**Province of British Columbia
Ministry of Education and Child Care**

Transcripts and Assessments

TRAX Data Transfer Specifications

As of February 2025

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1.0   SUMMARY OF CHANGES

- 6.4 XAM Record Layout updated with MINCODE_EXAM field and corresponding offsets and record size
- Further clarification on when CRS data is updated using REPLACE or APPEND mode

2.0   OVERVIEW

The TRAX system requires the three file formats for communication with schools' student information systems:

DEM   Demographic data for students

XAM   Any transaction dealing with a Graduation Assessment record to support registration of students for Numeracy and Literacy assessments.

The same file format is used by the Ministry to make assessment results available to the schools once released for an assessment session.

CRS   Any transaction dealing with a course taken by a student. This includes initial registration, interim and final percentages, and interim and final letter grades.

3.0 SCHEDULED DATA TRANSFERS

The "Upload TRAX Data Files" function on the School Secure Web is open for schools to transfer data electronically to the Ministry from early October through mid-July.

NOTE: Beyond the core times listed below, schools are encouraged to upload TRAX files monthly where possible. This keeps transcript records up to date for students who complete courses outside standard timetables and supports students' applications to post-secondary institutions.

Name of Transfer	Approx. Date	Direction	Files
First Data Submission	Oct/Nov	School to Ministry	DEM, XAM, CRS
November Assessment Records	Jan	Ministry to School	XAM
January Assessment Records	Mar	Ministry to School	XAM
April Assessment Records	Jun	Ministry to School	XAM
June/Final Submission of Grades	June/July	School to Ministry	DEM, XAM, CRS
June Assessment Records	July	Ministry to School	XAM

4.0   DATA SUBMISSIONS TO THE MINISTRY

4.1   Data Format

The file names used must be formed as follows:

Student demographic data	<school code>.DEM
Graduation Assessment records	<school code>.XAM
Non-provincially examinable courses	<school code>.CRS

<School code> refers to the school's eight-digit ministry facility code (e.g., 00101001.DEM).

4.2   Data Transfers

Schools send their TRAX data files using the **"**Upload TRAX Data Files (DEM, XAM and CRS)**"** function on the School Secure Web. For processing of student data for transcripts, all three files (DEM, XAM and CRS) must be uploaded.

5.0   DEM File – Student Demographic Data

5.1   Demographic Overview

The First Data Submission is used to add new students and update students already on the TRAX database. Subsequent Demographic files are used to update existing data. If the Ministry receives a "terminated" Demographic record, and the student is not re-activated by another school (or the same school), reports available to the schools on the School Secure Web will not include that student.

EVERY transfer should contain 1 record for each:

- Grade 10, 11 & 12 student on the 2023 Graduation Program (2023 GRAD_REQT_YEAR)

- Grade AN or Grade AD student registered in the Adult Graduation Program (1950 GRAD_REQT_YEAR), or

- student who is on a School Completion Certificate Program (SCCP), which does not lead to graduation but provides a School Completion Certificate, or

- **student who previously graduated on a BC graduation program and is returning to upgrade (i.e., GRAD_REQT_YEAR should be the original program at graduation).**

No other demographic records should be sent. The student's name should correspond to the LEGAL names as reported to the Ministry for the student's Personal Education Number (PEN). All student records must include the student's PEN. It is expected that the data sent by the schools is a COMPLETE SNAPSHOT of the student's demographic data.

After the initial upload in October, if a student withdraws, omitting the student's demographic record will not remove the student from any school reports. Instead, schools must wait until after January 1st and send the student's demographic record with a "T" for Terminated in the Status field. Once the demographic record with the termination status has been sent after January 1st, the student's DEM file does not need to be sent again in the school's the next data transfer.

TRAX cannot retain or accept a "T" status in the Oct-Dec collection period via upload.

