

DATA COOKBOOK; A DATA GOVERNANCE INITIATIVE

SESSION 6000 Tuesday, November 13 3:00 pm — 4:00 pm

PRESENTERS

Lee Dreger

Senior Manager, Business Intelligence

Office of the CIO MacEwan University

dregerl@macewan.ca

Karina Nestler

Functional Analyst, Student Financial Aid

Office of the University Registrar

MacEwan University nestlerk@macewan.ca

Deepinder Dhillon

Admissions Consultant

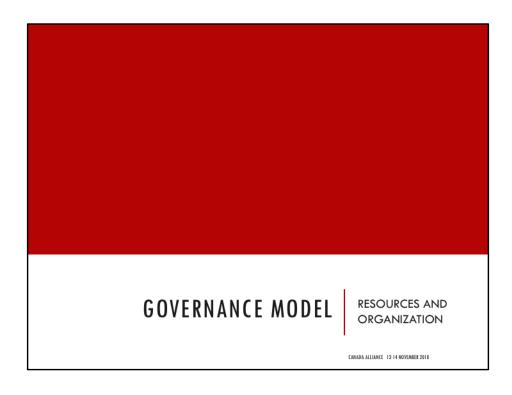
Office of the University Registrar

MacEwan University

dhillond7@macewan.ca

OVERVIEW

- 1. MODEL Resources and Organization
- 2. INITIATIVE Data Cookbook
- 3. GROWTH Leadership Support
- 4. GOVERNANCE Outcomes and Lessons Learned
- 5. CONCLUDING THOUGHTS Questions
- 6. APPENDIX Supporting Documentation



WHAT IS DATA GOVERNANCE?

Data Governance is a data management concept concerning the capability that enables an organization to ensure that high data quality exists throughout the complete lifecycle of the data. (Wikipedia)

Data Governance is a **collection of practices and processes** which help to ensure the formal management of **data assets** within an organization. (<u>Dataversity</u>)

Data Governance is the exercise of authority and control (planning, monitoring, and enforcement) over the management of data assets." (<u>DAMA International</u>)

Data Governance is a system of decision rights and accountabilities for information-related processes, executed according to agreed-upon models which describe who can take what actions with what information, and when, under what circumstances, using what methods." (Data Governance Institute)

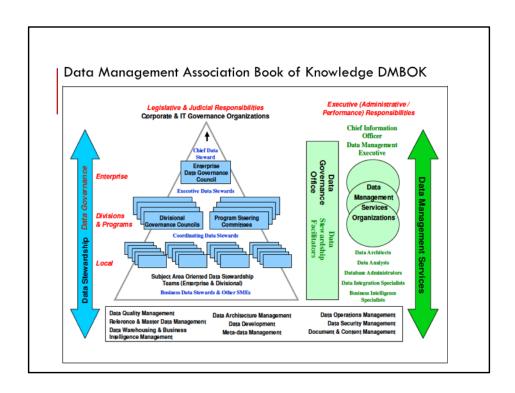
WHY DATA GOVERNANCE?

PeopleSoft projects and shared data
Cross functional team meeting
BI data validation and cleansing
New warehouse build

CANADA ALLIANCE 12-14 NOVEMBER 2018

New warehouse build – naming conventions and help text

Cross functional team meeting to do item – started list of issues to address, met with colleagues to plan and realized we were starting to address governance issues



Needed a plan

 ${\sf DMBOK-made\ sense\ to\ our\ group-IT\ driven\ with\ interest\ from\ business\ areas\ -IT\ professionals\ and\ Business\ area\ roles}$

DGI Data Governance Institute and other web resources

EIM – Enterprise Information Management

DATA GOVERNANCE WORKING GROUP (DAWG)

Director - HR Systems & Reporting	Director - ERP Business Support
Director - Financial Services	Senior Manager - Campus Solutions
Executive Director - Expenses, Procurement and Contact Services	Director - IT App Services & PMO
Associate Registrar - Information Systems and Scheduling	Senior Manger – Business Intelligence (CHAIR)
Director - Student Financial Aid	Senior Manager — HCM and Finance
Associate VP - Planning & Analysis and Registrar	

Assess data governance models and make recommendations. Determine primary goals and mandate for data governance.

