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SCED Overview

What is SCED?
School Courses for the Exchange of Data (SCED) is a voluntary, common classification system for prior-to-secondary and secondary school courses. It can be used to compare course information, maintain longitudinal data about student coursework, and efficiently exchange coursetaking records. SCED is based on a five-digit Course Code that provides a basic structure for classifying course content. Additional SCED elements and attributes provide descriptive information about each course.

SCED is a free resource intended for federal, state, and local education agencies. It is updated and maintained by a National Forum on Education Statistics (Forum) Working Group composed of federal and state and local education agency (SEA and LEA) representatives. The Working Group receives suggestions and assistance from a wide network of subject matter experts at the national, state, and local levels. As a result, SCED is designed to be flexible enough that education agencies can modify it to meet their needs.

Information on SCED, including an introductory video, is available at https://nces.ed.gov/forum/sced.asp.

What are the benefits of using SCED codes?
There are many benefits to using SCED codes:

- The SCED coding structure can be widely shared and easily understood.
- The SCED coding structure is flexible and can accommodate diverse course offerings and curricula.
- SCED can streamline data reporting processes and promote the collection of useful, high-quality data.
- SCED provides a structured method for transferring course information as students relocate or advance from one education setting to the next.
- SCED is free.


Is there a fee for SCED use?
No. There is no licensing fee for SCED.

What are the parts of the SCED Identifier?
The SCED Identifier consists of four elements: Course Code, Course Level, Available Carnegie Unit Credit (or Grade Span for prior-to-secondary courses), and Sequence of Course. These elements are described in detail in Chapter 2 of the Forum Guide to School Courses for the Exchange of Data (SCED) Classification System, available at https://nces.ed.gov/forum/pub_2014802.asp, and in the video School Courses for the Exchange of Data (SCED): An Introduction, available at https://nces.ed.gov/forum/sced.asp.

What is the SCED review process?
The Forum established a working group that regularly reviews and updates SCED based on the needs of SCED users. To remain relevant, SCED must reflect up-to-date course offerings, and updates must be implemented in a manner that maintains the structure and integrity of the established SCED. The review process includes the following major milestones:

1. Recommendations. SCED users are encouraged to submit recommendations for improvement through the Forum website at https://nces.ed.gov/forum. Updates are based on the recommendations of a wide network of stakeholders, including national organizations, representatives of SEAs and LEAs, education researchers, practitioners, and other SCED users.
2. **Review.** The Forum SCED Working Group considers recommendations and suggestions submitted by SCED users and determines the scope of each update. After identifying a set of priorities, the Working Group contacts subject matter experts in SEAs and LEAs to review and comment on proposed updates as applicable. The Working Group may choose to expand the review process to include focus groups or feedback from national subject area content organizations.

3. **Publication.** Updated SCED codes and attributes are reviewed by the National Center for Education Statistics (NCES) and subsequently released on the Forum’s website.


**Can an SEA or LEA create or request new SCED codes?**

Yes. SEAs that have implemented SCED often have systems in place for adding SCED codes at the state level, and LEAs that need new codes should first check with the SEA. Recommendations for SCED updates can be submitted through the Forum website at [https://nces.ed.gov/forum](https://nces.ed.gov/forum). Recommendations should provide as much information as possible, including the course title, course description, and other relevant information.

**Using SCED Elements and Attributes**

**What are SCED elements?**

SCED elements are data elements. A data element is an atomic unit of data that has precise meaning or precise semantics that can be defined and measured. SCED elements are the building blocks that, together, create the 12-character SCED Identifier: Course Code, Course Level, Available Carnegie Unit Credit (or Grade Span for prior-to-secondary courses), and Sequence of Course. These elements, presented in figure 1, are described in detail in chapter 2 of the *Forum Guide to School Courses for the Exchange of Data (SCED) Classification System*, available at [https://nces.ed.gov/forum/pub_2014802.asp](https://nces.ed.gov/forum/pub_2014802.asp), and in the video *School Courses for the Exchange of Data (SCED): Course Coding*, available at [https://nces.ed.gov/forum/sced.asp](https://nces.ed.gov/forum/sced.asp).