5.2 DEM Record Layout

Item	Type	Size	Offset
TX_ID	CHARACTER	3	0
VENDOR_ID	CHARACTER	1	3
VERI_FLAG	CHARACTER	1	4
FILLER1	CHARACTER	5	5
MINCODE	CHARACTER	8	10
STUD_LOCAL_ID	CHARACTER	12	18
STUD_NO (PEN)	CHARACTER	10	30
FILLER2	CHARACTER	9	40
STUD_SURNAME	CHARACTER	25	49
STUD_GIVEN	CHARACTER	25	74
STUD_MIDDLE	CHARACTER	25	99
ADDRESS1	CHARACTER	40	124
ADDRESS2	CHARACTER	40	164
CITY	CHARACTER	30	204
PROV_CODE	CHARACTER	2	234
CNTRY_CODE	CHARACTER	3	236
POSTAL	CHARACTER	7	239
BIRTHDATE	CHARACTER	8	246
STUD_SEX	CHARACTER	1	254
STUD_CITIZ	CHARACTER	1	255
STUD_GRADE	CHARACTER	2	256
PRGM_CODE1	CHARACTER	4	258
PRGM_CODE2	CHARACTER	4	262
PRGM_CODE3	CHARACTER	4	266
PRGM_CODE4	CHARACTER	4	270
PRGM_CODE5	CHARACTER	4	274
FILLER3	CHARACTER	5	278
PROGRAM_CADRE_FLAG	CHARACTER	1	283
STUD_STATUS	CHARACTER	1	284
GRAD_REQT_YEAR	CHARACTER	4	285
SCCP_COMPLETION_DATE	CHARACTER	8	289

Record Size: 297 Bytes

5.3   DEM Record Details

Field	Sample	Comments
TX_ID	E02	This is a constant.
FILLER1		Blanks
VENDOR_ID	3	Vendor Code to be supplied by the Ministry.
VERI_FLAG	Blank	Blank. This flag will be set to Y if file is run through TRAX verification software.
MINCODE	06262013	School Facility Code. Always 8 digits.
STUD_LOCAL_ID	000000012345	Student ID in the School Admin. computer system. Ministry will not alter this field - if you want it right-justified, then do it before sending it to us.
STUD_NO	900001234	Ministry Student ID (PEN). The 10th position is currently left blank. The 1st 9 digits must pass the mod-10 check digit routine.
FILLER2		Blanks
STUD_SURNAME	JOHNSON	1st character must be alpha. Must be legal name as reported for the student's PEN.
STUD_GIVEN	PATRICK	See previous field.
STUD_MIDDLE	JOHN L	No edits; otherwise, see previous field.
ADDRESS1	APARTMENT 201	At least one of ADDRESS1 or ADDRESS2 must be non-blank.
ADDRESS2	1234 BROAD STREET	

Field	Sample	Comments
CITY	VICTORIA	Must be non-blank.
PROV_CODE	BC	Standard 2-alpha character provincial/state codes. These are listed in the phone book.
CNTRY_CODE	CN	Two-character country code (table available on request). Blank defaults to CN for Canada.
POSTAL	V8N1L6 or 12345 or 1234567	Left-justified, no imbedded blanks for Canadian Postal code.
BIRTHDATE	20050316	YYYYMMDD format
STUD_SEX	M	M or F
STUD_CITIZ	C	Must be C or O. C stands for Canadian citizen or Permanent Resident. O = Other
STUD_GRADE	12	8,9,10,11,12, AD, AN, HS (as below): AD - Adult Graduation Program and expect to graduate in the current school year. AN - Adult Graduation Program and do not expect to graduate in the current school year. HS - Home Schooled
PRGM_CODE1	XYZZ	4 alpha characters or blank.
PRGM_CODE2	XYZZ	4 alpha characters or blank. Shouldn't have a value if PRGM_CODE1 doesn't have a value.
PRGM_CODE3	XYZZ	See previous field.
PRGM_CODE4	XYZZ	See previous field.

