Forum Guide to
Understanding the School Courses for the Exchange of Data (SCED) Classification System

National Forum on Education Statistics

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National Cooperative Education Statistics System

The National Center for Education Statistics (NCES) established the National Cooperative Education Statistics System (Cooperative System) to assist in producing and maintaining comparable and uniform information and data on early childhood, elementary, and secondary education. These data are intended to be useful for policymaking at the federal, state, and local levels.

The National Forum on Education Statistics (Forum) is an entity of the Cooperative System and, among its other activities, proposes principles of good practice to assist state and local education agencies (SEAs and LEAs) in meeting this purpose. The Cooperative System and the Forum are supported in these endeavors by resources from NCES.

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July 2023

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Technical Contact

Ghedam Bairu

(202) 245-6644

ghedam.bairu@ed.gov

Foreword

The Forum is pleased to present the *Forum Guide to Understanding the School Courses for the Exchange of Data (SCED) Classification System*. SCED was developed to meet the need for common, widely understood, standardized course codes. The purpose of this guide is to introduce the voluntary SCED classification system, including information on the structure of SCED codes, the process for ensuring that SCED remains up to date and accurate, and the benefits of SCED use. The guide is intended for both new and existing SCED users and contains best practices for implementing and expanding the use of SCED.

Publication Objectives

This guide is intended to address the needs of SCED users by providing

- an overview of the SCED development process;
- a framework for coding elementary through high school courses; and
- best practices for SCED implementation and use.

Intended Audience

The intended audience for this publication includes staff in local and state education agencies (LEAs and SEAs) who use course codes in their work, federal agencies, content-area organizations, education research organizations, institutes of higher education, and others who benefit from comparable information about student coursework.

Organization of This Resource

This resource includes the following chapters and appendices:

- **Chapter 1** introduces SCED and discusses the importance of standardized course codes, the benefits of SCED implementation, and the SCED development process.
- **Chapter 2** provides in-depth information on the elements that make up the SCED framework, optional SCED attributes, and best practices for SCED implementation.
- **Appendix A** provides a list of SCED Course Subject Areas.
- **Appendix B** discusses updates in each SCED version.

National Forum on Education Statistics

The work of the Forum is a key aspect of the Cooperative System. The Cooperative System was established to produce and maintain, with the cooperation of the states, comparable and uniform education information and data that are useful for policymaking at the federal, state, and local levels. To assist in meeting this goal, NCES within IES–a part of ED–established the Forum to improve the collection, reporting, and use of elementary and secondary education statistics. The Forum includes approximately 120 representatives from state and local education agencies, the federal government, and other organizations with an interest in education data. The Forum deals with issues in education data policy, sponsors innovations in data collection and reporting, and provides technical assistance to improve state and local data systems.

Development of Forum Products

Members of the Forum establish working groups to develop guides in data-related areas of interest to federal, state, and local education agencies. They are assisted in this work by NCES, but the content comes from the collective experience of working group members who review all products iteratively throughout the development process. After working groups complete the content and review documents a final time, publications are subject to examination by members

of the Forum standing committee that sponsors the project. Finally, Forum members review and formally vote to approve all documents before publication. NCES provides final review and approval before online publication. The information and opinions published in Forum products do not necessarily represent the policies or views of ED, IES, or NCES. Readers may modify, customize, or reproduce any or all parts of this document.

There is no federal mandate for collecting the data elements identified in this guide. SCED use is voluntary, and the recommendations provided here are meant to serve as best practices to promote the collection of high-quality and useful course information.

Working Group Members

Chair
Susan Williams, Virginia Department of Education

Members
Scott Gausland, Rhode Island Department of Elementary and Secondary Education

Laura Hansen, Metro Nashville Public Schools (TN)

Marilyn King, Bozeman School District #7 (MT)

Rachel Kruse, Iowa Department of Education

Kristina Martin, Macomb Intermediate School District (MI)

Raymond Martin, Connecticut State Department of Education

Jim Means, U.S. Department of Education

Karen Millette, Minnesota Department of Education

Robert Perkins, Westat

Jon Wiens, Oregon Department of Education

Project Officer
Ghedam Bairu, National Center for Education Statistics

Consultants
Kris Dunman, Quality Information Partners, Inc. (QIP)

Colleen Spagnardi, RTI International

Acknowledgments

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Chapter 1:
Introduction

Each student's education experience includes multiple transitions: progressing from prekindergarten through 12th grade (PK-12) school levels, moving to postsecondary education or the workforce, and sometimes changing schools. Students and school systems benefit from clear course information that can transfer from one organization to another. Common course codes allow for a seamless transfer of course information as a student progresses through their education and into the workforce. Moreover, education stakeholders, including administrators, content-area organizations, postsecondary admissions officers, and researchers, use course codes to compare course offerings across schools and to facilitate research. The School Courses for the Exchange of Data (SCED) Classification System was developed to meet the need for common, widely understood, standardized course codes that can be used to compare course information, maintain longitudinal data about students' coursework, and efficiently exchange course-taking records.

SCED is a voluntary standard that is widely used in the PK-12 education data community because of its usefulness in facilitating the exchange of transcript information, establishing and maintaining longitudinal data systems, and providing a standard for course comparisons. SCED also benefits organizations that use PK-12 course information for program monitoring and college admissions and facilitates education research at different levels, including National Center for Education Sciences (NCES) transcript studies.

Importance of Standardized Course Codes

Student populations are increasingly mobile, and course-taking information systems must be capable of transferring data as students move from one school, program, institution, district, or state to another, or advance from one sector of the education system to the next sector or the workforce. Local and state education agencies (LEAs and SEAs) must be able to accurately record and track the achievements of students in local education systems so that the information can be easily understood, compared, and exchanged across systems without compromising the content and structure of the local system. Without course code standards for communicating information, the transfer of data when a student moves to a new education setting may be slow, laborious, and fraught with errors, potentially increasing staff burden (for example, time spent deciphering data) and compromising student outcomes.

The use of standardized course codes within LEAs and SEAs can streamline data reporting processes and promote the collection of high-quality data. For example, when LEAs throughout a state accurately and consistently map their courses to SCED, LEA data stewards can access data quickly from multiple schools in a format preferred by the SEA. In turn, the SEA easily

and quickly can process data submissions from multiple LEAs, compare courses in individual schools across the state, and compile data for federal reporting. A standardized system such as SCED establishes a coding structure that can be shared widely and understood easily, thereby reducing the need for multiple rounds of data translation and data checking.

Another powerful use of SCED codes involves research into education equity. For example, Oregon uses course standardization to better understand education equity for historically underserved student groups. This work includes evaluating access of students of color to teachers of color, understanding math course-taking in high school, access to experienced teachers, and integration of English learners into general classrooms. This crucial research, which informs statewide decision-making, relies on standardized course codes.

Standardized course codes have a far-reaching impact on improving education systems. In addition to aiding the work of LEAs and SEAs, they provide a way for education agencies, researchers, policymakers, and other education stakeholders to compare course offerings and course-taking patterns across education organizations. Students, teachers, and others are better equipped to understand education data and make decisions when course information is easily understood and comparable, and when the systems that are built using standardized codes improve the maintenance and transfer of course information.

What is SCED?

The School Courses for Exchange of Data (SCED) is a voluntary, common classification system for pre-kindergarten through 12th grade courses (PK-12). It includes elements and attributes that identify basic course information.

SCED is NOT

- Ø   Required: Adoption is voluntary.
- Ø   All or nothing: Not all SCED elements are needed for SCED to be useful.
- Ø   A data collection: SCED does not collect data.
- Ø   A "one size fits all" implementation: SCED may be implemented differently according to the needs of various education agencies.
- Ø   A repository of courses: It does not include every course offered in LEAs and SEAs.

SCED Users

SCED is used at local, state, and federal levels. At the local and state levels, agencies use SCED for multiple purposes, including implementing and maintaining course codes, establishing data governance practices, tracking teacher schedules and qualifications, and data reporting. At the federal level, SCED codes are used for NCES secondary transcript studies.

As local, state, and federal agencies have adopted SCED, other groups have found the standardization useful, including

- content-area organizations that set professional standards for course offerings;
- organizations that conduct education research;
- colleges and universities that review transcripts for student admissions or to evaluate teacher preparation programs;
- education software vendors that provide tools for education agencies to track and manage student course information; and
- researchers interested in topics such as tracking education outcomes, enrollment patterns, and course-taking across agencies.

Interest in SCED continues to expand. For example, in Metro Nashville Schools (TN), staff who regularly use SCED share information in cross-departmental meetings with their colleagues who work in information technology, research, and assessment. This exchange of information allows staff who may not be directly involved in course coding to have the background information they need to understand how to leverage SCED codes for data analysis and reporting.

In Macomb County, Michigan, districts use SCED codes to coordinate the courses taught to students with teacher certifications and endorsements. A comparison system displays teacher credentials, which are housed in a human resources system, with the master schedule from the student information system in real time. This facilitates online comparisons and reports that help districts align teacher credentials with courses and ensures that districts are in compliance with state requirements. Michigan assists districts by providing a crosswalk resource that lists educator credentials and the corresponding SCED code or codes and by communicating data quality alerts to districts based on the SCED codes.

> **Two Forum Guides to the School Courses for the Exchange of Data (SCED)**
>
> The *Forum Guide to Understanding the SCED Classification System* provides information on the SCED structure and SCED implementation.
>
> The *Forum Guide to SCED Uses and Benefits*, a companion guide to this publication, discusses how SCED is used in education agencies, the research applications of SCED, and the benefits of SCED to users. The Guide also illustrates SCED uses with case studies.
>
> Both guides are available at https://nces.ed.gov/forum/SCED_guides.asp.

Across different states, staff in LEAs and SEAs are finding that SCED can be used to improve data management and reporting, from providing a way to map teacher licensure to endorsements, to aligning local and state course codes, to facilitating research across agencies.

Benefits of SCED Implementation

While the concept of a standard implies uniformity, SCED has been widely adopted because it offers a course-coding structure that can accommodate diverse course offerings and curricula. A team of local, state, and federal education agency representatives develop and maintain SCED. Members of this team receive assistance and feedback from a broad network of subject area experts in their agencies. As a result, the SCED structure is designed to be flexible enough to meet the needs of very different education agencies. Each SCED course description is designed to provide enough specificity to identify the course's topic and distinguish it from other courses. The descriptions are not designed to define every aspect of a course, such as course objectives, methods of delivery, prerequisites, or teacher certification requirements.

