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# Overview

The Canvas LMS (Learning Management System) collects a vast amount of data on the behavior of student and faculty users in Canvas courses. This data indicates the usage of course resources including time spent, page views, assignments submitted and graded, instructor feedback, and discussion posts, among other metrics. This information can be used for the improvement of instruction and course quality or to identify at-risk students or those students who may be subject to administrative withdrawal. The Canvas API (application program interface) allows this data to be queried and the results reported. The Canvas API Reports script provides a simple user interface to generate reports from the user data contained in Canvas.

# Report Types

The Canvas API Reports script allows users to produce four different reports:

**At-risk Students**: The At-Risk Students Report lists those students who have late or missing assignments, have not posted to discussions, or have a current average score that is below passing – all indications that a student may be struggling in the course.

**Course Resource Access**: The Course Resource Access Report provides the access and use history of all course resources (pages, assignments, discussions, etc.) by students, TAs, and instructors. Its purpose is to provide insights into how course resources are used.

**Final Grades**: The Final Grades Report is used to conduct grade audits.

**Instructor Presence**: The Instructor Presence Report includes several metrics of student-instructor interaction including instructor announcements and discussion posts, timely grading of assignments, and the amount of instructor feedback provided to students.

**Zero Participation**: The Zero Participation Report lists those students who have not submitted an assignment deliverable within the reporting period, typically the first two weeks of the quarter. Its purpose is to identify students who may subject to administrative withdrawal.

# Responsible Use of Canvas Data

The data obtained from these reports must be used and safeguarded responsibly. For student data, any misuse or unapproved release of the data may result in a violation of FERPA regulations and university policies. Faculty privacy must be protected in accordance with current employment law and university policies.

Reports may be relevant and required in discovery related to civil litigation, institutional accreditation, or U.S. Department of Education investigations. Reports must always be available to the SPS Registrar/FERPA Officer (Kim Chapman).

The data provided by these reports should never be used as the sole basis for any action by instructors or school administration. Information should be evaluated and confirmed by a qualified staff member who follows up with the person(s) identified in the report.

## 

## File Management

A key element of the responsible use of the Canvas data is effective file management procedures. There are three practices you should follow:

1. Save all report files to a Northwestern OneDrive or SharePoint folder. Access to the folder should be limited to qualified staff who have an educational interest in the data. The SPS Registrar/FERPA officer (Kim Chapman) must be aware of the existence and location of all reports.
2. All report files should be deleted no later than six months after they were created. This will limit the amount of data that is accessible outside of Canvas and ensure only recent data is available.
3. Do not store report files on your personal or university-issued devices. Delete all CSV files generated by the script that are saved to your Downloads folder.

# Producing Reports

## Initial Setup

You will only need to compete this initial setup process one time. The initial setup process has two parts; to I) install Tampermonkey, a userscript management extension for your web browser, and II) install the Canvas API Reports Script file.

If possible, use Google Chrome to install Tampermonkey and use the Canvas API Reports Script. The script has been the most thoroughly tested on Chrome.

### I. Install Tampermonkey

Open <https://www.tampermonkey.net/> to install Tampermonkey. The website will detect the web browser you are using and provide specific instructions for installing Tampermonkey.

### II. Install the Canvas API Reports Scripts File

To install the Canvas API Reports Scripts file, do the following:

1. Open this link in the web browser where you installed Tampermonkey:

<https://github.com/djm60546/canvas-api-reports/raw/master/canvas-api-reports.user.js>

A copy of the script will be displayed in your browser.

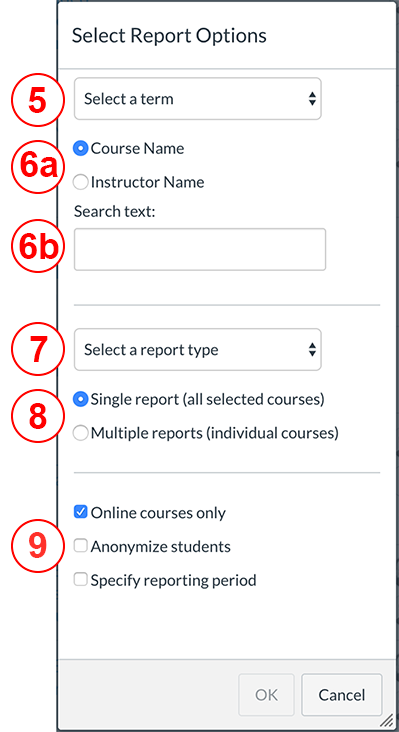
1. Click the **Install** button at the top left corner of the window. The script will be installed and ready for use.

