



**TO:** Planning and Budget Committee

**SPONSOR:** Gail Milgrom, Director, Campus and Facilities Planning

**CONTACT INFORMATION:** 416.978.5515

**DATE:** December 11, 2012 for January 16, 2013

**AGENDA ITEM: 5**

**ITEM IDENTIFICATION:**

Report of the Project Planning Committee for the Renovation of Chemistry Undergraduate Teaching Laboratories at University of Toronto Mississauga

**JURISDICTIONAL INFORMATION:**

Capital projects over \$3 million and up to \$10 million will be considered by the Planning and Budget Committee and recommended to the Academic Board for consideration and approval in principle (i.e. site, space plan, overall cost and sources of funds). It is expected that such projects will be placed on the Board's consent agenda and be confirmed by the Executive Committee of the Governing Council. If a project will require financing as part of the funding, the project proposal must be considered by the Business Board.

**BACKGROUND:**

UTM's first science laboratories were built almost 40 years ago and in many cases the facilities barely meet current regulatory standards. Although the North Building Reconstruction Phase One and Kaneff Building Expansion, both recently approved, will provide urgently needed office, classroom, and dry laboratory type research academic space, there is no funded plan, at this time, to create significant science expansion, so maximization and modernization of the existing serviced space in the W.G. Davis building for research and teaching laboratories is more important than ever.

In June, 2011, the Ontario government announced capital funding estimated at \$17.5 million for the Renovation of Undergraduate Teaching Laboratories at the University of Toronto Mississauga (UTM) enabling UTM to undertake a multi-year renewal program of its teaching laboratories. A November 2011 Project Planning Report identified a series of proposed renovations of undergraduate laboratories in the W.G. Davis Building that were to take place over the next four years during the summer semester construction window.

The renovation of the Chemistry teaching laboratories started in 2010 by creating large teaching laboratories, with significant number of fume hoods, to accommodate large first and upper year chemistry courses and was funded by the Knowledge and Infrastructure Program. This proposed project  
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will complete the CHM teaching laboratory renovation and allow for the entire 3rd floor of the W.G. Davis building D-block to be dedicated to CHM teaching and related research.

The Chemistry department is currently engaged in an academic and strategic planning process to support enrolment growth and expansion of lab-based courses. Investment in the physical structure will allow the improvement of pedagogical techniques, as well as more efficient use of space to deliver an effective educational experience to UTM's students.

In addition, the space will provide for an expansion of the suite of analytical instruments used by senior undergraduate chemistry students in research-intensive fourth-year chemistry courses, by chemistry graduate students in their research projects, and by other researchers within CPS and throughout the science disciplines based at UTM.

### **HIGHLIGHTS:**

Previous renovations to undergraduate teaching laboratories were completed in Summer 2012 and literally transformed the student experience.

The proposed renovation will combine the existing teaching laboratories and adjacent research area into one large teaching laboratory which will support both teaching and research purposes. The large open concept will allow for separation of incompatible courses in organic/inorganic chemistry, biochemistry and synthesis while providing flexible environment for teaching courses with various enrolments.

The final configuration of the upper year chemistry undergraduate teaching laboratory is designed to permit radically increased enrolments in these courses, as expected to arise due to overall enrolment increases at UTM, but also through increased "catchment" in CPS chemistry programs overall resulting from the enhanced chemistry education experienced by students in the recently renovated first and second year undergraduate chemistry teaching laboratories.

The particular laboratory-intensive chemistry courses to be accommodated in the newly renovated chemistry laboratories are:

CHM371H5Y "Techniques in Biological Chemistry"

JBC487Y5Y "Advanced Interdisciplinary Research Laboratory"

CHM391H5Y "Instrumental Laboratory"

The advanced chemistry undergraduate laboratory configuration will accommodate the various diverse advanced, and sometimes incompatible, experimental requirements, sophisticated instrumentation and computers demanded by these courses, while providing flexibility in scheduling and efficient usage of space, with due consideration to modern health and safety standards and practices.

The area to be renovated DV3069/3070/3071 is vacant and used on a temporary basis for research needs of the Department of Biology. This space will be fully vacant in March 2013 and available for the proposed renovation.

**FINANCIAL AND PLANNING IMPLICATIONS:**

The Phase 3, Chemistry Teaching Laboratory, 3<sup>rd</sup> Floor, Project has an estimated total project cost of \$3.9 million dollars.

**PROJECT FUNDING:**

In June 2011, the provincial government announced \$52.5 million in funding for the first phase of the reconstruction of the North Building and to renovate teaching laboratories in the William G. Davis Building. The combined North Building Reconstruction Phase 1 project and Teaching Laboratory Renovations in the Davis Building are to be funded by the province 70% and UTM 30%. However, due to the cash flow from the province and the required timing of the projects involved, the proportion of the funding will vary significantly among the related projects. This project is to be funded from the UTM Operating Fund.

**SCHEDULE:**

The Renovation of the Chemistry teaching laboratories is to occur in the Spring and Summer of 2013.

Consultant Selection Approval CaPS Exec	November 2012
Executive Committee of Governing Council	February 15, 2013
Construction	April-August 2013
Occupancy	September 2013

The proposed schedule is based on advanced planning to allow for construction to commence in April, 2013 immediately after classes finish. It is essential for construction to be completed by the end of August 2013.

**RECOMMENDATIONS:**

Be It Recommended to the Academic Board:

- a) THAT the Project Planning Report for the Renovation of the Chemistry Teaching Laboratories in the W.G. Davis Building at the University of Toronto Mississauga, dated November 2012, be approved.
- b) THAT the project scope with a total project cost of \$ 4.0 million to be funded from the UTM Operating Fund be approved in principle.