



DOUGLAS COLLEGE

Comprehensive Program Review

Faculty of Science & Technology

Mathematics Upgrading (MATU)

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Preliminary Pages

Scope of the Self-Study

The Mathematics Upgrading Department began the process of the Comprehensive Program Review in October 2022. Using the guidelines of the Comprehensive Program Review Guide, this report investigates the Mathematics Upgrading Department's program content and curriculum; student outcomes; admissions, pathways and enrolments/ FTE; program operations and costs; program delivery; faculty development; risks, and recommendations. The review was conducted and segments drafted by all faculty members.

The Mathematics Upgrading Department does not offer any specific certificate or diploma. Our main role is to offer courses and prepare students to meet the specific mathematics requirements needed for different programs and courses at the College. Another important role of our department is to offer assessment support across the College. Our students can take courses in the department that count towards the Adult Dogwood Diploma, but we do not offer this program.

Recommendations

Recomm. Number	Related Report Component	Recommendation	Status / Timeline
1.	12	Meet with the Marketing and Communications Office to better advertise our department to the larger Douglas Community.	Start Winter 2024
2.	6	Meet with the Office for International Students to identify the needs of students coming from abroad to recognize their mathematical requirements, identify their mathematics upgrading needs and streamline their enrolment into MATU.	Start Winter 2024
3.	12	Investigate ways to more effectively communicate and cooperate with the academic advisors and departments that work with incoming Douglas College students, to guide them toward taking the necessary MATU courses early in their Douglas College educational pathway.	Start Winter 2024
4.	4	Source an online textbook for the MATU0411 course.	Start Summer 2024
5.	5	Re-evaluate the readiness tests (CBAR, DCPA, DCVT) along with re-evaluating the cut-off score of 30% for direct placement from the Math 11 Exemption test to MATU 0411.	Start Summer 2024
6.	7	Meet with the Registrar's office to verify the practice of students who completed ABE courses elsewhere gain direct entry into the subsequent ABE course offered at Douglas College.	Start Summer 2024
7.	1	Investigate, revise and re-articulate the Course Guidelines for the Fundamental Level courses, most urgently MATU 0110.	Start Fall 2024
8.	12	Contacting Accessibility Services and requesting more faculty support.	Start Fall 2024
9.	5	Investigate ways to track the educational pathway of students from the upgrading level to the graduation stage	Start Fall 2025
10.	10	Advocate for a dedicated classroom on the Coquitlam campus and on the NW main campus that has updated technology and the capacity to store manipulatives and other necessities.	Ongoing
11.	12	Design surveys that better address the function of our department for the next Comprehensive Review.	Start one year before next Comprehensive Review

Previous CR Recommendations List

Past recommendations primarily dealt with the separation of the Developmental Studies Department into English and Math Upgrading. English Upgrading moved to Language, Literature, and Performing Arts and Math Upgrading is now with Science and Technology.

External Review of Program Quality Self-Study

External Reviewer(s):

*Jack Moes PhD
Dean, Trades, Technology, Upgrading and English Language Programs
College of the Rockies
Cranbrook, British Columbia*

Douglas College X Department / Program:

*Mathematics Upgrading Department
Faculty of Science & Technology
Douglas College*

Mathematics Upgrading does not provide a credential outcome, rather it is intended to meet two purposes:

- *Offer courses to prepare students to meet mathematics prerequisites for post-secondary programs and courses at Douglas; and*
- *Provide assessment support to several of the College's post-secondary programs.*

Date:

August 2024

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Introduction and Environmental Scan

Under the BC Colleges and Institutes Act, Douglas College shares a mandate with 17 other public post-secondary institutions to provide Adult Basic Education (ABE) for their respective constituencies. Similar mandates exist in other jurisdictions across Canada. The BC K-12 system also operates with such a mandate.

In British Columbia, the overarching principle for ABE is that adult learners should have access to opportunity to complete high school and to pursue post-secondary training and employment.

The ideal of access refers not only to the availability of necessary courses, but also with the costs to students by making courses available without tuition fees, and by providing financial support through the Adult Upgrading Grant (AUG). Access also considers the additional supports a student may need to be successful, such as accessibility and advising services, and Indigenous cultural services.

Among other things, the [BC Adult Education Policy Framework](#) states an expectation that students should have the ability to move among BC's ABE providers and seamlessly receive recognition and credit for their learning. To facilitate this there is a well-developed articulation network, in which Douglas College ABE instructors are engaged, that ensures courses share a common set of learning outcomes.

In short, Douglas College is connected with an entrenched Provincial mandate, in collaboration with an extensive network of providers, to deliver ABE to its community and enable students to pursue and succeed in their education and employment objectives.

