Curriculum Mapping Aid (CuMA):

CuMA is curriculum mapping tool that also serves as an archive of all Senate-approved learning outcomes at the University of Windsor. CuMA allows you to create or revise course and program learning outcomes for submission to PDC, build curriculum maps to visualize how courses align to program outcomes, and export your curriculum-related data to excel for further analysis.

Contents

Getting Started

- Log in with your UWinID and password: https://ctl2.uwindsor.ca/cuma
- On the welcome screen, you will see any projects that you belong to, as well as the UWindsor Course and Program Learning Outcomes archive.

UWindsor Courses and Programs: A Learning Outcomes Archive

On the homepage of CuMA, you will see a project called "UWindsor Courses and Programs". Click on the link to view a database containing Senate-approved learning outcomes for University of Windsor programs and courses, including past revisions. You may use this archive to

- Determine which programs and courses in your Faculty/Department have Senate-approved outcomes
- Look up a course that you are or will be teaching to review the learning outcomes
- Review Senate-approved outcomes for any relevant programs
- View examples of learning outcomes at different levels, or from different disciplines
- Print course and program outcomes to a PDC outcomes form.

This database will be updated as new program and course outcomes are approved, but only the University Secretariat will have direct access to modify them.
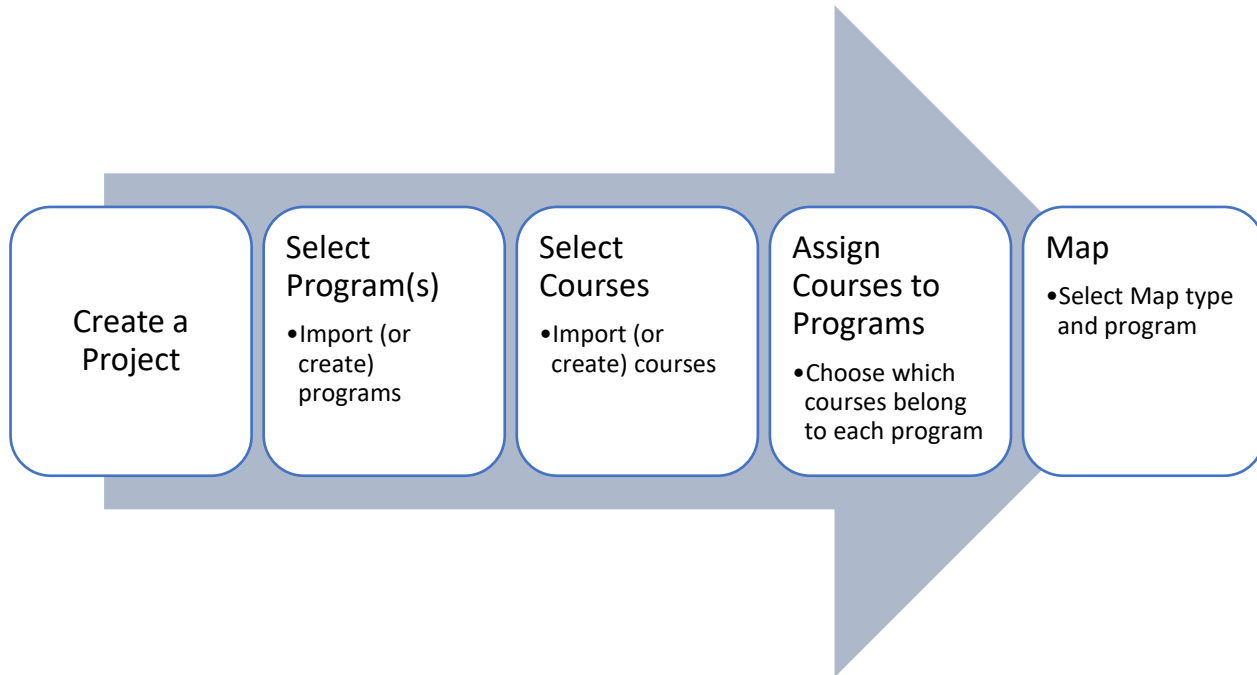
Create Your Own Project