CANADA ALLIANCE 12-14 NOVEMBER 2018

Initial buy in and interest

Met 4 times over a year – conceptual high level

DAWG Mandate – support from ERP and academic governance bodies

Group split – strategy versus action

Floundered for a bit

	^	0	-				-	"
		Data Assets and Issues						
		Item	Added by	Added on	Scope	Priority	Rank	Systems Affected
;	1	Buildings and Locations	DAWG	2017-03-23	Enterprise			FSM, CS, HCM, BI, FN
,	2	Academic Organizations/Departments	DAWG	2017-03-23	Enterprise			FSM, CS, HCM, BI
	3	External Organizations/Schools	DAWG	2017-03-23	Shared			CS, HCM
	4	Persons of Interest	DAWG	2017-03-23	Enterprise			
0	5	Affiliations	DAWG	2017-03-23	Enterprise			
1	6	Phone Numbers	DAWG	2017-03-23	Enterprise			
2	7	Job Codes	DAWG	2017-03-23	Local			нсм
3	8	Definition of FT and PT Students	DAWG	2017-09-25	Enterprise			CS, FMS
4	9	Headcount	DAWG	2017-09-25	Local			cs
5	10	Email addresses	DAWG	2017-09-25	Enterprise			cs
6	11	HR Home Departments	DAWG	2017-09-25	Local			нсм
7	12	Academic Program Titles	DAWG	2017-09-25	Enterprise			cs
8	13	Deceased Date	DAWG	2017-09-25	Enterprise			HCM, CS, IDM
9	14	GPAs	L Dreger	2017-09-26	Shared			cs
0	15	Addresses	DAWG	2017-09-26	Enterprise			HCM, CS

DATA ASSET AND ISSUE LOG

2		
3	Data Asset or Issue	Grade Point Averages (GPA)
4	Scope	Shared
5	Description	There are multiple GPA's used in the system and reporting but no central documentation (other than policy) for how they are calculated or where they are used. GPA types: Admissions - used by BI in Automated Admissions Evaluation dashboard; SAB for adjudication - are they the same formula? Cumulative - printed on the transcript Academic Standing - used in determing Dean's List, 1st Class Standing, Probation, Required to Withdraw, Distinction Term - printed on the transcript Graduation - used to determine eligibility to graduate
6	Business Area	Office of the University Registrar
7	Business Process	Admissions - calculated by EMS based on selected HS courses or recalculated using additional information outside PS Cumulative - calculated by PS based on course work by academic level Academic Standing - Term - calculated by PS based on course work within a term Graduation - calculated for the transcript based on course work used to satisfy program of study
8	Business Steward	Identify primary contact
9	System Affected	CS
10	Integrations	
11	Volume	

