

2016

Carl D. Perkins

**Career and Technical
Education Act of 2006**

**Career and Technical Education
Enrollment Reporting System
(CTEERS)**

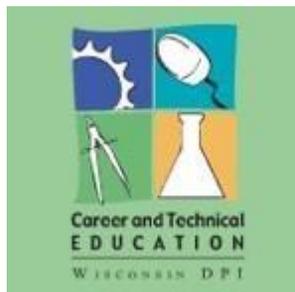
Field Manual

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CTEERS Overview

Section

CAREER AND TECHNICAL EDUCATION ENROLLMENT REPORTING SYSTEM

Introduction

The Career and Technical Education Enrollment Reporting System (herein referred to as CTEERS) is an important aspect of the Carl Perkins Act of 2006 (CPA) as it collects enrollment information at the 11th, 12th and 13th grade levels on those secondary districts receiving CPA funds or participating in CPA Basic Grant projects.

This collected enrollment information is in turn utilized to respond to the Federal Performance Report mandated of the State, to gather information related to the districts for the State Plan, to assist districts in measuring progress to mandated Core Indicators of Performance, and finally as a criterion in the Civil Rights process. **It is, therefore, very important and critical that all enrollment information requested by CTEERS from the district be timely, concise, complete and accurate.** Failure to report in such a manner can jeopardize the district's Perkins grant for the reporting year.

The two reports that basic grant participating districts are required to submit are the Composite Enrollment Report and the Graduate Completer Follow-up Report. The Composite Enrollment Report is due on or before July 15 with the Follow-up Report being due May 1 of the year following.

If you have questions relating to any aspect of CTEERS, please contact Mai Choua Thao at 608-267-2279 or MaiChoua.Thao@dpi.wi.gov for clarification.

Timeline For Report Submission:

DPI Number/Name	Due Date
PI-1330R/Composite Enrollment Report	July 15
PI-1335/Graduate Completer Follow-up Report	May 1 (following year)

CTEERS

Composite Enrollment Report Section

CTEERS Composite Enrollment Report [PI-1330R (Rev. 12/2009)]

Overview

The CTEERS Composite Enrollment Report has been developed for the purpose of submitting needed student information from the LEA to the Department and the Career and Technical Education (CTE) Team via the means of electronic file submission. Every student at the 11th-13th grade levels from each Carl Perkins participating district is to be reported by high school in the district on a one student record per line or row in the reporting file. The Composite Enrollment Report file is to be received by the Career and Technical Education Team on or prior to July 15 of each fiscal year.

Directions for Submitting Reports

1. Submission Requirements

- The file is to be uploaded to the secure file transfer program of Accellion whose web address is: <https://moveit.dpi.wi.gov/courier/web/1000@/wmLogin.html>
- Once in the program attach the Composite Enrollment file(s) to an email addressed to MaiChoua.Thao@dpi.wi.gov
- If the submitter does not have a login, email a request for its use at MaiChoua.Thao@dpi.wi.gov

2. File Requirements

- Form must adhere to columnar sequential layout as found on the CTEERS Composite Enrollment Report Element chart.
- One student record per line or row.
- Directions and coding are the same as the form from which the data element came.
- Do not use punctuation within the data unless the definition for the data cell allows a delimiting character of a tilde(~). A decimal point must be entered for Instructional Area code.
- The recommended file format is an Excel file, **if another application program is used and the file can not be exported to an Excel file format, the file must be in an ASCII (text), comma delineated format with a return after each line (student record) in the file.**
- Since the Career and Technical Education Team will be pre-editing the file through the use of an Excel spreadsheet prior to uploading to the DPI data base server, it is important that if

a particular cell is not applicable to an individual student, that cell should still be preserved through the use of a comma in a comma delineated file.

- File name convention will be as follows:

2016-CTE-DistrictName where the first four digits are to be replaced with the current reporting year and the DistrictName to be replaced with the district's name.

- All high schools within the district are to be included in the one file submission for the district with no line breaks between schools or grades.

Composite Enrollment Report Element Chart

The following "chart" details the column sequence and corresponding name for each data element as well as valid codes for each.

Column # Sequence	Name	Valid Codes
1	District Number	4 digit number found in District/School Section
2	School Number	4 digit number found in District/School Section
3	Student's District of Residence	4 digit number found in District/School Section
4	Wisconsin Student Number	10 digit number unique for the student within Wisconsin
5	Grade Level	11, 12, or 13
6	Last Name	Max 20 characters with no punctuation
7	First Name	Max 10 characters with no punctuation
8	Date of Birth	6 digit number in mmddyy format
9	Sex	M or F
10	Race - Ethnicity	A, B, H, I, P and or W with max of 6 codes with ~ between each, If student H (Hispanic) must use minimum of one other code
11	Characteristic	R only; or A, E, H and or L with max of 4 codes with ~ between
12	Teen Single Parent	Y or N 13 Student Progress Y or N
14	Career Plan	Y or N
15	Post-High School Career Preparation	1, 2, 3, or 4
16	CTE Participant	Y or N (skip to cell 23 if N for student)
17	Program Area Participation	A, B, F, H, M and or T with max of 6 codes with ~ between each
18	CTE Concentrator	N,1 or 2 (skip to cell 23 if N for student)
19	Instructional Area Code	4 digit number with decimal from Instructional Area Code Section only
20	Non-Certificated Learning Methodology	1, 2, 3, 4, 5, if more than one, ~ between each or 6
21	Certificated Learning Methodology	1, 2, 3, 4, if more than one, ~ between each or 5
22	Certificated Learning Completion	1, 2, 3 or 4 ; if more than one, ~ between each that aligns to sequence of cell 21 entries (leave blank if cell 21 is 5 for student)
23	Completion Status	C1, D1, D2, D3, A1, or B1
24	Compulsory School Attendance	2 character alpha or X
25	Youth Options Attendance	2 character alpha, 4 digit number, if more than one, ~ between each or X
26	Advanced Standing Credit - Tech Prep Participation	2 character alpha, if more than one ~ between each or X
27	Advanced Standing Credit - Tech Prep Completion	Y, N, if more than one, ~ between each that aligns to sequence of cell 26 entries or X;
28	Transcripted Credit-Tech Prep Participation	2 character alpha; if more than one, ~ between each or X
29	Transcripted Credit-Tech Prep Completion	Y, N, if more than one, ~ between each that aligns to sequence of cell 28 entries or X
30	Youth Apprenticeship, Participation	2 character alpha, 4 digit number; if more than one, ~ between each or X
31	Youth Apprenticeship, Completion	Y, N, if more than one, ~ between each that aligns to sequence of cell 30 entries or X;
32	Transcripted Credit – University, Participation	4 digit number; if more than one, ~ between each or X
33	Transcripted Credit – University, Completion	Y, N, if more than one, ~ between each that aligns to sequence of cell 32 entries or X

Coding Directions by Cell - Composite Enrollment Report

Cell 1: District Code

- Enter the DPI assigned code for your district
- District/School Code Listing section can be found on pages 35-56 of the Field Manual

Cell 2: School Code

- Enter the DPI assigned code for the specific high school within your district
- District/School Code Listing section can be found on pages 35-56 of the Field Manual

Cell 3: Student's District of Residence

- Enter the DPI assigned code for the student's district of residence
- This will differ from Cell 1 for those students who attend the district but reside in a different school district. Example: Open Enrollment Students

Cell 4: Wisconsin Student Number

- Enter the student's unique Wisconsin student number
- The number must be equal to 10 digits in length
- For further information on the Wisconsin Student Number go to the following DPI website:
<http://dpi.wi.gov/cst/data-collections/student/unique-id/wsls/wsn>

Cell 5: Grade

- Enter the student's grade level for the reporting period as follows
- | | |
|----|---|
| 11 | Junior |
| 12 | Senior |
| 13 | Ungraded, over the age of 16 and less than 22. Ungraded refers to those students who do not move on the same pace as their cohorts, typically special education students. |

Cell 6: Student Last Name

- Enter the student's last name
- Maximum number of characters is 20
- If the student is a "Junior" or "IV," place that information after the last name using a space to separate the entry. Example: Matthews Jr OR Porter IV
- Do not use punctuation within the name

Cell 7: Student First Name

- Enter the student's first name (No nicknames)
- Maximum number of characters is 10
- Do not use punctuation within the name

Cell 8: Birthday

- Enter the student's birth date
- Format must be six digits: MMDDYY Example: April 21, 1993 would be 042193

Cell 9: Sex

- Enter the code of either **M** for male or **F** for female that reflects the student's gender

Cell 10: Race-Ethnicity

- Enter a minimum of one code of the following (A, B, I, P or W) with the exception of H (Hispanic) which is now considered an ethnicity in which a minimum of two codes are necessary with a tilde (~) that apply for each student.
- If the student considers their self a multi-ethnic you may enter up to a maximum of six codes for the student with a tilde (~) between each code, i.e. H~I, H~W~B, A, B, etc:

H Hispanic

A Asian

B Black / African American

I American Indian / Alaska Native

P Pacific Islander / Hawaiian

W White

Cell 11: Characteristic

- Enter a minimum of one code for each student
- If the student can be characterized by more than one of the characteristics, enter the appropriate codes with a tilde (~) between each code. Example: H~L~A or H~E
- The maximum number of codes is 4
- A student classified as Regular will have only the one code of R

H Handicapped

L Limited English Proficient

A Disadvantaged - Academic

E Disadvantaged – Economic

R Regular

DEFINITIONS:

Handicapped includes any individual who

- 1) has a physical or mental impairment that substantially limits one or more of the major life activities of that individual; or
- 2) has a record of an impairment described in (1) of this definition; or 3) is regarded as having an impairment described in (1) of this definition.

Note: It further includes any individual who has been evaluated under Part B of the IDEA and determined to be an individual with a disability who is in need of special education and related services; and any individual who is considered disabled under section 3 of the Americans with Disabilities Act of 1990.

For a student to be coded as handicapped, the student must fall under one of the mentioned conditions and there must be substantive evidence of the condition on file at the district.

Limited English Proficient is to be utilized for students who were not born in the United States or whose native language is a language other than English; who come from environments where a language other than English is dominant; or who are American Indian and Alaska Natives and who come from environments where a language other than English has had a significant impact on their level of English language proficiency; and who by reason thereof, have sufficient difficulty speaking, reading, writing, or understanding the English language to deny those individuals the opportunity to learn successfully in classrooms where the language of instruction is English or to participate fully in our society. Again, there must be substantive evidence of condition on file at the district.