To create curriculum maps, or to use CuMA to create or revise learning outcomes and submit them to PDC, you will need your own project. , click on "Create Your Own Project". You may name this project whatever you like, but we recommend that you choose a name that clearly reflects the intended contents. In each project there will be 4 tabs:

(1) **Programs tab**: Click here to import programs from the Senate-approved archive or to create a program from scratch. Use this feature to determine which programs you wish to review and map.
(2) **Courses tab**: Import courses for mapping, or if a course isn't yet on the Senate-approved list, you can create new ones.
(3) **Maps tab**: In this area, you can begin curriculum mapping. Note that in order for the mapping feature to work, you must first assign courses to programs (this can be done in either the Courses or the Programs tabs).
(4) **Settings tab**: Use this tab to control access to your projects.   Simply add in the UWinID of anyone you wish to give access on a separate line or separated by a comma. Owners have full access in the project; members can edit, but cannot control access; guests have read access only. No one else will be able to view your project. You may also use this tab to export information from your project to Excel for further analysis.

Curriculum Mapping with CuMA
Workflow for Curriculum Mapping

| Create a Project | Select Program(s) •Import (or create) programs | Select Courses •Import (or create) courses | Assign Courses to Programs •Choose which courses belong to each program | Map •Select Map type and program |

Assigning Courses to Programs

To begin a curriculum map, you need to first import (or create) a program and the relevant courses, and then ensure that those courses have been "assigned" to the program.

- "Import" and "Create" buttons can be found in both the Programs and Courses tabs. Use these to ensure you have relevant programs and courses in your project.
- To connect courses with their respective programs, click the "Assign Courses to Programs" button (available in either the Courses or the Programs tab)
- Select the courses you wish to assign
- In the relevant program, click on the "Add Selected" button.
- Individual courses can be marked as "core" or "elective", to facilitate the easy generation of different types of maps. Courses can also be added or removed individually.
- Note that if you are mapping two or more similar programs, and wish to assign the same courses from one program to another, you can use the "Select these Courses" button to quickly highlight the relevant courses. Courses can be added or deleted, but remember that this will change your map.
- Don't forget to save your changes!

Mapping Your Curriculum

If you have set up a program with assigned courses, you will have two options for mapping:

(1) Create a curriculum map
(2) Generate an insta-map.

(1) Creating a Curriculum Map

To create a curriculum map, go to the Maps tab, and click "Create a New Map". Select the kind of map you wish to create and the program you are mapping. Select whether you wish to map only core courses (or leave blank to also map electives), and click "Save Changes."

Once the empty map is generated you can click in the individual cells to mark which courses introduce (I), reinforce (R), or indicate mastery (M) of those specific learning outcomes. You can also pull up a list of teaching methods to indicate which are used for this purpose, whether they are assessed, and whether they are high impact.

Some additional features:

- Re-order courses to better represent student pathways by clicking and dragging the double-headed arrow on the left side of each course
- If you prefer a different view, you can quickly transpose your map or view the information in it as a form.
- Use a divider to cluster courses under sub-headings, visually distinguish between core and elective courses – or classify groups of courses in whatever way makes sense for your program.
- If you are working on a large map, or losing track of which course or outcome a cell belongs to, click on the cell in question and hover your cursor over the blue text at the top of the pop-up menu. This will reveal the full details of both course and outcome.
- A comments feature allows you to make private internal comments to your committee (or partners) to help with decision-making and interpretation. In addition, you can add any notes that you wish on exported documents through the published comments box.
- Maps can be exported in either PDF or Excel. Exports will include a legend that identifies the program learning outcomes, University of Windsor Graduate Characteristics, and explanation of the letters signifying levels of mastery, as well as any comments that you have added for publication.

> CuMA currently supports two kinds of maps:
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> - **Courses to Program Maps**: how courses in a given program support students in achieving program level outcomes.
> - **Courses to CEAB Accreditation Standards**: Only be relevant to those who wish to articulate how their program fulfills Canadian Engineering Accreditation Board requirements.
>
> If you have other accreditation or competency requirements that you need to create maps for, please let me know at askene@uwindsor.ca.