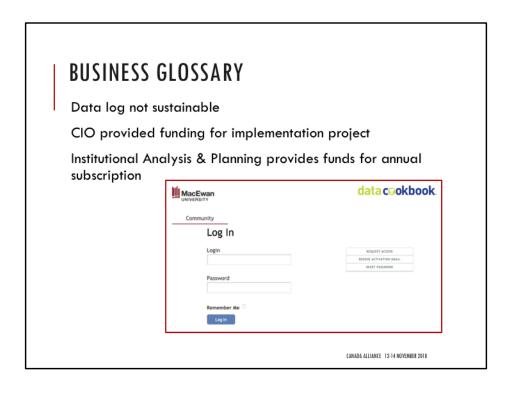
DATA ASSET AND ISSUE LOG

Aanager, HR Systems	Functional Analyst, Student Financial Aid	
unctional Analyst, Human Resources	BI Analysts, CIO Office	
Nanager, Finance Admin Services	Team Lead, School of Cont. Education	
unctional Analyst, Finance Services	IT Service Transition Analyst	
unctional Analyst, Expenses Procurement and Contract Services	Change Mgmt. and Data Governance Coordinator – Registrar's Office	
unctional Analyst, Faculty Relations	Business Analyst, Human Resources/Finance	
Admissions Consultant – Registrar's Office	Business Analyst, Campus Solutions	
Reporting Specialists – Institutional Analysis and Planning	Manager of Marketing, Office of Communications and Marketing	
Pesearch Analyst – Institutional Analysis and Planning	DAWG Chair	
Identify and document the university's data assets Provide input to data governance structure.		

Expanded to Stewards group

Not sure if all will be or are stewards but a working group for now Closer to the day to day activities – populate the log, update add new items





Cookbook on radar for years

DATA COOKBOOK PROJECT TEAM

Manager, HR Systems	Functional Analyst, Student Financial Aid		
Functional Analyst, Human Resources	BI Analysts, CIO Office		
Manager, Finance Admin Services	Team Lead, School of Cont. Education		
Functional Analyst, Finance Services	IT Service Transition Analyst		
Functional Analyst, Expenses Procurement and Contract Services	Change Mgmt. and Data Governance Coordinator — Registrar's Office		
Functional Analyst, Faculty Relations	Business Analyst, Human Resources/Finance		
Admissions Consultant – Registrar's Office	Business Analyst, Campus Solutions		
Reporting Specialists – Institutional Analysis and Planning	Manager of Marketing, Office of Communications and Marketing		
Research Analyst – Institutional Analysis and Planning	DAWG Chair		

Weekly meetings April to October 2018 Project managed by DAWG Chair Training and mentoring provided by iData consultant

CANADA ALLIANCE 12-14 NOVEMBER 2018

Primarily non IT

Marketing participation



Depending on the normal program length, there are four possible values:

- IC1 Year 1
- IC2 Year 2

List values

IC3 - Year 3
 IC4 - Year 4

A degree program is generally 4 years; applied degree programs are 3- or 4years; diploma programs are 2- or 3-years (no students will be reported in Year 4); and, a certificate or university transfer program is generally a 1-year program (all students in these programs will be in Year 1). In addition, for some programs, students will enter into later years (e.g. Year 3).

Business rules

In 2015 the university revised the YOS calculation to better align with government reporting requirements. The calculation of YOS is based on the credits taken by the student, including https://docs.pythos.org/nm/Plan in which the student is enroled. Additionally, some programs have restrictions on the applicability of credits or advance the calculation based on previous credentials.

Internal Add context

A students' year must be where they best fit for processes such as oEnrolment Appointments and applying for financial aid. To achieve this a 7 credit adjustment is added to the credits taken so a student one or two courses short of the next year will be determined to be that year. Certificate and most diploma program students are NOT adjusted.

In PeopleSoft, Year of Study is referred to as Academic Level and three variations are provided. MacEwan uses the YOS value displayed in Academic Level - Projected.

- Academic Level Projected: Sum of completed credits + inprogress credits + Transfer Credit (including Other Credit) exclusive of current and future terms
- Academic Level Start of Term: Sum of completed credits +
 Transfer Credit (including Other Credit) exclusive of current term
- Academic Level End of Term: Sum of completed credits +
 Transfer Credit (including Other Credit) including current term

These YOS values are updated when there are any changes to a student's enrollment record (e.g. a course add, drop, swap, normal maintenance change, course grading).

External Reference official sources

For government reporting (e.g. Learner Enrolment Reporting System), no credit adjustment is applied. This YOS calculation is available from Institutional Analysis and Planning.