Disadvantaged includes categories of academic disadvantage and economic disadvantage. For a student to be coded as disadvantaged, the student must fall under one of the following categories with substantive evidence of condition on file at the district:

Academic Disadvantaged –

Student demonstrates a need based on one of the following conditions:

- 1) Scores at or below the 25th percentile on a standardized achievement or aptitude test;
- 2) Whose secondary school grades are below 2.0 on a 4.0 scale where A = 4.0; or 3) Fails to maintain minimum academic competencies.

Economic Disadvantaged –

Student demonstrates a need based on one of the following conditions:

- 1) Family or student is eligible - for Aid to Families of Dependent Children (AFDC), Food Stamps, to be counted under Chapter 1 of Title 1 of the Elementary & Secondary Education Act, or Free or reduced priced meals under the National School Lunch program;
- 2) Determined to be low income according to the latest data from the Dept. of Commerce; or
- 3) Identified as low income based upon other indices of economic status granted by the Secretary of Education.

Regular is to be used for the student that does not fall under the Handicapped, LEP, or Disadvantaged coding conditions.

Cell 12: Teen Single Parent

- Enter **Y** for yes if:

- the student (male or female) is a single parent (unmarried or legally separated)
 - AND** ○ has sole or joint custody of a minor child or children during the reporting year •
- Enter N for no if the student is not a teen single parent

Cell 13: Student Progress

- Enter Y for yes if: ○ If the student achieved sufficient credits during the reporting year to move on to the next grade level **OR**
 - Has achieved sufficient credits to graduate during the current reporting year
- Enter N for no if:
 - The student will not progress to the next grade level **OR**
 - Will not graduate if a senior **OR** ○ Has dropped out of school during the reporting year
- Note: Student Progress is in part tied to Completion Status. (Cell # 23)

Cell 14: Career Plan

- Enter Y for yes if the student has a written career plan on file
- Enter N for no if the student does NOT have a written career plan

Definition: A career plan is defined as documentation maintained on the student that provides evidence that the student has systematically explored their aptitudes, interests, options, preferences, skills and the existing labor market and the student; is using this knowledge of self and work as a basis for goal setting and educational planning at the secondary level for post secondary attainment.

Cell 15: Post-High School Career Preparation

Enter a code that represents the student's preparation for post-high school.

Note: Plans should have been based upon an informed selected educational program through meetings between the student, guidance counselor and parents and based upon the student's future planned post-high school outcome.

1 Non-Baccalaureate Prep

- Student is enrolled in a planned sequence of courses that will lead to enrollment in a nonbaccalaureate degree program at a post-secondary institution
- Examples: technical college program; trade schools; adult apprenticeship program

2 Baccalaureate Prep

- Student is enrolled in a planned sequence of courses that will lead to enrollment in a baccalaureate degree program at a post-secondary institution
- Example: University program **3 Career Prep**
- Student is enrolled in a planned coherent sequence of courses that will result in academic and technical occupational competencies so that student can directly enter the workforce after graduation from high school
- Examples: Going directly into the workforce; military **4 Undeclared**
- Student is not enrolled in a planned coherent sequence of courses with a declared occupational and educational goal at this time
- Note: There should be very few coded "undeclared" students.

Cell 16: CTE Participant

- Enter one of the following codes for the student
- Y Yes, if the student was enrolled in one or more CTE courses for the reporting year
- N No, if the student was not enrolled in any CTE courses for the reporting year

Special Circumstance

If the student **has completed three or more CTE courses** within their chosen pathway but is **not enrolled in a CTE course** for the reporting year, report the student's activity as follows:

- fill in cell 16 with a Y,
- fill in the appropriate program area in cell 17 that is related to the student's Instructional Area Code provided in Cell 19
- mark the student as a concentrator with code 1 or 2 for cell 18,
- fill in cells 19 – 23 appropriately for that student's concentration and • the student should be coded C1 for Cell 23 if graduating,

DEFINITIONS:

Career and technical education (CTE) courses:

Secondary CTE courses, offered through the recognized Wisconsin program areas listed below, must be taught by a CTE instructor licensed for that specific discipline.

- Agriculture and Natural Resources
- Education ○ Business and Information
- Technology Education ○ Family and
- Consumer Science Education ○ Health Science Education**
- Marketing Education
- Technology and Engineering Education

**Exception: Health Science Education may also be taught by a health education instructor and/or a science licensed instructor. For further information, refer to Health Science Programming in Wisconsin, a brief that describes programs of study, courses in health science, licensure, CTEERS reporting, and funding. Visit the Wisconsin Health Science website at www.dpi.wi.gov/hs.

"CTE courses within a chosen pathway":

A coherent sequence of secondary CTE courses that have been identified as essential for success for post high school career preparation. The courses may cross over multiple CTE program areas. These courses may or may not be part of an operational Program of Study (POS). (See page 14 for definition of an operational POS.)

Revised: 4/2011

Note:

- If Cell 16 is coded Y, Fill in Cells 17 – 22
- If Cell 16 is coded N, skip to Cell 23

Cell 17: Program Area Participation

- Enter a minimum of one code from the following list that represents the program area of the coursework that the CTE participant was enrolled in
- If the CTE participant enrolled in coursework from more than one CTE program area, separate the codes with a tilde (~),
 - Example: A~B or B~F~M

- A** Agriculture and Natural Resources Education
- B** Business and Information Technology Education
- F** Family and Consumer Science Education
- H** Health Science Education
- M** Marketing Education
- T** Technology and Engineering Education

Cell 18: CTE Concentrator

A CTE Concentrator is a secondary student who has completed (earned secondary credit) in a minimum of two CTE courses within the student’s chosen pathway **and** is enrolled in continuing CTE course(s) in that pathway for the current reporting year.

Enter one of the following codes:

- 1 Student is a CTE Concentrator and is enrolled in an **operational** Program of Study (POS) at the district
 - 2 Student is a CTE Concentrator and is not enrolled in an **operational** Program of Study (POS) at the district
- N Student is not a CTE concentrator

Reminder: Special Circumstance

If the student **has completed three or more CTE courses** within their chosen pathway but is **not enrolled in a CTE course** for the reporting year, remember to report the student’s activity as follows:

- fill in cell 16 with a Y,
- fill in the appropriate program area in cell 17 that is related to the student’s Instructional Area Code provided in Cell 19
- mark the student as a concentrator with code 1 or 2 for cell 18,
- fill in cells 19 – 23 appropriately for that student’s concentration and • the student should be coded C1 for Cell 23 if graduating,

DEFINITION:

Operational Program of Study (POS):

“...career and technical programs of study, which may be adopted by local education agencies and postsecondary institutions to be offered as an option to students ... when planning for and completing future coursework, for career and technical content areas that--

1. Incorporate secondary education and postsecondary education elements;
2. Include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education;
3. May include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and
4. Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.” (Section 122(c)(1)(A) of Perkins IV)

NOTE: Districts in the implementation phase of a POS must evaluate their program design and operation against the four criteria above to determine if the POS is operational. Districts with a POS at the developmental stage will not have an operational POS.

Please refer to the following link for information on Program of Study:

<http://dpi.wi.gov/cte/pathways/career-clusters>

Cell 19: Instructional Area Code

- Enter an appropriate **4-digit code with decimal** from pages 22-27 of the Instructional Area Code listing for every CTE Concentrator
- The code should reflect the focus of the student's planned sequence of secondary CTE courses leading to skills for employment after graduation and/or the continuation of studies at an institution of higher education

Cell 20: Non-Certificated Learning Methodology

- Enter a minimum of 1 code for each CTE concentrator
- If the student was involved in more than 1 program, enter all codes separated by a tilde (~). ○
Example: 1~3
- If a student was only involved in a **certificated** learning methodology, enter code 6 and report under cell 21

1 Co-op:

The student is engaged in a written cooperative agreement between the school and a paying employer wherein the student receives instruction by alternation of study in school, which includes academic courses and related technical instruction, with a job in any occupational field. The instruction must be planned and supervised by the school and the employer so that each directly contributes to the student's education and employability.

2 Supervised Occupational Experience:

The student is engaged in an on-the-job experience designed to give the student knowledge of the skills required of an occupation under the direction of an employer, a training sponsor and/or a teacher-coordinator. The supervised occupational experience does not meet the criterion of a coop.

3 Simulation:

The student is engaged in an instructional classroom experience planned to give the illusion of real life from which the student may learn basic skills and competencies for an occupational area.

4 Internship

The student is engaged in a school approved program where the student is placed with an employer for a specific period of time to learn about a particular industry or occupation. The student may or may not be paid.

5 Other (Provide written description)

6 None at this time

Cell 21: Certificated Learning Methodology

- Enter a minimum of 1 code for each CTE concentrator
- If the student was involved in more than 1 program, enter all codes separated by a tilde (~) o
Example: 2~3

1 Youth Apprenticeship Program

A one or two-year school-supervised paid work experience, in which the student learns specific industry developed, state approved occupational competencies in a specific career field. The student is awarded a Certificate of Occupational Proficiency by the Wisconsin Department of Workforce Development upon successful completion of the program.