NEW! Copying Alignments

CuMA now has a copy function that allows you to copy information from one program map to another. The steps are as follows:

> Note: The copy feature is currently in pilot mode, and so to access it, you will need to send a request to askene@uwindsor.ca.

- Go to the map that you wish to copy from and click the "Copy To" button
- Select the program that you wish to copy to.
- You will then be presented with the option to copy courses into the new program. This option will automatically assign courses from the original program to the new program if you haven't already done so – or if there are courses in the original that aren't yet assigned to the new program.
- Next, you will see the outcomes for the original program on the left, and the outcomes for the new program on the right. You may select which outcomes align, and thereby where information will be transferred.
- The "Guess" button will suggest alignments between program outcomes based on similarity of wording. Review "guesses" carefully to ensure that you wish to accept them before committing.
- A preview map at the bottom of the screen will update to show you the changes you are making to the new map. (Note that you may need to scroll down to see the preview map).
- The preview map will show existing marks (in grey), changes if you are overwriting any existing information (in purple), or deletions if what you are copying will result in the removal of information in the new map (in red).
- **Caution**: If you are overwriting an existing map, you cannot undo changes. Make sure that the preview reflects changes you are confident in before clicking "Confirm and Continue".
    - When completed, you will be taken to the newly created map!

(2) Insta-maps

Insta-maps are automatically generated by counting the number of alignments between courses and programs based on University of Windsor Graduate Characteristics.

- For insta-maps to work, you must have assigned courses to a program.
- If no learning outcomes are listed for a course, the alignment count will be null.
- There are three choices for shading in the insta-maps.
    - *Absolute colouring* will highlight the highest counts across the whole map.
    - *Course-relative* colouring will highlight the highest counts in each course.
    - *PLO-relative* colouring will highlight the highest counts in each program outcome
- There is currently no export function for the Inst-maps, but you can take a screenshot if you wish to capture the image to compare against another map.
- Note that when counting alignments, the insta-map will include cross-aligned outcomes in the count. As a consequence, there may be more alignments than there are learning outcomes in a given course.

PDC Submissions

You can use CuMA to create or revise published learning outcomes and a "PDC Package" for submitting your changes to the PDC. This package provides a direct and persistent link to the relevant learning outcomes for reviewers that will continue to work, even when revisions are made. This package will serve as the learning outcomes form in the PDC workflow.

Create New Learning Outcomes

In order to create new learning outcomes, you will need a CuMA project to work in (see above for instructions). Once you have a project, use the following steps to create new learning outcomes:

1. Open your project, choose the relevant tab (either courses or programs), and click on "Create a new course" or "Create a new program"
2. Click on the University of Windsor Graduate Attributes link
3. Provide a tentative course code
4. Provide a name and a start date (Note that you do not need to fill in the document id or other fields – these will be completed through the PDC approval process.)
5. Draft your learning outcomes, adding just one outcome per box. (You can add as many boxes as you need.)
6. Align each outcome to a University of Windsor Graduate Attribute (UGA). You can do this by clicking on the box to the right of the outcome and selecting the relevant alignments. The first one you pick will be considered the primary alignment, but you can add as many alignments as you like. (Note that you can also enter alignments by simply typing the letter(s) corresponding to the relevant section of the PDC form. If you add multiple alignments, ensure that there are no spaces between the letters – and if you are unsure about which sections to align to, don't worry, you can go back and change them later.)
7. If outcomes aren't appearing in the desired order, move them around by clicking on the double-headed arrow on the right-hand side of the outcome, dragging and dropping.
8. Don't forget to save changes when you are done!

