

University of Manitoba Budget Model

Narrative to Model Calculations

This document is intended to be a supplement to planning and budgeting reports, particularly reports containing allocation calculation details. For each of the model outputs (e.g., revenue allocations, cost allocations, etc.) represented in the reports, this document provides additional context to the allocation methodology and any variables used in calculations. The goal of this document is to 1) clearly articulate all resource allocations in the budget model and 2) support future discussion and training. For questions related to content in this document, please contact one of the following individuals:

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Content in this document is organized by resources as they are represented in the allocation results report and form in UM Plan.

Definitions

Academic Units - comprised of faculties, schools and the Extended Education Division; units to which revenues are allocated in support of teaching, research and service activities.

Ancillary Units – financially self-supporting businesses and departments. The units extend the learning environment beyond the classroom to enhance campus life through the delivery of quality goods and services (i.e. Bookstores, Conference and Catering, Dining, Parking, Student Residences, etc.).

Central Support Units - units whose net expenses are allocated to Academic Units based on a set of cost allocation variables. (i.e., Student Services, Research Services, Libraries, IST, Financial Services, etc.)

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Revenue Allocations

Undergraduate Tuition

Allocation Methodology

- Program based undergraduate tuition revenue (i.e. fees not charged per credit hour) will be allocated 100% to the respective Academic Unit (Colleges of Medicine, Dentistry and, as of 2021/22, Pharmacy within the Rady Faculty of Health Sciences (RFHS) and Faculty of Law only).
 - Revenues for credit hour based programs in the RFHS are included in this allocation.
- Remaining tuition revenues are split in two pools 85/15, with each revenue pool having its own allocation variable:
 - 85% Weighted Credit Hours by Faculty of Instruction¹
 - 15% Credit Hours by Faculty of Student Record

Variable Input: Credit Hours by Instructor, Student Program – Undergraduate

- The model allocates undergraduate tuition using two types of credit hours:
 - Credit Hours by Faculty of Instruction (Taught By) – Credit hours are assigned to the faculty/school offering the course, using the course code identifier.
 - University 1 students take courses offered by academic units, those credit hours are assigned to the academic unit.
 - Credit Hours by Faculty of Student Record (Taught To) – Credit hours are assigned to the faculty/school of a student's program, regardless if the student is taking courses in the student's home faculty/school or another faculty/school.
 - University 1 is a Central Support Unit, so credit hours by Faculty of Student Record are not assigned.
- The model's credit hour data reflects the end of the course change period for each term.

¹ All allocations are calculated based on an Academic Unit's proportional share of a variable total across all Academic Units. For example, if an Academic Unit has 10% of total credit hours across all Academic Units, it will receive 10% of that allocation.

- For the purpose of allocating undergraduate tuition, distance credit hours are removed from a faculty/school's total, as distance tuition is allocated separately within the model.
- For Université de Saint-Boniface (USB) credit hours captured in UM datasets but taught by USB faculty, these data are excluded from the analysis (i.e. Education).

Variable Input: Weighted Credit Hours by Faculty of Instruction - Undergraduate

- The 85% portion of undergraduate tuition is allocated according to each academic unit's proportion of total weighted credit hours across the University.
- To create a weighted allocation variable, each academic unit's credit hours by Faculty of Instruction are multiplied by its fall tuition price per credit hour rate for the driver year.

Graduate Tuition

Allocation Methodology

- Graduate tuition is allocated 100% to the generating Academic Unit with the exception of continuing fees. The organization code assigned to revenue in the general ledger serves as the source for assigning graduate tuition to each Academic Unit.
 - Allocations to each Academic Unit includes an amount of tuition assigned to the Faculty of Graduate Studies. This amount is calculated by multiplying the Academic Unit's proportion of Graduate Tuition by the total amount of tuition from the Faculty of Graduate Studies.
- Continuing fees are allocated per graduate student headcount, as the general ledger does not provide detail of continuing fees by Academic Unit.

Variable Input: Student Headcount – Graduate

- Model data reflects fall student headcount – full-time and part-time – as of the course change date

Differential Fees (Undergraduate and Graduate)

Allocation Methodology

- Differential fees refers to the amount of tuition paid by international students above the regular domestic tuition rates. The portion of the international student tuition fees equivalent to the domestic tuition is included in the undergraduate and graduate tuition allocation methodologies described above. The differential tuition portion of international student fees follows the same methodology as the allocation of undergraduate and graduate tuition, respectively.
 - Undergraduate Differential: Direct allocation for program-based tuition faculties and 85/15 allocation for credit-hour tuition faculties (Note: credit hours are limited to international students).
 - Graduate Differential: Direct allocation per general ledger (Note: continuing fees do not apply to graduate differential fees).

