



## PROJECT SNAPSHOT

### Pathways in Chemistry and Applied Life Science

**Type:** Pathway Development

**Project Number:** 2022-21 or P2221

**Project Lead:** Lakehead University

**Collaborators:** Fanshawe College of Applied Arts and Technology

#### Project Summary

This project originally stemmed from student demand. Discussion between faculty, staff and students from Fanshawe College and Lakehead University identified potential pathway opportunities for graduates from both postsecondary institutions. After conducting a brief environmental and curriculum scan, the project team determined the need for additional resources to create a set of transfer pathways and also to assess if there were additional opportunities for pathway development.

The purpose of this project was twofold. Firstly, we aimed to develop a set of transfer pathways between the Chemical Laboratory Technology - Science Laboratory advanced diploma and the Honours Bachelor of Science (Chemistry Major) / Honours Bachelor of Science (Applied Life Sciences Major) degrees. Secondly, we wanted to assess the viability of developing additional pathways with other Honours Bachelor of Science (HBS) programs at Lakehead University, including a double-major (Biology and Chemistry) and medical/biomedical concentrations.

#### Project Rationale

Initial discussion between students, staff, and faculty from Fanshawe College and Lakehead University identified the potential for bilateral transfer pathways that would benefit graduates from both postsecondary institutions.

Although opportunities already exist for graduates of the Chemical Laboratory Technology - Science Laboratory (CLT) program to transfer into degree programs, most are outside the province and/or the country. Furthermore, none of the pathway opportunities lead to degrees in either Chemistry or Applied Life Sciences. Feedback from both students and the program

coordinator at Fanshawe College indicated that students were interested in additional opportunities for transfer to degree programs that would provide unique skills and training in preparation for the workforce, particularly when offered in the province of Ontario.

Similarly, graduates of the Honours Bachelor of Science (HBSc) programs at Lakehead University tend to seek out additional training in order to develop technical lab skills following completion of their degree.

Again, opportunities within the province and/or country are limited, and a formal pathway to an advanced diploma program in Ontario is appealing.

## Main Collaborators

The main collaborators included representatives from both Lakehead University and Fanshawe College, including a pathways coordinator, program coordinator, and faculty members.

## Results

The top 3 outcomes for this project are:

1. completion of proposed transfer pathways between Fanshawe College and Lakehead University
2. exploration of additional potential transfer pathways between Fanshawe College and Lakehead University
3. development of a closer inter-institutional relationship between Fanshawe College and Lakehead University

## Key Steps

Representatives from Fanshawe College and Lakehead University first identified the potential viability of a pathway between the CLT and HBSc programs through informal discussion. This potential was confirmed through further discussion with faculty members at both institutions.

Next, members of the project team conducted a brief environmental and curriculum scan to determine (a) whether pathways similar to those being proposed already existed, and, if there were no comparable pathways, (b) what resources would be required for pathway development. This process also contributed to the project team prioritizing what pathways were most viable and therefore should be developed first, and which potential pathways warranted further investigation to confirm viability.

The project lead and project co-lead collected application data, course outlines, and other information relevant to determining transfer credit and course equivalencies. Faculty across numerous departments at both institutions conducted a substantial course equivalency assessment and confirmed equivalents with their institutional counterparts.

Project team members then used the information gained from the course equivalency assessment to draft the proposed pathways. These pathways were discussed at a team meeting where final details were confirmed.

