University of Toronto

Office of the Assistant Vice-President, Campus and Facilities Planning

TO: Planning and Budget Committee

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AGENDA ITEM: 9

ITEM IDENTIFICATION:

Report of the Project Planning Committee for the Department of Chemistry Phase II Practical Laboratory Renovations

JURISDICTIONAL INFORMATION:

Under the Policy on Capital Planning and Capital Projects, the Planning & Budget Committee reviews Project Planning Reports prepared for a capital project and recommends to the Academic Board approval in principle of the project.

HIGHLIGHTS:

In 1998 the Department of Chemistry undertook a Master Plan process whereby a series of projects were identified, including proposed renovations to practical laboratories supporting the undergraduate teaching academic mission. The report was approved in May, 1998 and successful completion of 32 individual projects which included construction of the Davenport building, and extensive renovation, through multiple projects, of Lash Miller.

The Phase I Chemistry Undergraduate Teaching Labs renovation (completed Fall, 2003) and proposed Phase II renovations are part of this approved Master Plan.

The Department of Chemistry proposes to renovate approx. 2,175 NASM of aging practical laboratories. These are located in various existing labs and support space in the first and second floor of the Lash Miller/Chemistry building. These labs, used for undergraduate teaching, will be upgraded to the standard and exceptional level of functionality created by the Phase I renovations completed in the Fall of 2003.

Phase I renovations consisted of 1,058 NASM and included a financial investment of approximately $1.5 million in mechanical capacity (exhaust, supply, chilling, heating) in preparation for Phase II.

Phase II is a unique multi-faculty project that directly addresses the need to enhance the quality of student learning and the overall student experience, as well as address space challenges across the participating Faculties.

Chemistry is an experimental science but more uniquely, it is a discipline where student scientists can make the chemicals that they study. It is critical that students are able to design and create molecular architectures, and then investigate their

properties. This will result in better prepared and excited students who may be inspired to participate in undergraduate research opportunities and then go on to graduate or professional school imbued with a more realistic sense of what it means to design, build, and test molecular materials.

The proposed new practical laboratories will transform the learning experience for the approx. 5,200 student enrollments (2,600 FCE) in the Department of Chemistry's lab courses for instruction in organic, inorganic, materials, analytical, physical, environmental, and biological chemistry. Current projections are that approximately 800 Engineering students (400 FCE) and a further 400 Pharmacy students (200 FCE) will also utilize the renovated space for enhanced instruction.

The unique design proposed for Phase II will provide students at the Faculty of Applied Science and Engineering with full access to the entire suite of Chemistry teaching labs and will enhance course delivery and provide access for specialized courses offered by Chemical, Mechanical, Materials and Engineering Science. Student numbers are projected to be between 500 and 1000 with significant expansion potentially driven by a successful project.

Furthermore, the design proposed for Phase II will directly addresses the need to enhance the learning experience for Faculty of Pharmacy students taking Chemistry courses (approx. 400 per year) and provide the opportunity for delivery of specialized Pharmacy courses (240 students).

As was achieved by Phase I, Phase II will be used for 1st and 2nd year course delivery though the design can easily adapt to the needs of more specialized 3rd and 4th year courses; accessibility will be enhanced through wheelchair accessible fume hoods and FM broadcast for the hearing impaired.

Upon completion of Phase I and Phase II, the expectation is that the ability of the Lash Miller Building to support teaching will be extended to four decades, and it will support the possibility in future to offer integrated science courses.

RESOURCE IMPLICATIONS:

The projected Phase II project is estimated to cost $5,000,000 with the source of funding provided by the various partners; Faculty of Arts and Science and Department of Chemistry $1,080,000, Faculty of Engineering $350,000, and Faculty of Pharmacy $ 70,000 and an outstanding funding request of $3.5 million.

Phase II is proposed to be undertaken in Spring of 2007 for completion by September 2007.

RECOMMENDATIONS

The Planning and Budget Committee recommends to the Academic Board:

1. THAT the Project Planning Report for the Phase II Chemistry Undergraduate Practical Laboratory renovations be approved in principle.

2. THAT the total project scope consisting of approximately of 2,175 NASM with a Total Project Cost of $5,000,000 be approved with the funding sources identified as:

FAS & Department of Chemistry (50%-50%)	$1,080,000
Faculty of Engineering	$ 350,000
Faculty of Pharmacy	$ 70,000
Outstanding funding request	$3,500,000
Total	$5,000,000