As a manager of ABE programming at one of the other post-secondary providers within BC, I have been asked to review the Mathematics Upgrading Department's self-study report and recommendations.

I appreciate having been asked, and I hope my review and suggestions are helpful and received in the collegial and constructive manner I intend.

Audit of Self-study

Self-Study Recommendations		External Reviewer Assessment			
No.	Content	Agree ✓	Disagree ✓	Other ✓	Comments / Rationale
1	Meet with the Marketing and Communications Office to better advertise our department to the larger Douglas Community.	✓			I share the observation in my context that the contribution of the Upgrading department may not be altogether understood or acknowledged across the institution. While the M&C Office may be helpful, as an additional suggestion we have had some success in mitigating this by periodically inviting members of other functional areas to department meetings for conversation. Based on what you think they need to know about upgrading (and vice versa), toward better understanding it's a worthwhile investment of 20-30 minutes from time-to-time.
2	Meet with the Office for International Students to identify the needs of students coming from abroad to recognize their mathematical requirements, identify their mathematics upgrading needs and streamline their enrolment into MATU.	✓			I'd add that the need for such meeting is ongoing—I suggest revising the recommendation to "meet annually" or "semi-annually" to emphasize this.
3	Investigate ways to more effectively communicate and cooperate with the academic advisors and departments	✓			As above, this should be an ongoing dialogue rather than a one-off meeting. Consider revising the recommendation to clarify this.

	that work with incoming Douglas College students, to guide them toward taking the necessary MATU courses early in their Douglas College educational pathway.				
4	Source an online textbook for the MATU0411 course.	✓			A progressive and student-friendly objective.
5	Re-evaluate the readiness tests (CBAR, DCPA, DCVT) along with re-evaluating the cut-off score of 30% for direct placement from the Math 11 Exemption test to MATU 0411.			✓	This may be a sound recommendation, but I don't find enough discussion or clarification of the issue in the self-study—i.e. the “why” is unclear.
6	Meet with the Registrar's office to verify the practice of students who completed ABE courses elsewhere gain direct entry into the subsequent ABE course offered at Douglas College.	✓			This is certainly in keeping with the expectation that ABE learning be transferable, though as expressed, this seems like a straightforward question that could easily have been asked and answered. Is there a bigger concern or objective here?
7	Investigate, revise and re-articulate the Course Guidelines for the Fundamental Level courses, most urgently MATU 0110.	✓			I agree this is important. Articulation and transferability is assumed to be an operating parameter, as articulated in the Adult Education Policy Framework.
8	Contacting Accessibility Services and requesting more faculty support.	✓			Is there an instructor resource centre or teaching innovation centre that also can contribute to resolving this?

9	Investigate ways to track the educational pathway of students from the upgrading level to the graduation stage	✓			This is important information to better understand how to support upgrading students, and other institutions also struggle with how to get it. The Registrar and institutional research group will need to be involved.
10	Advocate for a dedicated classroom on the Coquitlam campus and on the NW main campus that has updated technology and the capacity to store manipulatives and other necessities.	✓			To facilitate quality learning requires, among other things, a suitable and well-equipped learning environment. Either addressing the deficiencies in these rooms or identifying alternatives is a high priority concern.
11	Design surveys that better address the function of our department for the next Comprehensive Review.	✓			As with recommendation 9, this is important information to better understand how to support upgrading students.

Additional Context, Recommendations, or other Conclusions

Additional Recommendations and/or Considerations		
No.	Content	Comments / Rationale
	Separation of Math and English upgrading	Referenced on page 5 of the self-study, this separation apparently resulted from a recommendation advanced in a previous review process. As program quality review is meant to become a continuous process, reflection on progress from review to review becomes valuable. The reference to the separation triggers a question for me—did this action produce the expected result? Either it did, or it didn't and a further recommendation could be considered.
	Reconciliation and Decolonization	Douglas College clearly places a high priority on its Indigenous initiatives . Given the obvious importance of Indigenization to the College and the emphasis of reconciliation and decolonization in the College's mandate letter, a program review seems an opportunity for every program area to reflect on what reconciliation and decolonization might mean in its context. A recommendation that begins to engage this question could be appropriate.
	PAC	On page 25, the review states that the program does not have a Program Advisory Committee. While this is not uncommon in regard to upgrading programs, there is a case to be made for doing so. PACs are usually employment focused, which of course is not of direct concern for upgrading programs. However, there are stakeholders whose voices could give valuable insights to the upgrading program area in relation to enrolment trends and student needs. Notwithstanding the operational separation of Math and English upgrading, the collective upgrading program area could derive significant benefit in terms of program direction and effectiveness.
	Program innovation	The Faculty Survey results summarized as Append C evidence an experienced team that is confident in what is being delivered to students. Along with this, however, there is expression of some recognition that further growth is always possible. The results for Q4, Q7, and Q9 suggest quite a number of areas of instructional practice where innovation opportunities may exist, and that could provide additional recommendations for consideration.
	FTE data and trends	The data presented suffer from the anomalies of the pandemic, and by changes in the recruitment of International students. Each BC institution that offers upgrading has been impacted similarly in

