# Department Guide for MEASURE

## Faculty of Engineering, McMaster University

January 9, 2020

**BY**

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## Modification Log

| Version | Modification Date | Author | Comments |
|---------|-------------------|--------|----------|
| 3.00 | January 9, 2020 | Andrew Aran | Initial Draft |

Click here to view previous modification log.

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# Contents

## Introduction

The Department Guide describes part of MEASURE (McMaster Engineering Accreditation System for UndeRgraduatE).

MEASURE's purpose is to:
- Facilitate the continual improvement of the curriculum of the programs offered by the Faculty of Engineering
- Assist with generating accreditation reports for the Canadian Engineering Accreditation Board (CEAB)

MEASURE is built using corporate performance management software, (Vena) that combines Excel spreadsheets, a central database, and workflow management.

This document outlines the MEASURE tasks that take place at the departmental level. Specifically, each department will annually update the following:
- Course offering
- Mapping between courses and programs
- Curriculum map of a program
- Measurement map
- The department's continuous improvement plan

The Vena Department Representative will be responsible for completing each task listed above.

Additional information on MEASURE can be found in the Administrator's Guide and in the Instructor's Guide. The latest version of all these documents, along with other resources, are available at http://measure.mcmaster.ca

Issue Reporting: https://www.eng.mcmaster.ca/forms/measure-issue-tracking

Technical Support:  measure@mcmaster.ca

## Prerequisites

The departmental templates are currently compatible for the Windows operating system. Enhancements will be implemented in the future to enable macOS compatibility.

### Windows

### System Requirements

| | Recommended | Minimum |
|---|---|---|
| **Operating System** | Latest version of Windows 10 (64-bit) | Windows 7 (32-bit) |
| **MS Office** | Office 2016 or newer<br>• Click here for instructions to download Office (via UTS) | Office 2010 |
| **.NET** | Latest version of .NET | 4.5 |
| **Browser** | Latest version of:<br>• Internet Explorer<br>• Microsoft Edge<br>• Mozilla Firefox<br>• Google Chrome | • Internet Explorer 10+<br>• Microsoft Edge<br>• Mozilla Firefox 12.0+<br>• Google Chrome |
| **RAM** | 16 GB | 4 GB |
| **CPU** | 2+ Cores | -- |
| **Reference:** | https://support.venasolutions.com/hc/en-us/articles/115000622006-Vena-Add-In-System-Requirements | |

### About the Vena Add-In

Vena uses both Microsoft Excel and the Vena website (https://vena.io) to give users access to the various templates and accreditation reports. Before users can update their course data in Excel, they will need to install the Vena Add-In for Microsoft Excel. This Add-In provides functionality to Excel that allows users to view, edit, and save their rubric data to the Vena cloud.

### Installing Vena Add-In for Windows Users
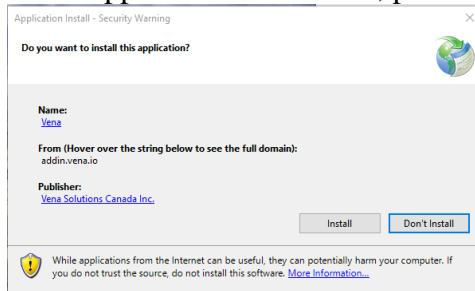
1. Visit the add-in website http://addin.vena.io/release/vena.application

2. Save the **vena.application** file

3. Double-click the **vena.application** file
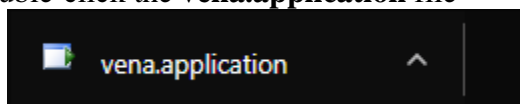


4. Run the installer. The following dialog box will appear:

**BRIGHTER WORLD**
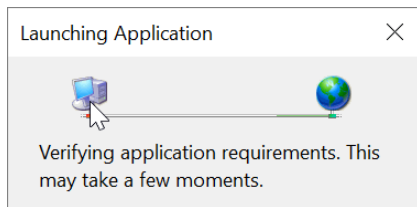
5. When the application has loaded, press **Install**



6. When the installation has completed, the following dialog box will appear. **Close** this dialog box to complete the installation.
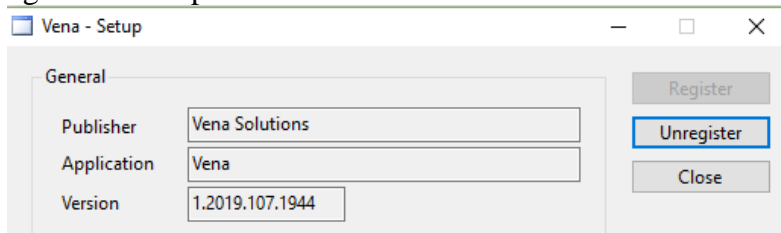


7. To ensure Vena has successfully installed, open Microsoft Excel, and confirm the Vena tab has been added.
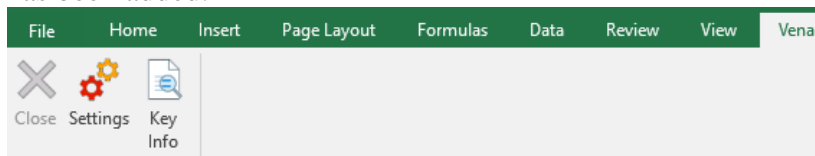


Enabling Trust Access to the VBA Project Object Model

After installing the Excel Vena Add-in, access to the VBA project object model will need to be trusted for Vena to run properly.

1. Open **Excel**

2. Select a **Blank Workbook**

3. Select **File**

BRIGHTER WORLD
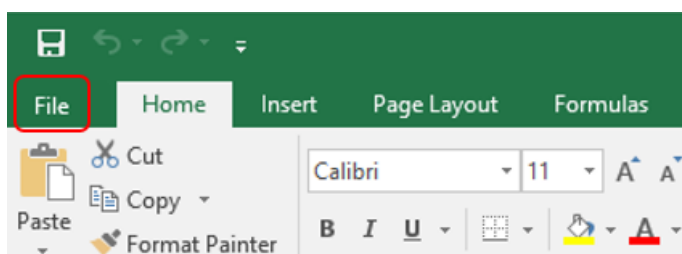
4. On the bottom of the left menu, select **Options**
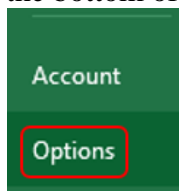


5. Select **Trust Center**
   a. Select **Trust Center Settings**
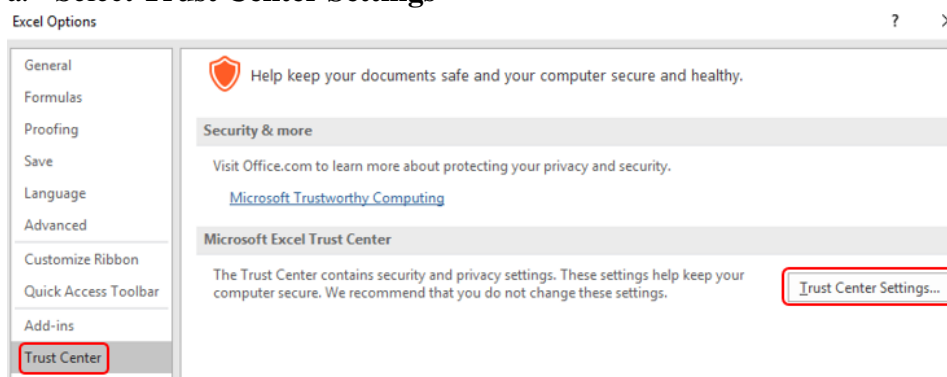


6. Select **Marco Settings**

7. Ensure that **Disable all macros with notification** is selected

8. Check the box next to **Trust access to the VBA project object model**

**BRIGHTER WORLD**
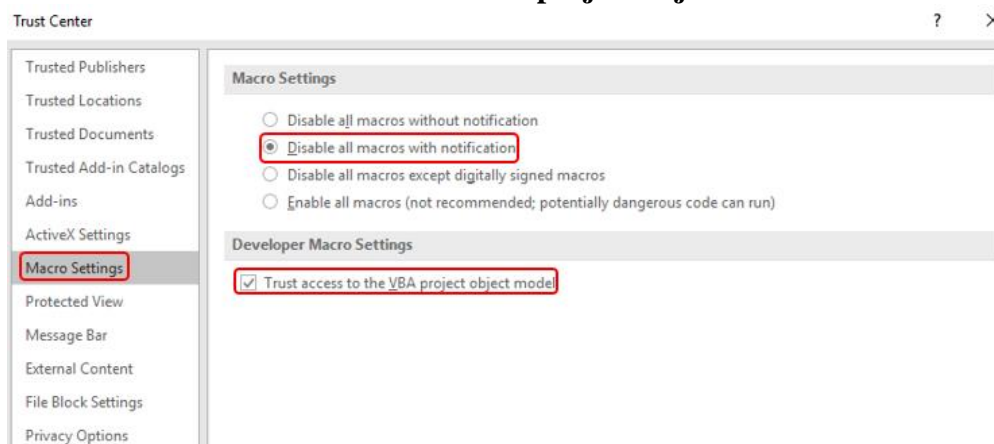
9.  Close all instances of Excel for the settings to take effect.

## Other Operating Systems

The Vena Departmental Templates are currently compatible for Windows users with Microsoft Office.  Users who do not have a compatible operating system and/or Microsoft Office will need to access Vena using a virtual machine.