A listing of Wisconsin state certified apprenticeship programs may be found at the website of <http://dwd.wisconsin.gov/youthapprenticeship/>

2 State Certified Cooperative Education Skill Standards Program –

A one-year school-supervised paid work experience in which a student is also enrolled in a DPI approved co-op class in one of the CTE education content areas. The student learns industry endorsed, state approved occupational competencies as well as general employability skills. The student is awarded a Certificate of Occupational Proficiency by the Wisconsin Department of Public Instruction upon successful completion of the program. A listing of Wisconsin state certified Cooperative Education Skill Standards programs may be found at:

<http://dpi.wi.gov/cte/skillsstandards/cooperative/introduction>

3 Employability Skills Certificate Program

A DPI approved school-supervised paid work experience of a minimum of 180 hours wherein the student learns SCANS employability skills and develops a written career plan. The student is awarded an Employability Skills Certificate by the Wisconsin Department of Public Instruction upon successful completion of the program. Program requirements may be found at:

<http://dpi.wi.gov/cte/skills-standards/employability>

4 Business/Industry Sponsored Certificate Program

This is a school-supervised program of varying time or length in a specific occupational area within the sponsoring business or industry. The student takes a business/industry developed course or training, or must meet related competencies on-the-job. The certificate is awarded to the student by the sponsoring business or industry upon successful completion of the program. See the following website which documents further the aspect of certifications as well as what is available nationwide at: <http://www.careervoyages.gov/certificationsmain.cfm?whatarecertscontinue=yes#whatarecerts>

5 None at this time

Cell 22: Certificated Learning Completion

- Enter a code for each certificated program identified in Cell 21
- If the student was involved in more than 1 program, enter all codes separated by a tilde (~) ◦ The completion codes must be in the accurate sequence of the program codes found in Cell 21 ◦ Example: 1~3

1 Student met the requirements of the certificated program and was or is to be awarded a certificate

2 Student is continuing in the certificated program

3 Student has left the certificated program before completion

4 Student completed program but did not meet the requirements for the certificate

- Leave cell blank if the student is coded as 5 in cell 21

Cells 23 – 33 are to be completed for all students, regardless of CTE Participation status

Cell 23: Completion Status

- Enter a code for every student based on the student's status at the end of the reporting year
- Do not blanket fill - realistic coding is expected for each student

C1 Student has graduated and is a CTE Concentrator who **has completed** the third CTE course in their chosen pathway

D1 Student has graduated but is:

- a CTE Concentrator who **has NOT completed** their third CTE course in their chosen pathway, or
- is only a CTE Participant, or
- is not a CTE participant during the reporting year

D2 Student has dropped out of school during the current reporting year

D3 Student has died during the current reporting year

B1 Student transferred to another secondary district during the current reporting year

A1 Student is continuing their secondary studies

Cell 24: Compulsory School Attendance

For students who attended a technical college for the reason of compulsory school attendance pursuant to §118.15(1) Wis. Stats

- Enter the **2 place alpha code** on page 20 for the technical college attending
- Enter **X** if not applicable.

Cell 25: Youth Options Attendance

For students attending a post-secondary educational institution under Youth Options (pursuant to §118.55 Wis. Stats. wherein an approved DPI form PI-8700 (or its equivalent) is on file at the secondary district)

- Enter the **2 place alpha code** from page 20 for the technical college, OR
- Enter the **4 digit code** from page 20 for the UW System campus; OR • Enter the **4 digit code** from page 20 for the Other College Code; OR
- Enter **X** if not applicable.

If the student attended multiple institutions during the reporting year, separate the institution's codes with a tilde (~).

- Example: WW~4672

Special Note: Do not code students who are attending a technical college under Compulsory School Attendance as Youth Option enrolled students.

Instructions:

Cells 26 – 31 deal with CTE coursework that has articulated credit arrangements with post-secondary educational institutions: advanced standing, transcribed credit, tech prep, and/or youth apprenticeship. Each of these arrangements must have written documentation on file to support the participation.

Note: If a student participates in CTE coursework that has articulation agreements with post-secondary institutions, that student should be marked as a CTE participant and cells 16-23 should be coded accordingly.

Cell 26: Articulated Course Participation - Advanced Standing; Tech Prep:

For students enrolled in high school CTE courses that have been articulated for advanced standing through the technical college system:

- Enter the **2 place alpha code** from page 20 of the technical college where the articulated agreement is valid
- Enter the multiple appropriate codes separated by a tilde (~)
- Enter **X** if not applicable

Cell 27: Articulated Course Completion - Advanced Standing; Tech Prep For students who are coded with participation in Cell 26

- Enter **Y** for yes if the student has fulfilled the requirements for high school credit for the articulated course that would allow the student to be eligible for technical college credit upon enrollment
- For enrollments in multiple technical colleges, enter the appropriate completion code for each in the same sequence. Separate each completion code with a tilde (~)

- Enter **N** for no if the student did not complete the agreement requirements • Enter **X** if not applicable

Cell 28: Articulated Course Participation - Transcribed Credit; Tech Prep

For students enrolled in CTE courses that have been articulated for transcribed credit (dual credit) through the technical college system:

- Enter the **2 place alpha code** from page 20 of the technical college where the articulated agreement is valid
- Enter the multiple appropriate codes separated by a tilde (~)
- Enter **X** if not applicable

Cell 29: Articulated Course Completion - Transcribed Credit; Tech Prep:

For students who are coded with participation in Cell 28

- Enter **Y** for yes if the student has fulfilled the requirements for high school credit for the articulated course that would allow the student to be eligible for technical college credit
- For enrollments in multiple technical colleges, enter the appropriate completion code for each in the same sequence. Separate each completion code with a tilde (~)
- Enter **N** for no if the student did not complete the agreement requirements. • Enter **X** if not applicable

Cell 30: Articulated Course Participation - Youth Apprenticeship

For students enrolled in CTE courses that are a part of the Wisconsin Youth Apprenticeship program and have the potential of advanced standing or transcribed credit through the technical college or university system:

- Enter the **2 place alpha code** from page 20 of the technical college where the articulated agreement is valid; OR
- Enter the **4 digit numeric code** from page 20 for the university
- Enter the multiple appropriate codes separated by a tilde (~)
- Enter **X** if not applicable

Cell 31: Articulated Course Completion - Youth Apprenticeship

For students who are coded with participation in Cell 30

- Enter **Y** for yes if the student has fulfilled the requirements for high school credit for the articulated course that would allow the student to be eligible for post-secondary credit
- For enrollments in multiple technical colleges and/or universities, enter the appropriate completion code for each in the same sequence. Separate each completion code with a tilde (~)
- Enter **N** for no if the student did not complete the agreement requirements • Enter **X** if not applicable

Cell 32: Course Participation - Transcribed Credit; University

For students enrolled in courses that have been articulated for transcribed credit (dual credit) through the UW System or other university system:

- Enter the **4 digit numeric code** form page 20 of the university where the articulated agreement is valid

- Enter the multiple appropriate codes separated by a tilde (~)
- Enter **X** if not applicable

Cell 33: Course Completion - Transcribed Credit; University

For students who are coded with participation in Cell 33

- Enter **Y** for yes if the student has fulfilled the requirements for high school credit that would allow the student to be eligible for university credit
- For enrollments in multiple universities, enter the appropriate completion code for each in the same sequence. Separate each completion code with a tilde (~)
- Enter **N** for no if the student did not complete the agreement requirements • Enter **X** if not applicable

Wisconsin Technical College Codes:

BH	Blackhawk	MP	Moraine Park
CV	Chippewa Valley	NI	Nicolet Area
FV	Fox Valley	NC	North Central
GW	Gateway	NE	Northeast Wisconsin
LS	Lakeshore	SW	Southwest Wisconsin
MA	MATC-Madison	WC	Waukesha County
MW	MATC-Milwaukee	WW	Western Wisconsin
MS	Mid-State	WI	Wisconsin Indianhead

University of Wisconsin System Campus Codes:

4657	UW-Baraboo / Sauk County	4674	UW-Oshkosh	4653	UW-Barron
	County	4690	UW-Parkside		
4670	UW-Eau Claire	4676	UW-Platteville		
4673	UW-Fond du Lac	9921	UW-Racine		
4687	UW-Fox Valley	4634	UW-Richland		
4688	UW-Green Bay	4678	UW-River Falls		
9000	UW-Kenosha	4689	UW-Rock County		
4672	UW-La Crosse	4695	UW-Sheboygan		
4656	UW-Madison	4680	UW-Stevens Point		
4692	UW-Manitowoc	4652	UW-Stout		
4696	UW-Marathon County	4682	UW-Superior		
4693	UW-Marinette	4659	UW-Washington County		
4697	UW-Marshfield / Wood County	4698	UW-Waukesha		
4681	UW-Medford	4684	UW-Whitewater	4658	UW-Milwaukee
	UW-Online Campus			3897	

Other College Codes

1000 If the student is participating in a college level advanced placement course at the high school.

IA If the technical college of attendance or the articulation agreement is with a technical college district or university located in Iowa.

IL If the technical college of attendance or the articulation agreement is with a technical college district or university located in Illinois.

MI If the technical college of attendance or the articulation agreement is with a technical college district or university located in Michigan.

MN If the technical college of attendance or the articulation agreement is with a technical college district or university located in Minnesota.

OT If the technical college of attendance or the articulation agreement is with a private technical school ,

college or university.

WS If the technical college of attendance or the articulation agreement is with a private technical college district or university located in Wisconsin.

CTEERS

Instructional Area Codes

NTO (Non-Traditional Occupations) refers to the underrepresented sex within the possible occupations under to the Instructional Area Classification code.

IAC	IAC Title	NTO	Cluster_Code	Cluster_Title
01.01	Agricultural Business and Management	F	1	Agriculture, Food and Natural Resource
01.02	Agricultural Mechanization	F	1	Agriculture, Food and Natural Resource
01.03	Agricultural Production Operations	F	1	Agriculture, Food and Natural Resource
01.04	Agricultural and Food Products Processing Management	F	1	Agriculture, Food and Natural Resource
01.05	Agricultural and Domestic Animal Services		1	Agriculture, Food and Natural Resource
01.06	Applied Horticulture/Horticultural Business Services	F	1	Agriculture, Food and Natural Resource
01.07	International Agriculture	F	1	Agriculture, Food and Natural Resource
01.08	Agricultural Public Services		1	Agriculture, Food and Natural Resource
01.09	Animal Sciences	F	1	Agriculture, Food and Natural Resource
01.10	Food Science and Technology	F	1	Agriculture, Food and Natural Resource
01.11	Plant Sciences, General	F	1	Agriculture, Food and Natural Resource
	Natural Resource		01.12	Soil Sciences
		F	1	Agriculture, Food and Natural Resource
01.99	Agriculture, Agriculture Operations and Related Sciences, Other	F	1	Agriculture, Food and Natural Resource
03.01	Natural Resources Conservation and Research	F	1	Agriculture, Food and Natural Resource
03.02	Natural Resources Management and Policy	F	1	Agriculture, Food and Natural Resource
03.03	Fishing and Fisheries Sciences and Management	F	1	Agriculture, Food and Natural Resource
03.05	Forestry	F	1	Agriculture, Food and Natural Resource
03.06	Wildlife and Wildlands Science and Management	F	1	Agriculture, Food and Natural Resource
03.99	Natural Resources and Conservation, Other	F	1	Agriculture, Food and Natural Resource
04.02	Architecture	F	2	Architecture and Construction
04.04	Environmental Design	F	2	Architecture and Construction
04.05	Interior Architecture	F	5	Education and Training
04.06	Landscape Architecture	F	2	Architecture and Construction
	2 Architecture and Construction		04.09	Architectural Technology/Technician
				F
04.99	Architecture and Related Services, Other	F	2	Architecture and Construction
09.01	Communication and Media Studies		3	Arts, Audio/Video Technology and Communications
09.04	Journalism		3	Arts, Audio/Video Technology and Communications
			5	Education and Training