SCED implementation varies according to the needs of LEAs and SEAs, with some agencies choosing to implement SCED as it is published and other agencies choosing to use only parts of SCED, such as individual Course Subject Areas. Other agencies provide maps between local or state course codes to SCED, and some use SCED to inform the development of their own state or local course codes. Moreover, some agencies use older versions of SCED, while others have adopted annual changes. Different implementations are expected because SCED is designed to be adaptable to the needs of individual agencies.

Like all Forum resources, SCED is available free of charge and SCED users may modify the resource to fit the needs of different systems. SCED implementation can help LEAs and SEAs minimize the cost and staff time required to develop standardized course classification systems. Moreover, many SEAs have implemented SCED as part of statewide longitudinal data systems. The accurate implementation of SCED ensures that an LEA's or SEA's course-coding data will be widely understood and that data will be comparable.

SCED Development

SCED Versions

Secondary SCED codes first were developed and released in 2007 as part of the document *Secondary School Course Classification System: School Codes for the Exchange of Data*. Prior-to-secondary codes were added in 2011 with the publication of *Prior-to-Secondary Course Classification System: School Codes for the Exchange of Data*. Together these two publications make up SCED Version 1.0.

In the years following the publication of SCED Version 1, users suggested changes to improve the usefulness of SCED, update course descriptions, and develop supplementary resources. The Forum convened a working group in 2012 to review and update the 2007 and 2011 SCED. The group collaborated extensively with stakeholders to develop Version 2, which was published in 2014. The scope of the updates to Version 2 showed the importance of maintaining a SCED Working Group to regularly review SCED course descriptions and codes and work with stakeholders to ensure that SCED remains up to date and accurate. The SCED Working Group continues to meet regularly to review suggestions sent by LEAs, SEAs, and the U.S. Department of Education (ED). The group also provides technical assistance to LEAs and SEAs that are implementing or updating SCED in their agencies and develops resources, including training tools and videos, to help SCED users.

> **Current and Previous SCED Codes**
>
> The Forum regularly updates SCED codes. The newest version is available at https://nces.ed.gov/forum/sced.asp. Earlier versions of SCED are available at https://nces.ed.gov/forum/sced_previous.asp.

The SCED Working Group developed a methodology for managing and implementing SCED changes. This methodology includes a set of guiding principles, as well as a process for updating course codes and descriptions that involves working closely with subject matter experts and SCED users at the local, state, and national levels. Working group members include representatives of local, state, and federal education agencies who are experts in their agencies' use of SCED. After reviewing proposed updates to SCED, the working group determines the scope of each update and begins working with users in LEAs and SEAs to identify needed revisions and updates. The Forum's national network of LEA and SEA members provides information about what courses are offered and the scope of need for newly proposed courses. Forum members also review proposed updates and provide feedback on the development of SCED resources.

As LEA and SEA course offerings change, the SCED Working Group responds with new versions that include new codes, updates to existing codes, and archived codes. At times, the scope of changes merits substantial changes to SCED. For example, beginning with SCED Version 2.0, prior-to-secondary and secondary courses were coded using the same two-digit Course Subject Area Codes (the first two digits of the SCED code). Previously, prior-to-secondary courses were coded using a separate set of Course Subject Area Codes. Other notable updates are included in Appendix B: SCED Versions.

Agencies that use SCED do not all use the most recent version. If an agency is using a version of SCED that meets the agency's needs, it is often unnecessary to update to the latest SCED version.

SCED Guiding Principles

A set of principles guided SCED development. They outlined the goals and established a structure for courses included in the coding system. The principles ensure that the diverse SCED Course Subject Areas, course codes, and course descriptions all function as part of a cohesive standard.

Guiding Principles: Classification

- SCED courses reflect current practices in each Course Subject Area.
- SCED is a flexible, common course coding system that can be modified to meet the needs of LEAs and SEAs.
- The SCED Working Group considers recommendations submitted by representatives of LEAs, SEAs, and NCES transcript studies.
- Each Course Subject Area includes courses commonly offered in the subject area, along with four standard courses: Aide, Independent Study, Workplace Experience, and Other.

Guiding Principles: System and Structure

- Course descriptions focus on the content of the course, not expectations for the students or their achievements.
- Course descriptions avoid specifying delivery methods, location, credit application, or credentials needed to teach the course.
- Course titles and descriptions are not labeled as "beginning" or "advanced" because these divisions depend on local context.
- Sequence and rigor elements are included in the SCED Identifier.[1]
- The SCED taxonomy maintains consistency across Course Subject Areas in terms of nomenclature, style, and detail of description.
- The SCED Framework does not label any courses as Career and Technical Education (CTE), but the CTE attribute identified in this document is suggested for use in identifying CTE courses.
- SCED course descriptions avoid references to other course descriptions.
- Course descriptions do not typically include sequential ordering or prerequisites since these are often locally determined.
- Course codes for archived courses are not deleted but are instead labeled as archived and maintained for legacy information and to allow organizations to determine their own priorities and schedule for making changes.

SCED Master List and SCED Finder

The publication of regular updates to SCED created a need for resources to help with common SCED tasks, such as finding specific codes, identifying codes that have changed over time, and updating codes from one version to the next. The SCED Working Group created two tools to help users:

- The **SCED Master List** is a downloadable, sortable file of every SCED Course Code published, available at https://nces.ed.gov/forum/Master_List.asp.
- **SCED Finder** is a searchable database of all SCED codes, available at https://nces.ed.gov/scedfinder/Home/. Its many functions are designed to help users easily find the SCED codes they need and create lists of courses. SCED Finder helps users to:
  - search for a specific SCED Course using keywords in course titles, course descriptions, or subsection titles;
  - browse through SCED Codes within each of the 23 Course Subject Areas;
  - save and export lists of codes;

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1   World Language courses include exceptions to the principle that course descriptions do not typically include sequential ordering, because SCED users have indicated that World Language courses typically are taught in the specified sequential order.

- view the history of each code, including the versions in which the code appeared and any recodes; and
- compare courses between SCED versions, either by searching by a single code or uploading a file of codes.

Future SCED Changes

Course offerings and course descriptions evolve over time. SCED must reflect up to date course offerings to remain relevant, and updates must be implemented in a manner that maintains the structure and integrity of the established SCED standard. The working group follows the process outlined below to update SCED yearly. See Appendix B for a complete history of SCED versions.

1. **Recommendations:** SCED must be able to accommodate user suggestions for improvements and expansions to remain relevant. SCED users are encouraged to submit recommendations for improvement by emailing Ghedam.Bairu@ed.gov.
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 LEAs and SEAs 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 Course Codes and attributes are reviewed by NCES and subsequently released on the Forum's website. Each time SCED is updated and published, it includes a new version number. Each SCED course is labeled with a change status to indicate the type of change made. SCED Course Codes are not reused; courses that are no longer used are archived. Archived courses remain available for use in legacy information and to allow organizations to determine their own priorities and schedule for making changes.

SCED Version Maintenance: Working Group Steps for Managing Updates

1. Review recommendations from SCED users
2. Determine if an update is needed and if so, identify its scope
3. Contact subject matter experts in LEAs and SEAs for comments on proposed changes, including archiving adding, and updating courses
4. Compile feedback on all recommendations and determine final SCED updates
5. Submit to NCES for review
6. Publish the updated SCED version on the Forum website

Chapter 2:
SCED Structure

The Language of SCED

SCED is structured into two parts, the SCED framework and attributes. The term "SCED Framework" is synonymous with the SCED Identifier, a unique, 12-character code consisting of four basic elements:

- SCED Course Code (made up of the Course Subject Area and the specific Course Number)
- SCED Course Level
- Available Carnegie Unit Credit[2]
- SCED Sequence of Course

Figure 1. SCED Identifier

02052G1.0011
Algebra I
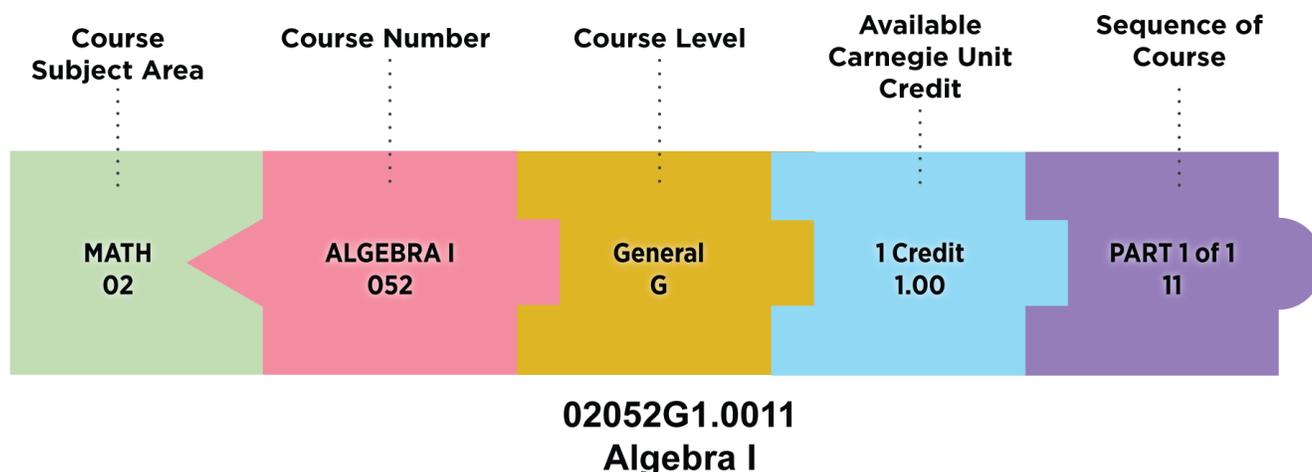
Figure 1 shows the 12-character SCED Identifier, which includes the five-digit SCED Course Code (Course Subject Area and Course Number), followed by the Course Level, Available Carnegie Unit Credit, and Sequence of Course.

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2   Prior-to-secondary courses use the SCED Grade Span.

Adding attributes, the optional elements that provide a more robust description of courses, can expand the information provided in the SCED Identifier.

Some LEAs and SEAs choose to use only the five-digit SCED Course Code (for example, 02052 for Algebra 1) while others use the full 12-character SCED Identifier. Still others, such as the Michigan Department of Education, use a combination of the SCED Course Code and other optional attributes.