Instructions to Access a Virtual Machine:
https://www.eng.mcmaster.ca/sites/default/files/vminstruct.pdf

Questions/Comments/Technical Support:
measure@mcmaster.ca

## Annual Timeline

The table below summarizes the typical tasks performed during the course of an academic year. Department Representative responsibilities are highlighted in **green**.

| Date | Task Description | Section | Template | Task Owner |
|---|---|---|---|---|
| January | • Instructor enters rubric and continuous improvement plan for Term 1 | Instructor Guide | Rubric Input Template | Instructor |
| January | • Instructor reviews the continuous improvement plan from the previous year for Term 1 | Instructor Guide | Rubric Input Template and Curriculum Committee Recommendations Report (Prev. Year) | Instructor |
| January | • Review current rubric entry status<br>• Contact instructors who have yet to complete their Vena rubric entry | Click here | Rubric Entry Report | Department |
| April | • Update global variable and point to Term 2 (after Term 1 data entry is complete) | Admin Guide | See Administrator's Guide | Associate Dean's Office |
| May | • Instructor enters rubric and continuous improvement plan for Term 2 | Instructor Guide | Rubric Input Template | Instructor |
| May | • Instructor reviews continuous improvement plan from the previous year for Term 2 | Instructor Guide | Rubric Input Template and Curriculum Committee Recommendations Report (Prev. Year) | Instructor |
| May | • Review current rubric entry status<br>• Contact instructors who have yet to complete their Vena rubric entry | Click here | Rubric Entry Report | Department |
| May | • Curriculum committees review (this year) course reports and continuous improvement plan reports | Click here<br>Click here | Course Report and Rubric Input Template (Instructor Guide) | Department |
| August | • Archive previous year<br>• Start New Academic Year<br>• Update global variable and point to Term 1 (after Term 2 data entry is complete) | Admin Guide | See Administrator's Guide | Associate Dean's Office |
| August | • Update Measurement Mapping | Click here | Measured Indicators Input Template | Department |
| August | • Update Curriculum Mapping<br>  o Consult with Instructors | Click here | Curriculum Mapping Input Template | Department |
| August | • Update Curriculum Recommendations | Click here | Curriculum Committee Recommendations Input Template | Department |
| August | • Review Programs in Vena<br>• Notify Associate Dean's Office if changes are needed | Click here | Login Vena→ Modeler→ Members→ Program | Department |
| August | • Add/Update/Un-map courses in the Vena Database<br>• **Do not delete Courses** | Click here | Login Vena→ Modeler→ Members→ Program | Department |
| September | • Faculty reviews departmental committee reports from prior year<br>• Prepare/review Graduate Attribute Report | Admin Guide | See Administrator's Guide | Associate Dean's Office |

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| December | • Execute Backup and Restore Process | Admin Guide | See Administrator's Guide | Associate Dean's Office |
|----------|--------------------------------------|-------------|---------------------------|-------------------------|

Throughout the year, the departmental representatives can review reports generated by MEASURE. These reports will be useful for filling out the CEAB questionnaire in accreditation years.

The reports include the following:

- Rubric Entry Report
- Faculty and Curriculum Committee Recommendations Report
- Attribute Map Report
- Attribute Map Summary Report
- Indicator Map Report
- Course Report (for any course)
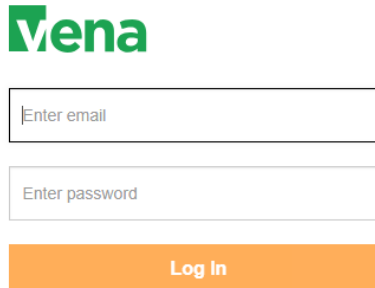
Using MEASURE, it is also possible to view the historical data through:

- Historical Course Measurement Report
- Historical Program Measurement Report.

The timeline table shows an entry for adding courses, but no time slot for deleting courses that are no longer offered. This is because courses are not deleted, since deleting them will remove all of the historical data associated with the course. Courses can be removed from a specific program, but should not be removed from the Vena database. Courses that are no longer offered should be moved to unmapped, as described in the appropriate section below.

## Accessing Vena

1. Open a web browser
2. Visit https://vena.io
3. In the email textbox, enter your McMaster email address (i.e. macid@mcmaster.ca)
4. Your password has been previously communicated.  If you do not remember, or do not have an account, please contact Measure Support (measure@mcmcaster.ca)

## Changing Vena Password

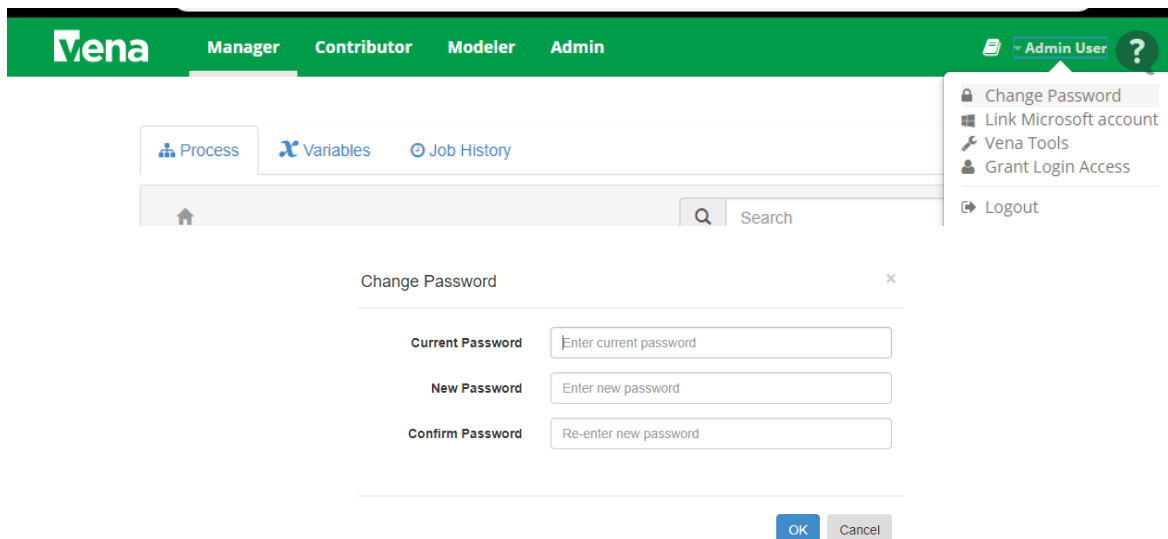Your password can be changed by clicking the user's name in the upper right corner of the screen and then selecting "Change Password".

You will be prompted to enter the current and new password.

## Department Input

Each department needs to update its measurement map (subsection 1 below) and a curriculum map (subsection 2 below). The measurement map for each year identifies what needs to be measured for that year. The curriculum map summarizes where the indicators are offered, and at what level, in each program.

Although it might appear that information is duplicated between the two templates, this is not actually the case. Not all indicators are measured, and not every measured indicator is part of the curriculum map. This second case occurs when a course does not explicitly teach an indicator, but it is measured. This might happen in a capstone course, for instance, where a presentation related indicator is measured, even though this indicator is not explicitly taught in the course.

### Measured Indicators Input

1. Under Contributor view, select your department's **Measured Indicators** task
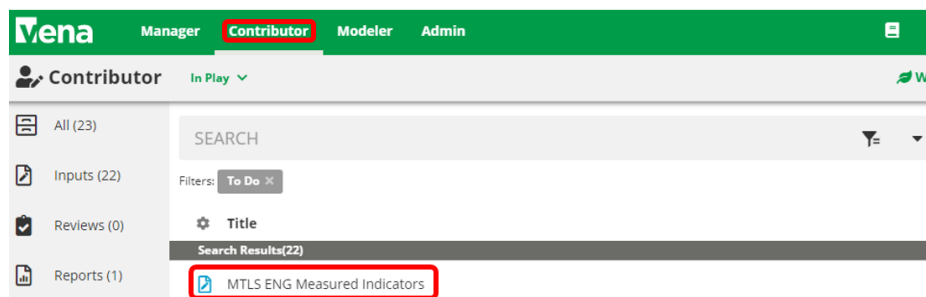


2. Select **Check Out** beside the **Measured Indicators Input Template.xlsm**
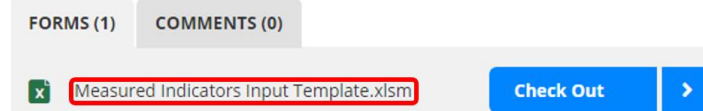


3. A pop-up will appear to save the template. Click **save** and remember the saved location of the template.

4. Open the Excel File
   a. If prompted, press **Enable Editing** in the Excel spreadsheet



   b. If prompted, press **Enable Content** to allow Macros
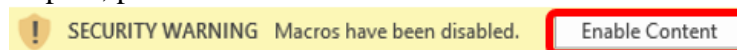


5. Select the Program and Year

   ***The measured indicators map should only be updated for the current year***

6. Updating the Measurement Map

The measured indicator map is centralized at the program level, and it is using the previous year's information as the starting point for the current year. Therefore, some of the information may be prepopulated.

    a. If an indicator for a course is measured for the year, place an **M** in the cell intersecting between the indicator and course



    b. If an indicator for a course is not measured for the year, delete the **M** in the cell intersecting between the indicator and course



Note: When an **M** is placed between an indicator and course, the indicator will be available in the Rubric Input Template and enable users to enter learning outcomes (rows) for that indicator. To learn more about the Rubric Input Template, please review the Instructor Guide.

| **Example:** Measured Indicators Template updated to display the indicator in the Rubric Input Template |
|---|
| **Measured Indicators Template**  |
| **Rubric Input Template**  |

7. When the indicators have been updated, click **Save Data** under the **Vena Tab**

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8. Closing and Checking in the Template
   a. When closing the template, you will be prompted to **Check-in**
   b. Select **Yes**



## Curriculum Mapping Input

The curriculum map is a summary of how our program maps to the CEAB attributes (and our indicators).