F



NTO	Cluster_Code
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09.07 Radio, Television, and Digital Communication F 3 Arts, Audio/Video Technology and Communications 09.09 Public Relations, Advertising, and Applied Communication, Other 3 Arts, Audio/Video Technology and Communications
 09.99 Communication, Journalism and Related Programs, Other 3 Arts, Audio/Video Technology and Communications
 10.01 Communications Technology/Technician 3 Arts, Audio/Video Technology and Communications

IAC	IAC Title				Cluster Title	
10.02	Audiovisual Communications Technologies/Technician	F	3		Arts, Audio/Video Technology and Communications	
10.03	Graphic Communications		3		Arts, Audio/Video Technology and Communications	
11.01	Computer and Information Sciences, General	F	5		Education and Training	
11.02	Computer Programming	F	5		Education and Training	
11.03	Data Processing	F	11		Information Technology	
11.04	Information Science/Studies	F	5		Education and Training	
11.05	Computer Systems Analysis	F				
11.06	Data Entry/Microcomputer Applications	M	4		Business, Management and Administration	
11.07	Computer Science	F	5		Education and Training	
11.08	Computer Software and Media Applications		3		Arts, Audio/Video Technology and Communications	
11.09	Computer Systems Networking and Telecommunications	F	11		Information Technology	
11.10	Computer/Information Technology Administration and Management	F	11		Information Technology	
11.99	Computer and Information Sciences and Support Services, Other	F	11		Information Technology	
12.04	Cosmetology and Related Personal Grooming Services	M	14		Marketing Sales and Service	
12.05	Culinary Arts and Related Services	F	9		Hospitality and Tourism	
12.99	Personal and Culinary Services, Other	F	9		Hospitality and Tourism	
13.01	Education, General		5		Education and Training	
13.15	Teaching Assistants/Aides	M	5		Education and Training	
13.99	Education, Other	5		Education and Training	14.01 Engineering, General F 5 Education	
	and Training					
14.02	Aerospace, Aeronautical and Astronautical Engineering	F	5	Education and Training	14.03 Agricultural/Biological Engineering and Bioengineering F 5 Education and Training	
14.04	Architectural Engineering	F	5	Education and Training		
14.05	Biomedical/Medical Engineering	F	5	Education and Training	14.06 Ceramic Sciences and Engineering F	
5	Education and Training	14.07	Chemical Engineering	F	5	Education and Training
					14.08 Civil	
					5	
					Education and Training	

F



NTO	Cluster_Code
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15.03	Electrical and Electronic Engineering Technologies/Technicians	F	13	Manufacturing
15.04	Electromechanical and Instrumentation and Maintenance Technologies/Technicians	F	13	Manufacturing
15.05	Environmental Control Technologies/Technicians	F	2	Architecture and Construction
15.06	Industrial Production Technologies/Technicians	F	13	Manufacturing
15.07	Quality Control and Safety Technologies/Technicians		8	Health Science
15.08	Mechanical Engineering Related Technologies/Technicians	F	16	Transportation, Distribution, and Logistics
15.09	Mining and Petroleum Technologies/Technicians	F	1	Agriculture, Food and Natural Resource
15.10	Construction Engineering Technology/Technician	F	2	Architecture and Construction
15.11	Engineering-Related Technologies	F	2	Architecture and Construction
	Manufacturing			
15.12	Computer Engineering Technologies/Technicians	F	13	Manufacturing
15.13	Drafting/Design Engineering Technologies/Technicians	F	2	Architecture and Construction
15.14	Nuclear Engineering Technology/Technician		15	Science, Technology, Engineering and Mathematics
15.15	Industrial Management	F	13	Manufacturing

5 Education and Training

F



NTO	Cluster_Code	
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15.99 Engineering Technologies/Technicians, Other

13 Manufacturing

IAC	IAC Title			Cluster_Title
19.01	Family and Consumer Sciences/Human Sciences, General		5	Education and Training
19.02	Family and Consumer Sciences/Human Sciences Business Services		5	Education and Training
19.04	Family and Consumer Economics and Related Services	5	Education and Training	19.05 Foods, Nutrition, and
	Related Services M 8 Health Science			
19.06	Housing and Human Environments		5	Education and Training
19.07	Human Development, Family Studies, and Related Services		5	Education and Training
19.09	Apparel and Textiles		5	Education and Training
19.99	Family and Consumer Sciences/Human Sciences, Other		5	Education and Training
22.03	Legal Support Services		M 4	Business, Management and Administration
22.99	Legal Professions and Studies, Other		10	Human Services
26.01	Biology, General		5	Education and Training
26.02	Biochemistry, Biophysics and Molecular Biology		5	Education and Training
26.03	Botany/Plant Biology		5	Education and Training
26.04	Cell/Cellular Biology and Anatomical Sciences		5	Education and Training
26.05	Microbiological Sciences and Immunology		5	Education and Training
26.07	Zoology/Animal Biology		1	Agriculture, Food and Natural Resource
26.08	Genetics			
26.09	Physiology, Pathology, and Related Sciences		5	Education and Training
26.10	Pharmacology and Toxicology		5	Education and Training
26.11	Biomathematics and Bioinformatics		5	Education and Training
26.12	Biotechnology		5	Education and Training
26.13	Ecology, Evolution and Population Biology		1	Agriculture, Food and Natural Resource
26.99	Biological and Biomedical Sciences, Other		5	Education and Training
30.08	Mathematics and Computer Science		15	Science, Technology, Engineering and Mathematics
30.16	Accounting and Computer Science		4	Business, Management and Administration
30.17	Behavioral Sciences		10	Human Services
30.18	Natural Sciences		15	Science, Technology, Engineering and Mathematics
30.19	Nutrition Sciences		M 5	Education and Training
			5	Education and Training

IAC	IAC Title	NTO	Cluster_Code	Cluster_Title
31.01	Parks, Recreation and Leisure Studies		5	Education and Training
31.03	Parks, Recreation and Leisure Facilities Management		9	Hospitality and Tourism
31.05	Health and Physical Education/Fitness		5	Education and Training
31.99	Parks, Recreation, Leisure and Fitness Studies, Other		9	Hospitality and Tourism
40.02	Astronomy and Astrophysics	F	15	Science, Technology, Engineering and Mathematics
40.05	Chemistry	F	5	Education and Training
40.08	Physics	F	5	Education and Training
40.99	Physical Sciences, Other		15	Science, Technology, Engineering and Mathematics
41.01	Biology Technician/Biotechnology Laboratory Technician		15	Science, Technology, Engineering and Mathematics
41.02	Nuclear and Industrial Radiologic Technologies/Technicians	F	15	Science, Technology, Engineering and Mathematics
41.03	Physical Science Technologies/Technicians	F	15	Science, Technology, Engineering and Mathematics
41.99	Science Technologies/Technicians, Other		15	Science, Technology, Engineering and Mathematics
42.01	Psychology, General		5	Education and Training
43.01	Criminal Justice and Corrections	F	5	Education and Training
43.02	Fire Protection	F	12	Law, Public Safety, Corrections and Security
44.02	Community Organization and Advocacy	M	7	Government and Public Administration
44.04	Public Administration	F	4	Business, Management and Administration
44.05	Public Policy Analysis	F	4	Business, Management and Administration
44.07	Social Work	M	5	Education and Training
44.99	Public Administration and Social Service Professions, Other	F	4	Business, Management and Administration
45.04	Criminology		10	Human Services
45.05	Demography and Population Studies		10	Human Services
45.06	Economics		5	Education and Training
45.11	Sociology			
45.12	Urban Studies/Affairs		10	Human Services
46.01	Mason/Masonry	F	2	Architecture and Construction
46.02	Carpenters	F	2	Architecture and Construction
46.03	Electrical and Power Transmission Installers	F	2	Architecture and Construction
46.04	Building/Construction Finishing, Management, and Inspection	F	2	Architecture and Construction
46.05	Plumbing and Related Water Supply Services	F	2	Architecture and Construction
46.99	Construction Trades, Other	F	2	Architecture and Construction
			5	Education and Training

IAC	IAC Title	NTO	Cluster_Code	Cluster_Title
47.01	Electrical / Electronic Maintenance and Repair Technology	F	13	Manufacturing
47.02	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance (HAC, HACR, HVAC, HVACR)	F	2	Architecture and Construction Technology/Technician
47.03	Heavy/Industrial Equipment Maintenance Technologies	F	2	Architecture and Construction
47.04	Precision Systems Maintenance and Repair Technologies	F	11	Information Technology
47.06	Vehicle Maintenance and Repair Technologies	F	13	Manufacturing
47.99	Mechanic and Repair Technologies/Technicians, Other	F	13	Manufacturing
48.05	Precision Metal Working	F	13	Manufacturing
48.07	Woodworking	F	13	Manufacturing
48.99	Precision Production, Other		3	Arts, Audio/Video Technology and Communications
49.01	Air Transportation	F	16	Transportation, Distribution, and Logistics
49.02	Ground Transportation	F	1	Agriculture, Food and Natural Resource
49.03	Marine Transportation	F	16	Transportation, Distribution, and Logistics
49.99	Transportation and Materials Moving, Other	F	16	Transportation, Distribution, and Logistics
50.04	Design and Applied Arts		3	Arts, Audio/Video Technology and Communications
50.06	Film/Video and Photographic Arts		3	Arts, Audio/Video Technology and Communications
50.07	Fine and Studio Art		3	Arts, Audio/Video Technology and Communications
50.09	Music		5	Education and Training
50.99	Visual and Performing Arts, Other		5	Education and Training
51.01	Chiropractic (DC)	F	5	Education and Training
51.02	Communication Disorders Sciences and Services	M	5	Education and Training
51.04	Dentistry (DDS, DMD)	F	5	Education and Training
51.05	Advanced/Graduate Dentistry and Oral Sciences	F	5	Education and Training
51.06	Dental Support Services and Allied Professions	M	5	Education and Training
51.07	Health and Medical Administrative Services		8	Health Science
51.08	Allied Health and Medical Assisting Services	M	8	Health Science
51.09	Allied Health Diagnostic, Intervention, and Treatment Professions Clinical/Medical Laboratory Science and Allied Professions	5		Education and Training 51.10
			5	Education and Training

