Innovative tools for large scale application of bioengineering laboratories - $29,826
Leah Bent, Jim Dickey, Lori Ann Vallis, Michele Oliver

The undergraduate laboratory experience is invaluable in providing students with independent thinking and problem solving skills in a small group setting. HHNS has been innovative by providing several key courses where students have the opportunity, in a laboratory setting, to apply the knowledge obtained in lecture. However, laboratory equipment and facilities are a major limitation to the current laboratory offerings. This proposal aims to enhance and extend the laboratory experience not merely by replacing dysfunctional equipment, but by providing state of the art equipment in a multidisciplinary fashion for students in HHNS, engineering and the influx of students through the Guelph-Humber initiative. The proposal also aims to support the new and growing field of bioengineering. The marrying of biological and anatomical information with engineering practice can lead to new and innovative developments with future objectives involving the engineering of new devices. We need to begin by getting students involved at the undergraduate level.

Introductory Chinese (Mandarin), I & II - $20,000
Don Bruce, Daniel Chouinard

The College of Arts now offers Introductory Chinese (Mandarin) I and II to interested students: this course is for students with no previous knowledge of the language and is not open to native speakers. The course will include instruction in Chinese language (Mandarin) and culture, and will give students an initial entry point into the most widely spoken language in the world, into one of the oldest and richest human cultures, and into the most rapidly expanding economy in the world. These courses will aim at providing the student with basic vocabulary and oral/aural skills in Mandarin; basic skills in reading and writing will also be developed with approximately 400 characters learned in a year’s study. Complementary courses in History, Philosophy and other disciplines in the College of Arts and in the College of Social and Applied Human Sciences provide additional points of access to Chinese culture for UG students.

Interdisciplinary product development course - $13,500
Elliott Currie, Melanie Lang, Andreas Boecker, Art Hill, Bill Bettger, Massimo Marcone, Al Sullivan, Vanessa Currie

This interdisciplinary course provides comprehensive and experiential training in development of new products and services based on agricultural products. It develops a thorough understanding of the innovation process involving all stages of the supply chain. Collaboration of university departments and industry establishes a unique multidisciplinary learning experience. Participating disciplines include business, food
sciences, health and nutritional sciences, plant agriculture, crop horticulture, agronomy, food and agricultural economics, and marketing and consumer studies. Student teams will create new products or services and develop plans to produce and market them. Outcomes will be evaluated by a panel of academic and industry product development specialists.

**Academically enriched residence hall and expansion of academic clusters - $20,000**
Mildred Eisenbach

Given the success of the academic clusters in residence, there is support for offering a cluster experience to all first-year students. It is recommended that one residence hall be identified as a pilot project for offering clusters to new students who have not selected this option. All staffing and programming would be implemented in exactly the same manner as in the present academic clusters. At the completion of the 2007-08 academic year, the academic outcomes and retention of this group of students would be compared to those in self-selected clusters and the new student body, at large. Programming, participation and student reports would also be considered to evaluate the success of the project, and the potential for expanding the academic cluster format to all first-year students living on-campus.

**3D Printing: Component based sculpture - $7,000**
Christian Giroux, John Phillip, Warren Stiver

The School of Fine Art and Music will partner with the School of Engineering to radically up-date the practice of print-making and sculpture in the study of Studio Art. Using engineering software, students will design components for the production of complex sculptural assemblages. These components will be “printed” in ABS plastic using 3D printers in the Engineering department. The course will combine the acquisition of computer and design skills within the aesthetic and theoretical framework of 20th century Utopian discourses which shaped the history of space-frame structures and architectural experiments of the past half century.

**Virtual educational laboratory for interactive electronic systems exploration - $2,800**
S. Gregori, Dalia Fayek

With this project we aim at studying an innovative instructional experience that meets the challenges of educating engineers in the 21st century. For this purpose, we will design a virtual educational laboratory that is as good as the best in the world in establishing a participative and creative relation of the engineering students with learning process and modern complex electronic systems. The objectives of this project are to use state-of-the-art software tools and equipment, re-invent the way we package and deliver engineering concepts in a practical and relevant way, and immerse undergraduate students in exciting design challenges and genuine research opportunities.
Engaging management students with work-based learning - $20,250
Jamie Gruman

There is a growing consensus that the traditional lecture-based approach to management education, which focuses on lecturing to students about pre-existing bodies of knowledge, may not be the most effective strategy for teaching students about management. Work-based learning is an alternative approach to management education that focuses on active student learning as opposed to passive instruction, and involves having students start and run small “companies.” Students are able to experience real managerial issues, apply their classroom knowledge to their experiences, and develop genuine management skills. LEF funds provide matching seed money for some of these “companies” and help to address calls for more relevant management education.

Enhancing digital resources available through the University’s Data Resource Centre for students in the humanities, social sciences and business - $6,720
Kris Inwood, Kevin James, Graeme Morton, Michelle Edwards

Digital resources hitherto restricted to natural and social scientists increasingly are being used by students in the humanities. A diminishing but still-significant obstacle is the architecture of digital databases and associated metadata, which often presumes a level of technical familiarity not yet widespread in the arts and humanities. This project will enhance non-specialist access to databases now held by the University’s Data Resources Centre and being generated by on-campus research projects. The enhanced accessibility is especially important for methods classes offered by most of the SSHRC-area departments (for demonstration data and student exercises) and for independent student research.

Digital imaging in anatomy - $9,905
Lorraine Jadeski

The overall goal of this project is to create digital images of anatomical specimens; images will be used in numerous applications. These include production of digital and printed versions of a dissection-based anatomy atlas. Images will also be used: 1) in lecture presentations, 2) in a ‘flash card’ approach for student study, and 3) for on-line student study and testing. While these images are being prepared to enhance what is primarily laboratory-based learning for students in our anatomy program, additional fields of study can benefit (e.g., biomechanics, bioengineering, psychology). Use of the digital images will not be restricted to this institution. With this proposal, we are requesting funds for the acquisition of a high quality digital camera, as well as the appropriate computer and software necessary for digital imaging, and page layout and design.
High enrolment first year philosophy courses - $10,000
Jay Lampert, Andrew Wayne

As first year Philosophy courses have increased dramatically in enrolment over the last 10 years (from 60 students per course to 150-300 students per course), traditional teaching methods are no longer adequate for conveying the skills of intense discussion and interactive reasoning that are so crucial for a philosophical education. This project will study new ways of generating philosophical discussion in large classes, and will produce ideas and tools that can be used in future years by all philosophy department faculty members.

Building the BASc Program: Curriculum Innovation in Child, Youth and Family and in Adult Development: Health and Well-Being - $9,999
Clare MacMartin

Through this proposal we plan to create a mechanism for integrating a new first-year course FRHD*1100 (required for all BASc majors) with revised experiential learning courses in the third and fourth year. Focusing on the Child, Youth and Family (CYF) and Adult Development: Health and Well-Being (ADFW) majors within the BASc program, the goal is to create a capstone learning experience for students that is rooted in a set of personalized learning goals established in the new hybrid course in first year, cultivated throughout their program, and realized in the experiential learning courses in their final semesters.