FUNCTIONAL AREAS

Admissions	Records & Enrolment
Student Financial Aid	Human Resources
Finance	Unassigned
XFunctional	eCV / Faculty Relations

CANADA ALLIANCE 12-14 NOVEMBER 2018

Used to organize definitions and provide governance structure Data Manager and functional user group

WORKFLOWS

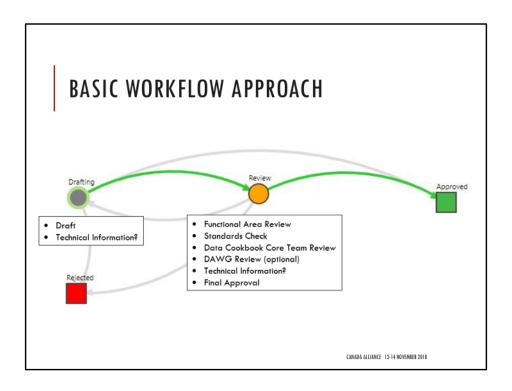
Mechanism to approve definitions within a functional area:

- As simple as possible
- · Role of data manager
- Workflow questions
- Consistent approach

CANADA ALLIANCE 12-14 NOVEMBER 2018

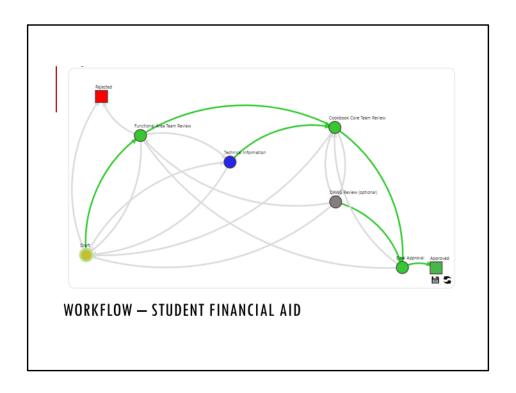
KARINA

- Keep as simple as possible while still including everyone who needs to be included
- Thought data managers for each functional area would manage all definitions within their area and do final approval turned out not to be the case for many of us
- Workflow design questions Who has control of the process?
 - *Who decides what and when?
 - *What if there are disagreements within the group?
 - *At each step, questions drilled down even further (example ConEd)
- Consistent approach
 - *Same people involved in same stages as much as possible
 - *Consistent naming and setup for stages and transition actions



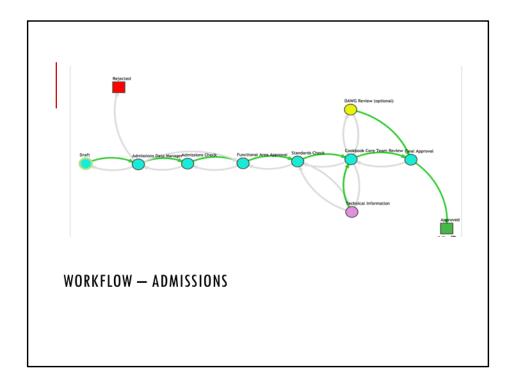
1. Draft

- Anyone in the university with editing rights
- 2. Functional Area Review
 - It this term required?
 - Manager intervention
- 3. Standards Check
 - Part of Draft/Functional Area Review or separate step
- 4. DC Core Team Review (subset of Stewards Group)
 - Include for feedback from broader campus community to ensure we cover all relevant areas
- 5. DAWG Review (optional)
 - All workflows include escalation to higher level (DAWG) in case questions or issues cannot be resolved within the core team
- 6. Technical Information (not finalized)
- 7. Final Approval
 - Mostly data managers but can be different for some functional areas (HR)



KARINA

- Fairly small functional area and team
- Weekly team meetings with director of functional area perfect for approving new definitions
- Data manager drafts definitions and brings to weekly team meeting for director's approval
- Standards check is included in Draft stage (if drafted by data manager) or in Functional Area Team Review stage before presenting at team meeting (if others submitted draft)
- Moves on to Cookbook Core Team Review, then to data manager for Final Approval