51.11	Health/Medical Preparatory Programs				5	Education and Training
51.15	Mental and Social Health Services and Allied Professions			M	10	Human Services
51.18	Ophthalmic and Optometric Support Services and Allied Professions				8	Health Science
51.20	Pharmacy, Pharmaceutical Sciences, and Administration				5	Education and Training
51.22	Public Health				5	Education and Training
51.23	Rehabilitation and Therapeutic Professions		5	Education and Training	51.24	Veterinary Medicine (DVM)
5	Education and Training					
51.25	Veterinary Biomedical and Clinical Sciences (Cert, MS, PhD)				5	Education and Training
51.26	Health Aides/Attendants/Orderlies			M	8	Health Science
51.27	Medical Illustration and Informatics				11	Information Technology
51.31	Dietetics and Clinical Nutrition Services	M	8	Health Science	51.38	Registered Nursing, Nursing
	Administration, Nursing Research and	M	8	Health Science		
	Clinical Nursing.					
51.39	Practical Nursing, Vocational Nursing and Nursing Assistants.			M	8	Health Science
52.02	Business Administration, Management and Operations			F	4	Business, Management and Administration
52.03	Accounting and Related Services				4	Business, Management and Administration
52.04	Business Operations Support and Assistant Services			M	4	Business, Management and Administration
52.06	Business/Managerial Economics				5	Education and Training
52.07	Entrepreneurial and Small Business Operations			F	4	Business, Management and Administration
52.08	Finance and Financial Management Services				4	Business, Management and Administration
52.09	Hospitality Administration/Management				9	Hospitality and Tourism
52.10	Human Resources Management and Services				4	Business, Management and Administration
52.11	International Business			F	4	Business, Management and Administration
52.12	Management Information Systems and Services				11	Information Technology
52.13	Management Sciences and Quantitative Methods				4	Business, Management and Administration
52.14	Marketing				5	Education and Training
52.16	Taxation				4	Business, Management and Administration
52.17	Insurance				5	Education and Training
52.18	General Sales, Merchandising and Related Marketing Operations				14	Marketing Sales and Service
52.19	Specialized Sales, Merchandising, and Related Marketing Operations				14	Marketing Sales and Service
52.99	Business, Management, Marketing, and Related Support Services				4	Business, Management and Administration

IAC	IAC Title	NTO	Cluster_Code	Cluster_Title
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Student Follow-Up Section

Student Follow-Up Report: Career and Technical Education [PI-1335]

Overview

The Student Follow-Up Report tracks the Student Enrollment Report (PI-1330R) career and technical education concentrator completer graduates from the previous year and finishes the reporting year's cycle. While referred to with a DPI form number (e.g., PI-1335), the Student Follow-up Report is actually an electronic file in an Excel spreadsheet format.

These files will be disseminated to the Fiscal Agents LVECs by means of secure file transfer email in January whom then in turn is responsible for disseminating the individual district files. Once the district has received their report, it must begin to contact those students listed by means of mail or telephone to ascertain responses from the student graduates as to what they are doing at this point in time in regards to education and/or employment.

For the purpose of eliciting responses from your completer graduates, a sample survey instrument has been provided at the end of this section. The accepted response rate is a minimum of 80% of the total number of completer graduates found within the PI-1335 file. If there is a difficulty in eliciting direct responses from the graduates themselves, it is completely appropriate to contact secondary sources of information on the student such as parents, teachers, etc., to achieve the minimum 80% response rate.

Some of the information requested on the Student Follow-up Response form details whether or not the education and/or employment the graduate is engaged in is related or unrelated to the student's secondary training. This relationship is based on the instructional area code associated with each student. The list of instructional area codes and titles can be found within the Instructional Area Code listing section of the Field Manual.

File Directions and Coding

General Directions: The Student Follow-up Response Form (PI-1335) file has been developed to facilitate the reporting of the follow-up data to the Career and Technical Education team. **The following information is pre-filled on the PI1335 file and is not to be altered:**

Lname_First: FA LVEC Name, Last_First

DCSCIACID: District Code, School Code, Instructional Area Code and Student ID DC:

District Code

SC: School Code

District: District Name

School: School Name

ID: Student ID number

Last_Name: Student Last Name

First_Name: Student First Name

IAC: Instructional Area Code

IAC_Name: Instructional Area Code Name

CS: Completion Status

Once the file has been properly coded it is to be submitted by means of secure file transfer attachment to an email addressed to MaiChoua.Thao@dpi.wi.gov

The window for submission of files will be three months prior to the established report due date of May 1st to one month after that date.

Coding Directions by Column

Student Contact Status (Column 5)

Enter the individually appropriate contact status code from the following list for all students:

- A** Student contact
- AS** Second Party Contact
- D** No Contact or No Response

Education Status (Column 6)

Enter the individually appropriate education status code for all students:

- A** Not attending any post-secondary school
- B** Attending two-year college, related to high school career and technical program
- C** Attending two-year college, unrelated to high school career and technical program
- D** Attending four-year college, related to high school career and technical program
- E** Attending four-year college, unrelated to high school career and technical program
- F** Attending other, related to high school career and technical program
- G** Attending other, unrelated to high school career and technical program
- X** No response

Employment Status (Column 7)

Enter individually, one of the following employment status codes for all students.

- 1** Employed in a field related to high school career and technical program
- 2** Employed in a field not related to high school career and technical program
- 3** Military full-time, related to high school career and technical program
- 4** Military full-time, unrelated to high school career and technical program
- 5** Homemaker
- 6** Unemployed, but seeking employment
- 7** Not in labor force and Not pursuing employment
- 8** Deceased
- 9** No response to question

Note: Columns, #8, #9, and #10 on the report are to be completed only for those individuals with the following employment status codes:

- 1 Employed in a field related** to high school career and technical program,
- or**
- 2 Employed in a field not related** to high school career and technical program

Hours Per Week (Column 8)

Enter the number of whole hours per week the individual normally works up to 99. If there is no response to this question, enter an "X."

Standard Occupational Classification Code (Column 9)

To determine the Standard Occupational Classification Code (SOC), evaluate the job title and/or job duties of the student and match with the appropriate SOC code given below. If the student did not indicate their job title or duties so that a SOC code cannot be ascertained, change the Employment Status Code to 9 and either do not enter information under hourly wage and hours worked or delete the information if entered.

The list of SOC Codes to utilize is as follows (a more detailed listing of job titles for each SOC can be found in the SOC Section listing following this section:

- 14 Management Related Occupations
- 17 Computer, Mathematical, and Operations Research Occupations
- 29 Registered Nurses
- 32 Writers, Artists, Performers, and Related Occupations
- 36 Health Technologists and Technicians
- 37 Engineering and Related Technologists and Technicians
- 38 Science Technologists and Technicians
- 39 Technicians: Except Health, Engineering, and Science
- 41 Sales Occupations, Commodities
- 42 Insurance, Securities, Real Estate, and Service Sales Occupations
- 45 Supervisors; Clerical Occupations
- 46 Clerical Occupations, Except Equipment Operators
- 48 Computing and Office Equipment Operations
- 51 Protective Service Occupations
- 52 Service Occupations, Except Private Household and Protective
- 53 Private Household Occupations
- 55 Farm Operators and Managers
- 57 Forestry and Logging Occupations
- 58 Fishers, Hunters, and Trappers
- 61 Construction Trades
- 64 Transportation and Material Moving Occupations
- 67 Mechanics and Repairers
- 72 Precision Production Occupations
- 77 Fabricators, Assemblers, and Hand Working Occupations

Hourly Wage (Column 10)

Enter the hourly wage of the student in the appropriate character positions up to a maximum of 99.99. If there was no response by the student, enter an X.

STUDENT FOLLOW-UP STUDY

Your cooperation in completing this study will allow us to better serve our present and future students and provide us with data that will help improve career and technical education programs. Thank you in advance for your participation in this study.

INSTRUCTIONS: Complete and return to:

Student Name:	School Attended:
Area of Career and Technical Training:	

1. Current Educational Status (check appropriate item)

- A** Not attending any post-secondary school
 - B** Attending 2 year college, **related** to high school career and technical program
 - C** Attending 2 year college, **unrelated** to high school career and technical program
 - D** Attending 4 year college, **related** to high school career and technical program
 - E** Attending 4 year college, **unrelated** to high school career and technical program
 - F** Attending other, **related** to high school career and technical program
- Specify:

G Attending other, **unrelated** to high school career and technical program

Specify:

Please indicate your current program of study if attending a post-secondary institution:

2. Current Employment Status (check appropriate item)

Employment includes all employment, full- or part-time.

- 1** Employed in a field **related** to high school career and technical program
- 2** Employed in a field **not related** to high school career and technical program
- 3** Military full-time, **related** to high school career and technical program
- 4** Military full-time, **unrelated** to high school career and technical program
- 5** Homemaker
- 6** Unemployed, but seeking employment
- 7** **Not** in labor force and **Not** pursuing employment

If employed, please indicate your:

Job Title:

Job Duties:

Hours worked during an average week: _____ Hourly wage: \$ ____./hr.