1. Under Contributor view, select your department's **Curriculum Mapping** task
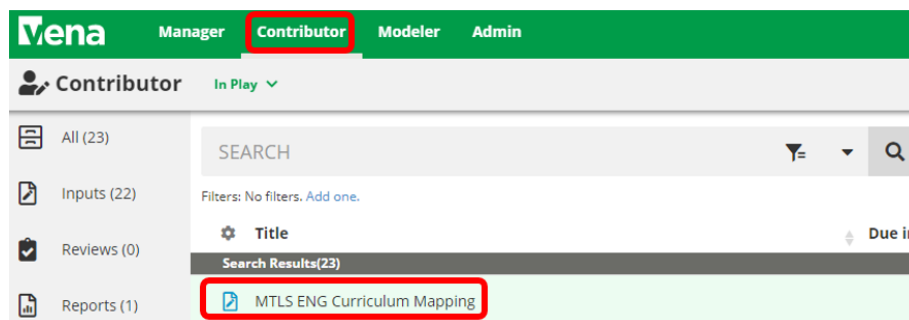


2. Select **Check Out** beside the **Curriculum Mapping Input Template.xlsm**
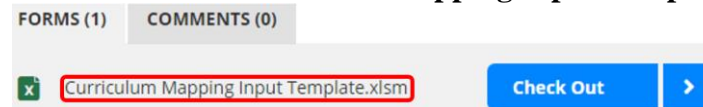


3. A pop-up will appear to save the template. Click **save** and remember the saved location of the template.

4. Open the Excel File
   a. If prompted, press **Enable Editing** in the Excel spreadsheet
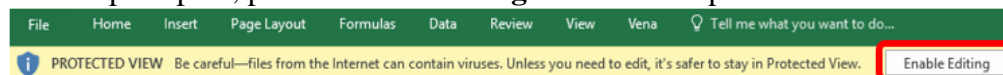


   b. If prompted, press **Enable Content** to allow Macros
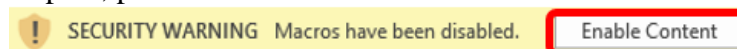


5. Select the Program and Year

   ***The curriculum map should only be updated for the current year***

6. Updating the Curriculum Map

The curriculum mapping is centralized at the program level, and it is using the previous year's information as the starting point for the current year, therefore some of the information may be prepopulated.

The Department's Curriculum Committee determines the curriculum level and ensure they accurately reflect the CEAB attributes.

Each cell corresponding to an indicator and course will contain a dropdown menu.

| Level | Description | Comments |
|-------|-------------|----------|
| I | Introduced | Indicator is mentioned, but not established |
| D | Developed | Indicator is covered in more detail, and reinforced by test questions or assignments |
| A | Applied | Indicator is covered in greater detail, and reinforced by a more sophisticated or involved project |

c.  If an indicator for a course requires a curriculum level, select a cell, press the **dropdown** button, and select the curriculum level





d.  If a curriculum level is not required for the year, select the cell, and **delete** the value intersecting between the indicator and course.

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7. When the indicators have been updated, click **Save Data** under the **Vena Tab**
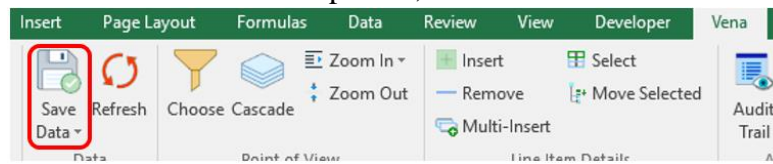


8. Closing and Checking in the Template
   e. When closing the template, you will be prompted to **Check-in**
   **f.** Select **Yes**
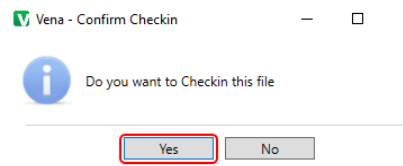


## Curriculum Committee Recommendations Input

At the end of the academic year, the Curriculum Committee will provide recommendations for the upcoming year regarding their programs and courses.

Example: At the end of 2018-2019 year, users will enter recommendations in 2018-2019 and to be reviewed during the 2019-2020 year.

The recommendations can be entered into the Curriculum Committee Recommendations Template.

1. Under Contributor view, select your department's **Curriculum Committee Recommendations** task
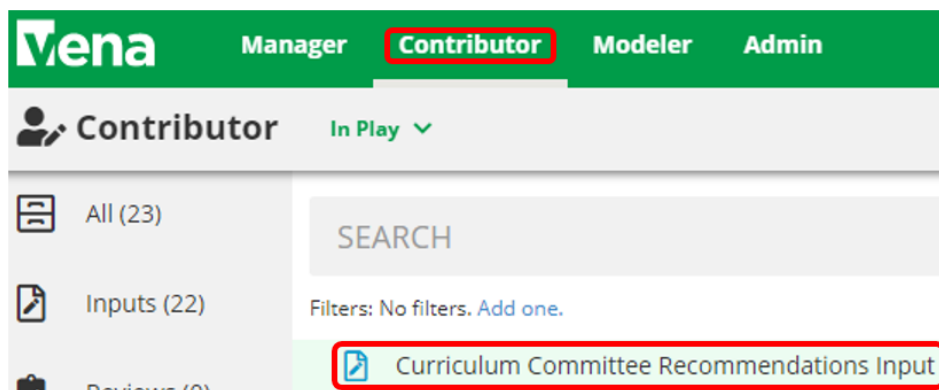


2. Select **Check Out** beside the **Curriculum Committee Recommendations Input Tempalte.xlsm**
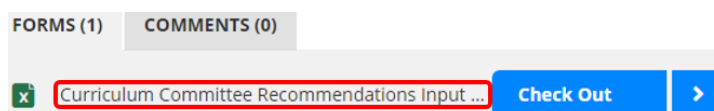
FORMS (1)     COMMENTS (0)

Curriculum Committee Recommendations Input ...     **Check Out**     ›

3.  A pop-up will appear to save the template.  Click **save** and remember the saved location of the template.

4.  Open the Excel File
    a.  If prompted, press **Enable Editing** in the Excel spreadsheet

File   Home   Insert   Page Layout   Formulas   Data   Review   View   Vena   ♡ Tell me what you want to do…

PROTECTED VIEW  Be careful—files from the Internet can contain viruses. Unless you need to edit, it's safer to stay in Protected View.     Enable Editing

    b.  If prompted, press **Enable Content** to allow Macros

⚠ SECURITY WARNING   Macros have been disabled.     Enable Content

5.  Select the Program and Year

Ⓥ Vena - Select Page Options                                    —    □    ›

Section1                                                 CEAB Accreditation

Program          Test Engineering                          ⌄

Year             2018-2019                                 ⌄

Skip Refresh...                                    **OK**        Cancel
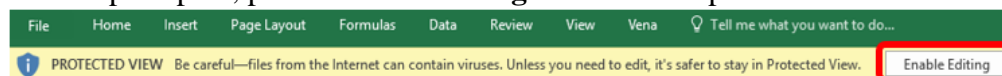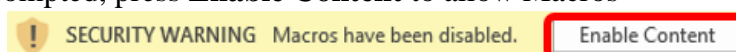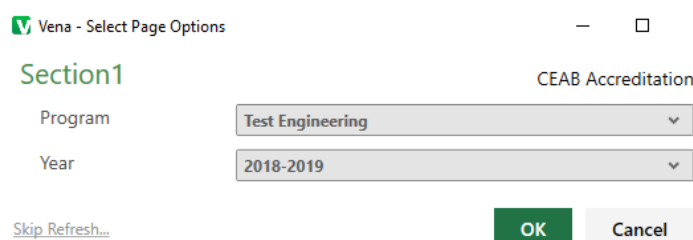
6.  Recommendations Input
    a.  Users can enter their program and course recommendations
        OR
    b.  If they prefer to attach a file, they can do so by:
        i.    Select a cell
        ii.   Click **Comments**
        iii.  In the **Comments** section, click **Details** Tab
        iv.   Click the **Add Comment** button
        v.    Click the **paper clip** and attach your file
        vi.   Click **Upload** when asked to upload the file as a comment
        vii.  Include text in the selected cell such as '**See attached file**' to notify users the template contains attachments

λ          🟩          📁
My       Comments  Intersection
Functions ▾          Files ▾
         Tools

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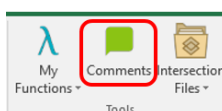
## Curriculum Committee Recommendations

Program:     Test Engineering
Year:        2018-2019
Instructions: Please select the required program and year, then enter your recommendations.

| Recommendations for Test Engineering | |
|---|---|
| See Attached - Andrew | ✔ |

| Courses for Test Engineering | Curriculum Committee Recommendations | |
|---|---|---|
| TEST 101 (Test Course for Training 1) | Test 101 | ✔ |
| TEST 102 (Test Course for Training 2) | Test 102 | ✔ |
| TEST 103 (Test Course for Training 3) | Test 103 | ✔ |
| TEST 104 (Test Course for Training 4) | Test 104 | ✔ |
| TEST 105 (Test Course for Training 5) | Test 105 | ✔ |
| TEST 106 (Test Course for Training 6) | Test 106 | ✔ |
| TEST 107 (Test Course for Training 7) | Test 107 | ✔ |
| TEST 108 (Test Course for Training 8) | Test 108 | ✔ |
| TEST 109 (Test Course for Training 9) | Test 109 | ✔ |
| TEST 110 (Test Course for Training 10) | Test 110 | ✔ |
| TEST2b (TTT) | Test 111 | ✔ |

7. When the recommendations have been updated, click **Save Data** under the **Vena Tab**
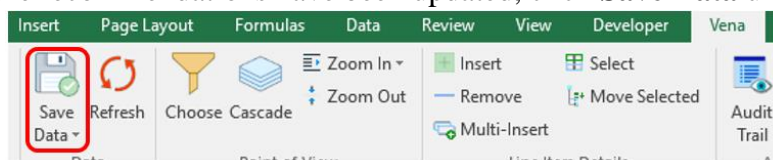
8. Closing and Checking in the Template
   a. When closing the template, you will be prompted to **Check-in**
   b. Select **Yes**

**BRIGHTER WORLD**
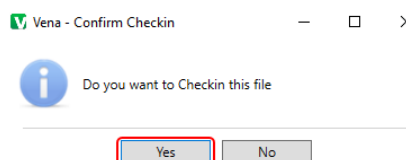
## Vena Program Review

Prior to the start of the academic year, Department Representatives will need to review their programs in Vena to ensure the courses are correctly mapped.