## Running Reports

To run reports, do the following:

1. A screenshot of a phone

   Description automatically generatedLogin to Canvas using your administrator credentials.
2. Click the **Admin** (shield) icon from the Canvas Global Navigation.
3. Select **School of Professional Studies** from the list of accounts. The [School of Professional Studies > Courses page](https://canvas.northwestern.edu/accounts/21?) will load.
4. Click the **Canvas API Reports** link at the bottom of the list of administrator tools. The *Select Report Options* dialog box will be displayed.



5. Choose a quarter, academic year, or term to limit the courses included in your report.

6a. Indicate the type of search text you will enter in the **Search text:** (6b) field. Skip Steps 6a and b if you are not using search text.

6b. Enter the text that matches:

* **Course Name** – all or part of a course code or course name
* **Instructor Name** – all or part of an instructor’s name

**Select a term** (5) and **Search text:** (6b) can be used in combination to narrow report results.

**A report with *no* term selected *and* *no* search text will include hundreds of courses!**

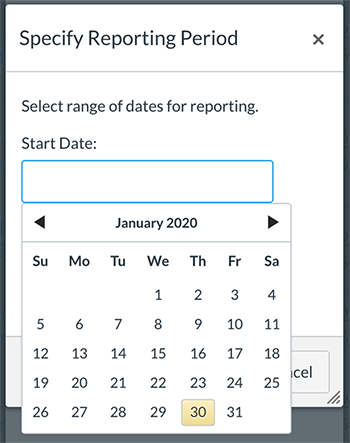
7. Select the type of report you want to produce. You must select an option from this list.

8. Select the output file(s) for your report:

* **Single report –** All selected courses reported in a single file.
* **Multiple reports –** Each selected course reported in a separate file.

9. Mark checkboxes for these report options:

* **Online courses only** – Limit the report to *online* courses that meet the term (5) and/or search text (6b) criteria.
* **Anonymize students** – Omit all personally identifiable information for students and replace student names with pseudonyms.
* **Specify reporting period** – Indicate a range of dates to limit the discussion posts, assignments submitted (students) and assignments graded (instructors).



When the “Specify reporting period” checkbox is marked or *Zero Participation* is selected from the “Report Type” list, the “Specify Reporting Period” dialog box is displayed.

Click the **Start Date** and **End Date** fields and use the calendars to indicate the range of dates for the reporting period.

Clear the **Specify reporting period checkbox** to eliminate the reporting period. The values you selected in the dialog box will be retained, if you want to re-apply or modify the reporting period.

# Limiting Report Results Examples

Here are some examples of using the **Select a term** menu and the **Search text** box to define the scope of reports.

|  |  |  |
| --- | --- | --- |
| **Report Scope** | ***Select a term* Menu Value** | ***Search text* Box Value** |
| All Spring 2024 courses | Spring 2024 |  |
| All sections of HCA 402 in Summer 2023 | Summer 2023 | HCA\_402 |
| All sections of MSGH 420 in current and previous quarters |  | MSGH\_420 |
| Section 55 of MSDS 400 from Winter 2022 |  | 2022WI\_MSDS\_400-DL\_SEC55 |
| All sections taught by Ray Robinson regardless of quarter or course |  | Robinson (select the **Instructor Name** radio button first) |

# Reporting Period

You can specify a reporting period for the “At-risk Student”, “Instructor Presence” and “Zero Participation” reports. The reporting period will limit the results to those discussions, assignments, grades, and first and most recent page views that fall within the reporting period. If no reporting period is specified, then the results are “to-date” from the day the course site was set up in Canvas (not the first day of the quarter).