Variable Input: Credit Hours by Instruction, Student Record – Undergraduate International

- Allocation calculations use international student credit hours only; credit hours are sourced from the same data set used for the undergraduate tuition allocation.
- Similar to the undergraduate tuition, the 85% portion of the undergraduate differential fee allocation uses a weighted allocation variable. Each academic unit's international student Credit Hours by Faculty of Instruction is multiplied by the international per-credit hour student fee less the domestic per credit hour student fee to create a Weighted International Credit Hours by Faculty of Instruction variable.

Distance Tuition

Allocation Methodology

- Distance tuition refers to the amount of tuition paid by students registered for distance courses, including the per credit hour fee and the distance and online education surcharge.
- The model allocates distance tuition in proportion to weighted distance credit hours instructed by each academic unit.

Variable Input: Weighted Distance Credit Hours by Instructor (Taught By)

- Distance Tuition allocations incorporate weightings by multiplying the Distance Credit Hours by Instructor (Taught By) - Total by the per-credit hour tuition price to create a Weighted Distance variable (effective 2020-21 budget year).
- Credit hours reflect course change date for each term.
- Per credit hour tuition price reflect Fall term rates
- Distance courses identified by "DE" course campus identifier within credit hour data.

Other Fees

Allocation Methodology

- The model allocates other student fees in two ways – either 100% to an Academic Unit, or across all Academic Units in proportion to student headcount – depending on the type of fee.
- All fees that can be assigned to an Academic Unit using the organizational code assigned to the revenue in the general ledger are allocated 100% to the generating Academic Unit.

- Student fees not assigned to an Academic Unit via the general ledger are considered "generic" student fees that are allocated to Academic Units in proportion to student headcount. These student fees consist of the following items: application fees, registration fees, library fees, student services fees, late payment fees, reinstatement fees, deferral fees, and late registration fees.
- Student Technology Fees are allocated to General University and offset by a transfer to the Capital Fund to pay down the debt of the University.

Variable Input: Student Headcount – Total

- Model headcount data reflects fall student headcount – full-time and part-time – as of the course change date.

Provincial Operating Grant (operating grant)

Allocation Methodology

- The operating grant includes unrestricted and restricted funds.
- Unrestricted funds are allocated as follows:
 - 65% is allocated based on each Academic Unit's proportion of the sum of the following allocated tuition:
 - Graduate tuition and program based undergraduate tuition as described above
 - Undergraduate and distance tuition recalculated with the per credit hour price weightings removed
 - 30% is allocated based on each Academic Unit's proportion of sponsored research expenses (three-year average).
 - 5% is allocated based on each Academic Unit's proportion of graduate student and faculty FTE (including faculty members with professorial rank only). This allocation is intended to support additional research activity that occurs outside of sponsored research.
- Restricted funds, such as ACCESS grants and other targeted grants are allocated 100% to the generating unit.

Variable Input: Sum of Tuition Allocation Results

- This variable is the sum of an academic unit's allocations for undergraduate tuition, graduate tuition, and distance tuition. This variable is intended to mirror the incentives for the allocation of tuition and fees; however, the variable does not intentionally incorporate weightings to recognize differences in tuition revenue generated by faculty.

To make sure the variable does not incorporate weighting, the results of the undergraduate tuition allocation needs to be updated. This does not affect the amount of undergraduate tuition allocated to a faculty, only the number used for the purpose of this allocation. The calculation of the undergraduate tuition allocation is updated so the 85% faculty of instruction allocation uses credit hours by Faculty of Instruction that is not multiplied by an academic unit's per credit hour tuition price. The calculation of the distance is similarly updated so that the distance tuition allocation uses distance credit hours that are not multiplied by an academic unit's per credit hour tuition price. The operating grant allocation uses the results of these updated allocations (i.e., tuition that would have been allocated to an academic unit if the undergraduate and distance tuition allocation was unweighted), and the results of graduate tuition and program based undergraduate tuition allocations, to allocate operating grant resources across each academic unit.