SCED Framework

The five-digit Course Code is the essential core of the SCED Framework–it provides a basic structure for classifying course content. Other elements that make up the 12-character SCED Identifier–SCED Course Level, Available Carnegie Unit Credit or SCED Grade Span, and SCED Sequence of Course–provide basic descriptive information about the course.

Figure 2. SCED Identifier for Secondary and Prior-to-secondary Courses

Secondary Course: United States Government — Comprehensive
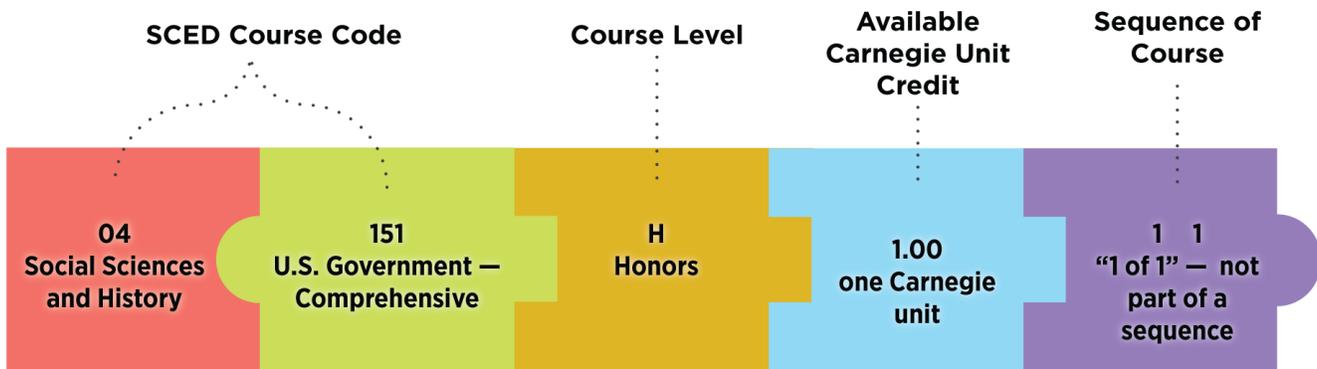
Prior-to-Secondary Course: United States Government — Comprehensive
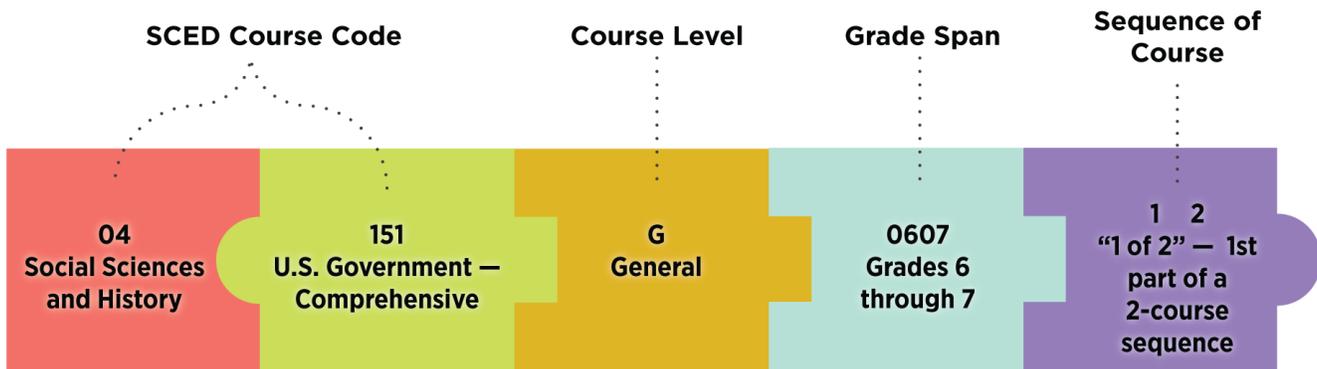
Figure 2 illustrates how the elements in the SCED Identifier are used to code specific courses at the secondary and prior-to-secondary levels.

Element 1. SCED Course Code

SCED Course Code is a five-digit code that provides a standardized number for the general subject area and specific subject of the course. The first two digits of the code represent the Course Subject Area and the next three digits indicate the specific Course Number.

Figure 2.a. SCED Course Code

Secondary Course: United States Government — Comprehensive

SCED Course Code

04
Social Sciences and History

151
U.S. Government — Comprehensive

Prior-to-Secondary Course: United States Government — Comprehensive

SCED Course Code

04
Social Sciences and History
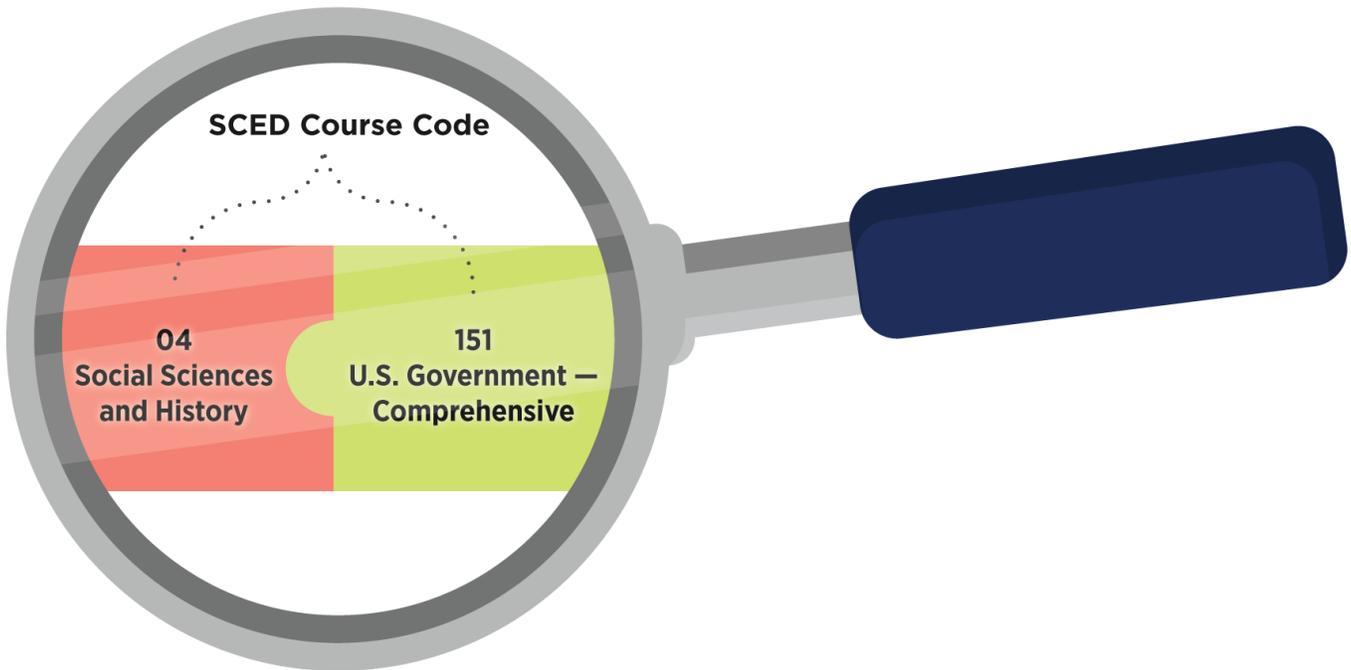
151
U.S. Government — Comprehensive
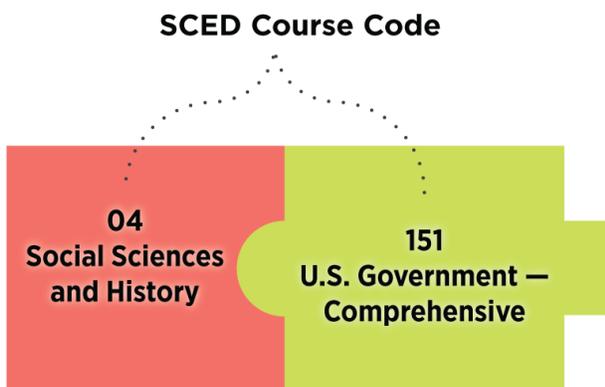
Figure 2.a illustrates how the Course Subject Area and Course Number combine to form the Course Code.

SCED Course Codes are general but provide enough specificity to identify the course's topic and distinguish it from other courses in that Course Subject Area:

- *Course Subject Area* – the intended major subject category of the education course. Each Course Subject Area is represented by a two-digit code. The categories are intended to include the full spectrum of courses offered in schools. Course Subject Area codes are listed in Appendix A.
- *Course Number* – the three-digit number that distinguishes a specific course or subject within a Course Subject Area. These numbers carry no meaning within themselves, except four Course Numbers reserved for courses included in each Course Subject Area:
  - 995–Course Subject Area–Aide
  - 997–Course Subject Area–Independent Study
  - 998–Course Subject Area–Workplace Experience
  - 999–Course Subject Area–Other

  Only some numbers between 001 and 999 have been used in this system; unused numbers are reserved for two purposes:
  - Unused numbers between 001 and 899 and 991 and 999 are reserved for use by the Forum SCED Working Group to accommodate new courses within a Course Subject Area in future versions of SCED.
  - Unused numbers between 900 and 990 may be used by states to code courses that are not included in SCED (see the next section for more on this topic).

State Uses for Unused Course Numbers 900-990

SCED is a course standard designed for widespread use; however, it cannot include every course offered in every state. States often find that not all course content is reflected in SCED because some of their courses may be too new or not widespread. In such cases, when no existing SCED code will accommodate course content, states should assign an unused number between 900 and 990 in the appropriate Course Subject Area. For example, a state-specific history class could be coded to 04902. States that incorporate unused course numbers between 900 and 990 must be sure that state-assigned course numbers are identified and explained clearly whenever course information is exchanged.

- *Courses that do not yet exist in SCED:* The SCED Guiding Principles indicate that SCED courses reflect current practices in each Course Subject Area. States therefore may develop new courses that do not have SCED Course Numbers. In such cases, states are encouraged to temporarily assign unused course numbers between 900 and 990 to the courses. States also may recommend these courses to the SCED Working Group for possible inclusion in future versions of SCED.

