Tandem for accreditation

Conducting a program review using Tandem: A training scenario

Questions?
Please contact visits@engineerscanada.ca
Last review date: August 2024

Table of contents

Glossary of terms

Generic course information
Generic course information refers to basic information about a course that is applicable to that course regardless of the program(s) offering it. Within Tandem, this information is displayed in the course information form.

Issue tracker
Formerly known as the tracking of issues sheet, the issue tracker is now superimposed on the *Questionnaire for the Evaluation of an Engineering Program*. The issue tracker allows the visiting team to review each section of the Questionnaire completed by the institution for a specific program. This is a tool used by visiting teams to record their observations as they review materials submitted by the program receiving a visit and collaborate with other visiting team members.

Issue tracker rollup summary
The issue tracker rollup summary automatically compiles all observations entered in the issue tracker associated with each program reviewed during the same visit. It displays all findings of all programs visited on the same screen.

Length of term factors
The length of term factors refers to the calculation that provides the average length of the academic term in weeks that is utilized by Tandem to calculate a course's AUs per term.

Persona
Tandem uses two personae, "My Items" and "Organization Representative", to filter the user experience within the system. Visiting team members will use the "My Items" persona to review the accreditation materials submitted by HEI representatives. HEI representatives will use the "Organization Representative" persona to enter course data and submit accreditation materials on behalf of their institution.

However, if only one persona has been assigned to your account, upon entering your email address and your password, you will directly access your Tandem dashboard without needing to select between "My Items" and "Organization Representative".

Program artifacts
Program artifacts are summary views of different components of evidence from the program. They are generated based on the information entered by the institution into the course information and program-specific information forms. The program artifacts correspond to the summary views that were previously created using macros in the Excel 6C file in the former system.

Program dashboard
The program dashboard is built from the information entered in the course information and program-specific information forms. It gives a summary view of the program's main components, including the list of courses attached to the program and the program's AU count. Visiting team members will use this dashboard and the program artifacts section to review the content of the accreditation materials the institution submitted for the visit.

Program-specific information
This is information specific to a course offered in a specific program. For each course in a program, the HEI must fill out the program-specific information form as it complements the information displayed in the course information form.

About Tandem's training environment

Tandem's training environment acts as a controlled and safe space where users can learn, experiment, and prepare themselves for the actual use of Tandem (known as "the production environment") for reviewing accreditation materials. It is recommended that individuals use the training environment in conjunction with the training materials provided.

It is important to note that all data entered in Tandem's training environment **is fake data** and should not be viewed as model examples of submissions from Higher Education Institutions (HEIs). The training data is provided as illustrative examples only and does not reflect real or ideal submissions.

The training environment has been set up to review two simulated engineering programs seeking CEAB accreditation. Visiting teams conducting accreditation visits to English-speaking institutions will be granted access to accreditation materials submitted by a fictitious organization (Engineers Canada University) through Tandem's training environment. Program visitors will have access to one of the programs, "CEAB Engineering C" or "CEAB Engineering D". Their access will mirror the experience they will have in the production environment. For example, they will be able to review program course data, read the Questionnaire, and complete an issue tracker. Visiting team chairs and vice-chairs will have access to both programs, as will be the case in the production environment.

About Tandem's training scenario

To support the transition to Tandem, this training scenario is available for visiting team members who will conduct an accreditation visit. Program visitors will learn about their specific roles by attending pre-visit team meetings and completing the online training module, *A Guide to Engineering Accreditation*. This training scenario specifically focuses on how to use Tandem, Engineers Canada's new data accreditation system, to conduct a program review.

The scenario includes the following learning activities:

1. Completing an issue tracker.
2. Reviewing a program dashboard page.
3. Reviewing program course data.
4. Reviewing program artifacts.
5. Using an issue tracker rollup summary.
6. Using a program's accreditation units reallocation tool.

Two colors have been used to highlight different sections of the training scenario. The blue sections contain contextual information related to the respective section of Tandem. The green sections present practical activities for users to explore the system and deepen their understanding of its features.

