. Most employ only a small subset of the equipment available, but may use it intensively. Minor User Fees are determined on the basis of the equipment employed. These will be assessed on either an annual basis for a specific piece of equipment or on an hourly basis. It is anticipated that all users fees combined will generate approximately \$35,000-40,000 per year once new faculty secure grants.
- c. UTSC central support to cover service contracts. Currently, these are estimated to cost about \$135,800/year. However continued funding at this level from central support will need to be rationalized with respect to cost recovery from users fees, use profile of equipment, and opportunities to obtain additional funding from external sources.

Space

All space associated with the CNS will be transferred to the Department of Biological Sciences and managed for the benefit of members of both departments.

Administration

The Centre will continue to be organized with a Director, a steering committee, faculty advisors, and the two research technicians. The Director will be appointed by the Chair of Biological Sciences for a three-year term following consultation with the Chair of Psychology and major users from both departments. The Director is responsible for all aspects of the Center's activities, including long term planning and advocacy both within and outside the university. The steering committee will evolve ideas for the future growth and development of the facility and deal with any problems that arise in the facility. Meetings of the entire group of major users together with

the Vice-Principal (Research and Graduate Studies) (ex officio) will occur at least once per year to assess the functioning and direction of the Centre and to assess fee structure. Meetings will also be called on an ad hoc basis as major issues arise that require group input and decision. The faculty advisers are responsible for various equipment sectors of the facility. These have been split into the following: i. Molecular Neurobiology lab; ii. Computer data analysis lab, radioactivity lab, security of access of the CNS facility, ultra freezers; iii. Cellular Neurobiology iv. Neurophysiology lab; v. tissue sectioning facilities; vi. surgery room and animal behaviour videotaping lab; and vii. tissue culture room. The two research technicians supervise the CNS operation on a daily basis and train all personnel.

The Business Officer of the Department of Biological Sciences will be charged with managing the financial aspects of the CNS - debiting grants, purchase of equipment, and payment of personnel.

Research Use

The CNS has been used by personnel affiliated with 20 NSERC supported research laboratories on a daily, around the year basis. However it is used primarily by eight faculty members (seven in Biological Sciences and one in Psychology) and to a lesser extent by twelve other faculty members, who require access to specific pieces of equipment. The predominant use pattern is research project applications including a major role in advanced training of graduate students and postdoctoral fellows in technical procedures of molecular neurobiology, cellular neurobiology, neurophysiology and behaviour. In addition, senior undergraduate students, many of whom go on to graduate school, are trained and utilize equipment in the CNS in their research projects.

Graduate Teaching at UTSC

The Centre is used to teach graduate courses which attract students from all three campuses. The extensive microscope infrastructure in the CNS allows students to receive hands-on training in brightfield (DIC, phase, darkfield), fluorescent, confocal, TIRF, scanning and transmission electron microscopy.

Budget Allocation for New Departments

Guidelines

1. **Faculty and Technicians:** All salary and benefit lines for faculty and staff that are clearly either biology or psychology will become part of the respective budget lines of their new departments. This includes all tenured and tenure-stream faculty and lecturers and all teaching and facility technicians.
2. **Staff:** Currently there are 5 administrative staff: one Business officer, Administrative Assistant, Chairs Secretary, and two Departmental Assistants. This complement needs to be increased by two. See the proposal for Administrative staffing on page 13 below.
3. **Administrative stipends.** The Department of Life Sciences has three academic administrators – the Chair and two Associate Chairs. The precise administrative structure

of the two new departments has not been worked out yet; however, it is likely to be comprised of a Chair and an Associate Chair.

4. **Teaching Budget:** The teaching budget will be attributed using standard budget allocation procedures and taking future needs into account.
5. **Disposable Funds:** The operating budget and carry forward funds of the Department of Life Sciences will be distributed as appropriate, taking into account prior commitments, usage and need. Shortfalls will be covered centrally.