> **Creating State-specific SCED Codes**
>
> The Connecticut State Board of Education requires that all Connecticut high schools offer a course called African American, Black, Latino, and Puerto Rican Course of Studies. The course follows a specific state-developed curriculum and does not align with existing SCED codes. Connecticut developed SCED code 04901 to provide districts with a standard way to identify this course.
>
> The Virginia Department of Education's graduation requirements include a course called Personal Living and Finance. This course does not align with existing SCED codes, and because of its importance in the state curriculum, it could not be assigned one of the general codes defined in SCED. Virginia developed SCED code 02901 to provide districts a standard way to identify this course.
>
> More information on creating state-specific course codes is available in the case study, *Virginia's Use of SCED State-Specific Course Codes*, available at https://nces.ed.gov/forum/sced_case_studies.asp.

- *State-specific courses that do not exist in SCED:* While many of the courses taught in states should be submitted to the SCED Working Group for future SCED consideration, other courses are state-specific and may not be appropriate for SCED. Many states have developed courses that cover topics such as state history or employment preparation focused on the workforce needs of the state. SCED does not include state-specific courses, so states may assign unused course numbers between 900 and 990 to these courses.

Element 2. SCED Course Level

SCED Course Level refers to the course's level of rigor. There are six options for coding this element:

- *B=Basic or remedial.* A course focusing primarily on skills development, including literacy in language, mathematics, and the physical and social sciences. These courses typically are less rigorous than standard courses and may be intended to prepare a student for a general course.
- *G=General or regular.* A course providing instruction in a given subject area that focuses primarily on general concepts appropriate for the grade level. General courses typically meet the state's or district's expectations of scope and difficulty for mastery of the content.
- *E=Enriched or advanced.* A course that augments the content or rigor of a general course but does not carry an honors designation.
- *H=Honors.* An advanced-level course designed for students who have earned honors status according to educational requirements. These courses typically include additional content not found in general courses and are formally designated as honors courses.
- *C=College.* A course that is designed to be credit-bearing at a postsecondary institution.
- *X=No specified level of rigor.* The notion of rigor may not be appropriate for some courses; survey or interest courses that expose students to a variety of subjects and study hall are examples.

Some courses are distinguished by having more or less rigorous requirements than general courses and are designated as enriched or advanced, honors, or basic or remedial. Other secondary courses may confer credit at a postsecondary institution, and the level of rigor should be coded as college.

While individual schools, districts, and states may have criteria that clearly distinguish one level of course from another, these criteria are not the same in every state or school district. Moreover, not every SEA or LEA includes courses at each level. Any research or comparison of data using SCED Course Codes from different education agencies should acknowledge and account for variability in the implementation of this element.

Figure 2.b. SCED Course Level

Secondary Course: United States Government — Comprehensive

SCED Course Code

04
Social Sciences and History

151
U.S. Government — Comprehensive

Course Level

H
Honors

Prior-to-Secondary Course: United States Government — Comprehensive

SCED Course Code

04
Social Sciences and History

151
U.S. Government — Comprehensive

Course Level

G
General
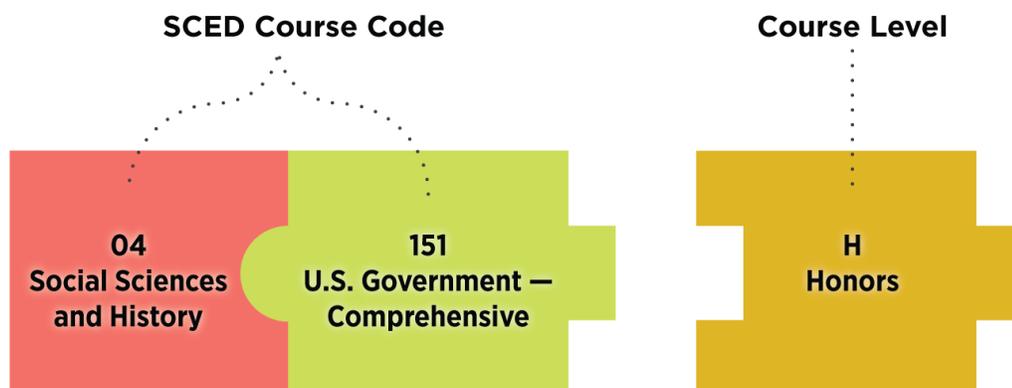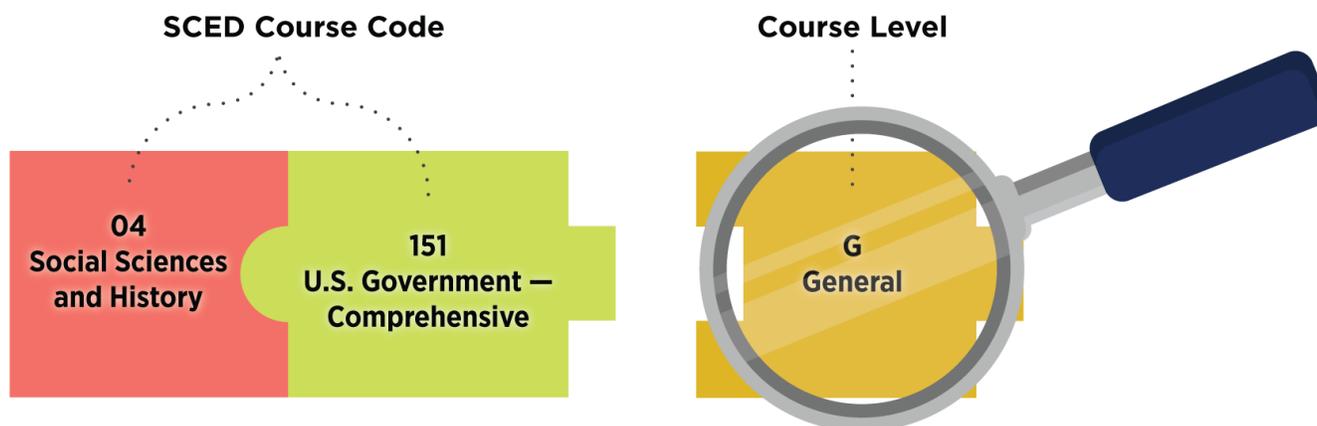
Figure 2.b illustrates the addition of the element SCED Course Level.

Element 3. Available Carnegie Unit Credit or SCED Grade Span

Available Carnegie Unit Credit identifies the amount of Carnegie Unit Credit available to a student who successfully meets the objectives of a secondary course, while Grade Span identifies the intended grade span of a prior-to-secondary course.

- *Available Carnegie Unit Credit* – Measured in Carnegie Units, it is the amount of credit available to a student who successfully meets the objectives of the course. The unit was developed in 1906 as a measure of the amount of time a student has studied a subject. For example, a total of 120 hours in one subject–meeting four or five times a week for 40 to 60 minutes, for 36 to 40 weeks each year–earns the student one "unit" of high school credit.[3] A Carnegie Unit is thus a measure of "seat time" rather than a measure of attainment of the course objectives. Available Carnegie Unit Credit is coded

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3   Additional information on the history of the Carnegie Unit is available from the Carnegie Foundation for the Advancement of Teaching, www.carnegiefoundation.org/.

as a one-digit number carried out to two decimal places, with an explicit decimal. That is, one Carnegie Unit would be coded as 1.00. A half-unit of Carnegie credit would be reported as 0.50. Note that the Available Carnegie Unit Credit for a given course can vary from school district to school district. While some schools and districts use a performance- or competency-based metric of student progress, the Carnegie Unit remains the predominant metric of student progress in schools in the United States and is part of the SCED Framework.

- *SCED Grade Span* – The grade span for which the course is appropriate. Carnegie Units hold no meaning for many prior-to-secondary courses, particularly in elementary and middle schools. The SCED Framework therefore includes the element Grade Span for prior-to-secondary courses. 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.
    - If a course is appropriate for multiple grades, then the beginning and the ending levels indicate a range of grades at which course concepts are being taught (for example, 0305 indicates that third- to fifth-grade concepts are being taught).
    - If a course is only appropriate for a single grade level, then the ending level is the same as the starting (for example, a course only offered in 6th grade is indicated as 0606).

SCED Grade Span reflects the grades for which the course is intended, regardless of which students are taking the course. Courses that include students from other grades as part of either accelerated or remedial learning should use the course code appropriate to the content of the course. This allows identifying students who enroll in courses at, above, or below their grade level. For example, a report listing students in third grade who are scheduled for a fourth-grade mathematics course (0404) would show that a school is offering advanced content for students. At the student level, this would indicate that a third-grade student is learning fourth-grade mathematics content.

Figure 2.c. Available Carnegie Unit Credit or SCED Grade Span

Secondary Course: United States Government — Comprehensive

SCED Course Code		Course Level	Available Carnegie Unit Credit
04 Social Sciences and History	151 U.S. Government — Comprehensive	H Honors	1.00 one Carnegie unit

Prior-to-Secondary Course: United States Government — Comprehensive

SCED Course Code		Course Level	Grade Span
04 Social Sciences and History	151 U.S. Government — Comprehensive	G General	0607 Grades 6 through 7
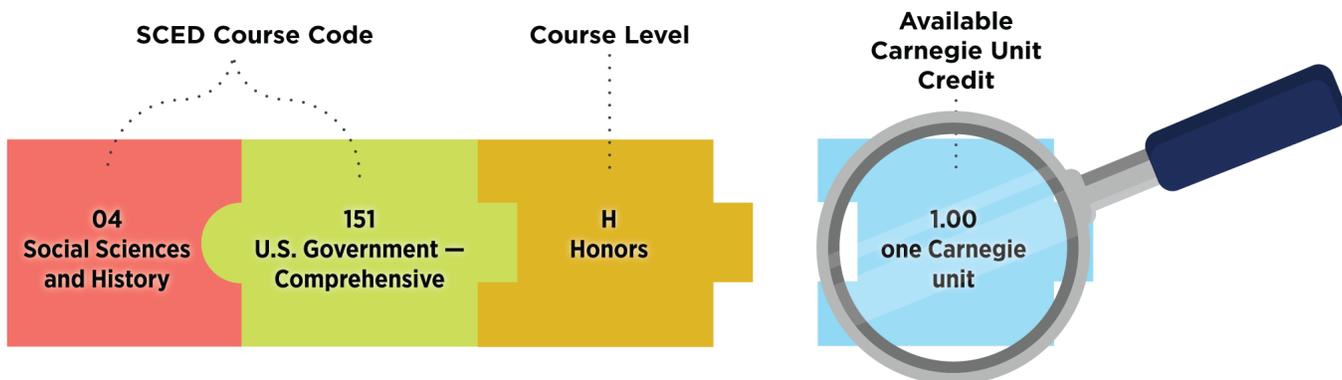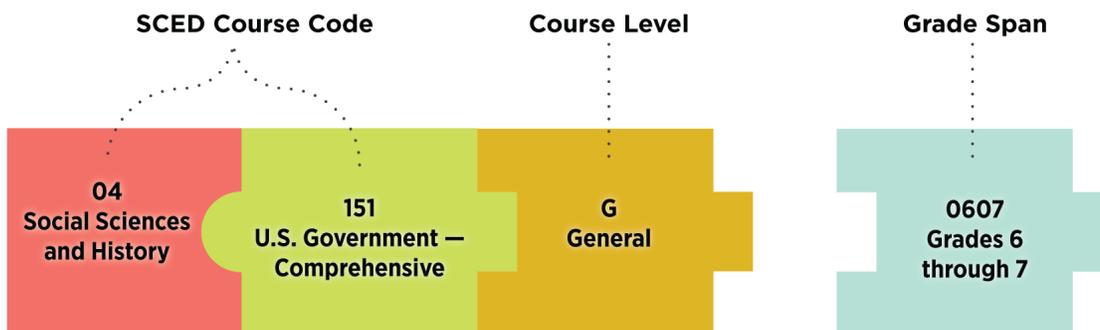
Figure 2.c illustrates the addition of the element Available Carnegie Unit Credit or SCED Grade Span.