If you do not see the Modeler tab, contact MEASURE Support (measure@mcmaster.ca).

1. Under the Modeler View, select **Data Modeler → Members → Programs**
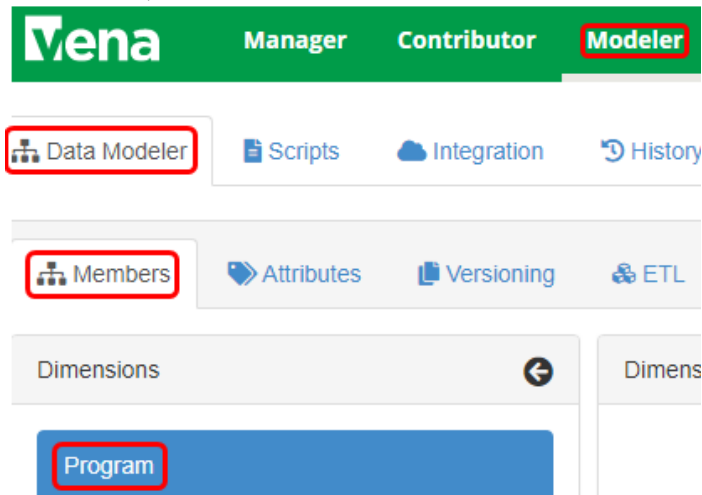
2. Expand **Program**

3. Expand the program that will be reviewed
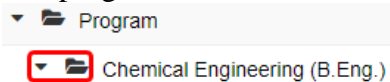
4. Expand each level to review the courses
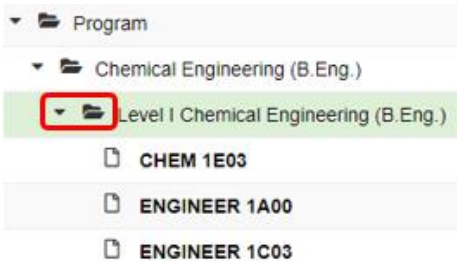
5. If there are any courses that need to be added or unmapped, contact measure@mcmaster.ca

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## Updating Courses and Program Maps

Please consult with your department and MEASURE Support (measure@mcmaster.ca) before making any changes to the course or program in Vena.

### Adding a New Course

New courses are added to MEASURE as they are offered, but courses that are no longer offered **should not be deleted**.  They can be unmapped from the program map, but if the course is actually deleted, all of the associated historical data will be lost.

If you do not see the Modeler tab, contact MEASURE Support (measure@mcmaster.ca).

1.  Under the Modeler View, select **Data Modeler → Members → Programs**
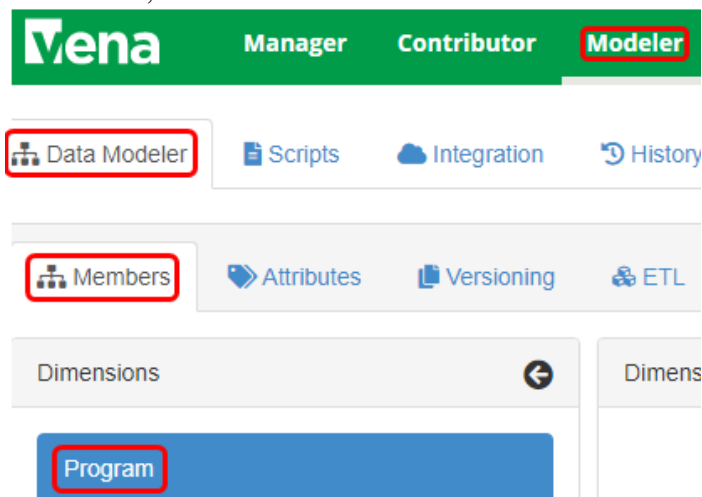


2.  Expand the **Program List →** Expand the program where the new course will be added **→** Expand the **Level →** Right-click on the level **→** Select **Add Child**



3.  Enter the **Course Code** and **Description**
    a.  Once a course has been added, remember to update the Measured Indicators Input Template and Curriculum Committee Recommendations Template

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## Sharing a Course

A course can be shared if the course already exists in Vena and needs to be added to another program

1. Under the Modeler View, select **Data Modeler → Members → Programs**
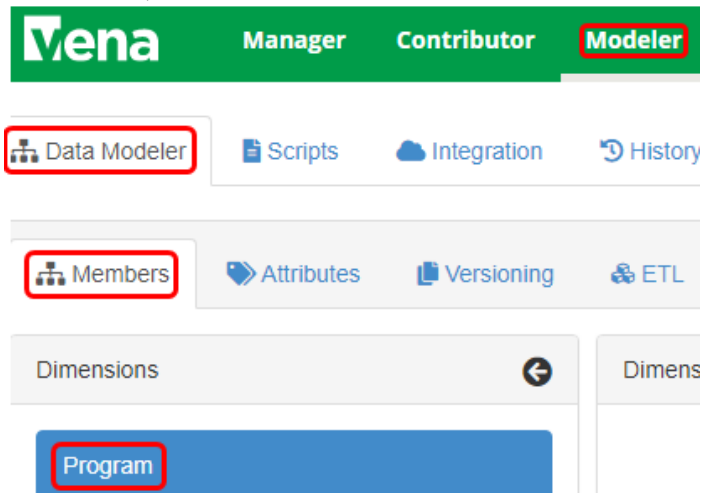
2. Select the course to be shared:
   a. Expand the **Program List** → Expand the program → Expand the **Level** →
      Right-click on the course → Select **Share**
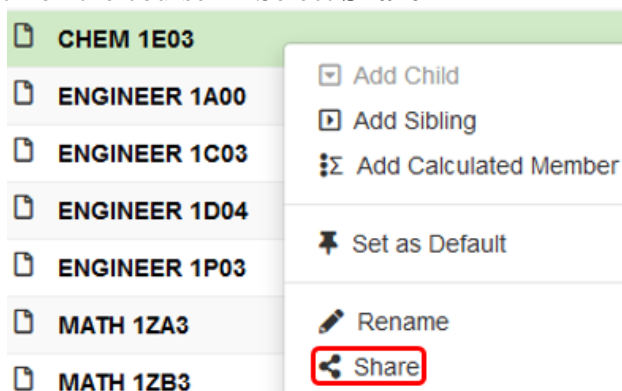
3. Next, select the destination:
   a. Expand the **Program List** → Expand the program → Expand the **Level** →
      Right-click on the level → Select **Paste**

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☐ Paste

✕ Cancel

↓F Expand All

↓A Sort Children by Name

↓A Sort Children by Alias

👁 Preview Intersections

🗑 Delete
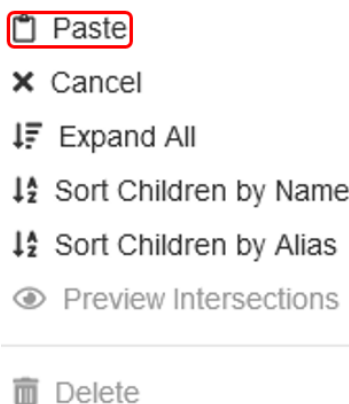
## Un-mapping a Course
**\*Please contact support ([measure@mcmaster.ca](mailto:measure@mcmaster.ca)) prior to un-mapping a course\***

Un-mapping a course is essential when the course is no longer offered for a program or all programs.  There are (2) methods to un-map a course.
1.  Un-mapping a course from **One** program.  2.  Un-mapping a course from **All** programs

## Un-mapping a Course from One Program
If the course is removed from one program, but is still offered in others, the course can be deleted from the selected program.  Even though the course is deleted from the selected program, the rubric data and data entry will remain available for the other programs containing the course.

1. Pause the Process
   a. Under the Manager View, select **Accreditation 2.0**, press the **Pause** button

2. Under the Modeler View, select **Data Modeler → Members → Programs**

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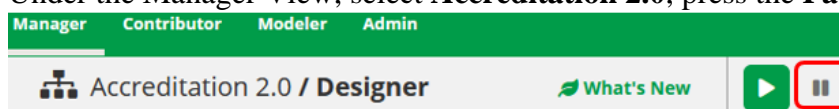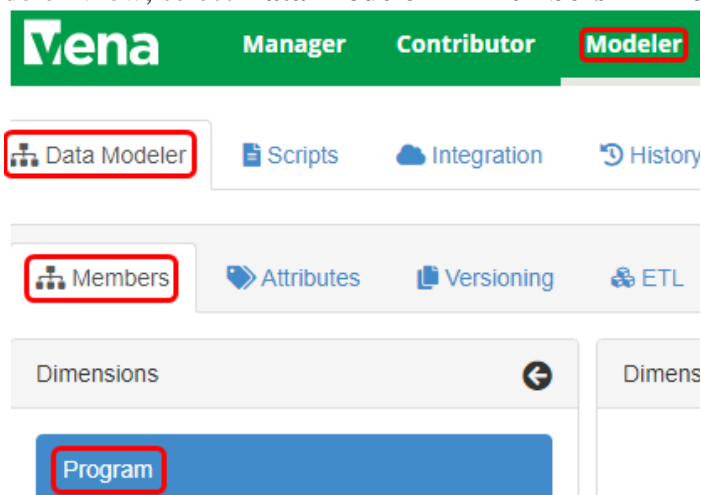
3. Expand the **Program List** → Expand the program → Expand the **Level** → Right-click on the course → Select **Delete**
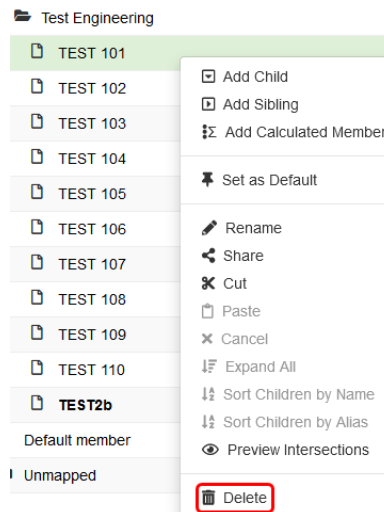