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**Figure 1.** The 12-character SCED Identifier includes the five-digit SCED Course Code (SCED Course Subject Area and Course Number), followed by the SCED Course Level, Available Carnegie Unit Credit (or SCED Grade Span for prior-to-secondary courses), and SCED Sequence of Course.
What are attributes? Are they required?

Attributes are optional elements that can be appended to the 12-character SCED Identifier to provide a more robust description of courses. Attributes are not required for SCED implementation, but they provide expanded information that schools and states may need for scheduling, funding, and reporting purposes. It is always important to check with the SEA regarding attributes used in state coding practices. For more information on attributes, including definitions, option sets, and usage notes, please refer to pages 17-21 of the Forum Guide to School Courses for the Exchange of Data (SCED) Classification System, available at https://nces.ed.gov/forum/pub_2014802.asp. Attributes also are listed in SCED downloadable files, which are available at https://nces.ed.gov/forum/sced.asp.

How does SCED define a high school credit?

SCED defines high school credits using Available Carnegie Units. The Carnegie Unit remains the predominant metric of student progress in schools in the United States and, as such, is part of the SCED Framework. Generally, a course meeting every day for one period of the school day over the span of a school year offers one Carnegie Unit. Schools, LEAs, and SEAs that use other student progress metrics instead of seat time often find it useful to create a system for mapping these metrics to Carnegie Units. Additional information on using the Available Carnegie Unit Credit element can be found in chapter 2 of the Forum Guide to School Courses for the Exchange of Data (SCED) Classification System, available at https://nces.ed.gov/forum/pub_2014802.asp.

How should a series of courses that occurs over multiple semesters or years be coded when there is only one appropriate SCED code (for example, multiple semesters of Carpentry)?

The last element in the 12-character SCED Identifier, SCED Sequence of Course, can be used to indicate where a specific course lies in a consecutive sequence of courses. The first digit indicates the order of the specific course, while the second digit designates the total number of courses in the sequence. This element should be interpreted as part “n” of “m” parts. For example, if a school offers a total of three semesters of Carpentry, the first semester would be indicated in the SCED Sequence of Course element as “13,” the second semester would be indicated as “23,” and the third semester as “33.”

SCED Sequence of Course indicates only the order in which a series of courses are taken, not the length of the course or the amount of credit available to a course taker. To accurately indicate the amount of credit available for each course within the sequence, SCED Sequence of Course always must be aligned with Available Carnegie Unit Credit.

Additional information on using the SCED Sequence of Course element can be found in chapter 2 of the Forum Guide to School Courses for the Exchange of Data (SCED) Classification System, available at https://nces.ed.gov/forum/pub_2014802.asp. SCED Sequence of Course coding examples are provided on pages 15-16.

For prior-to-secondary courses, is the SCED Grade Span element based on course content or the grade levels of the students in the course?

SCED course descriptions focus on the course, not expectations for the students or their achievements. The SCED Grade Span element refers to the intended grade span of a course, not the grade levels of the students in the course. SCED Grade Span is represented as a four-character code with no decimals. Each grade level from 1 through 12 is represented by a two-digit code, ranging from 01 to 12; kindergarten is represented by the letters KG, and prekindergarten by the letters PK. For example, a course appropriate for kindergarten and first grade would be assigned a grade span of KG01. A course appropriate for grades 6 through 7 would be assigned a grade span of 0607.

How should middle school courses be coded?

Non-credit-bearing courses should be coded using the SCED Grade Span element, which indicates the grade span for which the course is appropriate. SCED Grade Span is represented as a four-character code with no decimals. For example, a drama course appropriate for grades 6 through 7 would be assigned a grade span of 0607.

SCED Frequently Asked Questions
Credit-bearing courses should be coded using the Available Carnegie Unit Credit element. Available Carnegie Unit Credit is coded as a one-digit number carried out to two decimal places, with an explicit decimal. For example, a middle school Algebra I course that offers one credit would be assigned a Carnegie Unit Credit of 1.00.

The attribute Course Applicable Education Level also can be added to the SCED Identifier to provide more information. It indicates the education level, grade level, or primary instructional level at which a course is intended.