Deepinder

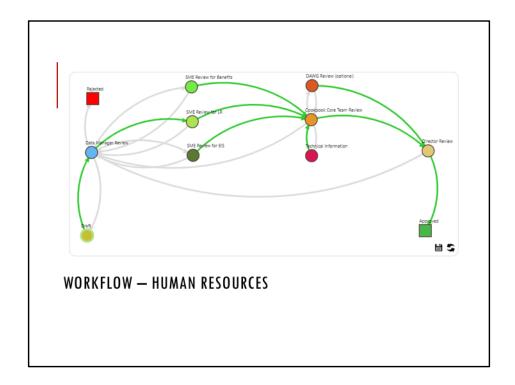
Different from Student Financial aid

Do not have weekly meetings

Data manager drafts forwards them to the admissions manager who has years of experience and knowledge

Functional area approval is done by the Associate Registrar, Admissions Then definitions get forwarded to the data manager for standard checks

Then follow the same route as Student Financial Aid workflow



Deepinder

Still do not have weekly meetings, but different from Student Financial aid and Admissions

Data manager screens the definitions and assigns them to different sub functional areas ...

HR data manager checks standards at the cookbook core team as he is part of that group

All definitions go through the HR director for final approval

Lee Dreger to discuss situations where terms and issues are escalated to DAWG

WORKFLOW RECAP

- 1. Draft
- 2. Functional Area Review
- 3. Standards Check
- 4. Data Cookbook Core Team Review
- 5. DAWG Review
- Technical Information
- Final Approval

CANADA ALLIANCE 12-14 NOVEMBER 2018

Deepinder

1. Draft

- Anyone in the university with editing rights can create draft and submit it to stage following draft stage

2. Functional Area Review

- It this term required? If no, gets rejected. If yes, review for completeness and correctness, then on to next stage
- Manager intervention (different solution for each functional area)

3. Standards Check

- Some areas do it as part of Draft or Functional Area Review, some do it as a separate step
- 4. Data Cookbook Core Team Review (name likely to change)
 - Knew we had to include Cookbook project team (now core team) for feedback from broader campus community to ensure we cover all relevant areas (others might think of uses for a term that we were not aware of)

5. DAWG Review

- All workflows include escalation to higher level (DAWG) in case questions or issues cannot be resolved within the data cookbook core team

- Optional step not on Happy Path
- 6. Technical Information
 - Not finalized but will be included in all workflows at some point
- 7. Final Approval
 - Step included in all workflows. Most data managers approve their definitions but different for some functional areas (HR).

GO LIVE?

Build and test workflows

Biweekly workshop and content review

Finalize draft definitions

Data Cookbook – consulting services – 4 month review

CANADA ALLIANCE 12-14 NOVEMBER 2018

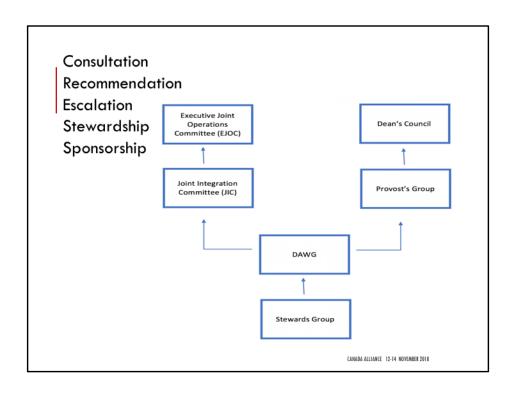
Deepinder

We have finished building most of our workflows, but there are some we are still working on.

Our core team meets regularly to go over our drafted definitions; we go through our definitions, discuss, learn new things, make changes, consult with other units, etc.

We have a consultant from Idata who coached and mentored us with cookbook. We have a follow up review meeting with her in 4 months.





