

The Federal Classification of Instructional Programs (CIP) Taxonomy and APIR's Principles of CIP Code Assignment to Academic Programs

A. Background

The federal Classification of Instructional Program (CIP) code taxonomy supports the tracking and reporting of program-level enrollments and program completion activity at U.S. colleges and universities. Each academic program at U.S. colleges and universities is assigned a CIP code that describes the program curriculum and, in some cases, its associated degree. This taxonomy enables a more “apples to apples” comparison of programs across institutions than would be evident from relying on the institutional name of the program alone.

B. CIP Code Structure

A CIP code is a six-digit code, made up of three groupings of two digits. The first two digits define the most general grouping of related programs (call the CIP area). For example, all CIP codes that start with 26 are in the broad area called “Biological and Biomedical Sciences”. The second two digits represent sub-areas within the two-digit sequence. For example, under the CIP code 26 are 26.01 (Biology), 26.02 (Biochemistry), and 26.03 (Botany). The full six-digit code represents a specific academic program. For example, 26.0205 is the CIP code for Molecular Biochemistry.

C. Why CIP Codes Matter

CIP codes have important uses and implications for the institutions and for individual students. These uses and implications need to be understood and appropriately considered during the CIP code assignment process.

From an institutional perspective, CIP codes:

1. Are the standard for official reporting of enrollments and degrees/awards conferred and thus enable “apples to apples” comparisons between institutions. For example, if we want to compare the number of master’s degrees UW-Madison awarded in Bacteriology to a peer institution we can do so on the basis of the program’s CIP code (26.0502) without having to know that the program’s name at that institution is, for example, Microbiology.
2. Are used to assess breadth and depth of program offerings at an institution and compare one institution’s program array to another. In these kinds of analyses each CIP code is assumed to be a single program. For example, to learn if UW-Madison has a larger number of biological science programs than another institution (or the average nationally) we can count the number of CIP codes used in CIP area 26.
3. Facilitate the determination of program attributes which inform accountability reporting, key performance metrics, and other institutional analyses. For example, to calculate the number of STEM programs UW-Madison offers using the National Science Foundation definition of STEM, we can look at which CIP codes the NSF used to define STEM and use our program CIP codes to group into the same categories.
4. Contribute to a determination of whether certain federal regulations apply to a program. For example, the CIP code of an academic program contributes to the determination of whether international students are eligible for visa extension at graduation as noted below. It also is a component of the application of federal gainful employment regulations.

From a student perspective, CIP codes:

1. Can be used to determine a student's eligibility for federal and state financial aid. For example, students in certain programs (based on CIP codes) are eligible for grants and/or loans not available to other students. Eligibility for certain veteran-related benefits is also determined by the CIP code assignment of the student's degree program.
2. Can be used to determine eligibility for certain student loan forgiveness programs.
3. Determine eligibility for visa eligibility and visa extensions. The Department of Homeland Security's STEM/OPT program is one example that allows extensions of student visas for certain international students who graduate from programs with certain CIP codes.

D. APIR's Principles for the Initial Assignment of CIP Codes to New Academic Programs

At UW-Madison, CIP code assignments for academic programs (majors and certificates, specifically plan types of MAJ, MIN, CRT, CAP) are initially made at the time a new program is approved by the University Academic Planning Council (UAPC) and, if relevant, the UW System Board of Regents. These CIP assignments are made by Academic Planning and Institutional Research, in consultation with UW System Administration (Office of Policy Analysis and Research) and are communicated to the Registrar's Office where the assignment resides in the academic plan table in the Student Information System (SIS).

Because CIP codes serve many important functions, the initial assignment of a CIP code should be defensible to internal and external stakeholders, align with the program curriculum and learning outcomes, and consider secondary effects of the assignment.

Academic Planning and Institutional Research uses the following principles in the assignment of CIP codes.

1. APIR consults the federal CIP code taxonomy and the description associated with CIP codes (<https://nces.ed.gov/ipeds/cipcode/default.aspx?y=56>) to determine the closest match to the program based on its approved curriculum and program learning outcomes. The official documentation provided to the University Academic Planning Council (UAPC) and the Board of Regents during the approval process is used as the basis for this determination because this is the publicly available description of the program.
2. If APIR finds a closely matching CIP code, we also confirm that:
 - a. the proposed CIP assignment is appropriate at all levels of the CIP taxonomy. For example, a proposed assignment to a CIP code in the Physical Sciences area (40) should also meet the criteria to be a Physical Sciences program, described in the taxonomy as "programs that focus on the scientific study of inanimate objects, processes of matter and energy, and associated phenomena".
 - b. the proposed CIP assignment is appropriate for the degree and degree-level awarded by the program. For example, CIP code 51.3801 (Registered Nurse) specifies that this CIP code is only valid for bachelors and master level degrees.
 - c. the CIP code is not already in use for another program unless the new program is an extension of an existing program (i.e. the addition of a PhD to an existing master's program) or is acknowledged to be in a closely related and potentially overlapping area of study to an existing area of study.