District-School Listing Section

(Sorted by District Name)

Note: If you do not find a listing for a particular high school for your district either consult the current year's DPI Wisconsin School Directory or go to the DPI Website listing at:
<https://apps4.dpi.wi.gov/SchoolDirectory/Search/PublicSchoolsSearch>

District Name	School Name	District Code	School Code
Abbotsford	Abbotsford Middle/Senior High	0007	0040
Adams-Friendship Area	Adams-Friendship High	0014	0040
Albany	Albany High	0063	0040
Algoma	Algoma High	0070	0040
Alma	Alma High	0084	0040
Alma Center	Lincoln High	0091	0060
Almond-Bancroft	Almond High	0105	0040
Altoona	Altoona High	0112	0040
Amery	Amery High	0119	0040
Antigo Unified	Antigo High	0140	0070
Appleton Area	East High	0147	0020
Appleton Area	North High	0147	0030
Appleton Area	West High	0147	0040
Appleton Area	Appleton Central High	0147	0400
Appleton Area	Renaissance School	0147	0420
Appleton Area	Tesla Engineering Charter School	0147	0430
Appleton Area	Appleton eSchool	0147	0440
Appleton Area	Appleton Career Academy	0147	0450
Appleton Area	Valley New School	0147	0460
Appleton Area	United Public Montessori (UPM)	0147	0470
Appleton Area	Appleton Cooperative Educational Center	0147	0800
Appleton Area	Wisconsin Connections Academy	0147	0850
Arcadia	Arcadia High	0154	0040
Argyle	Argyle High	0161	0040
Arrowhead UHS	Arrowhead High	2450	0020

Ashland	Ashland High	0170	0020
Ashwaubenon	Ashwaubenon High	0182	0020
Athens	Athens High	0196	0040
Auburndale	Auburndale High	0203	0060
Augusta	Augusta High	0217	0040
Augusta	Wildlands Charter School	0217	0410
Baldwin-Woodville Area	Baldwin-Woodville High	0231	0040
Bangor	Bangor Middle/High	0245	0040
Baraboo	Baraboo High	0280	0040
Barneveld	Barneveld High	0287	0040
Barron Area	Barron High	0308	0030
Barron Area	Advanced Learning Academy of Wisconsin	0308	0810
Barron Area	North Star Academy	0308	9410
Bayfield	Bayfield High	0315	0040
Beaver Dam Unified	Beaver Dam High	0336	0040
Beaver Dam Unified	Don Smith Learning Academy	0336	0850
Beecher-Dunbar-Pembine	Pembine High	4263	0060
Belleville	Belleville High	0350	0040

District Name	School Name	District Code	School Code
Belmont Community	Belmont High	0364	0040
Beloit	Memorial High	0413	0200
Beloit	Roy Chapman Andrews Academy	0413	0410
Beloit	Beloit Virtual School	0413	0850
Beloit	Kolak Education Center	0413	0860
Beloit Turner	Turner High	0422	0020
Benton	Benton High	0427	0040
Berlin Area	Berlin High	0434	0040

Big Foot UHS	Big Foot High	6013	0020
Big Foot UHS	Walworth Co Educ Alt High	6013	9401
Birchwood	Birchwood High	0441	0040
Birchwood	Birchwood Blue Hills Charter School	0441	0450
Black Hawk	Black Hawk High	2240	0020
Black River Falls	Black River Falls High	0476	0040
Black River Falls	Black River Area Green School	0476	0450
Blair-Taylor	Blair-Taylor Middle/High	0485	0011
Bloomer	Bloomer High	0497	0040
Bonduel	Bonduel High	0602	0040
Boscobel Area	Boscobel High	0609	0040
Bowler	Bowler High	0623	0040
Boyceville Community	Boyceville Middle/High	0637	0040
Brillion	Brillion High	0658	0040
Brodhead	Brodhead High	0700	0040
Brown Deer	Brown Deer High	0721	0040
Bruce	Bruce High	0735	0040
Burlington Area	Burlington High	0777	0020
Butternut	Butternut High	0840	0040
Butternut	Promethean Charter School	0840	0450
Cadott Community	Cadott High	0870	0040
Cambria-Friesland	Cambria Friesland Middle/High	0882	0040
Cambridge	Cambridge High	0896	0040
Cambridge	JEDI Virtual K-12	0896	9803
Cameron	Cameron High	0903	0040
Cameron	Cameron Academy of Virtual Education	0903	0800
Cameron	North Star Academy	0903	9410
Campbellsport	Campbellsport High	0910	0040
Cashton	Cashton High	0980	0040

Cassville	Cassville High	0994	0040
Cedar Grove-Belgium Area	Cedar Grove-Belgium High	1029	0040
Cedarburg	Cedarburg High	1015	0020
Central/Westosha UHS	Central High	5054	0020
Chequamegon	Chequamegon High	1071	0400
Chequamegon	Glidden Class ACT Charter	1071	0450
Chetek-Weyerhaeuser Area	Chetek-Weyerhaeuser High	1080	0400
Chetek-Weyerhaeuser Area	Link2Learn Virtual Charter School	1080	0800
Chetek-Weyerhaeuser Area	North Star Academy	1080	9410
Chilton	Chilton High	1085	0040

District Name	School Name	District Code	School Code
Chippewa Falls Area Unified	Chippewa Falls High	1092	0060
Clayton	Clayton High	1120	0040
Clear Lake	Clear Lake High	1127	0040
Clinton Community	Clinton High	1134	0060
Clintonville	Clintonville High	1141	0040
Cochrane-Fountain City	Cochrane-Fountain City High	1155	0040
Colby	Colby High	1162	0040
Coleman	Coleman High	1169	0060
Coleman	Lena Education Alternative Network	1169	9802
Colfax	Colfax High	1176	0040

Columbus	Columbus High	1183	0040
Cornell	Cornell High	1204	0040
Crandon	Crandon High	1218	0060
Crandon	Crandon Alternative Resource School	1218	0800
Crivitz	Crivitz High	1232	0040

Cuba City	Cuba City High	1246	0040
Cudahy	Cudahy High	1253	0040
Cumberland	Cumberland High	1260	0060
Cumberland	Island City Virtual Academy	1260	0800
D C Everest Area	D C Everest High	4970	0035
D C Everest Area	IDEA Charter School	4970	0400
Darlington Community	Darlington High	1295	0040
De Forest Area	De Forest High	1316	0040
De Pere	De Pere High	1414	0020
De Soto Area	De Soto High	1421	0040
Deerfield Community	Deerfield High	1309	0040
Delavan-Darien	Delavan-Darien High	1380	0020
Delavan-Darien	Walworth Co Educ Alt High	1380	9401
Denmark	Denmark High	1407	0080
Denmark	Denmark Community School	1407	0450
Dodge	Dodge Middle/High	2744	0022
Dodgeville	Dodgeville High	1428	0040
Drummond Area	Drummond High	1491	0040
Durand	Durand Junior/Senior High	1499	0040
East Troy Community	East Troy High	1540	0040
Eau Claire Area	Memorial High	1554	0340
Eau Claire Area	North High	1554	0400
Eau Claire Area	Oxford Avenue School	1554	0430
Eau Claire Area	McKinley Charter School	1554	0580
Eau Claire Area	Second Avenue School	1554	0800
Edgar	Edgar High	1561	0040
Edgerton	Edgerton High	1568	0080
Elcho	Elcho High	1582	0040
Eleva-Strum	Eleva-Strum High	1600	0060

Elk Mound Area	Elk Mound High	1645	0040
Elkhart Lake-Glenbeulah	Elkhart Lake High	1631	0040
Elkhorn Area	Elkhorn Area High	1638	0040

District Name	School Name	District Code	School Code
Elkhorn Area	Walworth Co Educ Alt High	1638	9401
Ellsworth Community	Ellsworth High	1659	0040
Elmbrook	Central High	0714	0020
Elmbrook	East High	0714	0060
Elmbrook	Fairview South	0714	0160
Elmwood	Elmwood High	1666	0040
Evansville Community	Evansville High	1694	0040
Fall Creek	Fall Creek High	1729	0040
Fall River	Fall River High	1736	0040
Fennimore Community	Fennimore High	1813	0040
Flambeau	Flambeau High	5757	0040
Flambeau	Whitetail Academy	5757	0410
Flambeau	Flambeau Charter School	5757	0800
Florence County	Florence High	1855	0060
Fond du Lac	Fond du Lac High School	1862	0140
Fort Atkinson	Fort Atkinson High	1883	0080
Fort Atkinson	JEDI Virtual K-12	1883	9803
Franklin Public	Franklin High	1900	0060
Franklin Public	Milwaukee County Correctional Facility	1900	0400
Frederic	Frederic 6-12 School	1939	0040
Freedom Area	Freedom High	1953	0060
Galesville-Ettrick-Trempealeau	Galesville-Ettrick-Trempealeau High	2009	0040
Germantown	Germantown High	2058	0180

Gibraltar Area	Gibraltar High	2114	0120
Gillett	Gillett High	2128	0020
Gillett	Gillett's Occupation and Leadership	2128	0450
Gilman	Gilman High	2135	0060
Gilmanton	Gilmanton High	2142	0060
Glenwood City	Glenwood City High	2198	0080
Glenwood City	Transitional Skills Center	2198	0400
Goodman-Armstrong Creeki	Goodman High	2212	0040
Grafton	Grafton High	2217	0040
Granton Area	Granton High	2226	0040
Grantsburg	Grantsburg High	2233	0080
Grantsburg	iForward	2233	0400
Green Bay Area Public	Bay View	2289	0040
Green Bay Area Public	East High	2289	0180
Green Bay Area Public	John Dewey Academy of Learning	2289	0445
Green Bay Area Public	Preble High	2289	0540
Green Bay Area Public	Southwest High	2289	0600
Green Bay Area Public	West High	2289	0720
Green Lake	Green Lake High	2310	0040
Greendale	Greendale High	2296	0060
Greenfield	Greenfield High	2303	0120
Greenwood	Greenwood High	2394	0060
Gresham	Gresham High	2415	0400
Hamilton	Hamilton High	2420	0040

District Name	School Name	District Code	School Code
Hartford UHS	Hartford High	2436	0020
Hayward Community	Hayward High	2478	0040

Hayward Community	Hayward Ctr for Individualized Learning	2478	0800
Highland	Highland Community High	2527	0040
Hilbert	Hilbert High	2534	0040
Hillsboro	Hillsboro High	2541	0060
Holmen	Holmen High	2562	0040
Horicon	Horicon High	2576	0060
Hortonville Area	Hortonville High	2583	0040
Howards Grove	Howards Grove High	2605	0060
Howard-Suamico	Bay Port High	2604	0020
Hudson	Hudson High	2611	0080
Hurley	Hurley High	2618	0060
Hustisford	Hustisford High	2625	0040
Independence	Independence High	2632	0040
Iola-Scandinavia	Iola-Scandinavia High	2639	0040
Iola-Scandinavia	Waupaca County Charter	2639	9408
Iowa-Grant	Iowa-Grant High	2646	0040
Ithaca	Ithaca High	2660	0060
Janesville	Craig High	2695	0060
Janesville	Parker High	2695	0280
Janesville	Rock River Charter School	2695	0400
Janesville	Janesville Academy for International	2695	0410
Janesville	Janesville Virtual Academy	2695	0420
Janesville	TAGOS Leadership Academy	2695	0430
Jefferson	Jefferson High	2702	0080
Jefferson	JEDI Virtual K-12	2702	9803
Johnson Creek	Johnson Creek Middle and High	2730	0040
Juda	Juda High	2737	0040
Kaukauna Area	Kaukauna High	2758	0040
Kenosha	Bradford High	2793	0060