4. Another window will appear to confirm deletion. Press **Delete**.



5. Unpausing the Process
   a. Under the Manager View, select **Accreditation 2.0**, press the **Play** button
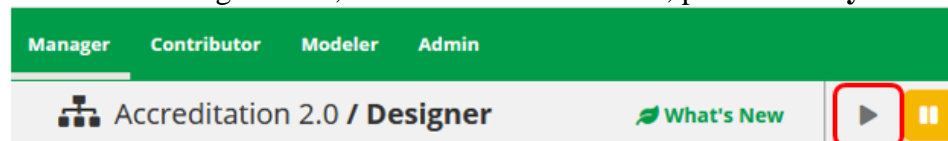


## Un-mapping a Course from All Programs

If the course is no longer offered to all programs, the course can be un-mapped and moved to the "Unmapped" folder. When the course is moved to the "Unmapped" folder, historical rubric data will remain available, but rubric data can no longer be submitted or edited.

1. Pause the Process
   a. Under the Manager View, select **Accreditation 2.0**, press the **Pause** button
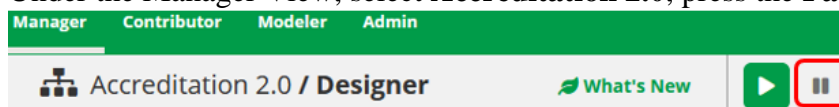


2. Under the Modeler View, select **Data Modeler** → **Members** → **Programs**
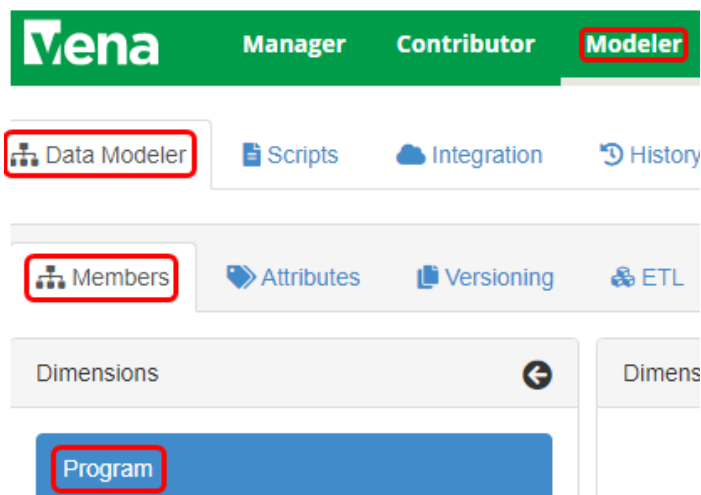
3. Move the first occurrence of the course to the "Unmapped" folder

   a. Expand the **Program List** → Expand the program → Expand the **Level** →
      Right-click on the course → Select **Cut**
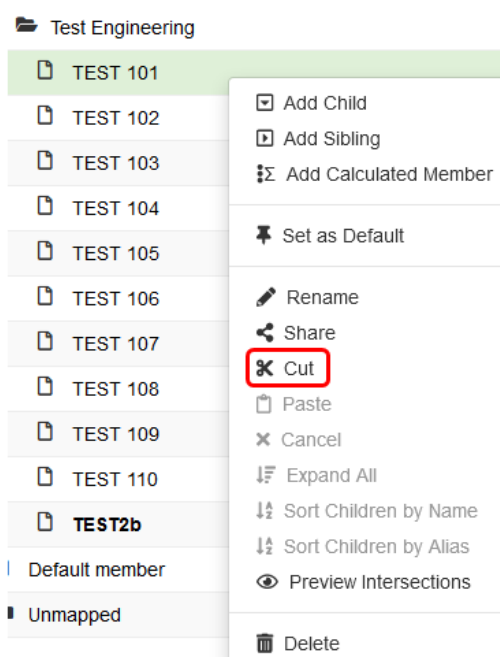


   b. Right-click on the Unmapped folder and select 'Paste'
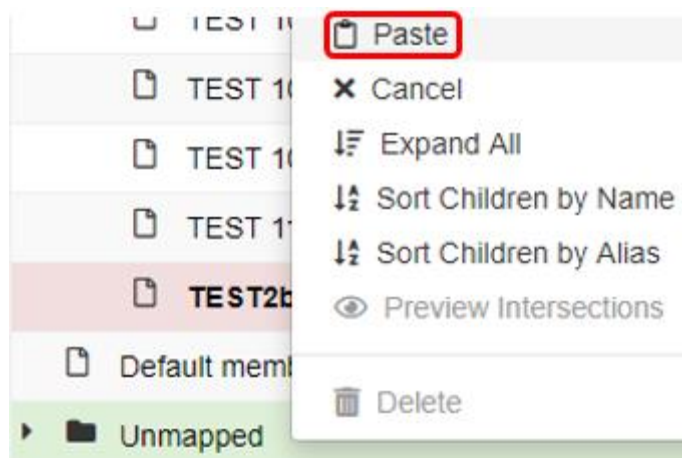
4.  Delete the remaining instances of the course from each program mapping
    Since the first instance of the course has been unmapped, the duplicate courses can now be deleted.

    a.  Expand the **Program List** → Expand the program → Expand the **Level** → Right-click on the course → Select **Delete**
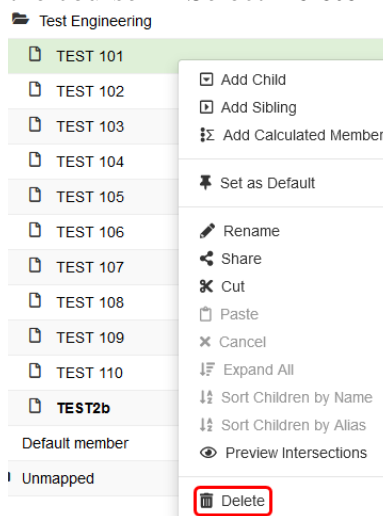


5.  Another window will appear to confirm deletion. Press **Delete**.



6.  Repeat steps 4 and 5 until all duplicate courses have been deleted.

## Reports

The data in the MEASURE database is viewed using spreadsheet reports. The purpose of the reports is to transform the information into a form that is suitable for review – including by the CEAB when necessary. Reports can be viewed for any year where the data has been entered.

The Vena Reports are best viewed using a Windows-based operating system.

### Accessing the Reports

1. Ensure the Contributor tab is selected
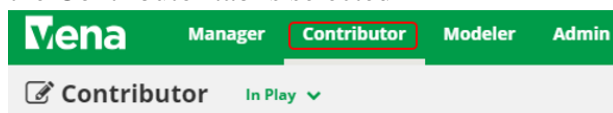


2. On the left side, click **Reports** (the centre section will reload to only display Reports)



3. Click **Reports**

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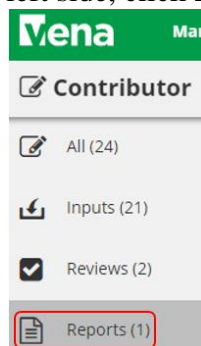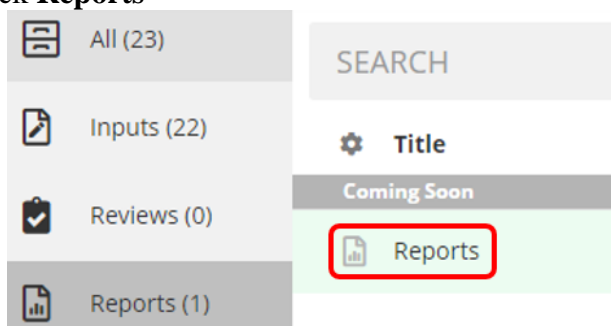
## CEAB Attribute Report

The CEAB Attribute Report displays the attribute results of a given program/course by year or term. Each bar in the report represents a Graduate Attribute. The bar may divide into 4 expectations.

The line indicates the average score for each attribute where 1 = Below expectations and 4 = Exceeds expectations.

1. Press **View** next to CEAB Attribute Report

2. Select a Course/Program, Term, and Section

3. **Download** and remember the saved location of the report

4. If prompted, **Enable Content** and **Enable Macros**



**CEAB Attribute Report**

Program/Course: Chemical Engineering (B.Eng.)
Term 2017-2018
Section All

| ATTRIBUTE | 1 (A knowledge base for engineering) | 2 (Problem Analysis) | 3 (Investigation) | 4 (Design) | 5 (Use of engineering tools) | 6 (Individual and team work) | 7 (Communication skills) | 8 (Professionalism) | 9 (Impact of engineering on society and the environment) | 10 (Ethics and equity) | 11 (Economics and project management) | 12 (Life-long learning) | 13 (Sustainability) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Exceeds Expectations | 5743 | 468 | 320 | 2626 | 289 | 865 | 1407 | 994 | 1075 | 851 | 269 | 553 | 469 |
| Meets Expectations | 9137 | 810 | 554 | 2506 | 531 | 1226 | 2627 | 313 | 328 | 263 | 224 | 471 | 316 |
| Marginal Expectations | 6276 | 444 | 190 | 590 | 255 | 217 | 443 | 136 | 72 | 79 | 60 | 117 | 94 |
| Below Expectations | 5487 | 158 | 106 | 307 | 111 | 60 | 231 | 66 | 35 | 25 | 4 | 52 | 16 |
| AVG Score | 2.57 | 2.84 | 2.92 | 3.24 | 2.84 | 3.22 | 3.11 | 3.48 | 3.62 | 3.59 | 3.36 | 3.28 | 3.38 |

## Vena's Drill Down Feature

The Drill down feature enables users to view the raw data making up the sum of a selected expectation.