This scenario is self-guided and optional. However, visiting team members are encouraged to complete it at their own pace to facilitate a smooth transition to the new system.

Learning outcomes

As a result of completing the training scenario, you will:

- Be familiar with an issue tracker.
- Be able to review:
    - A program dashboard.
    - Program course data.
    - Program artifacts.
- Be familiar with an issue tracker rollup summary.
- Be familiar with a program's AU reallocation tool.

Need help?

If you need help at any point, please contact the Tandem support team at Engineers Canada. We can be reached via email at: visits@engineerscanada.ca.

Getting started

To complete this scenario, you will need:

1. An internet browser opened to the Tandem training environment (for optimal results, it is recommended to use Google Chrome): https://tandemtraining.engineerscanada.ca/.
2. The email address and password associated with your Tandem training account.
3. The *Tandem User Guide – Conducting a program review using Tandem*.
4. The following training videos, accessible on YouTube:
   - How to complete an issue tracker.
   - How to review a program dashboard page.
   - How to review program course data.
   - How to review program artifacts.
   - How to use an issue tracker rollup summary.
   - How to use a program's AU reallocation tool.

Learning activity #1: Completing an issue tracker

In this first learning activity, you will learn:

- How to complete an issue tracker, formerly known as the tracking of issues sheet.

Enter Tandem's training environment

1. Log in to Tandem's training environment: https://tandemtraining.engineerscanada.ca/
2. Enter your email address and password.
3. Select the persona "My Items".

Complete an issue tracker

Formerly known as the tracking of issues sheet, the issue tracker is now superimposed on the Questionnaire. It allows the program visitors to review each section of the Questionnaire completed and submitted by the institution for a specific program. Multiple program visitors can work simultaneously on the issue tracker, and any modifications made by an individual will be saved. **Please refrain from clicking on "Complete review"**. The issue tracker must remain unsubmitted. Clicking "Complete review" will lock the issue tracker, preventing further edits by you and your team. This also applies to the production environment.

1. From Tandem's home page, on the right-hand side of the screen, under the "Scheduled Items" header, click on the issue tracker link associated with the program you are reviewing[1]: "CEAB Engineering C" or "CEAB Engineering D".
2. Read all sections of the Questionnaire.

---

[1] The visiting team chair and vice-chair will have access to both programs as they will have access to all materials submitted by an institution in Tandem's production environment.

3. The numbers referenced before each title match the numbering utilized in the former version of the Questionnaire.
4. The completion progress is shown for each section necessitating review. When the progress reaches 100%, it signifies that all criteria within that section of the issue tracker have been reviewed.
5. For each criterion, select from the dropdown menu the appropriate symbol:
   o A checkmark (✓) means that there is no observed issue for the criterion or that it is a numerical criterion which has a positive binary result.
   o An asterisk (*) means that the *Program Visitor's Observations* field will contain a description of an observed item flagged for CEAB review that, in the opinion of the visiting team, has the potential to either jeopardize future compliance, or currently prevents compliance, with the criterion.
6. When more than one program visitor assesses the same program, it can be helpful to highlight your observations in different colors. To use the rich text editor:
   o Type your response in the box.
   o Choose the appropriate option(s) from the upper ribbon. Please be aware that all observations are automatically compiled into the issue tracker rollup summary. It is recommended that you not incorporate tables, pictures, or extensive text in the response box. Comments should be precise and concise.
7. You can save the progress you make on the issue tracker in order to exit the system and return at a later time. To do this, click the "Save" button at the top or at the bottom of the page. **Do not click on "Complete review"**.
8. To return to Tandem's homepage, click on "Exit". You will leave the issue tracker and be redirected to the Questionnaire. Then, click on the "Home" tab from the Questionnaire page.

For training purposes, please write observations for at least **five (5)** criteria. Since multiple program visitors are working on the same issue tracker in the training environment, it is recommended to highlight your observations in different colors or add your initials. For each criterion reviewed, select either a checkmark or an asterisk.