The reporting period extends from 12:00 AM Midnight at the *beginning of* the start date through 12:00 AM Midnight at the *end of* the end date. The reported data will include results from those exact days and hours.

12:00 AM Midnight

12:00 AM Midnight

🕛

End Date

🕛

Day *n*

Day 3

Day 2

Start Date

*Days and hours included in a reporting period*

### False Positives Related to the Reporting Period

Any *graded* quizzes, assignments or discussions that do not have a due date set will not be evaluated in relation to the reporting period since there is no way to determine when they are due. Depending on the report you are running, false positive results will indicate that no students have submitted work, or the instructor is overdue on grading those assignments.

### Reporting Period Columns

In the lists of columns for each report type (at the end of this document), a value of *Yes* in the **RP** column indicates the data may be limited by a reporting period. Columns with a *No* value may be date-sensitive but cannot be limited to a reporting period because of the way the data is stored in Canvas. Some columns do not contain date-sensitive data and there will be no RP value for these.

# Instructor of Record

The At-Risk Student, Instructor Presence and Zero Reports include the teacher’s name and email address. For some course sections, multiple teachers may be enrolled. In Canvas, there is no way to differentiate the instructor of record from other faculty who may be enrolled in that section as teachers (e.g., mentor teacher, peer teacher copying course content, etc.).

# Detailed Report Descriptions & Notes

## At-risk Student Report

The At-risk Student Report provides a list of students whose low participation, missing or late assignments, or low assignment scores have the *potential* to place their success in the course at risk.

To be included in the report, a student may meet *any* of the following criteria:

* One or more assignments submitted late
* One or more assignments not submitted
* One or more missing discussion posts
* A current mean score below 70% on all assignments due

### Recordkeeping

This report *does not include student grades* and should not be considered as a student transcript or official academic record. Students’ current scores are reported as either “Low” or “OK” based on a 70% threshold.

### Appropriate Use

The data contained in the report should not be used as the sole basis for determining if a student is at risk of failure. A list of students who appear to be at risk should be provided to the instructor and Program Coordinator/Assistant Director. Each student should be contacted personally to discuss their performance in the course.

### Students Not Anonymized

Student identities cannot be anonymized in the At-risk Student Report because its purpose is to identify individual students.

## Course Resource Access Report

The Course Resource Access Report provides information on how each enrolled user viewed or otherwise interacted with each of the course resources.

Enrolled users include those listed on the course *People* page as students, teachers, TAs and observers. Course accesses by Canvas administrators, whether as enrolled users or not, are not included in the report.

Course resources include:

* Announcements
* Assignments
* Discussions
* Wiki (content) pages
* Files
* Media (images and video)
* External tools (video streaming, web conferencing)
* Links to external websites

### Students Anonymized

By default, student identities will be anonymized in the Course Resource Access Report. This means that each student’s name will be replaced by a pseudonym and their Canvas and login IDs will not be reported. Anonymization can be disabled, but the purpose of this report is to illustrate the access and use of course assets in general and not the behavior of individual users.

The real names of all enrolled *non-student* users (teachers, TAs, etc.) will be reported.

### Reporting Period

You cannot specify a reporting period for the Course Resource Access report because the data retrieved from Canvas for this report cannot be limited to a range of dates.

## Final Grades Report

The Final Grades Report lists each student’s final calculated score and the final letter grade (when available) for the courses included in the report. Student and course information is provided along with links to each student’s Canvas course grade details page so the results of the report can be confirmed, or individual assignment grades can be checked.

### Recordkeeping

This report *includes student grades* but should not be considered as a student transcript or official academic record. Given the grade data in the report, the retention and destruction guidelines described above in the “[Responsible Use of Canvas Data > File Management](#_File_Management)” section should be strictly observed.

### Appropriate Use

The data contained in the report should be retrieved from Canvas only when necessary by authorized staff or administrators. The data should not be used to evaluate student performance or reported to others.

### Students Not Anonymized

Student identities cannot be anonymized in the Final Grades Report because it provides the final calculated scores of individual students.