1. Select a cell intersecting an Attribute and Expectation

| Attributes | Expectations | | | |
|---|---|---|---|---|
| | Below Expectations | Marginal Expectations | Meets Expectations | Exceeds Expectations |
| 1 (A knowledge base for engineering) | 1194 | 1352 | 4330 | 2911 |
| 2 (Problem Analysis) | 566 | 333 | 804 | 1528 |
| 3 (Investigation) | 162 | 108 | 606 | 1862 |
| 4 (Design) | 279 | 571 | 1782 | 1192 |
| 5 (Use of engineering tools) | 132 | 153 | 613 | 345 |
| 6 (Individual and team work) | 27 | 24 | 273 | 264 |
| 7 (Communication skills) | 45 | 182 | 1210 | 689 |
| 8 (Professionalism) | 53 | 137 | 67 | 937 |
| 9 (Impact of engineering on society and the environment) | 19 | 62 | 381 | 1103 |
| 10 (Ethics and equity) | 16 | 299 | 604 | 75 |
| 11 (Economics and project management) | 5 | 22 | 13 | 258 |
| 12 (Life-long learning) | 21 | 135 | 274 | 342 |

2. Select Drill Down

a.  For **Windows users**, select Vena Tab → Drill → Drill Down
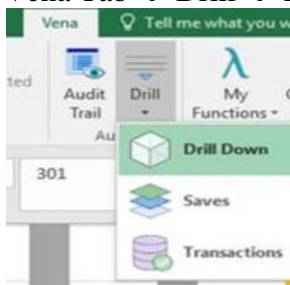


b.  For **macOS users**, select Drill Down



c.

3.  A new Excel worksheet will be generated displaying a breakdown of the data by course, year, attribute, section, value, etc.
    a.  The sum of the **Value** column will equal the value of the selected cell

| Program | Year | Attribute | Section | Outcome | Scenario | Measure | Rollup Multiplier | Value |
|---|---|---|---|---|---|---|---|---|
| ELEC ENG 4FJ4 (Microwave Engineering) | 2018-2019 Term 1 | 4.1 (Recognizes and follows an engineering design process.) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 3 |
| ELEC ENG 4FJ4 (Microwave Engineering) | 2018-2019 Term 1 | 4.3 (Proposes solutions to open-ended problems) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 4 |
| ELEC ENG 4FJ4 (Microwave Engineering) | 2018-2019 Term 1 | 4.6 (Determines and employs applicable standards and codes of practice) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 1 |
| ENGINEER 1C03 (Engineering Design and Graphics) | 2018-2019 Term 1 | 4.1 (Recognizes and follows an engineering design process.) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 20 |
| ENGINEER 1C03 (Engineering Design and Graphics) | 2018-2019 Term 1 | 4.2 (Recognizes and follows engineering design principles including appropriate consideration of environmental, social and economic aspects as well as health and safety issues) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 117 |
| ENGINEER 1C03 (Engineering Design and Graphics) | 2018-2019 Term 1 | 4.3 (Proposes solutions to open-ended problems) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 20 |
| ENGINEER 1D04 (Engineering Computation) | 2018-2019 Term 1 | 4.1 (Recognizes and follows an engineering design process.) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 56 |
| ENGINEER 1D04 (Engineering Computation) | 2018-2019 Term 1 | 4.2 (Recognizes and follows engineering design principles including appropriate consideration of environmental, social and economic aspects as well as health and safety issues) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 51 |
| ENGINEER 1P03 (Engineering Profession and Practice) | 2018-2019 Term 1 | 4.1 (Recognizes and follows an engineering design process.) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 0 |
| ENGINEER 1P03 (Engineering Profession and Practice) | 2018-2019 Term 1 | 4.3 (Proposes solutions to open-ended problems) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 0 |
| ENGINEER 1P03 (Engineering Profession and Practice) | 2018-2019 Term 1 | 4.4 (Employs appropriate techniques for generation of creative ideas such as brainstorming and structured inventive thinking) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 1 |
| ENGINEER 1P03 (Engineering Profession and Practice) | 2018-2019 Term 1 | 4.5 (Includes appropriate health and safety considerations) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 1 |
| ENGINEER 4A03 (Sustainability and Ethics in Engineering) | 2018-2019 Term 1 | 4.5 (Includes appropriate health and safety considerations) | Section 1 | Below Expectations | Actual | Number of Measurements | 1 | 5 |

## Rubric Entry Report

The Rubric Entry Report monitors the progress of the rubric input.  The report lists all the courses from a selected program.  The report will display:

| Column Name | Description |
|---|---|
| Course | - Course name |
| Status | - Displays the current status of the rubric input<br>    o Options: BLANK, Not Started, WIP, Fully Complete |
| Measure Required? | - **If Yes**: At least (1) graduate attribute for a course is being measured for the year<br>- **If No**:  The course does not have any graduate attributes measured for the year |
| Instructor Name | - Name of instructor teaching the course |

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| Rubric Updated By | - | The last user to update the rubric input template for the course |
|---|---|---|
| Last Rubric Save Time | - | The last time the rubric input template was saved |

1. Press **View** next to CEAB Attribute Report

2. Select a Program, Term, and Section

3. **Download** and remember the saved location of the report

4. If prompted, **Enable Content** and **Enable Macros**

**McMaster University — Rubric Entry Status**

Program: Test Engineering
School Year / Term: 2018-2019 Term 1
Section: Section 1

| Summary | # |
|---|---|
| # of Courses Not Started | 2 |
| # of Courses Started | 0 |
| # of Courses Completed | 1 |
| Total Number of Courses | 3 |

| Courses | Status | Measure Required? | Instructor Name | Rubric Updated By | Last Rubric Save Time |
|---|---|---|---|---|---|
| TEST 101 (Test Course for Training 1) | Not Started | Yes | in10 Toby Flenderso | arana2 | Wed Jul 3, 2019 |
| TEST 102 (Test Course for Training 2) | Not Started | Yes | nacosx Michael Scot | Andrew Aran | Fri May 10, 2019 |
| TEST 103 (Test Course for Training 3) | Fully Complete | Yes | win10 test | arana2 | Mon May 13, 2019 |
| TEST 104 (Test Course for Training 4) | | Yes | | | |
| TEST 105 (Test Course for Training 5) | | Yes | | | |
| TEST 106 (Test Course for Training 6) | | Yes | | | |
| TEST 107 (Test Course for Training 7) | | Yes | | | |
| TEST 108 (Test Course for Training 8) | | Yes | | | |
| TEST 109 (Test Course for Training 9) | | Yes | | | |
| TEST 110 (Test Course for Training 10) | | Yes | | | |
| TEST2b (TTT) | | No | | | |

## Faculty and Curriculum Committee Recommendations Report.xlsm

Displays the recommendations from the curriculum committee at both course and program level. This report can be viewed for any year where data is available. The data comes from the feedback provided in the Curriculum Committee Recommendations Input Template.

1. Press **View** next to Faculty and Curriculum Committee Recommendations Report

2. Select a Course/Program and Year

3. **Download** and remember the saved location of the report

4. If prompted, **Enable Content** and **Enable Macros**

To view an attached file:
      a.  Select the cell containing an attachment

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b. Click on **Comments** under **Vena** Tab
c. On the right-hand side, select the attached file



5. For macOS users, click ≡ View All  under Vena Comments
   a. On the right-hand side, select the attached file

## Attribute Map Report

Indicates the measure level at the attribute level.  If a different indicator level appears, the highest level will appear: I(ntroduced) → D(eveloped) → A(pplied)

1. Press **View** next to Attribute Map Report

2. Select a Program and Term

3. **Download** and remember the saved location of the report

4. If prompted, **Enable Content** and **Enable Macros**

**Attribute Map**

Program:     Test Engineering
School Year / Term:     2018-2019
Measure Level:     I – Introduced    D – Developed    A – Applied
Note:     If different measures at indicator level, the report will display the highest level (A > D > I)

| Courses | 1 Knowledge base | | | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Math | Nat. Sci. | Fund. ES | Spec. ES | PA | Inv. | Des. | Tools | Team | Comm. | Prof. | Impact | Ethics | Econ. | LL |
| TEST 101 (Test Course for Training 1) | I | | | | D | A | | | | | | | | | |
| TEST 102 (Test Course for Training 2) | D | D | D | D | D | D | D | D | D | D | D | D | D | D | D |
| TEST 103 (Test Course for Training 3) | I | | | | D | A | | | | | | | | | |
| TEST 104 (Test Course for Training 4) | I | | | | D | A | | | | | | | | | |
| TEST 105 (Test Course for Training 5) | I | | | | D | A | | | | | | | | | |
| TEST 106 (Test Course for Training 6) | I | | | | D | A | | | | | | | | | |
| TEST 107 (Test Course for Training 7) | I | | | | D | A | | | | | | | | | |
| TEST 108 (Test Course for Training 8) | I | | | | D | A | | | | | | | | | |
| TEST 109 (Test Course for Training 9) | I | | | | D | A | | | | | | | | | |
| TEST 110 (Test Course for Training 10) | I | | | | D | A | | | | | | | | | |
| TEST2b (TTT) | | | | | | | | | | | | | | | |

*Graduate Attribute Measured*

## Attribute Map Summary Report

Similar to the Attribute Map Report, instead of showing the actual level (I, D, A), the summary report will only display the "X" to indicate that the specific course is measured at the specific attribute.