Additional information on using the Available Carnegie Unit Credit or SCED Grade Span elements can be found in chapter 2 of the Forum Guide to School Courses for the Exchange of Data (SCED) Classification System, available at https://nces.ed.gov/forum/pub_2014802.asp.

How should online, virtual, or combined virtual/in-person courses be mapped to SCED codes?

SCED course descriptions focus on content and avoid specifying delivery methods or location, so SCED offers optional attributes that can be added to the 12-character SCED Identifier to provide a more robust description of courses. The attribute Course Section Instructional Delivery Mode can be used to indicate the method of delivery. It includes the options “Broadcast,” “Correspondence,” “Early College,” “Interactive Audio/Video,” “Online,” “Independent Study,” “Face to Face,” and “Blended Learning.”

Additional information on integrating virtual education course and course section data into existing data systems can be found in chapter 3, pages 26-27, of the Forum Guide to Elementary/Secondary Virtual Education Data, available at https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=NFES2016095.

How are dual enrollment courses coded in SCED?

SCED course descriptions focus on content, and all courses, including dual enrollment courses, should be assigned a SCED code based on the content of the course. The SCED Course Level element should be used to indicate the course’s level of rigor. There are six options for coding this element. Postsecondary courses—courses that are designed to be credit bearing at a postsecondary institution—should be coded as “C,” for college. The attribute Additional Credit Type or an SEA- or LEA-defined attribute also can be used to indicate whether a course is dual credit. Some states direct LEAs to assign course levels in accordance with state requirements.

Is there a crosswalk of teacher endorsements for each of the SCED codes?

Teacher endorsements vary from state to state. Some SEAs that use SCED have mapped SCED codes to teacher endorsements, but the decision about whether to create a map is made by the SEA. SCED users should contact their SEA for information on SCED and teacher endorsements.

Can a single SCED course be linked to multiple teacher endorsements?

Teacher endorsements vary from state to state. Some SEAs that use SCED have mapped SCED codes to teacher endorsements, and these maps can show multiple endorsements that apply to a single SCED code. SCED users should contact their SEA for more information on SCED and teacher endorsements.

Implementing SCED

How can an agency begin implementing SCED?

Agencies can implement SCED in different ways. The first step is to download the latest version of SCED from https://nces.ed.gov/forum/sced.asp. The SCED Finder tool, available at https://nces.ed.gov/scedfinder, can also be helpful when reviewing SCED. The tool has search functions that can help identify codes based on course title, description, or subject area.

Can an agency choose to implement part, but not all, of SCED?
Yes. SCED is not all or nothing. Agencies may choose to implement parts of SCED, and not all parts of SCED must be implemented for it to be useful.

How does an LEA implement SCED while still keeping customized LEA codes?
If an SEA is implementing SCED, an LEA in the state can map its existing codes into SCED.

Do LEAs that implement SCED always choose to use SCED course names, or do they sometimes maintain historical or local course names?
LEAs may choose to either switch to SCED course names or continue to use the local course names. SCED is designed to be flexible; there is no one-size-fits-all SCED adoption process. SEAs and LEAs may implement the course-coding system differently according to their unique needs and standards. However, it is always good practice for LEAs to check with their SEA regarding any state-specific coding practices.

Is there a map of SCED codes and Classification of Secondary School Courses (CSSC)?
Yes. The Classification of Secondary School Courses (CSSC) was a secondary course taxonomy that provided a general inventory of courses taught nationwide at the secondary school level (grades 9 through 12). It was based on the NCES High School Transcript Studies, which are conducted as part of the National Assessment of Educational Progress (NAEP). In an effort to use a single standard course code system at NCES, CSSC codes were mapped to SCED Version 2. The map is available in appendix A of the publication Considerations for Using the School Courses for the Exchange of Data (SCED) Classification System in High School Transcript Studies: Applications for Converting Course codes from the Classification of Secondary School Courses (CSSC), available at https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2019417. Additional information on CSSC codes and their use is available at http://nces.ed.gov/surveys/hst/courses.asp.