STEWARDSHIP

Academic Organization and Department =

Academic Department and Department

Student ID, Employee ID, EmplID, Applicant ID, MacEwan ID = Student ID and Employee ID

Course ID, Course, Subject, Catalog Number, Section, Class, = 2222

Consultation

Recommendation

Escalation

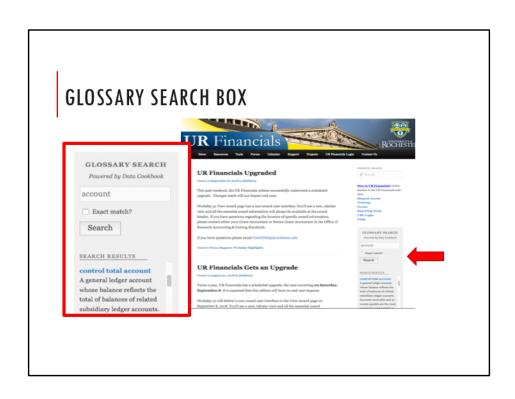
Stewardship

Sponsorship

- Creating new vocabulary
- Aligning policy and procedural language
- Collaboration and guidance for ERP projects







OUR DEFINITION

Data Governance is fundamentally about decisions and data. This includes deciding what the data means, where it should be used, how accurate it needs to be, and what rules it needs to follow.

TDAN.com

Performed by the business people who know and use the data.

CRITICAL ELEMENTS

Business Glossary: a record of the meaning of the data, so all the variations of it can be distinguished and erroneous comparisons eliminated

Data Quality: the condition of the data and its level of trustworthiness and adherence to policies

Roles & Responsibilities: the organizational structure that determines who takes responsibility for the care and maintenance of the data

OUTCOMES

Sub-functional areas

- •Admissions Recruitment, Transfer Unit
- Records & Enrolment Course Catalog, Registration, Scheduling

Review and approval participants expanded from 10 to 25 plus

Data Governance Coordinator position

MacEwan definition and scope

Structure and direction

CANADA ALLIANCE 12-14 NOVEMBER 2018

Workflow discussions

- Sub-functional areas separate workflows but one data manager
- Participants involved

FUTURE PLANS

Specifications – additional governance

- PSQueries, Reports, BI Dashboards, Integrations, Extracts,
- Enterprise Information Management
- Report Catalog

Technical definitions

- Data Systems PeopleSoft, Bl, Infosilem, Blackboard, Raisers Edge
- Bl trailblazer technical description standards and data systems development

Data forum / open house

Website / portal link

CANADA ALLIANCE 12-14 NOVEMBER 2018

Now direction for DAWG – continue with specifications and technical definitions

LESSONS LEARNED

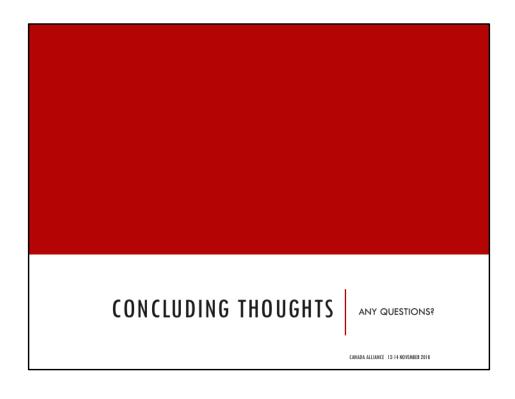
- 1. Have a plan but let it evolve and shape itself
- 2. Participation rate may vary
- 3. Membership may change
- 4. Consistent leadership
- 5. No Go Live is not a failure
- 6. Collaboration is essential
- 7. Slow is OK
- 8. Executive and administrative support
- 9. Just start

CANADA ALLIANCE 12-14 NOVEMBER 2018

Role of data managers

Finance capacity

Cookbook team added to stewards – process matured IT Service Transition no fit BI faster than DG but we'll manage





ALL ALLIANCE PRESENTATIONS WILL BE AVAILABLE FOR DOWNLOAD FROM THE CONFERENCE SITE







DAWG - CONTEXT

Source: Data Governance Institute DGI

The primary goals of a Data Governance Program are to:

- 1. Enable better decision-making through better data management.
- 2. To understand and promote the value of data assets.
- 3. Reduce operational friction when resolving data related issues.
- 4. Protect the needs of data stakeholders.
- 5. Train management and staff to adopt common approaches to data issues.
- 6. Build standard and repeatable processes.
- 7. Reduce costs and increase effectiveness through coordination of efforts.
- 8. Ensure transparency of processes.