Field	Sample	Comments
PRGM_CODE5	XYZZ	See previous field.
FILLER3		Leave blank
PROGRAM_CADRE_FLAG	Y	Y if student registered in Program Cadre. Otherwise, blank.
STUD_STATUS	A	A=Active T=Terminated (Withdrawn) D=Deceased
GRAD_REQT_YEAR	2023	2023 – Student is completing graduation requirements that came into force as of July 1, 2023. 1950 – Student is at least 18 years old and completing the graduation requirements of the Adult Graduation Program. STUD_GRADE must be "AD" or "AN" if GRAD_REQT_YEAR=1950 (Adult). 2018 - Student previously graduated on the 2018 Grad Program and is returning to upgrade. 2004 – Student previously graduated on the 2004 Grad Program and is returning to upgrade. 1996 – Student previously graduated on the 1995 Grad Program and is returning to upgrade. SCCP – Student is on a School Completion Certificate Program (does not lead to graduation).

Field	Sample	Comments
SCCP_COMPLETION_DATE	20210630	Format YYYYMMDD or blank. Must be provided by the school so the Ministry can issue a School Completion Certificate (SCC) for a student who has met their educational program goals. Note: The GRAD_REQT_YEAR must also be "SCCP".

6.0   XAM file – Graduation Assessment Records

6.1   Overview

If the student has been selected for the DEM file, then select the **Numeracy and Literacy Assessment registration** records scheduled for the student in the current school year.

NOTE: This file no longer includes provincially examinable courses, as they are not applicable to any current graduation program. Reporting errors in school percentages for past courses with provincial exams must be completed using a TRAX Change Form (available on the School Secure Web).

Adult Graduation Program (GRAD_REQT_YEAR = 1950): Graduation Assessments are NOT required for students on this program. Only include assessment registrations for Adult Grad Program students who opt to write them in the current school year. **Even if no Adult students opt to write assessments, a XAM file must still be submitted (content blank) to enable processing of the other TRAX data files.**

2023 Graduation Program (GRAD_REQT_YEAR = 2023). Graduation Assessments are required for students on this program and must be reported using applicable assessment codes (in parenthesis):

- **Grade 10 Literacy Assessment (LTE10)**
- **Évaluation de littératie de la 10e année – Français langue première (LTP10)**

- **Grade 10 Numeracy Assessment (NME10)**
- **Évaluation de numératie 10 (NMF10)**

- **Grade 12 Literacy Assessment (LTE12)**
- **Évaluation de littératie de la 12e année – Français langue première (LTP12)**
- **Évaluation de littératie de la 12e année – Français langue seconde-immersion (LTF12)**

For all assessments, the CRSE_CODE includes the grade level so the CRSE_LEVEL field should be blank. The NUM_CREDITS field should also be blank.

The session date (CRSE_YEAR plus CRSE_MONTH) on each XAM record must reflect a date when the assessment is offered in the current school year's Graduation Assessment Schedule. This will allow the Ministry to pick out the student's registration for a particular assessment session in the data transfer of each record. The vendor must provide a mechanism for the school to convert their internal "Course End" date to a "Session Date" as defined by the Ministry. Ministry session dates consist of a 4-digit year plus the 2-digit month. The Ministry currently offers graduation assessments (but not for all the assessments) in November, January, April, and June (**CRSE_MONTH = 11, 01, 04, or 06**).

6.2   XAM File – Assessment Data by Session

Schools can register students for all assessment sessions at the start of the school year, if they wish, in their first TRAX data submission.

6.3   Ministry-provided XAM Data File

The Ministry makes assessment results available to schools after each assessment session (if the school had students writing assessments in that session). **The XAM file contains the assessment proficiency score (at Final Percent offset).** It is the responsibility of the school to update their system with any or all the data items provided in the file.