Element 4. SCED Sequence of Course

SCED Sequence of Course identifies where a specific course lies when it is part of a consecutive sequence of courses. This element should be interpreted as "part 'n' of 'm' parts" (for example, if a school offers four years of Theater, Theater 3 within this school would be indicated in the sequence elements as 34, denoting the third part of a four-part sequence of courses).

The method for determining SCED Sequence of Course depends on the school system's scheduling and grading policies, the number of local courses that map to one SCED code, and whether a course is part of a larger sequence of course requirements. SCED Sequence of Course indicates only the order in which a series of courses are taken and does not indicate 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 must always be aligned with Available Carnegie Unit Credit.

Figure 2.d. Sequence of Course

Secondary Course: United States Government — Comprehensive

SCED Course Code		Course Level	Available Carnegie Unit Credit	Sequence of Course
04 Social Sciences and History	151 U.S. Government — Comprehensive	H Honors	1.00 one Carnegie unit	1 1 "1 of 1" — not part of a sequence

Prior-to-Secondary Course: United States Government — Comprehensive
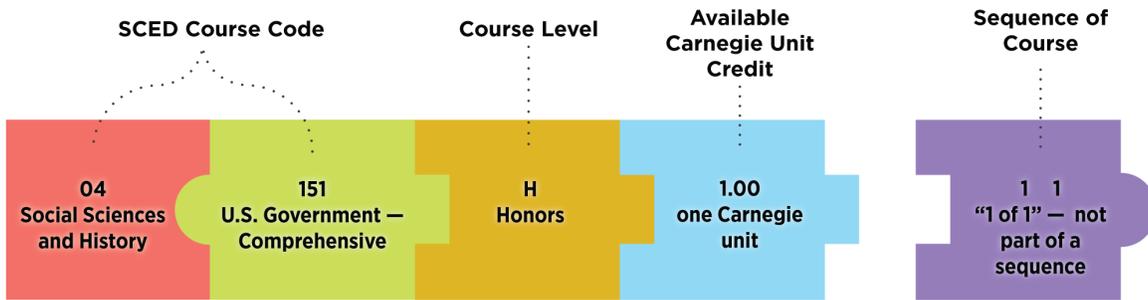
SCED Course Code		Course Level	Grade Span	Sequence of Course
04 Social Sciences and History	151 U.S. Government — Comprehensive	G General	0607 Grades 6 through 7	1 2 "1 of 2" — 1st part of a 2-course sequence
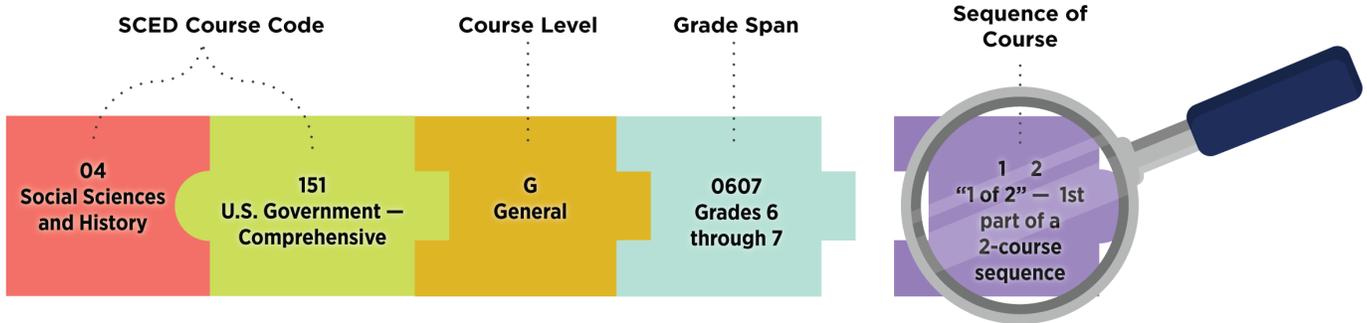
Figure 2.d illustrates the addition of the element SCED Sequence of Course, which completes the 12-character SCED Identifier.

Examples of SCED Sequence of Course Implementation

Example 1: District A schedules courses by year and offers a full year each of Accounting I and Accounting II. The content covered in local courses Accounting I and II correspond to SCED course code 12104 Accounting.

Local Course #	Local Course Title	SCED Course Code	SCED Course Level	Available Carnegie Unit Credit	SCED Sequence of Course	SCED Identifier
153	Accounting I	12104	G	1.00	12	12104G1.0012
154	Accounting II	12104	G	1.00	22	12104G1.0022

Example 2: District B schedules courses by semester and offers a full year each of Accounting I and Accounting II. The content covered in local courses Accounting I and II correspond to SCED Course Code 12104 Accounting.

Local Course #	Local Course Title	SCED Course Code	SCED Course Level	Available Carnegie Unit Credit	SCED Sequence of Course	SCED Identifier
210F	Accounting I	12104	G	0.50	14	12104G0.5014
210S	Accounting I	12104	G	0.50	24	12104G0.5024
211F	Accounting II	12104	G	0.50	34	12104G0.5034
211S	Accounting II	12104	G	0.50	44	12104G0.5044

Example 3: District C offers three sequential courses in Automotive Mechanics. Each course corresponds to SCED Course Code 20105, Particular Topics in Automotive Mechanics.

Local Course #	Local Course Title	SCED Course Code	SCED Course Level	Available Carnegie Unit Credit	SCED Sequence of Course	SCED Identifier
778	Auto Electricity	20105	G	0.50	13	20105G0.5013
779	Auto Suspensions/ Steering	20105	G	0.50	23	20105G0.5023
780	Auto Heating/AC	20105	G	0.50	33	20105G0.5033

Aligning Available Credit and Course Sequence – A Kansas Example

When districts map their course data, it is important that they consider how their local student information system manages courses. When data stewards at the Kansas SEA analyzed data sent from districts, they were confused by the course outcome data from several districts. Students were reported as completing several credits of the same course, often earning different grades for each completion. For example, a district that had listed Algebra I as a 1.0 credit course with sequence 1 of 1 sent two records for each of the freshmen. Analyzing the data as submitted resulted in each of the freshman earning 2.0 credits of Algebra I during the year.

After discussing this with school and district staff, the state data steward realized that the school's student information system reported grades by semester, so the school had submitted two grades for each of the freshmen students, one for each semester of Algebra I. The data steward solved the problem by recommending that the district map two courses to Algebra I, each with 0.50 Available Carnegie Unit Credits, specifying sequence of 1 of 2 and 2 of 2, respectively. Then, when the district sent the students' course outcomes to the state, the outcomes would be recorded for the proper course with the proper credit.

Aligning Course Level and Sequence of Course – A National Center for Education Statistics (NCES) Transcript Study Example

While many agencies use only the five-digit SCED code, others use the full 12-character SCED Identifier. The elements included in the Identifier provide additional information about each course. For example, the elements SCED Course Level and SCED Sequence of Course help NCES transcript coders understand anomalies in course data. In the course of their work, coders found that transcripts from one school showed that students were taking two different sequences of English/Language Arts courses. Both sequences started with English/Language Arts I (grade 9) and both included American Literature in the sequence. However, American Literature was the second part of the sequence for some students, while it was the third part of a sequence for other students. Other courses in the two sequences were different. By aligning the sequence of course data with information on course level, it was clear to the coders that the school offered different course sequences to students taking honors-level English/Language Arts courses and those taking general courses. Similar situations appeared in transcripts for other schools, most frequently involving mathematics course sequences.

A Course Is More than a Five-Digit Code

SCED is based on a five-digit course code that provides the minimum amount of information needed to identify a course within the SCED system. The expanded 12-character SCED Identifier captures additional information, including the course level, the amount of Available Carnegie Unit Credit (or grade span), and the placement of the course if it is part of a sequence. Optional course attributes allow users to capture even more information about a course, such as the language of the course and the method of instruction. Optional attributes can be added to the SCED Identifier to improve the usefulness of the standard. Attributes are elements widely used by LEAs and SEAs to provide more information on courses, but they are not essential to basic SCED classification. Figure 3 illustrates how an agency might expand upon the SCED Identifier with additional elements.