		<p>these regards. In some jurisdictions, an increasing high school graduation rate is also affecting the demand for upgrading. There is a growing sense that the playing field is changing, and no one knows quite what that will look like. Consideration of this dynamic needs to be on the program team's radar, along with exploration of opportunities to adapt the program to meet needs in new and different ways. The team's discussion of FTE trends has not led to any particular recommendation—perhaps some reflection is warranted on this front.</p>
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DOUGLAS COLLEGE COMPREHENSIVE REVIEW (CR)
RESPONSE FROM THE
OFFICE OF THE VICE-PRESIDENT, ACADEMIC AND PROVOST

Douglas College Administration policy A38: Program Review requires a follow-up plan be developed by the Vice President, Academic and Provost, in response to the Self-Study and External Report.

FACULTY (Lead Dean/Associate Dean)	Click to enter Faculty Name	
Department / Program	Math Upgrading	
Date Submitted	August 2024	
External Review Panel (ERP)	Jack Moes	Dean, Trades, Technology, Upgrading and English Language Programs, College of the Rockies
Reason for Timing of Comprehensive Review	<input checked="" type="checkbox"/> Schedule (routine) or <input type="checkbox"/> Off-cycle, due to emergent concerns (specify below) <div style="margin-left: 150px;"> <input type="checkbox"/> Changes in discipline/field/licensing <input type="checkbox"/> New program development <input type="checkbox"/> Demand/enrolment/budget concerns <input type="checkbox"/> Other (specify) </div>	
Date of last Comprehensive Review	2011	
RESPONSE/RECOMMENDATIONS		
SUMMARY RESPONSE	<p>The External reviewer notes that <i>“Under the BC Colleges and Institutes Act, Douglas College shares a mandate with 17 other public post-secondary institutions to provide Adult Basic Education (ABE) for their respective constituencies. Similar mandates exist in other jurisdictions across Canada.”</i></p> <p>In BC this means providing adult learners with financial support and institutional ‘access’ such that they are able to complete secondary school level mathematics -- leading to opportunities for post-secondary education and improved employment outcomes.</p>	
All Self-Study recommendations accepted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
All External Report recommendations accepted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

<p>VPA's RECOMMENDATIONS</p> <p>In particular, MATU should focus on the following:</p>	<p>The VPA&P accepts all of the recommendations presented in the self-study report with caveats.</p> <ol style="list-style-type: none"> 1. The external reviewer felt that there was insufficient rationale for self-study recommendation #5 <i>"Re-evaluate the readiness tests (CBAR, DCPA, DCVT) along with re-evaluating the cut-off score of 30% for direct placement from the Math 11 Exemption test to MATU 0411."</i> The VPA&P therefore requests that the Dean and Department re-examine the rationale for recommendation #5 and confirm that it still has merit. 2. The VPA&P accepts recommendation #10 of the self-study that the Department may <i>"Advocate for a dedicated classroom on the Coquitlam campus and on the NW main campus that has updated technology and the capacity to store manipulatives and other necessities."</i> However, the VPA&P's acceptance of this initiative should not be construed as endorsement or agreement to provide such additional resources to MATU. Decisions regarding the allocation of classrooms are made in the context of general space constraints and competing interests. Typically, this will require an analysis by the Office of Institutional Effectiveness. Also, it is important to note that any renovations must go through a formal request during the preparation of the College's annual budget. <p>The VPA&P accepts the additional recommendations/suggestions of the external reviewer, noting that each requires either some further study or further consultation. Therefore, the external reviewer's recommendations should not be considered binding on the department.</p> <p>The VPA&P directs the Dean to work with the department on the implementation of the self-study recommendations while also considering the external reviewer's suggestions.</p> <p>As per the College's routine follow-up to comprehensive program reviews, the Department is to submit its <u>Implementation and Action Plan (IAP)</u> to the Dean within 45 days of receipt of this Report, and to report back to the Dean one year after submission of the IAP to account for progress made.</p>
<p>Next scheduled PR (5 – 7 years):</p>	<p>2030</p>



Vice-President, Academic and Provost

March 24, 2025

Date