Kenosha	Hillcrest School	2793	0280
Kenosha	Kenosha House of Corrections	2793	0405
Kenosha	Indian Trail High School and Academy	2793	0410
Kenosha	Reuther Central High	2793	0450
Kenosha	Lakeview Technology Academy	2793	0480
Kenosha	Harborside Academy	2793	0490
Kenosha	Tremper High	2793	0580
Kenosha	Kenosha eSchool K-12	2793	0800
Kettle Moraine	Kettle Moraine High	1376	0120
Kettle Moraine	Kettle Moraine Global School for Global	1376	0450
Kettle Moraine	School for Arts and Performance	1376	0460
Kewaskum	Kewaskum High	2800	0080
Kewaunee	Kewaunee High	2814	0100
Kewaunee	Lakeshore Alternative School	2814	0490
Kickapoo Area	Kickapoo High	5960	0020
Kickapoo Area	Vernon County Area Better Futures High	5960	9407

District Name	School Name	District Code	School Code
Kiel Area	Kiel High	2828	0040
Kiel Area	Kiel eSchool	2828	0405
Kimberly Area	Kimberly High	2835	0080
Kimberly Area	Kornerstone School	2835	0410
Kohler	Kohler High	2842	0040
La Crosse	Central High	2849	0020
La Crosse	Logan High	2849	0220
La Crosse	LaCrossroads Charter	2849	0410

La Farge	La Farge High	2863	0040
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La Farge	Vernon County Area Better Futures High	2863	9407
Ladysmith	Ladysmith High	2856	0080
Ladysmith	Health Care Academy	2856	0410
Lake Geneva-Genoa City UHS	Badger High	2884	0020
Lake Geneva-Genoa City UHS	Walworth Co Educ Alt High	2884	9401
Lake Holcombe	Holcombe High	2891	0040
Lake Mills Area	Lake Mills High	2898	0040
Lake Mills Area	JEDI Virtual K-12	2898	9803
Lakeland UHS	Lakeland High	3647	0020
Lancaster Community	Lancaster High	2912	0020
Laona	Laona High	2940	0020
Lena	Lena High	2961	0040
Lena	Lena Education Alternative Network	2961	9802
Little Chute Area	Little Chute High	3129	0040
Little Chute Area	Little Chute Career Pathways Academy	3129	0410
Lodi	Lodi High	3150	0080
Lomira	Lomira High	3171	0060
Loyal	Loyal High	3206	0060
Luck	Luck High	3213	0060
Luxemburg-Casco	Luxemburg-Casco High	3220	0140
Madison Metropolitan	Diploma Completion High	3269	0012
Madison Metropolitan	East High	3269	0150
Madison Metropolitan	Memorial High	3269	0360
Madison Metropolitan	Shabazz-City High	3269	0400
Madison Metropolitan	LaFollette High	3269	0420
Madison Metropolitan	Innovative & Alternative High	3269	0460
Madison Metropolitan	Metro School	3269	0820
Madison Metropolitan	West High	3269	0840
Manawa	Little Wolf Junior/Senior High	3276	0040

Manawa	Waupaca County Charter	3276	9408
Manitowoc	Lincoln High	3290	0140
Manitowoc	McKinley Academy	3290	0400
Manitowoc	Manitowoc County Juvenile Detention	3290	0450
Maple	Northwestern High	3297	0160
Marathon City	Marathon High	3304	0040
Marinette	Marinette High	3311	0060
Marion	Marion High	3318	0100
Markesan	Markesan High	3325	0120

District Name	School Name	District Code	School Code
Marshall	Marshall High	3332	0040
Marshall	Marshall Charter	3332	0400
Marshall	JEDI Virtual K-12	3332	9803
Marshfield Unified	Marshfield High	3339	0120
Mauston	Mauston High	3360	0060
Mauston	iLEAD Charter School	3360	0410
Mauston	Juneau County Charter School	3360	9405
Mayville	Mayville High	3367	0080
McFarland	McFarland High	3381	0080
McFarland	Wisconsin Virtual Academy (WIVA)	3381	0800
Medford Area Public	Medford High	3409	0220
Mellen	Mellen High	3427	0060
Mellen	Mellen Technology Charter School	3427	0400
Melrose-Mindoro	Melrose-Mindoro High	3428	0040
Menasha Joint	Menasha High	3430	0100
Menominee Indian	Menominee Indian High	3434	0040
Menomonee Falls	Menomonee Falls High	3437	0110

Menomonie Area	Menomonie High	3444	0180
Mequon-Thiensville	Homestead High	3479	0060
Mercer	Mercer School	3484	0040
Mercer	Mercer Environmental Tourism	3484	0450
Merrill Area	Merrill High	3500	0140
Merrill Area	Merrill Adult Diploma Academy	3500	0400
Merrill Area	Bridges Virtual Academy	3500	0800
Middleton-Cross Plains Area	Middleton High	3549	0060
Middleton-Cross Plains Area	Clark Street Community School	3549	0400
Middleton-Cross Plains Area	21st Century eSchool	3549	0800
Milton	Milton High	3612	0100
Milwaukee	Bay View Middle and High	3619	0012
Milwaukee	Bradley Technology High	3619	0014
Milwaukee	Career and Technical Education	3619	0016
Milwaukee	Hamilton High	3619	0018
Milwaukee	King International	3619	0020
Milwaukee	Milwaukee School of Entrepreneurship	3619	0023
Milwaukee	Pulaski High	3619	0026
Milwaukee	New School for Community Service	3619	0027
Milwaukee	Riverside High	3619	0029
Milwaukee	South Division High	3619	0032
Milwaukee	Vincent High	3619	0033
Milwaukee	Milwaukee High School of the Arts	3619	0038
Milwaukee	Morse Marshall	3619	0052
Milwaukee	Milwaukee School of Languages	3619	0071
Milwaukee	Groppi High	3619	0236
Milwaukee	CYD - Career Youth Development	3619	0282
Milwaukee	Lad Lake Synergy School	3619	0296
Milwaukee	Milwaukee County Youth Education Center	3619	0315

Milwaukee	WI Conservatory of Lifelong Learning	3619	0399
District Name	School Name	District Code	School Code
Milwaukee	Carmen High	3619	0407
Milwaukee	James Madison Academic Campus	3619	0409
Milwaukee	Grandview High	3619	0410
Milwaukee	Advanced Language and Academic Studies	3619	0412
Milwaukee	Alliance School of Milwaukee	3619	0413
Milwaukee	Community High School	3619	0416
Milwaukee	North Division Charter High	3619	0419
Milwaukee	WHS Information Technology	3619	0424
Milwaukee	Northwest Secondary School	3619	0428
Milwaukee	Banner Preparatory School of Milwaukee	3619	0432
Milwaukee	Transition High	3619	0433
Milwaukee	Audubon High	3619	0434
Milwaukee	Reagan College Preparatory High	3619	0435
Milwaukee	International Peace Academy	3619	0436
Milwaukee	Milwaukee Community Cyber High	3619	0441
Milwaukee	Transformation Learning Community	3619	0443
Milwaukee	Milwaukee Excel High	3619	0446
Milwaukee	Achievement Center	3619	0447
Milwaukee	Professional Learning Institute	3619	0450
Milwaukee	Project STAY	3619	0458
Milwaukee	St Charles Intensive Day Treatment	3619	0805
Milwaukee	St Charles Behav Reassign Success Acad	3619	0825
Milwaukee	Project Excel	3619	0865
Milwaukee	MacDowell Montessori School K3-12	3619	0870
Milwaukee	ASSATA	3619	1063

Milwaukee	Centro Hispano High	3619	1066
Milwaukee	NOVA	3619	1072
Milwaukee	Shalom High	3619	1074
Milwaukee	Lad Lake Ultra	3619	1078
Mineral Point Unified	Mineral Point High	3633	0080
Mishicot	Mishicot High	3661	0040
Mondovi	Mondovi High	3668	0100
Monona Grove	Monona Grove High	3675	0060
Monona Grove	Monona Grove Liberal Arts Charter School	3675	0450
Monroe	Monroe High	3682	0120
Monroe	Monroe Alternative Charter School	3682	0410
Monroe	Monroe Independent Virtual Charter High	3682	0420
Montello	Montello Junior/Senior High	3689	0040
Montello	High Marq Environmental Charter School	3689	0420
Monticello	Monticello High	3696	0040
Mosinee	Mosinee High	3787	0100
Mount Horeb Area	Mount Horeb High	3794	0120
Mukwonago	Mukwonago High	3822	0060
Muskego-Norway	Muskego High	3857	0180
Necedah Area	Necedah Middle/High	3871	0040
Necedah Area	Juneau County Charter School	3871	9405
Neenah Joint	Neenah High	3892	0180

District Name	School Name	District Code	School Code
Neillsville	Neillsville Middle/High	3899	0040
Nekoosa	Nekoosa High	3906	0060
Nekoosa	Central Cities Health Institute	3906	9416
New Auburn	New Auburn Jr-Sr High	3920	0040

New Berlin	Eisenhower Middle/High	3925	0050
New Berlin	New Berlin Middle/High	3925	0140

New Glarus	New Glarus High	3934	0040
New Holstein	New Holstein High	3941	0080
New Lisbon	New Lisbon Junior High/High School	3948	0060
New Lisbon	Juneau County Charter School	3948	9405
New London	New London High	3955	0080
New London	School of Enterprise Marketing	3955	0400
New Richmond	New Richmond High	3962	0060
Niagara	Niagara High	3969	0040
Nicolet UHS	Nicolet High	2177	0020
Norris	Norris High	3976	0020
North Crawford	North Crawford High	2016	0120
North Fond du Lac	Horace Mann High	3983	0060
Northern Ozaukee	Ozaukee High	1945	0060
Northern Ozaukee	Wisconsin Virtual Learning	1945	0850
Northland Pines	Northland Pines High	1526	0090
Northwood	Northwood School	3654	0060
Northwood	Northwood High	3654	0410
Norwalk-Ontario-Wilton	Brookwood High	3990	0020
Oak Creek-Franklin Joint	Oak Creek High	4018	0140
Oakfield	Oakfield Junior/Senior High	4025	0060
Oconomowoc Area	Oconomowoc High	4060	0130
Oconto Falls Public	Oconto Falls High	4074	0200
Oconto Falls Public	Falls Alternative Learning Site (FALS)	4074	0400
Oconto Falls Public	New Path	4074	0410
Oconto Unified	Oconto High	4067	0100
Omro	Omro High	4088	0060