Variable Input: Net Sponsored Research Expenses (three-year average)

- Allocation is intended to support the indirect costs of sponsored research; each Academic Unit receives its allocation based on its proportion of total sponsored research expenses (three-year average), effective 2020-21 budget year.
- Expenses only include "research funds" for each Academic Unit, as well as research conducted by Rady Faculty of Health Sciences affiliated sites. These expenses make up the total sponsored research activity, that is recorded in account types 60 and 70 in fund type 30 in the general ledger, plus amounts reported by affiliated sites.

Variable Input: Adjusted Faculty and Graduate Student FTE

- Variable is the sum of faculty FTE and graduate student FTE.
- Faculty FTE is adjusted to only include faculty members with professorial rank.

Additional Allocations of Revenues and Expenses

Allocation Methodology

- Additional allocations pertain to subsets of resources within particular revenue and expense lines of the model. These allocations are made based on:
 - Recommendations from the Financial Planning Office to properly represent revenues and expenses relative to how they were recorded in the general ledger.
 - Specific recommendations from Deans/Directors and the Steering Committee throughout the model development process, and approved by the President.

- Allocations include (source in italics):
 - *Research Support Fund (Government of Canada Revenue)* – Full amount of RSF funding provided to the University is allocated to Academic and Central Support Units in proportion to how RSF funding has been historically allocated.
 - *Research Overhead (Indirect Cost Recovery)* – Full amount of research overhead is allocated within the budget year to Academic and Central Support Units that generate the revenue.
 - *International College of Manitoba (ICM) Revenue (Miscellaneous Revenue)* – A balance of ICM revenue is directly allocated within the budget year to units per historical ICM agreement.

- Note: In future years, changes to business processes may reduce the need for these types of allocations.

Cost Allocations

Central Support Unit Cost Allocations

Allocation Methodology

- Academic Units are expected to support the costs of Central Support Units. Allocating costs to the Academic Units is intended to enhance transparency around costs incurred to operate the University.

- For the purpose of allocating costs to the Academic Units, Central Support Units are grouped into nine cost pools: Academic; Administration; President, External and Indigenous; Facilities; IT; Libraries; Research; Student Services; and General University. These nine cost pools do not represent a

reorganization of reporting relationships, but rather a grouping of "like" units for the purpose of allocating each cost pool's costs via a single allocation variable.

- Each Academic Unit receives cost allocations based on its proportion of the allocation variable assigned to each cost pool. Costs allocated to Academic Units represent the net expenses (gross expenses less self-generated revenues) of each cost pool.
- Cost pools and variables represented below:

Cost Pool	Allocation Variable	Allocation Narrative
Academic	Credit Hours Taken by Students	Academic support services provided by the VP Academic's operations generally fluctuate based on an increase or decrease in the credit hours generated by an academic unit's students.
Administration	Total Direct Expenditures (excludes clinical exp.)	Administrative services provided by the VP Administration's operations generally follow growth trends in overall University activities, which can be measured by an academic unit's total direct expenses.
President, External, and Indigenous	Faculty and Staff FTE	Demand for services provided by the President's, VP Indigenous' and VP External's operations can be generally tied to the amount of an academic unit's size.
Facilities	Net Square Footage Occupancy / Student Headcount	Maintenance of the physical plant generally follows an academic unit's square footage.
Information Technology	Faculty, Staff, and Student Headcount	Information technology services generally follow students and employees on a per-headcount basis.
Libraries	Adj. Faculty and Student Headcount	Library services are generally offered to students and faculty on a per-headcount basis.
Research	Sponsored Research Expenses (three-year avg.)	Research administration support services generally follow an academic unit's sponsored research activities.
Student Services	Credit Hours Taught by Faculty	Student services generally follow student activity, which can be measured by an academic unit's credit hours.
General University	Total Direct Expenditures (excludes clinical exp.)	General University costs support diverse initiatives; direct expenses selected to represent range of University activities.