Learning activity #2: Reviewing a program dashboard page

In this second learning activity, you will learn:

- How to review a program dashboard page.

Enter Tandem's training environment

1. Log in to Tandem training environment: https://tandemtraining.engineerscanada.ca/
2. Enter your email address and password.
3. Select the persona "My Items".

Review a program dashboard page

The program dashboard page provides a summary view of the program's main components. It is from this page that a program visitor will access all course data and materials submitted by the HEI for the accreditation visit.

1. From Tandem's home page, on the right-hand side of the screen, under the "Review items" header:
   - Click on the program name you are assigned to review: "CEAB Engineering C" or "CEAB Engineering D".
   - If the program name is not listed, click on "View all items", then select the program's name.

From the program dashboard page, you will be able to review:

A. The number of academic credits.
B. The number of hours of lecture per week.
C. The number of hours of lab/tutorial per term.
D. The overall AU count for the program.
E. The AU breakdown for CEAB content categories by course type.
F. The Specific AUs breakdown for Engineering Science and Engineering Design.

Note: The minimum AU requirement incorrectly shows 225 Specific AUs for Engineering Science. This is a content error that does not reflect the CEAB criteria. Please ignore that cell.

G. The list of courses offered in the program, displayed in the "Course manifest" table. From this list, program visitors can access individual program course data.

On the right-hand side of the page, you will be able to view:

H. The link that gives access to the Questionnaire completed and submitted by the institution for the program.
I. The program artifacts.

For training purposes, please take the time to explore the program dashboard page. Review the numbers displayed in the AU calculation table, and open different course forms and program artifacts.

Learning activity #3: Reviewing program course data

In this third learning activity, you will learn:

- How to review program course data submitted by the institution through the course information and program-specific information forms.

Enter Tandem's training environment

1. Log in to Tandem training environment: https://tandemtraining.engineerscanada.ca/
2. Enter your email address and password.

3. Select the persona "My Items".

Review the course information form data

From this form, you can view generic course information applicable to that course regardless of the program(s) offering it.

To access the course information form of a course offered in a program:

1. From Tandem's home page, on the right-hand side of the screen, under the "Review items" header:
    - o Click on the program name you are assigned to review, "CEAB Engineering C" or "CEAB Engineering D".
    - o If the program name is not listed, click on "View all items", then select the program's name.
2. On the left hand-side of the screen, under the "Course manifest" header, click on the name of the course you wish to review.
3. Click on the "Course information form" tab.

From this form, you will be able to view:

A. Course number.
B. Course title.
C. Link to course in institution's course catalogue.
D. AU calculation type (Accreditation Units, K Factor, Manual, Prior Studies) and the AU calculation methodology (if applicable).
E. Length of term factors.
F. Hours of instruction.
G. Total AUs for the course.
H. Content category & elements.
I. CEAB graduate attribute content.
J. Learning outcome expectations.

For training purposes, please take the time to explore the course information forms of at least **three (3)** courses, preferably one of each type: "compulsory", "prior studies" and "elective". Examine the program artifacts section of the program dashboard page to see which data from the course information form is being populated into the artifacts, when applicable.

Review the program-specific information form data

From this form, you will be able to view information specific to a course offered in a specific program. Data in this form complements the information entered in the course information form.

To access the program-specific information form of a course offered in a specific program:

1. From Tandem's home page, on the right-hand side of the screen, under the "Review items" header:

- o Click on the program name you are assigned to review, "CEAB Engineering C" or "CEAB Engineering D".
- o If the program name is not listed, click on "View all items", then select the program's name.
2. On the left hand-side of the screen, under the "Course manifest" header, click on the name of the course you wish to review.
3. Click on the "Program-specific information form" tab.

From this form, you will be able to view:

A. Course type.

For elective courses, the group (A, B, C, etc.) and the number of elective courses a student must choose within that group will be specified. This enabled the calculation of the minimum path and populated the program artifact called "Minimum path compulsory and elective courses", which is accessible from the program dashboard page.