6.4   XAM Record Layout

Item	Type	Size	Offset
TX_ID	CHARACTER	3	0
VENDOR_ID	CHARACTER	1	3
VERI_FLAG	CHARACTER	1	4
FILLER1	CHARACTER	5	5
MINCODE	CHARACTER	8	10
STUD_LOCAL_ID	CHARACTER	12	18
STUD_NO (PEN)	CHARACTER	10	30
CRSE_CODE	CHARACTER	5	40
CRSE_LEVEL	CHARACTER	3	45
CRSE_YEAR	CHARACTER	4	48
CRSE_MONTH	CHARACTER	2	52
INTERIM_LETTER_GRADE	CHARACTER	2	54
INTERIM_SCHOOL_PERCENT	CHARACTER	3	56
FINAL_SCHOOL_PERCENT	CHARACTER	3	59
EXAM_PERCENT	CHARACTER	3	62
FINAL_PERCENT	CHARACTER	3	65
FINAL_LETTER_GRADE	CHARACTER	2	68
E-EXAM FLAG (previously EXAM_TYPE_FLAG)	CHARACTER	1	70
PROV_SPEC_CASE	CHARACTER	1	71
LOCAL_CRSE_ID	CHARACTER	20	72
CRSE_STATUS	CHARACTER	1	92
STUD_SURNAME	CHARACTER	25	93
NUM_CREDITS	CHARACTER	2	118
CRSE_TYPE	CHARACTER	1	120
TO_WRITE_FLAG	CHARACTER	1	121
MINCODE_ASSMT	CHARACTER	8	122

Record Size: 130 Bytes

6.5   XAM record details (Assessments)

Field	Sample	Comments
TX_ID	E06	Use E06 for transactions sent to the Ministry. The Ministry will use E07 for transactions sent to the school.
VENDOR_ID	W	Vendor Code
VERI_FLAG	*Blank*	This flag will be set to Y if file is later run through TRAX verification software.
FILLER1		Blanks
MINCODE	06262013	School Facility Code Always 8 digits.
STUD_LOCAL_ID	000000012345	Student ID in the school's student information system. Ministry will not alter this field.
STUD_NO	900001234	Ministry Student ID (i.e., PEN). The 10th position is left blank. The first 9 digits must pass the mod-10 check digit routine.
CRSE_CODE	LTE10	Must be left-justified. Incudes full code (Assessment Name and Grade Level)
CRSE_LEVEL	*Blank*	**Leave blank**
CRSE_YEAR	2021	The Year portion of the Ministry set assessment session date.
CRSE_MONTH	01	The Month portion of the Ministry set assessment session date. Currently, the only months allowed are 11, 01, 04, 06.
INTERIM_LETTER_GRADE	*Blank*	**Leave blank**
INTERIM_SCHOOL_PERCENT	*Blank*	**Leave blank**
FINAL_SCHOOL_PERCENT	*Blank*	**Leave blank**

Field	Sample	Comments
FINAL_PERCENT	**001 — 004**	This data originates with the Ministry. If the assessment is completed, the school can store this proficiency score in their system.
FINAL_LETTER_GRADE	*Blank*	**Leave blank**
E_EXAM_FLAG	Y	Y = Student will complete the assessment electronically (Y is the only accepted value)
PROV_SPEC_CASE	E	Blank = no special case.
		E = Exemption for assessment (Ministry applied only, value inputs from schools are not accepted by TRAX).
		R=Rewrite (N/A: Legacy value related to provincial exams)
		D=Deferral (N/A: Legacy value related to provincial exams)
LOCAL_CRSE_ID		These 20 bytes can be used in whatever way is required by the school to identify the course on their system.
		The ministry will return this data unchanged so that the assessment proficiency score or special case can be put onto the student's record locally.
CRSE_STATUS	A	A=Active, W=Withdrawn
		If the assessment is for a FUTURE session, then a "W" indicates that the student has withdrawn. Note: Once an assessment session has passed, the Ministry will not process any data sent by schools for assessments in that session.
STUD_SURNAME	JONES	Used to ensure that the STUD_NO on the record is for the correct student.
NUM_CREDITS	*Blank*	**Leave blank**
CRSE_TYPE	*Blank*	**Leave blank**

Field	Sample	Comments
TO_WRITE_FLAG	*Blank*	**N/A**

7.0   CRS File - Non-provincially Examinable Courses

7.1   Courses Overview

Since provincial exams associated with courses are no longer offered, the CRS file will include all courses currently available for schools to report.