Facilities Allocation

- The allocation of the Facilities cost pool is different than other Central Support Unit cost pools for two reasons: 1) step down allocations and 2) recreational space adjustment.
- Step down allocations refer to allocations of facilities costs to other Central Support Unit cost pools prior to their ultimate allocation to academic units (i.e., Facilities expense → Administrative cost pool → Academic Units). Step down allocations are incorporated to provide additional transparency to space costs incurred by Central Support Units.
- There are two components to the allocation of facilities costs:
 - The portion of Facilities budget that supports space assigned to academic units is allocated based on each Academic Unit's proportion of square footage.
 - The portion of Facilities budget that supports space assigned to Central Support Units (excluding Facilities) is allocated across the cost pools based on each cost pools' proportion of square footage; these costs become part of overall costs allocated to the Academic Units based on the cost pool's allocation driver.
- Recreational space is allocated across Academic Units through the Facilities cost pool and based on student headcount, as all students can utilize the recreational space.

General University Allocation

- General University is a cost pool that captures university-wide financial and accounting related activities. It is a common placeholder and tends to exist at every institution.
- General University includes such institution-wide or anomalous activities, revenues, expenses and transfers such as capital allocations, retiree benefits, and transfers from other funds to support operating costs.
- Over time, new business processes may impact how revenue, expenses, and transfers are budgeted in General University.

Variable Input: Credit Hours by Instructor or Student Major – Total

- Academic Unit credit hour totals include undergraduate and graduate, domestic and international, and distance and on campus credit hours.
- Consistent with other credit hour variables used in the model, data represents course change date for each term.

Variable Input: Total Direct Expenses

- Academic Unit total direct expenses is generated from the general ledger data, inclusive of actuals for all funds.
 - Total does not include fund transfers; only direct expenses. That is, account types 60 and 70 for all fund types in the General Ledger.
- Allocation excludes Rady Faculty of Health Sciences' clinical expenses

Variable Input: Faculty and Staff FTE

- Faculty and staff FTE totals are as of March 31.
- Student workers are excluded from totals to prevent double-counting students (as a student and as an employee).
- Academic Positions from data includes (per OIA):
 - *Employee Types*: President, Deans, Directors, Heads, Geographical Full-Time (GFT) Medical Doctors and Clinical Psychologist, U.M.F.A. Full-Time Academics, Professors, Lecturers, and Instructors, Research Associates, Visiting Scholars, Sessional Instructors, Graders/Markers, Clinical Educators, and Part-time instructors.
 - *Compensation Groups*: Admin Excluded Academic Positions, Executives / Sr Admin, G.F.T., U.M.F.A (D.C.S., Academics, and Instructors), Research Academics, C.U.P.E 3909 Students and Other Academics, C.U.P.E Local 3909 Sessionals, Excluded Professional Sessional Academic Staff and Excluded UMFA Sessional Academics.

- Staff Positions from data includes (per OIA):
 - *Employee Types:* Office, Administrative, and Library Assistants, Technicians, Child Care Workers, Information Technology Staff, Patrol Officers, Sessional Librarians, Research Nurses, Food Service Workers, Clerks, Laboratory Assistants and Technical Assistants
 - *Compensation Groups:* A.E.S.E.S, C.U.P.E. Local 1482, C.U.P.E 3909 Librarians, E.M.A.P.S., Excluded Students, Executives / Sr Admin, Medical/Dental Practitioners & Admin, Nurses In Northern Manitoba, UNIFOR
- Executives / Sr Admin positions are included in either Academic or Staff positions. Executives / Sr Admin positions who also have a primary Academic appointment would be listed as "Academic" and those who do not have a primary academic appointment would be listed as "Staff."
- FTE calculations are determined by calculating the actual number of hours academic and staff members worked in the previous year divided by the normal working hours per year by position.

Variable Input: Net Square Footage Occupancy

- Data represents chargeable square footage occupancy details provided by the Campus Planning Office (March 31 snapshot of the ongoing space inventory audit)
 - Laboratories and classroom facilities that are not-centralized have been assigned to Academic Units.

Variable Input: Faculty, Staff, and Student Headcount

- Combination of Faculty/Staff and Student data sets; see descriptions for data variables for additional detail.

Other

University Fund

- One of the most critical elements of a decentralized budget model is the creation of a University Fund to address mission-critical subvention and invest in strategic priorities.
- The University Fund is generated in the model through a participation rate calculated on the tuition (undergraduate, graduate, distance), differential fees, and operating grant revenue allocated to and budgeted directly by Academic Units.
- The participation rate is set at a rate to provide sufficient funds for balancing and strategic priorities.
- 100% of investment income is allocated to the University Fund
- Ancillary Units are charged an overhead amount and these funds are allocated to the University Fund
- A portion of ICM revenue is allocated to the University Fund

Summary Model Funds Flow