Revise Existing Learning Outcomes

If the course/program already has approved learning outcomes, you can use the CuMA tool to update your learning outcomes with the following steps:

1. Import the existing learning outcomes from the UWindsor Courses and Programs Archive into your own project
   a. Select either the "Programs" tab or the "Courses" tab, depending on what you want to import
   b. Use the search filter to locate the relevant course(s) or program(s)
   c. Select what you wish to work on and click "Import Selected …"
2. Once courses/programs are imported, click on the arrow button that appears beside them and select "Begin a New Revision". Be sure to enter a current date into the Start Date box, but other fields can be left as they are.
3. Revise learning outcomes by editing the text, adding new ones or deleting old ones
4. Don't forget to save changes when you are done!

> **Deleting Learning Outcomes**
>
> **Note:** when you delete a learning outcome from a course or program, it will be highlighted in red – but it will not disappear until you save your changes.

Create A PDC Package

- Go to the PDC Packages tab and click "Create a New Package". (Note that you need to be an owner of the project to see the PDC Packages tab.)
- Select the course(s), program(s), and map(s) that you would like to include in the package.
- If learning outcomes have already been approved at Faculty Council, you can toggle the checkbox to indicate this. (Note that this isn't necessary as Faculty Council is part of the PDC Workflow.)
- Click "Create PDC package" at the bottom of the page.
- On the new page that opens, select the "Download PDC Package Link" button. This will contain a PDF with a link that you can upload to the PDC workflow. This link will allow reviewers throughout the PDC approval process to view the most recent revision of your learning outcomes.
- Note that once added to a PDC package, outcomes will be locked from further revisions, unless these are specifically requested during the PDC review process.
- Once approved, the learning outcomes will then automatically become a part of the published learning outcomes archive.

Note that you cannot directly revise Senate-approved outcomes. To make revisions, you will need to import published outcomes into your own project and then click on the arrow and "Begin a New Revision."

Exporting Curriculum Data to Excel

In the settings tab is a button labelled "Export Alignment and Activity Data to Excel". This will generate an Excel spreadsheet with:

- One worksheet containing the raw data from CuMA that you can use to analyze data or generate reports
- One worksheet containing a pivot table that you can use to generate reports about teaching methods and activities. The default report is set to report on High Impact Practices across all programs in your project, but this can be adjusted by changing the filters, columns and rows of the pivot table.
- One worksheet containing a chart visualizing the alignments in each course.
- Note that to view and edit the pivot tables, you will need to click the yellow button at the top of Excel to "Enable Editing".

Troubleshooting CuMA

I can't find learning outcomes for certain courses or programs	The CuMA learning outcomes archive is complete, but some courses and programs do not yet have approved outcomes. Also, if outcomes just recently went through the PDC process, it may take some time before they are officially published. If you wish to verify whether there are learning outcomes for your course or program, contact the University Secretariat.
I can't edit any learning outcomes	The UWindsor Courses and Program archive is locked for editing. To revise any approved learning outcomes, create your own project, import the existing learning outcomes into them, and then click on the arrow to select "Begin a New Revision". This will allow you to edit. When you are finished, you will be able create a PDC package to submit them for approval.
I can't save my learning outcomes	Outcomes must be aligned before they are saved. To align outcomes add the letter representing the appropriate section of the PDC form in the box to the right of the outcome. Note that if you are uncertain about these sections, you can use the legend that appears when you click on this box. Alignments can also be changed later if desired.
I want to add more than one alignment to my learning outcomes.	To add multiple alignments, simply type the letters representing each section of the PDC form you wish to align to. Ensure there are no spaces or punctuation marks between the letters.
When I try to assign courses to programs, the course(s) I want aren't there.	You will need to either import them from the official archive or create them. This can be done through the Courses tab.
When I try to create a map, no programs appear in the drop-down list	Programs need to be either imported from the UWindsor courses and program archive into your project, or created from scratch (through the Programs tab).
My curriculum map only shows the program outcomes, but I can't see any of the courses	Assigning courses to programs can be done from either the Programs or the Courses tab. Note that the select buttons allow you to easily recreate course lists for setting up similar programs. Remember to save your changes on this page.

Plans

CuMA is still growing! As we move forward, additional maps, descriptive stats, and other features will be improved and added. We welcome your feedback!

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