Space Allocation for New Departments

Guidelines

1. All space in the Science and Humanities Wings that is currently associated with the research and teaching of each of the proposed departments will become part of the space inventory of that department. This includes the offices of faculty, of stipend instructors, and of graduate students. This also includes the labs of faculty that are already here or that were promised as part of the hiring package. The most current inventory of the Science Wing by the Office of the Associate Principal and CAO will be used as the reference for this process.
2. The space occupied by the Centre for the Neurobiology of Stress will be transferred to the Department of Biological Sciences. The space includes the Molecular Neurobiology Facility, Cellular Neurobiology Facility, Neurophysiological Facility, and the Behavioural Facility.
3. Three rooms will continue to be owned and operated by both departments together: the mail and photocopying room and two rooms to be used only for archival purposes.
4. Current administrative offices will need to be increased by at least 3 offices to allow for the new administrative unit to be set up. Additional offices will be provided.
5. All space associated with the Animal Care Facility will be transferred to the Office of the Vice-Principal (Research and Graduate Studies).
6. Two rooms used exclusively by Graduate Students of UTSC will become part of the inventory of the Vice-Principal (Research and Graduate Studies): the Computer lab and the Graduate Student Lounge.
7. Support facilities that are either solely or largely used by Biological Sciences will become part of the inventory of Biological Sciences. This includes: the Radiation Waste Room; Chemical Clean Up Room; Storage Room for liquid nitrogen, gases, and solvents; A Wash/Sterilization Facility; Ultracold freezer room and S518 Darkroom; Green House Facilities.
8. Space allocation in the new Science building has been fixed and the respective research areas will become part of the inventory of the new departments. The first floor research area will become part of the inventory of Psychology and the second floor research area will become part of the inventory of Biological Sciences.

Administrative Staffing

Currently there are 5 administrative staff members: the Chair's secretary, a Business Officer, an Administrative Assistant, and two Clerk Assistants (Clerk 3 positions).

Because of the severe workload and pressure the staff have been under in the past 4 years (zero increase in their complement while undergrad enrollment more than doubled, trimestering and coop appeared and made major demands on time, and the faculty complement increased though modestly from 30.49 to 36.49) with the Business Officer and the Administrative Assistant often giving up their weekends or working extra hours at night, the administrative staff complement will be increased to 7 positions. An outline of the responsibilities of each job is as follows:

1. Chair's Secretary: (2, one for each new department) Responsibilities: all administrative details relating to tenure packages, promotions, searches, 3-year reviews, research leaves, secretarial/administrative support, preparation of material for meetings, reception in the chair's office, and scheduling of appointments and maintaining calendar. Also deals with student petitions, collects final exams, runs reports and statistics on ROSI; catering of departmental events.
2. Business Officer: (2, one for each new department) Responsibilities: Annual budget process, reconciliation of monthly statements, statistics requested by the chair or financial services, short and long-term budget planning, forecasting, invoicing, expense reports, cheque requests, imprest bank account, petty cash, auditing internal charges, charge backs to grants and reconciliation of grant accounts, research set up accounts, TA budget, Postage records, long distance phone calls; CNS financial accounting.
3. Administrative Assistants (2, one for each new department) Responsibilities: Space inventory and space requirements, management of facilities (in biology: green house, wash sterilization); admin support for teaching and research requirements, work order requests and ensure completion, renovation projects, attendance records, personnel files for academic and nonacademic staff; TA matters: job posting, contracts, descriptions, execution of departmental policies, exam invigilators.
4. Clerical support (1 position to be shared 0.5 Biological Sciences: 0.5 Psychology) typing teaching and research materials, ensure safe keeping of exam papers, delivery and pickup of printing, sorting incoming and outgoing mail, class cancellation messages, maintaining office supplies, orders key changes, intranet changes and room booking, ordering software and clerical material.

Proposal for the Management of the UTSC Animal Care Facility

Rationale

The animal care facility will serve the needs of both the research and teaching programs in two departments: Biological Sciences and Psychology. Placing the administration of the facility under an impartial, independent administrative structure (the Vice-Principal (Research and Graduate Studies)) will eliminate future conflict in terms of allocating and adjudicating spaces issues. The proposed structure will permit the demands of all researchers to be considered equally, will enable campus-wide planning for facility renewal and, finally, it will be more closely aligned with the administrative structures in place at UTM and planned by the Faculty of Arts and Science on St. George.

Context

The animal care facility is a small facility, which also includes an aquatics facility and a wildlife research facility. The teaching component uses about 10-15% of the facilities' resources, housing animals used in undergraduate courses in neuroscience and biology. The research component uses the rest and houses animals used in the current research programs of nine faculty members. The main facility is now about 40 years old and has not undergone significant modernization and renovation over that time and the likely increased pressures in the future (current and new hires) may necessitate that this occur.