- d. similar programs in the UW System (in consultation with staff in the Office of Policy Analysis and Research at UW System) have that same CIP code assignment. Evidence that degree programs are similar to or different from other degree programs in the UW System are found in the program approval documentation submitted to the Board of Regents. UW System's expectation is that similar programs will have similar CIP code assignments so the decision about appropriate CIP code assignments is not entirely up to UW-Madison to make without consultation and, in some cases, negotiation with UW System Administration.
3. If APIR does not find a closely matching CIP code or one that also meets the additional considerations in 2 above, the following additional pieces of information are considered to help with the assignment.
 - a. The academic home (School/College and Department) of the program. For example, the program Rehabilitation Psychology and Special Education (home in the School of Education with licensure implications for Special Education teachers) has plausible CIP code matches in Education (CIP 13) and Health Sciences (CIP 51). A decision to use the CIP code in CIP area 51 would also be a decision to consider this program a Health Sciences program (along with inheriting any additional accreditation, reporting, expectations etc.) that may accompany programs in that area. For this reason, the option for a CIP code in Education was selected as this signals to stakeholders and agencies related to teacher licensure that the program prepares future teachers.
 - b. The known attributes associated with the CIP code. For example, the undergraduate program in Forest Science has elements of CIP codes 03.0501 (Forestry, General) and 03.0502 (Forest Science and Biology). Neither is a perfect match. However, 03.0502 is considered by most agencies to be a STEM program and eligible for visa extensions through the STEM OPT program. The latter selection was more beneficial to students.
 - c. For programs that prepare graduates for standard occupations, the Standard Occupational Classification (SOC) codes associated with likely employment opportunities for graduates can guide the selection of the CIP code.
 - d. CIP code assignments for similar programs at peer institutions.
4. If APIR does not find any closely matching CIP code, the following additional pieces of information are considered and a CIP assignment with the final digits of 9999 ("other" at the CIP area level) or 99 (other at the CIP sub-area level) is made. Consideration is given to:
 - a. The academic home (School/College and Department) of the program and the current CIP code assignments of existing programs in that department. For example, if a program's home is in the English department and no specific CIP codes in area 23 (English Language and Literature/Letters) are appropriate then a CIP code assignment of 23.9999 (English, Other) is considered.
 - b. Avoidance of a CIP code already in use for another program at the same level.

E. APIR's Principles for Changes to CIP Code Assignments

Because CIP code assignments have student implications for financial aid eligibility and visa status and institutional implications for accreditation and peer benchmarking, changes to CIP codes must be governed using the same process as the original assignment of CIP code. Assignments of CIP codes need to be defensible to questions from internal and external audiences. Changes to CIP codes can have unintended consequences for students and recent graduates in the affected programs. In addition, changes to CIP codes trigger changes to peer benchmarking which can lead to changes in conclusions that are drawn from benchmarking activities.

Changes to CIP code assignments should only be made when there is a compelling reason, with the knowledge and approval of affected stakeholders and governance bodies, and with full consideration of all the implications for doing so.

Justification for changes to CIP code assignments generally falls into the following categories:

1. When the curriculum and/or the learning outcomes have changed from the time of the original approval. This is the most common reason for a CIP code change and it is an essential consideration in any CIP code assignment. Despite any external motivations or benefits for a change in CIP code (for example, STEM OPT considerations), the CIP code must accurately represent the program learning outcomes and curriculum. Substantial changes in CIP code assignments (for example, the change of a CIP area or sub-area) may be interpreted as a substantial change in curriculum and trigger additional scrutiny by the governance and accreditation bodies that oversee academic programs.
2. When the Department of Education releases a new version of the CIP code taxonomy (approximately every 10 years). New versions of the CIP code taxonomy sometimes sunset codes that are in use necessitating a new assignment. New versions also add new codes (particularly in emerging disciplines) and sometimes better matching options exist for programs that had difficult initial assignments. The Department of Education also uses the release of a new version of the taxonomy to be more directive to institutions about the CIP area under which certain programs should be assigned. For example, the last release of the taxonomy in 2020 directed institutions to move programs in Veterinary Medicine to CIP area 01 (Agriculture, Agriculture Operations, and Related Sciences) rather than CIP area 51 (Health Professions and Related Programs).