B. Type of AU calculation.
C. Total AU.
D. Summary graduate attribute curriculum map.
   - o To view the graduate attribute indicators, click on the eye icon. The same information is also displayed in the corresponding program artifacts, accessible from the program dashboard page. **To return to the form, click "Done".**
E. Instructor – course contact.

The AU calculation of courses in engineering science or engineering design that must be taught by a faculty member licensed to practice engineering in Canada (known colloquially as the "specified AUs") is based on the information provided for the faculty member listed as the course contact.

F. Instructor(s) – other contact(s).
G. Course delivery and outcomes, displaying:
   - The number of students per supervisor in laboratory sections.
   - The number of students per supervisor in tutorials.
   - The average grade for the course, as a percentage.
   - The average grade for the course, as a letter grade.
   - The failure rate for the course.
H. Laboratory details (if applicable).
I. Required texts.
J. Detailed syllabi and additional information.
K. Documentation of assigned work and assessment.
L. Examples of evaluated student work.

Note: Assigned work and assessments, as well as evaluated student work, may have been uploaded directly into Tandem in PDF files or submitted by providing a link to the designated folder on the institution's web-based collaborative platform (e.g., SharePoint) or learning management system (LMS, i.e. D2L). In Tandem's training environment, where applicable, a fake hyperlink is provided.

For training purposes, please take the time to explore the program-specific information forms of at least **three (3)** courses, one of each type: "compulsory", "prior studies" and "elective". Examine the program artifacts section of the program dashboard page to see which data from the program-specific information form is being populated into the artifacts, when applicable.

Learning activity #4: Reviewing program artifacts

In this fourth learning activity, you will learn:

- How to review program artifacts.

Enter Tandem's training environment

1. Log in to Tandem training environment: https://tandemtraining.engineerscanada.ca/
2. Enter your email address and password.
3. Select the persona "My Items".

Review program artifacts

Program artifacts are summary views of different components of the program's evidence. The institution enters data into the course information and program-specific information forms, which generate the artifacts.

To access the program artifacts of a specific program:

1. From Tandem's home page, on the right-hand side of the screen, under the "Review items" header:
   o Click on the program name you are assigned to review, "CEAB Engineering C" or "CEAB Engineering D".
   o If the program name is not listed, click on "View all items", then select the program's name.
2. On the right hand-side of the screen, all summary views of the program are listed under the "Program artifacts" header, including:
   A. Summary graduate attribute map (3.1.1, 3.1.1.a).
   B. Graduate attribute learning-level (3.1.1b/c).
   C. Indicators and learning activities assessed (3.1.2).
   D. Instructors (4.1).
   E. Laboratory experience (4.2).
   F. Enrolment and degree data (4.3).
   G. Minimum path compulsory and elective courses (4.4a/b).
   H. Minimum path summary (4.4c).
   I. Curriculum committee members (4.5).
   J. Average grade and failure rate (4.6).
   K. Issue tracker rollup summary.

Regarding the enrolment and degree data, this program artifact does not display any information. In the production environment, a workaround has been implemented to resolve this issue. Instructions are provided in the User Guide on page 31.

Similar to the previous Excel 6C file, the summary views generated in the "Program artifacts" section also display colour-coded cells.

- In the *Summary graduate attribute map*, the *Graduate attribute learning-level*, and the *Indicators and learning activities assessed*:
    o Cells highlighted in yellow demonstrate where in the program student achievement has been, or is planned to be, assessed.
- In the *Minimum path compulsory and elective courses*:
    o Cells highlighted in blue indicate what CEAB content category (AU) are included in the minimum path for elective courses.
    o Cells highlighted in yellow demonstrate where in the program student achievement has been, or is planned to be, assessed.

Finally, some program artifacts include legends explaining the color codes and acronyms on the page. Some program artifacts also have a filter option to facilitate data review.

For training purposes, please take the time to examine the program artifacts section of the program dashboard page to understand the relationship between each artifact and the course data forms.

Learning activity #5: Using an issue tracker rollup summary

In this fifth learning activity, you will learn:

- How to use an issue tracker rollup summary.