1. Press **View** next to Attribute Map Summary Report

2. Select a Program and Term

3. **Download** and remember the saved location of the report

4. If prompted, **Enable Content** and **Enable Macros**

**Measurement Map Summary**

Program:     Test Engineering
School Year / Term:     2018-2019

| Courses | 1 Knowledge base | | | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Math | Nat. Sci. | Fund. ES | Spec. ES | PA | Inv. | Des. | Tools | Team | Comm. | Prof. | Impact | Ethics | Econ. | LL |
| TEST 101 (Test Course for Training 1) | X | | | | X | X | | | | | | | | | |
| TEST 102 (Test Course for Training 2) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| TEST 103 (Test Course for Training 3) | X | | | | X | X | | | | | | | | | |
| TEST 104 (Test Course for Training 4) | X | | | | X | X | | | | | | | | | |
| TEST 105 (Test Course for Training 5) | X | | | | X | X | | | | | | | | | |
| TEST 106 (Test Course for Training 6) | X | | | | X | X | | | | | | | | | |
| TEST 107 (Test Course for Training 7) | X | | | | X | X | | | | | | | | | |
| TEST 108 (Test Course for Training 8) | X | | | | X | X | | | | | | | | | |
| TEST 109 (Test Course for Training 9) | X | | | | X | X | | | | | | | | | |
| TEST 110 (Test Course for Training 10) | X | | | | X | X | | | | | | | | | |
| TEST2b (TTT) | | | | | | | | | | | | | | | |

*Graduate Attribute Measured*

## Indicator Map Report

Indicates the measure level at the indicator level.

1. Press **View** next to Indicator Map Report

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2. Select a Program and Term

3. **Download** and remember the saved location of the report

4. If prompted, **Enable Content** and **Enable Macros**

| McMaster University Indicator Map Report | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

Program: Test Engineering
Year: 2018-2019
Note: If the measure level not defined for any attribute or indicator, the courses will be hidden from this report
Measure Level: I - Introduced  D - Developed  A - Advanced

| Attribute | Indicator | TEST 101 (Test Course for Training 1) | TEST 102 (Test Course for Training 2) | TEST 103 (Test Course for Training 3) | TEST 104 (Test Course for Training 4) | TEST 105 (Test Course for Training 5) | TEST 106 (Test Course for Training 6) | TEST 107 (Test Course for Training 7) | TEST 108 (Test Course for Training 8) | TEST 109 (Test Course for Training 9) | TEST 110 (Test Course for Training 10) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 (A knowledge base for engineering) | 1.1 (Competence in Mathematics) | I | D | I | I | I | I | I | I | I | I |
| | 1.2 (Competence in Natural Sciences) | | D | | | | | | | | |
| | 1.3 (Competence in Engineering Fundamentals) | | D | | | | | | | | |
| | 1.4 (Competence in Specialized Engineering knowledge) | | D | | | | | | | | |
| 2 (Problem Analysis) | 2.1 (Demonstrates an ability to identify reasonable assumptions (including identification of uncertainties and imprecise information) that could or should be made before a solution path is proposed) | D | D | D | D | D | D | D | D | D | D |
| | 2.2 (Demonstrates anability to identify a range of suitable engineering fundamentals (including mathematical techniques) that would be potentially useful for analyzing a | | D | | | | | | | | |
| | 2.3 (Obtains substantiated conclusions as a result of a problem solution including recognizing the limitations of the | | D | | | | | | | | |
| 3 (Investigation) | 3.1 (Recognizes and discusses applicable theory knowledge | A | D | A | A | A | A | A | A | A | A |

## Historical Course Measurement Report

Shows the historical trend for each course at different levels (indicator, attribute and all).

1. Press **View** next to Historical Course Measurement Report

2. **Download** and remember the saved location of the report

3. Select a Course (and Graduate Attribute if necessary)

4. If prompted, **Enable Content** and **Enable Macros**

**McMaster University — Historical Course Measures**

Course: TEST 101 (Test Course for Training 1)
Attribute: All
Instruction: Please select a course and attribute

| Year | Exceeds Expectations | Meets Expectations | Marginal Expectations | Below Expectations |
|---|---|---|---|---|
| 2013-2014 | 25.0% | 25.0% | 25.0% | 25.0% |
| 2014-2015 | 0.0% | 0.0% | 0.0% | 0.0% |
| 2015-2016 | 0.0% | 0.0% | 0.0% | 0.0% |
| 2016-2017 | 0.0% | 0.0% | 0.0% | 0.0% |
| 2017-2018 | 25.0% | 25.0% | 25.0% | 25.0% |
| 2018-2019 | 34.9% | 21.7% | 19.3% | 24.1% |
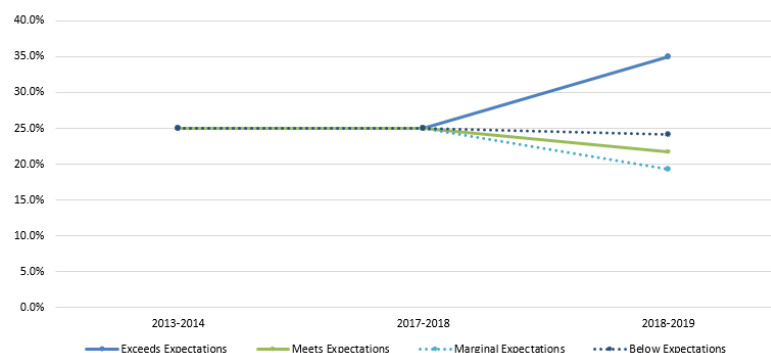
## Historical Program Measurement Report

Shows the historical trend for each program at different levels (indicator, attribute and all).

1. Press **View** next to Historical Program Measurement Report

2. **Download** and remember the saved location of the report

3. Select a Program (and Graduate Attribute if necessary)

4. If prompted, **Enable Content** and **Enable Macros**

### Historical Program Measures

**Program:** Engineering I (B.Eng)
**Attribute:** All
**Instruction:** Please select a program and attribute

| Year | Exceeds Expectations | Meets Expectations | Marginal Expectations | Below Expectations |
|---|---|---|---|---|
| CurY 2018-2019 | 26.7% | 40.3% | 19.8% | 13.2% |
| 2013-2014 | 0.0% | 0.0% | 0.0% | 0.0% |
| 2014-2015 | 12.6% | 44.9% | 32.2% | 10.3% |
| 2015-2016 | 0.0% | 0.0% | 0.0% | 0.0% |
| 2016-2017 | 0.8% | 51.9% | 27.6% | 19.7% |
| 2017-2018 | 30.9% | 36.7% | 18.2% | 14.2% |
| 2018-2019 | 0.0% | 0.0% | 0.0% | 0.0% |
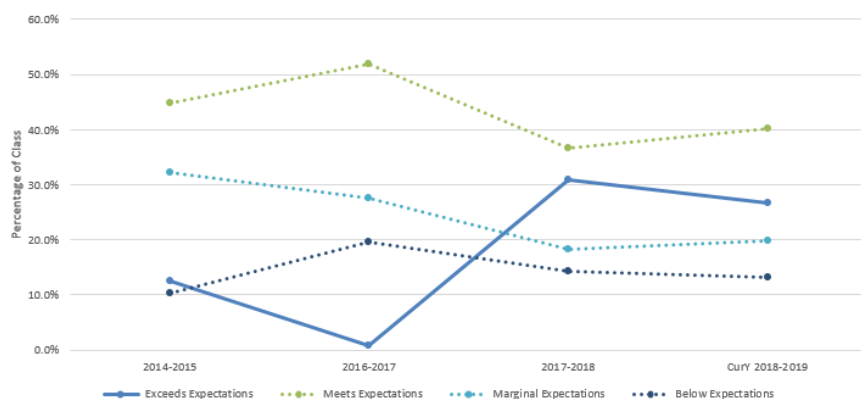
## Course Report

Displays the course outcome, recommendations from the curriculum committee, the continuous improvement plan, and charts generated from the rubric entry. Every course for which rubric data is entered will have a corresponding Course Report.

## Cascade

**\*\*\* Vena Feature currently available to Windows Users only \*\*\***

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The cascade feature enables users to generate the same Vena report for multiple courses or programs.  This feature eliminates the need to manually generate the same report for multiple courses.

<span style="color:red">Generating a Mass Course Report</span>
The steps below will show how to create
1. Select Contributor → Reports → Course Reports → **View**

2. Download and open the Course Report
   a. Click **Enable Editing** and **Edit Content** if the pop-up appears

3. Select a Course (belonging to the program), Year, Term, Section

4. Select the Vena Tab then click **Cascade**

   Cascade

5. For dimension, select **Program**

   V Vena - Cascade

   Select a dimension to cascade:  Program

6. Select the courses belonging to the program (hold shift + click)

   | ⊟ Test Engineering | |
   |---|---|
   | TEST 101 | Test Course for Training 1 |
   | TEST 102 | Test Course for Training 2 |
   | TEST 103 | Test Course for Training 3 |
   | TEST 104 | Test Course for Training 4 |
   | TEST 105 | Test Course for Training 5 |
   | TEST 106 | Test Course for Training 6 |
   | TEST 107 | Test Course for Training 7 |
   | TEST 108 | Test Course for Training 8 |
   | TEST 109 | Test Course for Training 9 |
   | TEST 110 | Test Course for Training 10 |