To simplify the extraction process, all extracts can use identical criteria, as follows:

- ONLY select Grade 10, 11 and 12 courses for students currently registered in Grades 10, 11, 12, or Grades AD or AN in the Adult Graduation Program. *

- For the courses selected, send final marks for all completed Grade 10, 11 and Grade 12 courses.

- For these same students, also send courses that the student is CURRENTLY taking or WILL take this school year. For the April data transfer, if available, send interim marks for Grade 10, 11 and 12 courses being completed in June of the current year.

*NOTE: Grade 10 courses are not required for students completing the Adult Graduation Program (GRAD_REQT_YEAR = 1950) but will appear on the student's official transcript if sent to TRAX.

The session dates on the CRS records can be ANY month of the year.

7.2   Replace or Append Course Status

TRAX defaults schools to REPLACE all school-reported, grades 10-12 course data for a not-yet graduated student that is stored in the TRAX database with each data transfer. This means the current school of record is responsible for working with students (and any schools in which they may be cross-enrolled or were previously enrolled) to obtain a complete record of their Grade 10, 11 and 12 non-provincially examinable course data.

Grades 10-12 course data submissions for graduated students are set to APPEND mode. And, in rare exceptions, a school can be set to APPEND course data. However, exceptions will only be made in select cases where regularly securing complete student records may present an unreasonable challenge to the school (e.g., schools that regularly serve adult students who have been absent from the system for a long period). Requests must be made by email to TRAX.Support@gov.bc.ca, and a TRAX Support team member will review the benefits and challenges of APPEND status with the school.

7.3 CRS Record Layout

Item	Type	Size	Offset
TX_ID	CHARACTER	3	0
VENDOR_ID	CHARACTER	1	3
VERI_FLAG	CHARACTER	1	4
FILLER1	CHARACTER	5	5
MINCODE	CHARACTER	8	10
STUD_LOCAL_ID	CHARACTER	12	18
STUD_NO	CHARACTER	10	30
CRSE_CODE	CHARACTER	5	40
CRSE_LEVEL	CHARACTER	3	45
CRSE_YEAR	CHARACTER	4	48
CRSE_MONTH	CHARACTER	2	52
INTERIM_PERCENT	CHARACTER	3	54
INTERIM_LG	CHARACTER	2	57
FINAL_PERCENT	CHARACTER	3	59
FINAL_LG	CHARACTER	2	62
CRSE_STATUS	CHARACTER	1	64
STUD_SURNAME	CHARACTER	25	65
NUM_CREDITS	CHARACTER	2	90
RELATED_CRSE	CHARACTER	5	92
RELATED_LEVEL	CHARACTER	3	97
CRSE_DESC	CHARACTER	40	100
CRSE_TYPE	CHARACTER	1	140
CRSE_GRAD_REQT	CHARACTER	1	141

Record Size: 142 Bytes

7.4 CRS Record Details

Field	Sample	Comments
TX_ID	E08	Constant value.
VENDOR_ID	W	Vendor Code
VERI_FLAG	Blank	Blank. This flag will be set to Y if file is later run through TRAX verification software.
FILLER1		Blanks
MINCODE	06262013	School Facility Code. Always 8 digits.
STUD_LOCAL_ID	000000012345	Student ID in the school's student information system. Ministry will not alter this field.
STUD_NO	900001234	Ministry Student ID (i.e., PEN). The 10th position is left blank. The first 9 digits must pass the mod-10 check digit routine.
CRSE_CODE	CALC	Must be left-justified, and one of the courses listed as approved (Provincially authorized or locally developed). TRAX codes can be found in the Ministry's Course Registry.
CRSE_LEVEL	12	Left-justified.
CRSE_YEAR	2021	The year portion of the date the course session ends.
CRSE_MONTH	06	The month portion of the date the course session ends. Any month of the year is allowed.
INTERIM_PERCENT	e.g., 0, 80, 100, blank	The interim percent assigned for a completed course. The interim percent can range from 0 to 100.
INTERIM_LG	B	The interim letter grade assigned for an in-progress course.