Figure 3. The SCED Identifier Expanded with Additional Elements
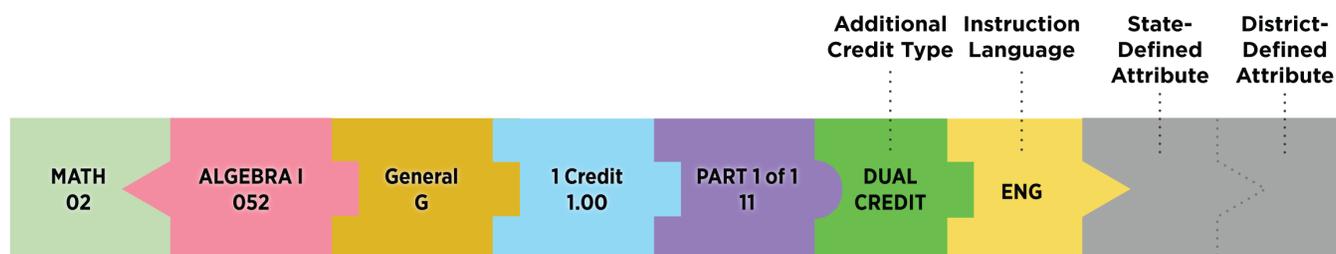
Figure 3: The SCED Identifier Expanded with Additional Elements

Attributes

Attributes are not part of the 12-character SCED Identifier. Attributes are additional elements that can be applied to the 12-character SCED Identifier to provide more robust descriptions of courses. Attributes can be useful for capturing expanded information that schools, districts, and states may need for scheduling, funding, and reporting purposes. Because attributes are not a part of the 12-character SCED Identifier, they may be implemented differently according to the needs of each LEA or SEA.

SCED users are encouraged to customize SCED to meet the needs of their education agencies. The 12-character SCED Identifier can be combined with attributes or other elements to create electronic student transcripts, course scheduling and curriculum systems, teacher-student data links, systems for matching teacher qualifications and assignments, data to support research and reporting, and a host of other information needs and data management tools.

State or Locally Adopted Attributes

SCED course descriptions focus on the content of the course. States or districts sometimes need more information about a course. Common examples:

- A state offers a specific curriculum. Courses offered as part of the curriculum are coded using existing SCED codes. However, the state needs a way to signify that these courses are part of the specific curriculum. The state adds an attribute to the end of the SCED code that clearly flags the course as part of the curriculum.
- The Iowa Department of Education needs to know where a course originated. For example, an LEA may develop a course and share it with other LEAs, or a community college may provide a course to LEAs. To track this information, the SEA developed the attribute "Course Origination" that identifies the source of the course content.

- Virginia uses a state-adopted attribute called the Virginia Extended Descriptor to store the numbers I, II, and III to help identify career and technical education (CTE) completers who complete a state-approved sequence of courses. The state also codes virtual education as an attribute.

**SCED Suggested Attributes**

The examples below include short descriptions of attributes that states can use as-is or as a starting point for developing their own attributes for their unique needs. Comprehensive information including definitions, option sets, and usage notes are available on the Common Education Data Standards (CEDS) website at https://ceds.ed.gov. The list below is provided as a resource; attributes are not necessary for SCED implementation.

- **Additional Credit Type** is the type of credits or units of value available for the completion of a course in addition to Carnegie Units.
- **Career Cluster** defines the industry or occupational focus which may be associated with a career pathways program, plan of study, or course.
- **Course Aligned with Standards** is an indication of whether the course is aligned with the established standards of a curriculum framework.
- **Course Applicable Education Level** is the education level, grade level, or primary instructional level at which a course is intended.
- **Course Certification Description** is a description of the certification or recognition associated with the course (for example, Networking, CAD).
- **Course Description** provides a description of the course content or goals and may include reference to state or national content standards.
- **Course Funding Program** is the program through which the course is funded. This may be a program targeted to a specific student population (for example, Special Education, English as a Second Language), and the funding guidelines may specify that all or some of the students in the course are members of the subgroup.
- **Course Grade Point Average Applicability** is an indicator of whether the course is included in the computation of the student's Grade Point Average (GPA).
- **Course Section Instructional Delivery Mode** is the primary setting or medium of delivery for the course.
- **Course Title** provides a descriptive name for a course of study offered in a school or other institution or organization. In departmentalized classes at the elementary, secondary, and postsecondary levels (and for staff development activities), this refers to the name by which a course is identified (for example, American History, English III). For elementary and other non-departmentalized classes, it refers to any portion of instruction for which a grade or report is assigned (for example, reading, composition, spelling, language arts).
- **Curriculum Framework Type** is an indication of the standard curriculum used for the course.
- **Family and Consumer Sciences Course Indicator** is an indication that the course is associated with the Family and Consumer Sciences plan of study.
- **High School Course Requirement** is an indication that this course credit is required for a high school diploma.
- **Instruction Language** is the language of instruction, other than English, used in the program or course.

- **K12 End of Course Requirement** is an indication that this course has an end-of-course examination required by the SEA or LEA.
- **National Collegiate Athletic Association Eligibility** is an indication that the course is approved for determining National Collegiate Athletic Association (NCAA) eligibility.
- **Work-based Learning Opportunity Type** is the type of work-based learning opportunity in which a student participated.

Key Considerations for Implementing and Using Attributes

- Attributes are not required for SCED implementation. LEAs and SEAs may choose not to implement attributes, or they may choose to implement only those attributes that fit the needs of their course-coding systems.
- While the elements of the 12-character SCED Identifier are designed to be used in an established order, there is no standard order for attributes.
- The list of attributes includes elements that many LEAs and SEAs have added to the SCED Framework to create a longer code, but it does not include all the attributes used in different systems. LEAs and SEAs may need to develop additional attributes to meet local and state needs.
- The addition of attributes requires additional documentation. LEAs and SEAs that include attributes as part of the course-coding structure should develop documentation similar to that provided for the 12-character SCED Identifier that explains the expanded coding structure.

Figure 4. Example of SEA SCED Implementation

SCED Course Code	Course Level	Available Carnegie Unit Credit	Sequence of Course	Course Grade Point Average Applicability	High School Course Requirement
02 Mathematics / 121 Calculus	C College	0.50 one-half Carnegie unit	1 2 "1 of 2" — part of a sequence	Applicable	No
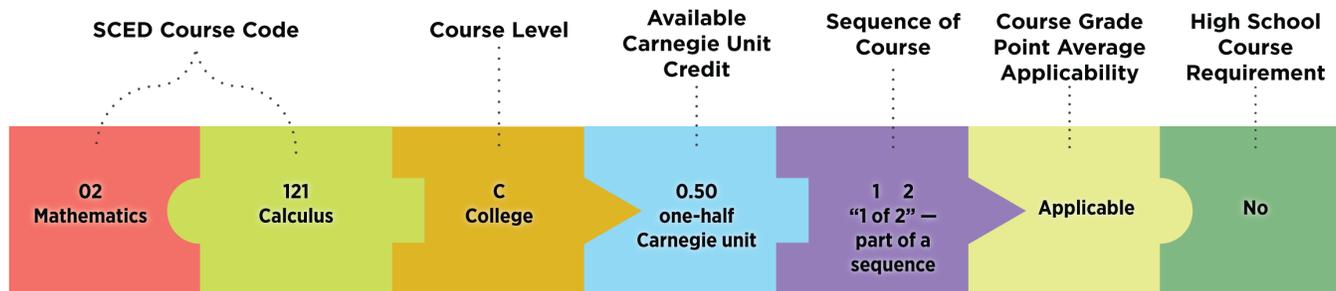
Figure 4 is an example of how attributes could be added to the SCED Identifier to provide additional information about a course.

Additional Notes on the Content and Structure of SCED

For SCED to be an effective means of collecting, managing, and transferring data, it is important that SCED users fully understand the taxonomy. The following notes clarify aspects of SCED and provide information about decisions made during the development of SCED:

- *Additional Transcript Information* – SCED does not include every detail that may be needed on a student transcript.
- *Treatment of World Language Courses* – SCED does not include every language taught in schools. The languages for which there are course descriptions are those most likely to be found in elementary, middle, and secondary school course catalogs.
- *Miscellaneous Course Subject Area* – Courses that cannot be assigned to any of the other Course Subject Areas are designated as courses with a miscellaneous Course Subject Area. Miscellaneous courses often include activities or skills that are applicable to a

range of topics, such as Standardized Test Preparation (22001), Career Exploration (22151), or Employability Skills (22152).

- *Career and Technical Education Courses* – SCED does not differentiate between courses that are considered purely academic and those considered career or technical. Courses commonly considered part of career and technical education (CTE) are included in multiple SCED Course Subject Areas. Many LEAs and SEAs track courses according to the National Career Clusters® Framework, and the CTE attribute identifies courses according to Career Clusters® to facilitate this tracking.
- *Family and Consumer Sciences Courses* – Many family and consumer sciences (FCS) education courses are included in Course Subject Area 19: Human Services, but FCS courses also may be found in other Course Subject Areas, including
  - Course Subject Area 8: Physical, Health, and Safety Education;
  - Course Subject Area 16: Hospitality and Tourism; and
  - Course Subject Area 22: Miscellaneous.

Districts and states can use an attribute to identify courses throughout SCED that are part of FCS education.

SCED Coding Best Practices

SCED is designed to be adaptable and enable agencies to address their unique needs within a common standard. A perfect match between state or local course codes and SCED codes is not expected or anticipated. To help LEAs and SEAs with efficient yet flexible implementation of SCED, this section reviews best practices for identifying and assigning SCED codes based on course content:

- Match local and state codes to existing SCED codes whenever possible. The search options available in SCED Finder (https://nces.ed.gov/scedfinder) can help users find the SCED course descriptions that most closely match the local or state course.
- When no match between a local or state code and SCED is possible, determine the Course Subject Area. When a course does not align well with an existing SCED code, it may be possible to identify the Course Subject Area where the course should reside. Once the Course Subject Area is determined, users can code courses using one of two methods:
  1. Use a course code set aside for "Other" or "Particular Topics" courses within the Course Subject Area.
  2. Use one of the unused course numbers that are set aside for state-specific courses within each Course Subject Area.
- Use the version of SCED that best meets the agency's needs. New SCED versions provide updated and accurate course codes so that SCED remains relevant and useful to LEAs and SEAs. If an LEA or SEA 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. The SCED Finder provides a quick reference for each SCED version.
- Add an indicator when needed to note if a course has been adapted to meet the individual needs stated in a student's Individual Education Program (IEP). There are no course descriptions in SCED that are intended solely for students with disabilities or that indicate that a course has been modified for these students. When this information is appropriate, users will need to add an indicator to note that a course is adapted to meet the individual needs stated in a student's IEP. Additional information on criteria related to grading and diplomas for students with disabilities, including information

on transcripts, can be found in the U.S. Department of Education Office for Civil Rights *Letter to Runkel*.[4]

- Identify courses that belong to a specific curriculum and that are not found in SCED in one of two ways.
    1. Code the courses using course numbers 900-990 that are reserved for state-specific use in each Course Subject Area.
    2. Code the courses using existing SCED codes that cover similar content and add attributes to the end of the code that identify the course as belonging to a specific curriculum.
- For courses that span subject areas, such as Integrated English/History, decide whether to map course content to multiple SCED codes or to a single SCED code. Assign credit for the course accordingly in one of the following two ways:
    1. Assign credit for the portions of the course assigned to each SCED code. For example, for the integrated English/History course, English and History portions of the course could be coded using separate codes with partial credit attributed to each mapped course.
    2. Assign credit for one Course Subject Area only. Consider adding an attribute to identify the course as an integrated course.