## Instructor Presence Report

The Instructor Presence Report provides indicators of the instructor’s involvement in the course and their responsiveness to students.

All users enrolled as “Teacher” for the selected course are included in this report. While TAs have the same rights in Canvas as teachers, they are not included.

Instructor presence is indicated by these general criteria:

* Teacher activity in the course discussions using these metrics:
  + number of announcements
  + number of discussion posts
  + date of the most recent discussion post
  + mean number of text characters in all posts.
* Timely grading of assignments using these metrics\*:
  + percentage of assignments graded on-time
  + percentage of assignments graded late
  + percentage of assignments overdue for grading (>7 days).
* The quantity of assignment feedback given to students using these metrics\*:
  + number of assignments returned with written feedback:
  + mean number of characters in the written feedback.

\* If the instructor opted to give audio or video feedback, or give feedback outside the Canvas SpeedGrader, these results will not reflect that.

### Appropriate Use

The data contained in the report should not be used as the sole basis for personnel decisions. All indications of poor performance by an instructor should be investigated by the instructor’s mentor teacher, the Program Coordinator/Assistant Director or other qualified administrator.

### Class Size

The number of students enrolled in the course is included in this report (*Enrolled* column) to gauge the instructor’s efforts relative to the class size.

### No Student Data

No student personally identifiable information is included in the Instructor Presence Report because it reports only the behaviors of users enrolled as *teacher*.

## Zero Participation Report

This report lists all students who have **not submitted** a deliverable for any of the assignments that are due within the reporting period. The SPS Registrar’s Office uses this report to identify students who **may be** subject to administrative withdrawal due to their non-participation in the course.

Page views and ungraded interactions in the course are *not counted as participation*. For example, a student who *viewed* all the Module 1 pages and assignments, completed a self-assessment quiz and posted to an ungraded “Introduce Yourself” discussion, but had not submitted any deliverables for the graded assignment(s) due during the reporting period will be identified as non-participating student.

The report will include false positives (zero participation) for students in courses when there are *either*:

* Assignments with due dates but none are due within the reporting period or to-date
* Assignments with no due dates

In both cases, the script cannot identify any assignments as indicators of missing work. For these courses, there will be a value of zero [ 0 ] in the “Assignments Due” column of the report and *all enrolled students* will be listed as subject to administrative withdrawal.

Assignments that are given a score of zero [ 0 ] by the instructor will be counted as missing. This assumes an instructor would only give a zero for missing work (as opposed to a low, but non-zero, score for poor quality work). Where no score has been entered in the gradebook, the script checks the assignment’s “unsubmitted,“ “missing,” and “graded\_state” properties to determine its status.

### Appropriate Use

The data contained in the report should not be used as the sole basis for an administrative withdrawal. A list of students who appear to be non-participating in a course is sent to the instructor and Program Coordinator/Assistant Director. Each student should be contacted to confirm their intent to withdraw or remain in the course.

### Reporting Period

When the report is run for the Registrar’s Office, a reporting period is required. Typically, the date range is the first day of the quarter to the end of Week 2 (the second Sunday). The report can be run without a reporting period, in which case the results are “to date.”

### Students Not Anonymized

Student identities cannot be anonymized in the Zero Participation Report because its purpose is to identify individual students.