What is the difference between SCED codes and Classification of Instructional Programs (CIP) codes?
SCED focuses on the content of courses, not fields of study, and SCED is used primarily at the secondary and prior-to-secondary levels. The Classification of Instructional Programs (CIP) provides a taxonomic scheme that supports the accurate tracking and reporting of fields of study and program completion activity. CIP titles and program descriptions are primarily used at the postsecondary level. Additional information on CIP is available at https://nces.ed.gov/ipeds/cipcode/Default.aspx?y=56.

Keeping SCED Current in Your Agency

If an SEA or LEA continues to offer courses that have been archived in SCED, what is the appropriate way to code those courses?
Archived SCED codes still can be used. SCED codes may be archived when a course is no longer commonly taught, when the content of the course is better represented in a new course, or when it is necessary to change a course code as part of a SCED revision. Course descriptions for archived courses include recommendations for new codes that may meet the agency’s needs.

Are agencies expected to update codes every time the Forum releases a new version of SCED?
No. New SCED versions are intended to provide up-to-date and accurate course codes so that SCED remains relevant and useful to SEAs and LEAs. If an SEA or LEA is using a version of SCED that meets the agency’s needs, the agency may not need to update. LEAs always should check with any SEA requirements for course code updates.
How should agencies that implemented prior-to-secondary course codes using the 2011 SCED Guide, which includes Course Subject Areas 51-73, handle these course codes?

If the existing prior-to-secondary Course Subject Areas meet the needs of the SEA or LEA, they may not need to be updated. All SCED updates, including changes to prior-to-secondary Course Subject Areas, are intended to ensure that SCED remains relevant and useful to SEAs and LEAs. If the SEA or LEA wishes to update these codes, two SCED resources can help with the update:

- The SCED Master List (https://nces.ed.gov/forum/Master_List.asp) provides a record of each code used in each SCED version, including the 2011 prior-to-secondary codes and any changes to the codes over time.

LEAs always should check any SEA requirements for course code updates.

What is the best way to migrate to the latest version of SCED?

The Forum has developed multiple resources to assist SEAs and LEAs with SCED implementation and mapping. Resources available at https://nces.ed.gov/forum/sced.asp include

- the latest version of SCED, as well as all the previous SCED versions;
- the SCED Master List, which provides a record of each code used in each SCED version and any changes to the codes over time;
- SCED Finder, a tool that can help identify codes based on course titles, descriptions, or subject area; and
- the Forum Guide to School Courses for the Exchange of Data (SCED) Classification System.

Where are Foreign Language and Literature courses that were previously included in Course Subject Area 06 located?

SCED Version 4 reclassified Foreign Language and Literature courses in the newly created Course Subject Area 24: World Languages. This reclassification was necessary to update existing courses and add new courses that were recommended by subject matter experts and SCED users. A complete list of recoded courses is available in the SCED Master List at https://nces.ed.gov/forum/sced.asp. Archived SCED codes still can be used.

Assigning Course Codes

How should Special Education courses be coded?

SCED course descriptions focus on content and avoid specifying delivery methods, audience, or location. When additional information is needed, such as when a course is intended solely for students with disabilities, or when a course has been modified for these students, users can add attributes to provide a more robust description of the course. The treatment of Special Education courses is discussed in chapter 2, page 20, of the Forum Guide to School Courses for the Exchange of Data (SCED) Classification System, available at https://nces.ed.gov/forum/pub_2014802.asp.

How should courses specifically designed for English learners in subjects such as mathematics, science, and social studies be coded using SCED?

SCED course descriptions focus on content and avoid specifying delivery methods, audience, or location. When additional information is needed, such as when a course is designed specifically for English learners, users can add attributes to provide a more robust description of the course.
How should courses that integrate content from multiple Course Subject Areas, such as courses that combine mathematics and art, or history and composition, be coded using SCED?

It may be necessary to map course content for integrated courses to multiple SCED codes. Each agency must determine how best to assign credit for the portions of the course assigned to each SCED code. Some agencies attribute partial credit to each mapped course. Others assign credit for one Course Subject Area only.