7. Change option from Cascade to Sheet to **Cascade to File**

   Cascade to file ∨

8. Choose a location to save the files

9. Click **OK**

10. The Cascade feature will take approximately 5-10 minutes to complete

Name

- Course Report. - Program TEST 101 (Test Course for Training 1) -
- Course Report. - Program TEST 102 (Test Course for Training 2) -
- Course Report. - Program TEST 103 (Test Course for Training 3) -
- Course Report. - Program TEST 104 (Test Course for Training 4) -
- Course Report. - Program TEST 105 (Test Course for Training 5) -
- Course Report. - Program TEST 106 (Test Course for Training 6) -
- Course Report. - Program TEST 107 (Test Course for Training 7) -
- Course Report. - Program TEST 108 (Test Course for Training 8) -
- Course Report. - Program TEST 109 (Test Course for Training 9) -
- Course Report. - Program TEST 110 (Test Course for Training 10) -
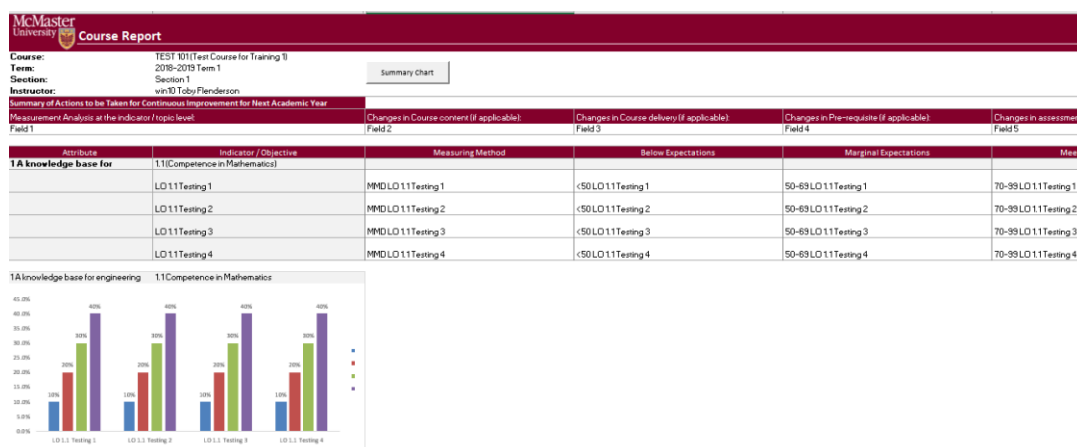


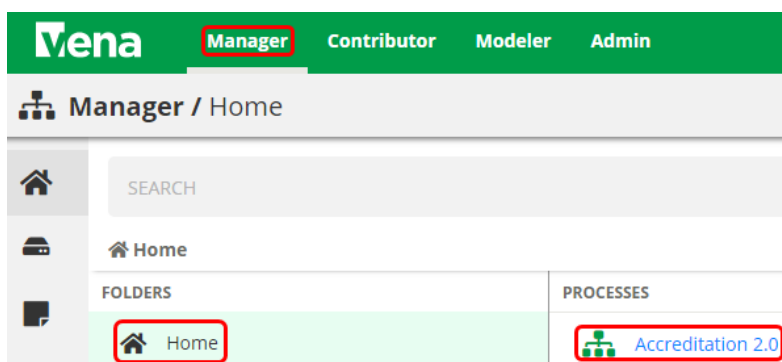## CourseList – Rubric Input Template

When a course is updated, added, or removed, the CourseList sheet in the Rubric Input Template will need to be updated as well. The CourseList sheet is responsible for validating the course name, term, and section against the Vena database. If there is a discrepancy, the rubric input template will display an error message to the user.
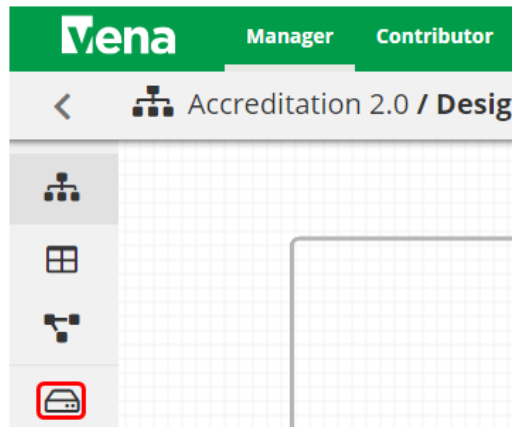
### Updating the CourseList

The following steps will need to be completed as a Vena Manager. Only the Vena Manager has the capability to update the template for all users.

**\*\*\* Vena Manager mode can only be accessed by a Windows-based operating system \*\*\***
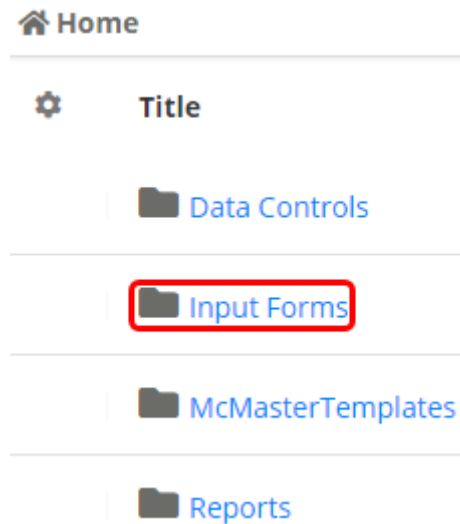
1. Under Manager view, select Home → **Accreditation 2.0**

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2.  On the left panel, select **Files Library**

3. Select **Input Forms**



4. Updating the **Windows and macOS Rubric Input Template**
   When updating the course information, both templates will need to be updated.
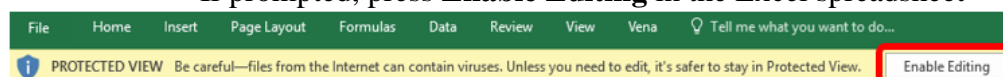
   a. Select **Rubric Input Template – Windows.xlsm**
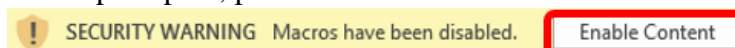
   

   b. A pop-up will appear to save the template. Click **save** and remember the saved location of the template.
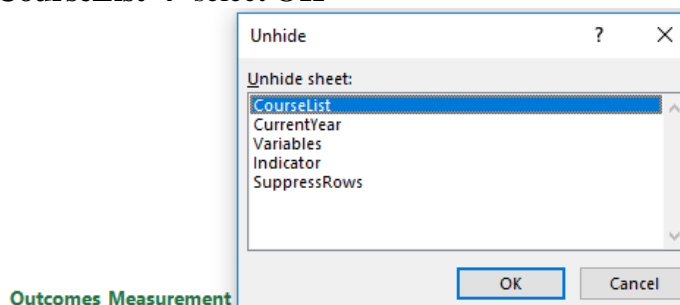
   g. Open the Excel File
      - If prompted, press **Enable Editing** in the Excel spreadsheet

   

      - If prompted, press **Enable Content** to allow Macros

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c. Select a Course, Year, and Section
   i. The choices selected will not matter since we will be updating the template

d. Right-click the **Outcome_Measurement** sheet → select **Unhide** → select **CourseList** → select **OK**



e. Update the **Course**; **Term**; **Section** in the spreadsheet (Columns A-C)

|   | A | B | C | D |
|---|---|---|---|---|
| 1 | Course | Term | Section | Lookup |
| 2 | CHEM 1E03 | Term 1 | Section 1 | CHEM 1E03Term 1Section 1 |
| 3 | CHEM ENG 2D04 | Term 1 | Section 1 | CHEM ENG 2D04Term 1Section 1 |
| 4 | CHEM ENG 2G03 | Term 1 | Section 1 | CHEM ENG 2G03Term 1Section 1 |

f. Copy the Excel formula in **Column D** down

g. Hide the **CourseList** sheet

h. Under the Vena tab, click **Save Template**
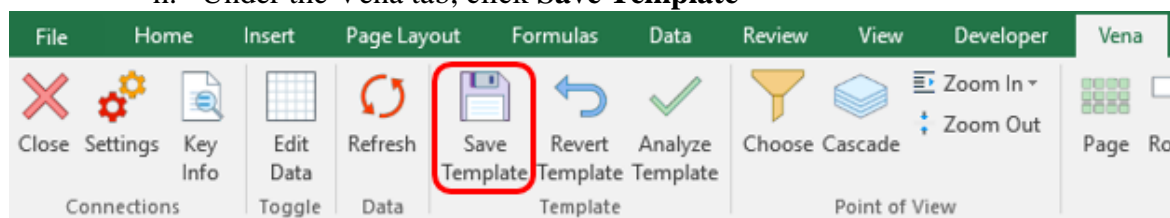


i. Close the **Rubric Input Template**

7. Repeat steps 1-5 for **macOS Rubric Input Template**

## Appendix I: Previous Modification Log

| Version | Modification date | Author | Comments |
|---------|-------------------|--------|----------|
| 1.0 | July 5, 2016 | Evan Situ | |
| 1.1 | August 28, 2016 | Evan Situ | Split the instructor document |
| 1.2 | August 28, 2016 | Evan Situ | Added Section 6 and 4.1 and 1.4 |
| 1.3 | October 19, 2016 | Michelle Zheng | Edited Section 6 |
| 1.4 | October 28, 2016 | Evan Situ | Added New Section 5: Add New Course |
| 1.5 | November 8, 2016 | Michelle Zheng | Added introduction, moved sections around, general modifications based on Spencer's notes |
| 1.6 | November 15, 2016 | Spencer Smith | Additions to introduction, clarification of timeline, editing/rearranging of sections, added title page |
| 1.7 | November 21, 2016 | Evan Situ | Added section Updating Valid Course Information |
| 1.8 | November 21, 2016 | Evan Situ | Removed Other Resource |
| 1.9 | November 29, 2016 | Michelle Zheng | Added Section 6.3 |
| 2.0 | December 16, 2016 | Spencer Smith | Update Section on Validation Rules, Added Rubric Entry Report |
| 2.1 | January 2, 2016 | Spencer Smith | Move Curriculum Committee Recommendations Report to Instructor Guide |
| 2.2 | April 29, 2019 | Andrew Aran | Added instructions to access CEAB Attribute Report and Drill Down Feature |