How to Access Course Information

Individual SCED Course Codes

The SCED Course Codes are available in a downloadable spreadsheet on the Forum website (https://nces.ed.gov/forum/sced.asp) and from SCED Finder (https://nces.ed.gov/scedfinder). The downloadable spreadsheet file includes a list of every five-digit SCED Course Code along with the course title, course description, and change status for each Course Code. See the Related Resources section of this guide for additional information about SCED, including links to SCED Guides and online training courses.

Course Groupings

The downloadable SCED report includes separate groupings of SCED codes, including

- *SCED Career and Technical Education (CTE) Courses* – SCED Course Codes recognized as belonging to one of the 16 CTE Career Clusters®[5] are included in the comprehensive list of SCED Course Codes as well as a separate tab of the SCED report labeled "CTE and FCS Attributes." Individual SCED Course Codes may be used in multiple Career Clusters®, and the list includes both the SCED Course Code and CTE Attribute for each course to indicate the specific course-Career Cluster associations.

> ### SCED Change Codes
>
> The downloadable spreadsheets, available at https://nces.ed.gov/forum/sced.asp, include change status information for each School Courses for the Exchange of Data (SCED) Course Code. Frequently used change statuses:
>
> - Substantive update
> - Editorial update
> - No change
> - New course
> - Archived course

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4   The letter can be found at https://www2.ed.gov/about/offices/list/ocr/letters/colleague-20081017.pdf.
5   Additional information on Career Clusters® is available at http://www.careertech.org/career-clusters/.

- *SCED Family and Consumer Sciences (FCS) Education Courses* – SCED Course Codes that the National Coalition for Family and Consumer Sciences Education has recognized as part of FCS education are included in the comprehensive list of SCED Course Codes as well as a separate tab of the SCED report labeled "CTE and FCS Attributes."

Appendix A:
Course Subject Area Codes

Course Subject Areas and Codes in SCED	
Course Subject Area	**Code for Courses**
English Language and Literature	01
Mathematics	02
Life and Physical Sciences	03
Social Sciences and History	04
Visual and Performing Arts	05
Religious Education and Theology	07
Physical, Health, and Safety Education	08
Military Science	09
Information Technology	10
Communication and Audio/Visual Technology	11
Business and Marketing	12
Manufacturing	13
Health Care Sciences	14
Public, Protective, and Government Services	15
Hospitality and Tourism	16
Architecture and Construction	17
Agriculture, Food, and Natural Resources	18
Human Services	19
Transportation, Distribution, and Logistics	20
Engineering and Technology	21
Miscellaneous	22
Non-Subject-Specific	23[6]
World Languages	24

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6   Non-Subject-Specific is used only at the prior-to-secondary level. The Non-Subject-Specific Subject Area was designed specifically for courses conveying prior-to-secondary-level content.

Appendix B:
SCED Versions

SCED codes first were developed and released in 2007. Since that time, the National Forum on Education Statistics (Forum) has released new versions to ensure that SCED codes remain updated and accurate and that SCED remains relevant and useful to local and state education agencies (LEAs and SEAs).

- Version 1: Secondary SCED codes were developed and released in 2007 as part of the document *Secondary School Course Classification System: School Codes for the Exchange of Data*. Prior-to-secondary codes were added in 2011 with the publication of *Prior-to-Secondary Course Classification System: School Codes for the Exchange of Data*. Together these two publications make up SCED Version 1.0.
- Version 2: Beginning with SCED Version 2.0, prior-to-secondary and secondary courses were coded using the same two-digit Course Subject Area Codes (the first two digits of the SCED code). In addition to aligning the prior-to-secondary and secondary Course Subject Areas as part of the SCED Version 2 update, the SCED Working Group updated Career and Technical Education (CTE) courses in multiple Course Subject Areas and revised Course Subject Area 5: Fine and Performing Arts, which was renamed to Visual and Performing Arts.
- Version 3: Version 3 updates included updated Family and Consumer Sciences courses and new courses in Course Subject Area 19.
- Version 4: As part of the Version 4 update, the working group archived Course Subject Area 6: Foreign Languages and added Course Subject Area 24: World Languages. The working group also focused on subject areas that had not yet been revised. Updates implemented in Version 4 included new and revised courses in Course Subject Area 01: English Language and Literature, 02: Mathematics, 03: Life and Physical Sciences, 04: Social Sciences and History, 07: Religious Education and Theology, 08: Physical, Health, and Safety Education, 09: Military Science, and 22: Miscellaneous. With the completion of SCED Version 4, the working group achieved its goal of reviewing and updating each SCED Course Subject Area.
- Version 5: Beginning with Version 5, the working group turned its focus to reviewing and implementing updates across all Course Subject Areas to ensure that SCED codes and descriptions remain up to date and accurate. Version 5 included new and updated courses in multiple subject areas, with a focus on Course Subject Area 5: Visual and Performing Arts.

- <u>Versions 6 and 7</u>: As part of the Version 6 and Version 7 development process, the working group continued reviewing and implementing updates across multiple subject areas.
- <u>Version 8</u>: Version 8 updates focused on Course Subject Area 02: Mathematics.
- <u>Version 9</u>: Version 9 included new and updated courses in multiple Course Subject Areas.
- <u>Version 10</u>: Version 10 updates included new and updated courses in multiple Course Subject Areas, including a new subsection in Course Subject Area 22: Miscellaneous with new Data Science, Data Literacy, and Data Science Applications courses.

For all Previous SCED Versions, go to https://nces.ed.gov/forum/sced_previous.asp.

Related Resources

National Forum on Education Statistics SCED Resources

Case Studies

https://nces.ed.gov/forum/sced_case_studies.asp

Case studies provide examples of best practices for SCED implementation and use in education agencies.

Current SCED File

https://nces.ed.gov/forum/Current_SCED_File.asp

This webpage features the most up to date SCED codes in a downloadable, sortable file. It includes

- a comprehensive list of all five-digit SCED Course Codes included in the most recent SCED version. This list includes the Course Title, SCED Course Code, Course Description, and Change Status;
- a list of Course Codes that have been archived, as well as suggested alternative Course Codes;
- names and definitions of the SCED Elements that make up the 12-character SCED Identifier and optional attributes that can be applied to the Identifier to provide a more robust description of courses; and
- a list of SCED Course Codes commonly included in one of the 16 Career Clusters® or as part of a Family and Consumer Sciences plan of study. This spreadsheet is an example of how the Career Cluster attribute and the Family and Consumer Sciences Indicator can be used to identify courses from different Course Subject Areas that are part of a plan of study.

School Courses for the Exchange of Data (SCED) Uses and Benefits

https://nces.ed.gov/forum/pub_2021023.asp

This resource was developed to provide a brief overview of the School Courses for the Exchange of Data (SCED), highlight the research application and benefits of SCED to users, and illustrate SCED uses with case studies.

SCED Finder | Fast access to school codes

https://nces.ed.gov/scedfinder/Home/Search

The SCED Finder is a free web-based tool designed to help select SCED codes for secondary and prior-to-secondary courses. This online tool can be used for a variety of purposes by school staff, researchers, students, or parents. The SCED Finder can help assign SCED codes to courses in a school's curriculum. The Finder's interactive interface enables users to quickly prepare 12-character SCED identifiers for courses by selecting individual applicable elements, including the course level, the amount of available Carnegie Unit credit (or grade span) and the placement of the course if it is part of a sequence. The SCED Finder can be used for single courses or an entire course catalog.

SCED Frequently Asked Questions (FAQ)

https://nces.ed.gov/forum/SCED_FAQ.asp

This resource supplements this guide and the *SCED Uses and Benefits* (https://nces.ed.gov/forum/pub_2021023.asp). It provides a quick reference for common questions about how to use SCED elements and attributes, implement SCED, keep SCED current in an agency, and assign course codes.

SCED Master List

https://nces.ed.gov/forum/Master_List.asp

The SCED Master List is a downloadable, sortable file containing a list of every SCED Course Code published in every version of SCED. This master list is intended to assist state and local education agencies with implementing or updating SCED.

SCED User Training

https://nces.ed.gov/forum/SCED_Training.asp

SCED User Training is designed to introduce new users to SCED and provide information on the benefits of SCED, the SCED coding structure, and tools for implementing and adapting SCED for use in education agencies. The materials on this page also can help experienced users learn more about SCED and the many free SCED resources. These resources can be used by education agencies to create their own internal SCED trainings.

Additional National Forum on Education Statistics Resources

Forum Guide to Metadata (2021)

https://nces.ed.gov/forum/pub_2021110.asp

This resource presents and examines the ways in which metadata can be used by education agencies to improve data quality and promote a better understanding of education data. The resource highlights the uses of metadata, discusses how to plan and successfully implement a metadata system in an education setting, and provides examples of standard metadata items and definitions to assist agencies with standardization.

Forum Guide to Staff Records (2021)

https://nces.ed.gov/forum/pub_2021094.asp

This resource is intended to help education agencies effectively collect, manage, utilize, and dispose of staff data. The resource provides an overview of the many types of information that may be classified as staff records; effective practices for collecting, maintaining, and protecting the privacy of these records; and information on managing access to the records, including open records requests.

Forum Guide to Virtual Education Data: A Resource for Education Agencies (2021)

https://nces.ed.gov/forum/pub_2021078.asp

This resource is designed to assist agencies with collecting data in virtual education settings, incorporating the data into governance processes and policies, and using the data to improve virtual education offerings. This resource reflects lessons learned by the education data community during the coronavirus disease (COVID-19) pandemic and provides recommendations that will help agencies collect and use virtual education data.

Forum Guide to Attendance, Participation, and Engagement Data in Virtual and Hybrid Learning Models (2021)

https://nces.ed.gov/forum/pub_2021058.asp

This resource provides an overview of best practices that will help education agencies collect, report, and use attendance, participation, and engagement data in different learning formats. It was developed as a companion publication to the 2018 *Forum Guide to Collecting and Using Attendance Data* and incorporates lessons learned by local and state education agencies (LEAs and SEAs) during the COVID-19 pandemic.