## Pathways Created

The following pathways were created during this project:

- Fanshawe College Chemical Laboratory Technology - Science Laboratory advanced diploma to Lakehead University HBSc (Chemistry Major) degree
- Fanshawe College Chemical Laboratory Technology - Science Laboratory advanced

diploma to Lakehead University HBSc (Applied Life Sciences Major) degree  
- Lakehead University HBSc (Chemistry Major) degree to Fanshawe College  
Chemical Laboratory Technology - Science Laboratory advanced diploma

## Incompleted Pathways

We successfully completed all of the anticipated pathways; however, the pathway from Lakehead HBSc (Chemistry Major) to Fanshawe Chemical Laboratory Technology - Science Laboratory (CLT) does not appear to be feasible from a student perspective. Despite successfully identifying and mapping course equivalents and drafting the pathway, due to the requirements of the CLT program, it was not possible to condense the duration to fewer than 7 years total (i.e., 4+3). Therefore, students who complete the 4-year HBSc degree would still be required to complete an additional 3 years at Fanshawe to earn the CLT diploma. Project team members agree that it is unlikely that students would pursue this pathway; however, team members identified the potential of an alternate pathway from the HBSc (Biology and Chemistry Major) degree to the CLT diploma because of the possibility for greater transfer credit and the ability to thus condense the CLT program duration.

## Challenges

Overall, the challenges faced by this project were minimal. The main challenge is the consensus that the pathway from Lakehead HBSc (Chemistry Major) to Fanshawe CLT is not likely to receive student interest; however, the project team has engaged in collaborative discussions to determine alternate strategies for providing students the opportunity to move from a Lakehead degree to a Fanshawe advanced diploma and are committed to further developing those opportunities together.

## Student Outcomes

This project benefits transfer students by providing a new and unique opportunity to continue their studies by building on their advanced diploma. Fanshawe CLT graduates will now have the option to complete their preference of either the HBSc (Chemistry Major) or HBSc (Applied Life Sciences Major) in only 2 additional years. Furthermore, students now have these options within the province of Ontario. For the HBSc (Applied Life Sciences Major) option, students will have the opportunity to complete their degree at either the Orillia or Thunder Bay Campus.

Despite some comparable options, no other pathways from the CLT program feature (1) an honour's degree, (2) an Ontario institution, AND (3) only 2 additional years of study.

These pathways represent not only time savings of as much as 2 years, but also financial savings related to moving out of the province or even the country.

## Student Credential

This project benefits transfer students by providing a new and unique opportunity to continue their studies by building on their advanced diploma. Fanshawe CLT graduates will now have the option to complete their preference of either the HBSc (Chemistry Major) or HBSc (Applied Life Sciences Major) in only 2 additional years. Furthermore, students now have these options within the province of Ontario. For the HBSc (Applied Life Sciences Major) option, students will have the opportunity to complete their degree at either the Orillia or Thunder Bay Campus.

Despite some comparable options, no other pathways from the CLT program feature (1) an

honour's degree, (2) an Ontario institution, AND (3) only 2 additional years of study.

## Student Time Savings

These pathways represent a time savings of as much as 2 years. The estimated time to completion for the pathways from Fanshawe CLT to Lakehead HBSc is a total of 5 years (3+2).

While the proposed pathway from Lakehead HBSc (Chemistry) to Fanshawe CLT does not currently represent a time savings, the potential for a pathway from Lakehead HBSc (Biology & Chemistry) to Fanshawe CLT (to be explored further in the future) will likely represent a substantial time savings.

## Student Financial Savings

These pathways result in financial savings related to the reduced time to completion for obtaining both a diploma and degree as well as financial savings related to moving out of the province or even the country for similar academic opportunities.

## Student Flexibility

These pathways will improve access to academic programs both through transfer credit as well as greater awareness of opportunities for students to further their education and training. Representatives at both Fanshawe and Lakehead are committed to promoting the pathways to students and supporting the transfer process between our postsecondary institutions.

## Student Work Alignment

These pathways contributes to students' employment/labour market opportunities by providing opportunities for students to develop complementary theoretical and technical skills and credentials.

## Tips

Collaboration is key. Taking the time to establish relationships between institutions and engaging in ongoing discussions are major factors in developing sustainable pathways.

## Tools and Resources

Articulation agreements have been drafted for the Fanshawe CLT to Lakehead HBSc (Chemistry Major) and Fanshawe CLT to Lakehead HBSc (Applied Life Sciences Major) pathways. These agreements have been / will be submitted for Lakehead University Senate approval.