Enter Tandem's training environment

1. Log in to Tandem training environment: https://tandemtraining.engineerscanada.ca/
2. Enter your email address and password.
3. Select the persona "My Items".

Use an issue tracker rollup summary

The issue tracker rollup summary compiles all observations entered into the issue tracker associated with each program reviewed during the same visit. It displays all findings of all programs visited on the same screen. During the visit, in the evening team meetings at the hotel, it is suggested that the visiting team chair or vice-chair present the issue tracker rollup summary on the screen, using a computer connected to a projector (or similar setup). This will allow for the refinement of the information entered in the issue trackers and facilitate discussions on the recorded observations. Program visitors will be able to edit their observations in real-time, directly in the issue tracker associated with the program they are evaluating, using their personal

computers. The rollup summary is available when reviewing single or multiple engineering program(s).

To access the issue tracker rollup summary of a specific program:

1. From Tandem's home page, on the right-hand side of the screen, under the "Review items" header:
   o Click on the program name you are assigned to review, "CEAB Engineering C" or "CEAB Engineering D".
   o If the program name is not listed, click on "View all items", then select the program's name.
2. Under the "Program artifacts" header, click on "Issue tracker rollup summary" to view all observations related to criteria marked with an asterisk, recorded by all program visitors for all programs. All asterisks will be displayed in yellow. By default, all non-reviewed criteria will be marked with asterisks and the mention: "Program visitor observations not provided".

Note: The issue tracker rollup summary is a read-only view. To modify the observations shown in the summary, open the issue tracker of the specific program you are reviewing, make the desired changes and click "Save". Then, go back to the rollup summary and refresh your browser to display the edits.

For training purposes, please take the time to examine the issue tracker rollup summary to understand its relationship with the issue tracker. Modify at least **three (3)** observations made in the issue tracker of your assigned program and refresh your browser to see the changes in the rollup summary. It may take a few minutes for the page to update. Since multiple program visitors are working on the same issue tracker in the training environment, it is recommended to highlight your observations in different colors or add your initials.

Learning activity #6: Using a program's accreditation units reallocation tool

In this sixth learning activity, you will learn:

- How to use a program's accreditation units reallocation tool.

Enter Tandem's training environment

1. Log in to Tandem training environment: https://tandemtraining.engineerscanada.ca/
2. Enter your email address and password.
3. Select the persona "My Items".

Use a program's accreditation units reallocation tool

The reallocation table is a tool for the visiting team to reallocate AUs for any given course and track any adjustments required after triangulation of evidence. Please note that data entered in the AUs reallocation tool does not automatically synchronize with other programs' AUs reallocation tools.

When reallocating AUs for courses offered across multiple programs, visiting team members must collaborate to ensure consistency in data entry.

To access a program's AUs reallocation tool:

1. From Tandem's home page, on the right-hand side of the screen, under the "Review items" header:
    - Click on the program name you are assigned to review, "CEAB Engineering C" or "CEAB Engineering D".
    - If the program name is not listed, click on "View all items", then select the program's name.
2. On the right-hand side of the screen, under the "Program reallocation" header, click on "Create reallocation tool". Once the tool has been created, the system will re-title it "Open AU reallocation tool".
3. Before exiting the tool, click "Save".

Explanatory notes about the reallocation tool:

- The table displays accreditation units of compulsory and elective courses entered by the institution ("HEI" columns).
- The visiting team will reallocate AUs under the "VT" columns. Please note that the same numbers are entered in columns "HEI" and "VT" by default.
- The "Diff." columns display the difference between the AUs entered by the institution and the AUs reallocated by the visiting team.
- The section in yellow displays the specified AUs, the AUs courses in engineering science or engineering design that must be taught by a faculty member licensed to practice engineering in Canada. Note: The minimum AU requirement incorrectly shows 225 Specific AUs for Engineering Science. This is a content error that does not reflect the CEAB criteria. Please ignore that cell.

For training purposes, under the "VT" column, please reassign at least **five (5)** accreditation units to different compulsory and elective courses to understand how the table works.