Field	Sample	Comments
FINAL_PERCENT	e.g., 0, 80, 100, blank	The final percent assigned for a completed course. The final percent can range from 0 to 100. A blank or zero will be treated as a missing final percent.
FINAL_LG	A	The final letter grade assigned for a completed course.
CRSE_STATUS	A	A=Active, W=Withdrawn
STUD_SURNAME	JONES	Used to ensure that the STUD_NO on the record is for the correct student. Actual name changes must be submitted to the PEN system.
NUM_CREDITS	4	Edits for NUM_CREDITS are only required for course sessions >= 199509. Withdrawals should be reported with 0 credits. Note: The Ministry does not maintain the number of credits that make up a completed locally-developed course. Thus, the school can submit 1, 2, 3 or 4 credits for these courses.
RELATED_CRSE	CH	When combined with RELATED_LEVEL, must make up a valid course code/ level, or be blank.
		Must have a value if record is for an Independent Directed Study course, or else must be blank.
RELATED_LEVEL	11	When combined with RELATED_CRSE, must make up a valid course code/ level, or be blank.
CRSE_DESC	Modern Photography Technique	Custom description for a BAA/FNA, Locally Developed or other eligible course type that will appear on a student's transcript. The Ministry will default this field to the original course name if it is blank.

Field	Sample	Comments
CRSE_TYPE	E	Must be "E", "C", or blank.
		"E" indicates that the student received course credit via an equivalency review.
		"C" indicates challenge for course credit.
CRSE_GRAD_REQT	F	To indicate that a Grade 11 BAA/FNA course meets the Arts Education and/or Applied Design, Skills and Technologies Graduation Requirement. Acceptable values are:

"B" – Grade 11 BAA/FNA course meets the Arts Education and/or Applied Design, Skills and Technologies Graduation Requirement

"F" – legacy value, applicable to the 1996 Graduation Program only

"A" – legacy value, applicable to the 1996 Graduation Program only

Blank if not applicable.

8.0   MASTER TABLES

The TRAX system uses a number of tables to validate data elements and determine graduation status. On request, the ministry will provide a data extract which includes the following files:

File Name	Contents
COUNTRY.DAT	Two-character country codes
COURSES.DAT	All course codes **(no graduation assessment codes)** *
ERRORS.DAT	Errors which are checked during data loading
GRADCRSE.DAT	Grad requirements fulfilled by each course
GRADES.DAT	Letter Grades
GRADREQ.DAT	Grad requirements by graduation program
PROGRAMS.DAT	Career Preparation program codes
RESTRICT.DAT	Restricted course combinations
SESSIONS.DAT	Valid exam sessions **(past provincial exams – reference only)** *
TTCODES.TXT	File layouts for each of the above files

Of particular interest to vendors are the PROGRAMS, COUNTRY, and COURSES tables.

*Note: Graduation Assessment codes are provided in Section 6.1 of in this document. Assessment session dates for the current school year are included in the year's Graduation Assessment Schedule.

9.0   MINISTRY CONTACTS

If you have any questions about these specifications or about certification, please contact:

> TRAX System Coordinator
> email: trax.support@gov.bc.ca

Questions about 1701 data transfers should be referred to:

> Manager, Data Management
> email: data.management@gov.bc.ca

Questions about student demographic (DEM) errors should be referred to:

> Ministry PEN Coordinator
> email: pens.coordinator@gov.bc.ca