Forum Guide to Strategies for Education Data Collection and Reporting (SEDCAR) (2021)

https://nces.ed.gov/forum/pub_2021013.asp

This resource was created to provide timely and useful best practices for education agencies that are interested in designing and implementing a strategy for data collection and reporting, focusing on these as key elements of the larger data process. This new resource is designed to be relevant to the LEAs and SEAs of today, in which data are regularly collected for multiple purposes, and data collection and recording may be conducted by many different individuals within an agency.

Forum Guide to Cybersecurity: Safeguarding Your Data (2020)

https://nces.ed.gov/forum/pub_2020137.asp

This resource provides timely and useful best practice information to help education agencies proactively prepare for, appropriately mitigate, and responsibly recover from a cybersecurity incident. It provides recommendations to help protect agency systems and data before, during, and after a cybersecurity incident and features case studies from LEAs and SEAs.

Forum Guide to Exit Codes (2020)

https://nces.ed.gov/forum/pub_2020132.asp

This resource provides best practice information for tracking data about when students transferred, completed high school, dropped out, or otherwise exited an education agency. The resource defines exit codes and reviews their use in an education agency; provides an updated, voluntary, common taxonomy for exit codes; discusses best practices and methods for addressing specific challenges in exit codes data collection; and features case studies that highlight different education agencies' approaches to and experiences with exit coding.

Forum Guide to Data Governance (2020)

https://nces.ed.gov/forum/pub_2020083.asp

This resource provides timely and useful best practices, examples, and resources for agencies implementing or updating their data governance programs. It provides an overview of data governance; discusses effective data governance practices, structures, and essential elements; describes how to meet privacy and security requirements while also meeting data accessibility and sharing needs; and includes detailed case studies from education agencies in their data governance efforts.

Forum Guide to Technology Management in Education (2019)

https://nces.ed.gov/forum/tech_management.asp

This resource is designed to assist education agency staff with understanding and applying best practices for selecting and implementing technology to support teaching and learning in the classroom. It addresses the widespread use and integration of technology in modern education systems and focuses on technology governance and planning, technology implementation, integration, maintenance, support, training, privacy, security, and evaluation.

Forum Guide to Planning for, Collecting, and Managing Data About Students Displaced by a Crisis (2019)

https://nces.ed.gov/forum/pub_2019163.asp

This resource provides timely and useful best practice information for collecting and managing data about students who have enrolled in another district or school because of a crisis. It highlights best practices that education agencies can adopt before, during, and after a crisis and features contributions from agencies that have either experienced a crisis or received students who were displaced by a crisis.

Forum Guide to Personalized Learning Data (2019)

https://nces.ed.gov/forum/pub_2019160.asp

This resource will help education agencies as they consider whether and how to expand their use of personalized learning. It includes an overview of the topic, best practices on collecting and using data for personalized learning, and case studies from states and districts that have implemented personalized learning.

Forum Guide to Early Warning Systems (2018)

https://nces.ed.gov/forum/pub_2019035.asp

This resource provides information and best practices that will help education agencies plan, develop, implement, and use an early warning system in their agency to inform interventions that improve student outcomes. This document focuses on early warning systems and their data from the perspective of the education data community.

Forum Guide to Facility Information Management: A Resource for State and Local Education Agencies (2018)

https://nces.ed.gov/forum/pub_2018156.asp

This resource is designed to help LEAs and SEAs plan, design, build, use, and improve their facility information systems. It includes a review of why school facilities data matter and recommends a five-step process that an education agency can undertake to develop a robust facility information system around goals, objectives, and indicators.

Forum Guide to Reporting Civil Rights Data (2018)

https://nces.ed.gov/forum/pub_2017168.asp

This resource presents a variety of effective methods through which LEAs report civil rights data to the U.S. Department of Education's Office for Civil Rights. In addition, the guide provides examples of how SEAs can voluntarily help their LEAs with Civil Rights Data Collection (CRDC) reporting. The guide includes an overview of the CRDC, a discussion of the challenges and opportunities in reporting civil rights data, an explanation of the CRDC reporting process, and six case studies that examine how specific education agencies report civil rights data.

Forum Guide to Collecting and Using Attendance Data (2018)

https://nces.ed.gov/forum/pub_2017007.asp

This resource offers best practice suggestions and features real-life examples of how attendance data have been used by education agencies. A set of voluntary attendance codes that can be used to compare attendance data across states, districts, and schools is included, as well as tip sheets for a wide range of education agency staff who work with attendance data.

Forum Guide to Data Visualization: A Resource for Education Agencies (2016)

https://nces.ed.gov/forum/pub_2017016.asp

This resource recommends data visualization practices that will help education agencies communicate data meaning in visual formats that are accessible, accurate, and actionable for a wide range of education stakeholders. Although this resource is designed for staff in education agencies, many of the visualization principles apply to other fields as well.

Forum Guide to Collecting and Using Disaggregated Data on Racial/Ethnic Subgroups (2016)

https://nces.ed.gov/forum/pub_2017017.asp

This resource is intended to identify some of the overarching benefits and challenges involved in data disaggregation; recommend appropriate practices for disaggregating racial/ethnic data in states and districts; and describe real-world examples of large and small education agencies disaggregating racial/ethnic data successfully.

Forum Guide to Education Data Privacy (2016)

https://nces.ed.gov/forum/pub_2016096.asp

This resource provides LEAs and SEAs with best practice information to use in assisting school staff in protecting the confidentiality of student data in instructional and administrative practices. LEAs and SEAs may also find the guide useful in developing privacy programs and related professional development programs.

Forum Guide to Alternative Measures of Socioeconomic Status in Education Data Systems (2015)

https://nces.ed.gov/forum/pub_2015158.asp

This resource provides "encyclopedia-type" entries for eight plausible alternative measures of socioeconomic status (SES) and, as such, will help readers better understand the implications of collecting and interpreting a range of SES-related data in education agencies.

Forum Guide to College and Career Ready Data (2015)

https://nces.ed.gov/forum/pub_2015157.asp

This resource outlines the data needs and helpful analytics for five use cases (individual learning plans, educator support systems, postsecondary feedback loops, accountability systems, and career technical and education programs) that support LEA and SEA college and career-ready initiatives.

Forum Guide to Supporting Data Access for Researchers: A Local Education Agency Perspective (2013)

https://nces.ed.gov/forum/pub_2014801.asp

This resource recommends a set of core practices, operations, and templates that can be adopted and adapted by LEAs as they consider how to respond to requests for both new and existing data about the education enterprise.

Forum Guide to the Teacher-Student Data Link: A Technical Implementation Resource (2013)

http://nces.ed.gov/forum/pub_2013802.asp

This resource provides a practical guide for implementing a teacher-student data link (TSDL) that supports a range of uses at the state, regional, and local levels. The guide addresses the considerations for linking teacher and student data from multiple perspectives, including governance, policies, data components, business rules, system requirements, and practices. It provides references to promising practices for high-quality data linkages, including TSDL-specific processes such as roster verification and the establishment of the teacher of record.

Forum Guide to Taking Action with Education Data (2013)

https://nces.ed.gov/forum/pub_2013801.asp

This resource provides practical information about the knowledge, skills, and abilities needed to identify, access, interpret, and use data to improve instruction in classrooms and the operation of SEAs, LEAs, and schools.

Forum Guide to Supporting Data Access for Researchers: A State Education Agency Perspective (2012)

https://nces.ed.gov/forum/pub_2012809.asp

This resource recommends a set of core practices, operations, and templates that can be adopted and adapted by SEAs as they consider how to respond to requests for data about the education enterprise, including data maintained in longitudinal data systems.

Forum Guide to Ensuring Equal Access to Education Websites: Introduction to Electronic Information Accessibility Standards (2011)

https://nces.ed.gov/forum/pub_2011807.asp

This resource is intended to raise awareness in nontechnical audiences and suggest best practices for complying with Section 508 goals at an operational level in SEAs, school districts, and schools. It is not intended to recreate technical resources that already exist to facilitate Section 508 compliance.

Traveling Through Time: The Forum Guide to Longitudinal Data Systems (Series)

Book I: What is an LDS? (2010) http://nces.ed.gov/forum/pub_2010805.asp

Book II: Planning and Developing an LDS (2011) http://nces.ed.gov/forum/pub_2011804.asp

Book III: Effectively Managing LDS Data (2011) http://nces.ed.gov/forum/pub_2011805.asp

Book IV: Advanced LDS Usage (2011) http://nces.ed.gov/forum/pub_2011802.asp

The *Traveling Through Time* series is intended to help LEAs and SEAs meet the many challenges involved in developing robust systems, populating them with quality data, and using this new information to improve the education system. The series introduces important topics, offers best practices, and directs the reader to additional resources related to longitudinal data system (LDS) planning, development, management, and use.

Common Education Data Standards (CEDS)

https://ceds.ed.gov

CEDS is an education data management initiative whose purpose is to streamline the understanding of data within and across early learning, elementary, secondary, postsecondary, Forum Guide to Digital Equity and workforce (P-20W) institutions and sectors. The CEDS initiative includes a common vocabulary, data models that reflect that vocabulary, tools to help education stakeholders understand and use education data, an assembly of metadata from other education data initiatives, and a community of education stakeholders who discuss the uses of CEDS and the development of the standard. School Courses for the Exchange of Data (SCED) codes and related elements are included in CEDS.

High School Longitudinal Study of 2009 (HSLS:09)

https://nces.ed.gov/surveys/hsls09/

HSLS:09 is a nationally representative, longitudinal study of 23,000+ 9th graders from 944 schools in 2009, with a first follow-up in 2012 and a second follow-up in 2016.

High School Transcript Study (HSTS)

https://nces.ed.gov/nationsreportcard/hsts/

NCES periodically surveys the curricula being implemented in the nation's high schools and the course-taking patterns of high school students through the HSTS. The study provides information about the types of courses that graduates take, how many credits they earn, their grade point averages, and the relationship between course-taking patterns and graduates' achievement based on their performance on the National Assessment of Educational Progress (NAEP) in 12th grade. HSTS was conducted most recently in 2019. Previous studies were collected in 2009, 2005, 2000, 1998, 1994, 1990, and 1987.