DAWG - MANDATE

- 1. To assess data governance models and make a recommendation to Deans' Council.
 - a) Determine an appropriate cross functional governance body.
 - b) Identify potential Data Stewards.
 - c) Investigate potential non-ERP data governance participants.
- 2. To identify and document the university's data assets.
- 3. To identify issues with data assets and suggest processes to address these issues.
- 4. To implement local data governance practices to help inform an institutional level approach to data governance. Use these solutions to demonstrate the value in having data governance.
- 5. To provide a means for Data Stewards to provide input into a data governance structure.
- $\pmb{6}.$ To develop a preliminary strategic plan for data governance, including short term and long term objectives.
- 7. Provide mentorship and education regarding data governance developments at MacEwan and develop a mechanism for staff and faculty to contribute issues and ideas.
- 8. Determine implications for potential policy development.
- 9. Document current "data governance initiatives" at MacEwan (e.g. LERS).

DEFINITION STANDARDS

 ${\bf Common\ business\ terms\ -\ reference\ PeopleSoft\ if\ different\ -\ add\ PeopleSoft\ field\ name\ as\ synonym}$

Use business language (Address instead of Street Line 1)

Use full name and Title Case - add acronyms in () after

Use definitions within definitions

Add business rules

List values – provide list if 10 or less, add attachments or provide URL if long list

 $\label{eq:Add-context-specify} \mbox{Add context - specify if a term or definition can be used in more than one context and describe the circumstances}$

Reference official sources if there is a direct link

i.e. Policy 1005 Credentials for credential type or MSA Collective Agreement for term employees.

Source of Definition - office or business unit or official document as relevant, including time period

i.e. Office of the University Registrar, MSA Collective Agreement 2017-2019

Year of Study (YOS)



Edit [

Functional Definition: (1)

Year of Study is a measurement of a students' progress towards completing a ministry approved <u>Credential</u>. It does not refer to how long the student has been in a program. For non-ministry approved programs students are considered as Year 1.

Depending on the normal program length, there are four possible values:

- IC1 Year 1
- IC2 Year 2
- IC3 Year 3
- IC4 Year 4

A degree program is generally 4 years; applied degree programs are 3- or 4years; diploma programs are 2- or 3-years (no students will be reported in Year 4); and, a certificate or university transfer program is generally a 1-year program (all students in these programs will be in Year 1). In addition, for some programs, students will enter into later years (e.g. Year 3).

In 2015 the university revised the YOS calculation to better align with government reporting requirements. The calculation of YOS is based on the credits taken by the student, including https://docs.pythos.org/nm/Plan in which the student is enroled. Additionally, some programs have restrictions on the applicability of credits or advance the calculation based on previous credentials.

Internal

A students' year must be where they best fit for processes such as oEnrolment Appointments and applying for financial aid. To achieve this a 7 credit adjustment is added to the credits taken so a student one or two courses short of the next year will be determined to be that year. Certificate and most diploma program students are NOT adjusted.

In PeopleSoft, Year of Study is referred to as Academic Level and three variations are provided. MacEwan uses the YOS value displayed in Academic Level - Projected.

- Academic Level Projected: Sum of completed credits + inprogress credits + Transfer Credit (including Other Credit) exclusive of current and future terms
- Academic Level Start of Term: Sum of completed credits +
 Transfer Credit (including Other Credit) exclusive of current term
- Academic Level End of Term: Sum of completed credits +
 Transfer Credit (including Other Credit) including current term

These YOS values are updated when there are any changes to a student's enrollment record (e.g. a course add, drop, swap, normal maintenance change, course grading).

External

For government reporting (e.g. Learner Enrolment Reporting System), no credit adjustment is applied. This YOS calculation is available from Institutional Analysis and Planning.