# At-risk Student Report Columns

| Column | RP[[1]](#footnote-1) | Description | Notes |
| --- | --- | --- | --- |
| User ID |  | User’s Canvas ID |  |
| Login ID |  | User’s NetID |  |
| Sortable Name |  | User’s last name, first name |  |
| Email |  | User’s Canvas email address | Click the address to open a new email. |
| Total Hours Active | No | Total time the course has been open in a browser with the user logged in | Large values are not likely to be significant, but smaller values may indicate a lack of participation |
| Last Activity | Yes | Date user was last active in the course |  |
| Home Page Views | No | Count of times the home page was loaded | A more reliable indicator of participation than Total Hours Active |
| Total Page Views | No | Count of times all course pages were loaded | A more reliable indicator of participation than Total Hours Active |
| Submitted / Due | Yes | Count of due assignments completed by user / Count of all assignments due |  |
| Late Assignments | Yes | Count of completed assignments submitted after the due date/time |  |
| Max. Days Late | Yes | Greatest number of days that any one assignment was late before it was submitted. |  |
| Missing Assignments | Yes | Count of assignments that are overdue. |  |
| Max. Day Missing | Yes | Greatest number of days that any one assignment is currently overdue. |  |
| Current Score | Yes | Indication of the student’s current score in the courses for all assignments to date. | No actual scores are reported. Results are either “Low” or “OK”. The threshold is 70.00%. |
| Discussion Posts | Yes | Count of original discussion posts by user / Count of all discussions due to date or during the reporting period | Fully and partially anonymous discussions are not evaluated because participants may not be identifiable. |
| Quarter |  | The current quarter |  |
| Section |  | The current section number |  |
| Short Course Code |  | The generic course code without quarter or section |  |
| Course Name |  | The course name |  |
| Full Course Code |  | The course code with quarter and section |  |
| Instructor Name |  | Names of instructor(s) | Administrators enrolled with an “NU…” Canvas login ID are excluded from the report. May contain more than one name. |
| Instructor Email |  | Email address(es) of instructor(s) | Click an address to open a new message in your email client. For multiple instructors, a semi-colon delimited list of email addresses may be pasted into an email To: field. |
| User Course Enrollment Page |  | URL for student’s Canvas course user page | Click the link to open. May be used to verify report results for each user. |

# Course Resource Access Report Columns

|  |  |  |
| --- | --- | --- |
| Column | Description | Notes |
| User ID | User’s Canvas ID | Omitted if students are anonymized |
| Login ID | User’s login/NetID | Omitted if students are anonymized |
| Sortable Name | User’s name as last name, first name | Omitted if students are anonymized |
| Name | User’s name as first name last name | Student pseudonyms if students are anonymized, all other roles (teacher, TA) will show real names |
| Role | User’s role in the course |  |
| Total Hours Active | Total time the course has been open in a browser with the user logged in | Large values are not likely to be significant, but smaller values may indicate a lack of participation |
| Asset Title | Display name of resource |  |
| Views | Count of views for this resource |  |
| Participations | Count of user interactions with resource | May not reflect the most recent participations |
| First Access | Date of first access of this resource |  |
| Last Access | Date of most recent access of resource |  |
| Action | Type of user interaction(s) with resource |  |
| Asset Code | Unique asset identifier |  |
| Asset Group Code | Identifier of the asset group within course |  |
| Quarter | The current quarter |  |
| Section | Course section number |  |
| Short Course Code | Generic course code without quarter or section |  |
| Course Name | The course name |  |
| Full Course Code | Course code with quarter and section |  |
| Canvas Course ID | Unique Canvas course identifier |  |
| SIS Course ID | CAESAR course ID |  |
| Canvas Term ID | Unique Canvas quarter/term identifier |  |
| Asset Category | General name of asset category |  |
| Asset Class | Asset’s use within its category |  |

# Final Grades Report Columns

| Column | Description | Notes |
| --- | --- | --- |
| User ID | User’s Canvas ID |  |
| Login ID | User’s NetID |  |
| Sortable Name | User’s last name, first name |  |
| Final Score | User’s calculated final course score |  |
| Final Grade | User’s calculated final course letter grade | A course grading scheme must be activated for letter grades to be reported, otherwise this column will be blank. |
| Quarter | The current quarter |  |
| Section | The current section number |  |
| Short Course Code | The generic course code without quarter or section |  |
| Course Name | The course name |  |
| Student Grade Page | URL for student’s Canvas course grade detail page | Click the link to open. May be used to verify report results for each user. |