Some schools deliver instruction in multigrade classrooms. How can these courses be coded using SCED?

Regardless of whether teachers in multigrade classrooms are teaching multiple courses simultaneously or a single course that is targeted to multiple grades, the following parameters apply:

- If different courses are taught within the classroom, each course should be given a separate SCED code (for example, one group is studying 02052 Algebra I and another group is studying 02072 Geometry).
- If a single course targets multiple secondary grade levels (for example, 9th, 10th, and 11th graders are all enrolled in 02052 Algebra I), then the course can be coded using the attribute Course Applicable Education Level. This attribute is repeatable for most use cases.
- If a single course targets multiple prior-to-secondary grade levels (for example, 1st, 2nd, and 3rd graders are all enrolled in 01049 Reading—General), then the course can be coded using the SCED Grade Span element. In this example, the grade span would be coded as “0103,” indicating grades 1 through 3.

How should state-specific courses be coded using SCED?

SCED includes several methods for coding state-specific courses (for example, courses that cover topics such as state history or employment preparation focused on the particular workforce needs of the state) and other courses that do not correspond to an existing SCED code:

- SCED code 04105 State-Specific Studies, within Course Subject Area 04: Social Studies and History, can be used for courses that examine the history, politics, economics, society, and/or cultures of one state in the United States.
- Whenever possible, state-specific courses should be coded within the appropriate Course Subject Area. Each Course Subject Area includes “Particular Topics” or “Other” course codes. For example, a state-specific tourism course could be coded in Course Subject Area 16 as 16155: Particular Topics in Travel and Tourism. In addition, unused Course Numbers in the range 900-990 are available for coding courses that do not correspond to an existing SCED code.
- SCED also offers Course Subject Area 22—Miscellaneous for courses that do not fit within any other Course Subject Area.


If an LEA course description matches a SCED course, but the title of the course is different, is it acceptable to use the SCED code?

Yes. SCED course descriptions focus on course content. It is therefore appropriate to code a course based on the course description and not the title.
If a course matches most, but not all, of the description of a course in SCED, should it be coded using the SCED code or a generic code?

A perfect match between state or local course codes and SCED codes is not expected or anticipated in most cases—SCED offers a course-coding structure that can accommodate diverse course offerings and curricula. SCED Finder (https://nces.ed.gov/scedfinder) can help users find the best possible match. LEAs may wish to double-check with the SEA’s course code expert. If necessary, the LEA can ask the SEA course code expert to assign an unused course number in the appropriate Course Subject Area to the course. Unused course numbers in the range 900-990 are available in each Course Subject Area for coding courses that do not correspond to an existing SCED code.

Some elementary schools use the traditional single-class model of instruction, in which the elementary teacher teaches all subjects. Should separate courses be reported for each subject taught, or is there a single SCED code for this situation?

SCED offers course codes 23001-23011 for prior-to-secondary courses that involve content that is not differentiated by subject area. It is important for the LEA to confirm with the SEA that these are the correct codes to use.

Where are prior-to-secondary course codes located?

Beginning with SCED Version 2.0, prior-to-secondary and secondary courses use the same two-digit Course Subject Area codes (the first two digits of the SCED code). Prior-to-secondary courses can be indicated using either the SCED Grade Span element, which is part of the 12-character SCED Identifier, or the attribute Course Applicable Education Level, which can be added to the SCED Identifier to provide more information.


Where are Family and Consumer Sciences courses located?

Many Family and Consumer Sciences (FCS) courses are found in Course Subject Area 19: Human Services, but others are found throughout SCED in multiple Course Subject Areas. SCED includes the attribute Family and Consumer Sciences Course Indicator for use by SEAs and LEAs that wish to identify these courses. In addition, beginning with Version 2, each downloadable SCED file includes a tab labeled “CTE and FCS Attributes.” The left column includes a list of courses, and the far-right column, labeled “Family and Consumer Sciences,” indicates courses that are commonly considered part of an FCS plan of study.

The most current version, as well as older versions, of SCED are available at https://nces.ed.gov/forum/sced.asp. All codes also are available through SCED Finder at https://nces.ed.gov/scedfinder.