Guidelines

1. The Office of the Vice-Principal (Research and Graduate Studies) and the Departments of Biological Sciences and Psychology are committed to ensuring all operations are fully compliant with all relevant university, provincial and federal regulations and guidelines.
2. Access to, and services in, animal care facilities should be independent of departmental membership.
3. The administration of animal care will be the responsibility of the Vice-Principal (Research and Graduate Studies).
4. Operating costs are charged on a per animal basis and costs for food and bedding and a portion of the personnel costs are recovered. These costs will be comparable to those incurred by colleagues in the Faculty of Arts and Science and at UTM. There may be built-in charges to include charges to cover replacement of small routine items such as cages and may include a component directed towards a fund for replacement of major infrastructure; however, the full cost to replace major infrastructure should involve a discussion between the department(s) involved and the Vice-Principal (Research and Graduate Studies).
5. Each department may, from their own departmental resources, subsidize faculty members who use the animal care facilities. Such subsidies, or lack thereof, are at the discretion of individual departments; the rate of subsidy does not have to be the same across the two departments or even across researchers within a department.

Administration

1. The Vice-Principal (Research and Graduate Studies) will strike an Animal Care Steering Committee. The committee will be chaired by the Vice-Principal (Research and Graduate Studies), and will include the Chair of the Local Animal Care Committee (a user of the facility), the University Veterinarian, the Supervisor of the facility, and appointees by the

respective chairs of Biology and Psychology (these should include at least one user from each new department). The committee would be responsible for setting all policies, charges, and practices related to animal care and for steering the overall direction of the facility.

2. The Vice-Principal (Research and Graduate Studies) will consult on staffing arrangements. It is proposed that a full-time Supervisor of the facility be appointed for all animal care activities. The Supervisor would report directly to the Vice-Principal (Research and Graduate Studies) and would be responsible for the day-to-day operations, for the care and maintenance of animals in the facility, and for ensuring compliance with the Government and University regulations for the use of animals in teaching and research. In consultation with the university veterinarian, the Supervisor would ensure appropriate medical care of the animals.
3. The Office of the Vice-Principal (Research and Graduate Studies) will hold the operating budget, including all staff salary lines, for the animal care facility.
4. The Vice-Principal (Research and Graduate Studies) will recover the full operating costs (not including staff salaries) from the department of each user.

Strengths and Challenges

Strengths

The formation of the new Department of Biological Sciences and Department of Psychology will enable each of them to become leaders in their respective areas of strength both nationally and internationally. Both groups are already strong, and the addition of dedicated chairs and administrative staffs who are intimately familiar with their individual disciplines and with the inner workings and demands of the two constituencies will only enhance the already existing strengths of these programs.

Challenges

This proposal does not address a number of key pedagogical, structural, and conceptual issues for each of the new departments. To meet these goals, both groups will have to address the demands of a large undergraduate population within the context of limited resources. Among the issues of significance, are the following:

1. Redressing the current imbalance between teaching and research by providing more staff support for teaching so that faculty can excel in the central missions of the university.
2. Creating mechanisms (such as enhancing individual and campus web sites) for highlighting the cutting edge research done at UTSC and the particular achievements of individuals and groups. The audience for this effort will be future faculty, graduate students, undergraduate students, and the public.
3. Currently, there is spatial fragmentation throughout the Science Wing, with the offices and labs of professors with similar interests often being on different floors. To promote a research atmosphere and the synergy critical for advancement of ideas and research, it will be essential to rationalize the locations of offices and especially of labs that focus on research clusters or groups with existing strengths
4. A critical examination of the curriculum to ensure that in both biology and psychology the undergraduate student experience is approximately similar across all three campuses. In biology, and to some extent in psychology, one of the primary issues involves redressing the problems introduced by inequities in the high level of administrative supervision of its faculty, and a correspondingly low level (in terms of quantity, not quality) of administrative support staff. In psychology one of the primary issues involves redressing the problems introduced by budgetary cuts that have, over the years, undermined the nature of how the undergraduate teaching program has been delivered. These cuts have created a situation in which teaching enhancements, in the form of laboratories, tutorials, and course related equipment and staffing are lacking in most of its courses. Although psychology has led UTSC in terms of developing creative solutions to increasing enrolments such as their innovative use of web-based instruction, such solutions only go so far in resolving the issues created by an increasing FCE/Faculty ratio, particularly for courses above the introductory level.
5. Development of mechanisms to enhance the graduate student enrolment at UTSC to enhance their experience and to ensure that UTSC becomes the first place of choice for a significant number.