# Instructor Presence Report Columns

| Column | RP[[2]](#footnote-2) | Description | Notes |
| --- | --- | --- | --- |
| User ID |  | User’s Canvas ID |  |
| Login ID |  | User’s login/NetID |  |
| Sortable Name |  | User’s name as last name, first name |  |
| Email |  | User’s Canvas email address | Click the address to open a new message in your email client. |
| Total Hours Active | No | Total time the course has been open in a browser | Large values are not likely to be significant, but smaller values may indicate a lack of participation |
| Last Activity | Yes | Date user was last active in the course |  |
| Home Page Views | No | Count of times the home page was loaded | A more reliable indicator of participation than Total Hours Active |
| Total Page Views | No | Count of times all course pages were loaded | A more reliable indicator of participation than Total Hours Active |
| Announcements | No | Count of instructor announcements | Only posted announcements are counted |
| Discussion Posts | Yes | Count of original discussion posts by instructor | Fully and partially anonymous discussions are not evaluated because participants may not be identifiable. |
| Last Post Date | Yes | Date of last discussion post by instructor |  |
| Mean Post Chars | Yes | Mean number of characters in instructor’s discussion posts | This may be an indicator of the quality of the instructor’s posts, but those should be reviewed personally by a qualified staff member. |
| Graded On-time % | Yes | Percentage of student deliverables **graded within** seven days of assignment due date or receipt, if late. | Percentages may not add to 100% while the course is running. |
| Graded Late % | Yes | Percentage of student deliverables **graded** **after** seven days of assignment due date or receipt, if late. | Grades are not late if deliverables submitted within the last seven days. Percentages may not add to 100% while the course is running. |
| Grades Overdue % | Yes | Percentage of student deliverables currently **not graded after** seven days of assignment due date or receipt, if late. | Grades are not missing if deliverables submitted within the last seven days. Percentages may not add to 100% while the course is running. |
| Assignment Feedback | Yes | Count of graded deliverables with instructor feedback |  |
| Mean Feedback Chars | Yes | Mean number of characters in instructor feedback | This may be an indicator of the quality of the instructor’s feedback, but those should be reviewed personally by a qualified staff member. |
| Enrollment |  | Total number of students enrolled in this course section | Use this number to gauge the instructor’s workload relative to the number of students. |
| Quarter |  | The current quarter |  |
| Section |  | The current section number |  |
| Short Course Code |  | The generic course code without quarter or section |  |
| Course Name |  | The course name |  |
| Full Course Code |  | The course code with quarter and section |  |
| Instructor Course Enrollment Page |  | URL for the instructor’s course user page | Click the link to open. May be used to verify report results for this user. |

# Zero Participation Report Columns

|  |  |  |  |
| --- | --- | --- | --- |
| Column | RP | Description | Notes |
| User ID |  | User’s Canvas ID |  |
| Login ID |  | User’s NetID |  |
| Sortable Name |  | User’s last name, first name |  |
| Email |  | User’s Canvas email address |  |
| Quarter |  | The current quarter |  |
| Section |  | The current section number |  |
| Short Course Code |  | The generic course code without quarter or section |  |
| Course Name |  | The course name |  |
| Full Course Code |  | The course code with quarter and section |  |
| Canvas Course ID |  | Canvas course identifier |  |
| SIS Course ID |  | CAESAR course ID |  |
| Canvas Term ID |  | Canvas quarter/term identifier |  |
| Assignments Due | Yes | Total assignments due in reporting period/to date | False positives will result if no (zero) assignments are due within the reporting period or to date ***or*** the assignments have no due date. |
| Instructor Name |  | Name(s) of instructor(s) | Administrators enrolled with an “NU…” Canvas login ID are excluded from the report. May contain more than one name. |
| Instructor Email |  | Email address(es) of instructor(s) | Click an address to open a new message in your email client. For multiple instructors, a semi-colon delimited list of email addresses may be copied and pasted into an email To: field. |
| Student Course Enrollment Page |  | URL for student’s course user page | Click the link to open. May be used to verify report results for each user. |
| Name |  | Student’s Canvas display name | Used to generate a comma-delimited list of all non-participating students in a section |

1. 1 *Yes* indicates results may be limited to a reporting period, if one was specified. *No* indicates results are always to “to-date.” See the [Reporting Period](#_Reporting_Period) section above. [↑](#footnote-ref-1)
2. *Yes* indicates results may be limited to a reporting period, if one was specified. *No* indicates results are always to “to-date.” See the [Reporting Period](#_Reporting_Period) section above. [↑](#footnote-ref-2)