Onalaska	Onalaska High	4095	0040
Oostburg	Oostburg High	4137	0080
Oregon	Oregon High	4144	0060
Osceola	Osceola High	4165	0060
Oshkosh Area	North High	4179	0290
Oshkosh Area	West High	4179	0300
Oshkosh Area	Jackson Street School	4179	0420
Osseo-Fairchild	Osseo-Fairchild High	4186	0080
Owen-Withee	Owen-Withee High	4207	0060
Palmyra-Eagle Area	Palmyra-Eagle High	4221	0015
Pardeeville Area	Pardeeville High	4228	0080
Parkview	Parkview High	4151	0100
Pecatonica Area	Pecatonica High	0490	0040
Pepin Area	Pepin High	4270	0040
Peshtigo	Peshtigo Middle/High	4305	0100

District Name	School Name	District Code	School Code
Pewaukee	Pewaukee High	4312	0080
Phelps	Phelps High	4330	0020
Phillips	Phillips High	4347	0120
Pittsville	Pittsville High	4368	0040
Platteville	Platteville High	4389	0060
Plum City	Plum City High	4459	0040
Plymouth Joint	Plymouth High	4473	0100
Port Edwards	John Edwards High	4508	0040
Port Edwards	Central Cities Health Institute	4508	9416
Port Washington-Saukville	Port Washington High	4515	0100
Portage Community	Portage High	4501	0180

Portage Community	Portage Academy of Achievement	4501	0400
Portage Community	Portage Virtual School	4501	0450
Potosi	Potosi High	4529	0040
Poynette	Poynette High	4536	0080
Prairie du Chien Area	Prairie du Chien High	4543	0060
Prairie Farm Public	Prairie Farm High	4557	0040
Prentice	Prentice High	4571	0060
Prescott	Prescott High	4578	0060
Princeton	Princeton School	4606	0040
Pulaski Community	Pulaski High	4613	0100
Racine Unified	Case High	4620	0491
Racine Unified	Horlick High	4620	0492
Racine Unified	Park High	4620	0494
Racine Unified	Walden III High	4620	0499
Racine Unified	The REAL School	4620	0800
Randolph	Randolph High	4634	0040
Random Lake	Random Lake High	4641	0080
Reedsburg	Reedsburg Area High	4753	0080
Reedsville	Reedsville High	4760	0040
Rhineland	Rhineland High	4781	0180
Rhineland	Rhineland Environmental Stewardship	4781	0200
Rhineland	Northwoods Community Secondary School	4781	0420
Rib Lake	Rib Lake High	4795	0060
Rice Lake Area	Rice Lake High	4802	0180
Rice Lake Area	Northern Lakes Regional Academy	4802	0450
Richland	Richland Center High	4851	0320
Rio Community	Rio Middle/High School	4865	0040
Ripon Area	Ripon High	4872	0120
Ripon Area	Crossroads	4872	0430

Ripon Area	Lumen Charter High	4872	0440
River Falls	River Falls High	4893	0080
River Falls	Renaissance Charter Academy	4893	0410
River Ridge	River Ridge High	4904	0080
River Valley	River Valley High	5523	0110
Riverdale	Riverdale High	3850	0120
Rosendale-Brandon	Laconia High	4956	0050

District Name	School Name	District Code	School Code
Rosholt	Rosholt High	4963	0040
Royall	Royall High	1673	0060
Royall	Juneau County Charter Sch	1673	9405
Saint Croix Central	Saint Croix Central High	2422	0060
Saint Croix Falls	Saint Croix Falls High	5019	0080
Saint Francis	Saint Francis High	5026	0040
Sauk Prairie	Sauk Prairie High	5100	0120
Seneca	Seneca High	5124	0080
Sevastopol	Sevastopol High	5130	0040
Seymour Community	Seymour High	5138	0100
Shawano	Shawano High	5264	0280
Sheboygan Area	North High	5271	0280
Sheboygan Area	South High	5271	0340
Sheboygan Area	George D Warriner High School	5271	0440
Sheboygan Area	Central High	5271	0450
Sheboygan Area	IDEAS Academy	5271	0451
Sheboygan Falls	Sheboygan Falls High	5278	0040
Shell Lake	Shell Lake Jr/Sr High	5306	0040
Shiocton	Shiocton High	5348	0040

Shiocton	Shiocton International Leadership	5348	0450
Shorewood	Shorewood High	5355	0080
Shorewood	New Horizons for Learning	5355	0400
Shullsburg	Shullsburg High	5362	0080
Siren	Siren High	5376	0040
Slinger	Slinger High	5390	0080
Solon Springs	Solon Springs School	5397	0800
Somerset	Somerset High	5432	0040
South Milwaukee	South Milwaukee High	5439	0120
South Shore	South Shore Jr/Sr High	4522	0100
Southern Door County	Southern Door High	5457	0220
Southwestern Wisconsin	Southwestern Wisconsin High	2485	0060
Sparta Area	Sparta High	5460	0160
Sparta Area	Sparta High Point School	5460	0410
Sparta Area	Sparta Alternative Independent Learning	5460	0800
Spencer	Spencer Junior High/High	5467	0040
Spooner Area	Spooner High	5474	0080
Spring Valley	Spring Valley High	5586	0080
Stanley-Boyd Area	Stanley-Boyd High	5593	0080
Stevens Point Area Public	Stevens Point Area Senior High	5607	0270
Stevens Point Area Public	Charles F Fernandez Center Alt Learning	5607	0310
Stevens Point Area Public	Juvenile Detention	5607	0320
Stockbridge	Stockbridge High	5614	0040
Stoughton Area	Stoughton High	5621	0140
Stoughton Area	JEDI Virtual K-12	5621	9803
Stratford	Stratford Jr/Sr High	5628	0040
Sturgeon Bay	Sturgeon Bay High	5642	0010
Sun Prairie Area	Sun Prairie High	5656	0100

District Name	School Name	District Code	School Code
Sun Prairie Area	Prairie Phoenix Academy	5656	0410
Sun Prairie Area	JEDI Virtual K-12	5656	9803
Superior	Superior High	5663	0280
Suring Public	Suring High	5670	0080

Thorp	Thorp High	5726	0040
Three Lakes	Three Lakes High	5733	0080
Tigerton	Tigerton High	5740	0040
Tomah Area	Tomah High	5747	0180
Tomah Area	Robert Kupper Learning Center	5747	0800
Tomahawk	Tomahawk High	5754	0200
Tomorrow River	Amherst High	0126	0060
Tri-County Area	Tri-County High	4375	0060
Turtle Lake	Turtle Lake High	5810	0040
Turtle Lake	North Star Academy	5810	9410
Two Rivers Public	Two Rivers High	5824	0080
Union Grove UHS	Union Grove High	5852	0020
Unity	Unity High	0238	0100
Valders Area	Valders High	5866	0060
Verona Area	Verona Area High	5901	0100
Viroqua Area	Viroqua High	5985	0220
Viroqua Area	Laurel High	5985	0410
Viroqua Area	Vernon County Area Better Futures High	5985	9407
Wabeno Area	Wabeno High	5992	0080
Washburn	Washburn High	6027	0040
Washington	Washington Island High	6069	0040
Waterford UHS	Waterford High	6083	0020

Waterloo	Waterloo High	6118	0040
Watertown Unified	Watertown High	6125	0140
Waukesha	North High	6174	0290
Waukesha	Waukesha Engineering Preparatory Academy	6174	0430
Waukesha	Waukesha Academy of Health Professions	6174	0450
Waukesha	South High	6174	0460
Waukesha	eAchieve Academy - Wisconsin	6174	0470
Waukesha	Harvey Philip Alternative Charter School	6174	0490
Waukesha	Project Change-A Recovery School	6174	0495
Waukesha	West High	6174	0560
Waunakee Community	Waunakee High	6181	0040
Waupaca	Waupaca High	6195	0140
Waupaca	Waupaca County Charter	6195	9408
Waupun	Waupun Area Senior High	6216	0200
Wausau	East High	6223	0360

Wausau	West High	6223	0380
Wausau	Enrich Excel Achieve Learning Academy	6223	0400
Wausau	Wausau Engineering and Global Leadership	6223	0410
Wausaukee	Wausaukee High	6230	0100
Wautoma Area	Wautoma High	6237	0140
Wauwatosa	East High	6244	0020
District Name	School Name	District Code	School Code
Wauwatosa	Plank Road Complex	6244	0190
Wauwatosa	West High	6244	0280
Wauzeka-Steuben	Wauzeka High	6251	0040
Webster	Webster High	6293	0080
West Allis-West Milwaukee	Central High	6300	0020

West Allis-West Milwaukee	Nathan Hale High	6300	0340
West Allis-West Milwaukee	Shared Journeys	6300	0410
West Allis-West Milwaukee	West Allis-West Milwaukee Learning	6300	0490
West Bend	East High	6307	0050
West Bend	West High	6307	0200
West Bend	Washington Street School	6307	0400
West De Pere	West De Pere High	6328	0120
West De Pere	Phantom Knight School of Opportunity	6328	0400
West Salem	West Salem High	6370	0080
Westby Area	Westby High	6321	0200
Westby Area	Vernon County Area Better Futures High	6321	9407
Westfield	Westfield Area High	6335	0100
Weston	Weston High	6354	0100
Weyauwega-Fremont	Weyauwega High	6384	0100
Weyauwega-Fremont	Waupaca County Charter	6384	9408
White Lake	White Lake High	6440	0040
Whitefish Bay	Whitefish Bay High	6419	0100
Whitehall	Whitehall High	6426	0120
Whitewater Unified	Whitewater High	6461	0140
Whitewater Unified	JEDI Virtual K-12	6461	9803
Whitnall	Whitnall High	6470	0100
Wild Rose	Wild Rose High	6475	0060
Williams Bay	Williams Bay High	6482	0040
Williams Bay	Walworth Co Educ Alt High	6482	9401
Wilmot UHS	Wilmot High	6545	0020
Winneconne Community	Winneconne High	6608	0060
Winter	Winter High	6615	0080
Wisconsin Dells	Wisconsin Dells High	6678	0100
Wisconsin Heights	Wisconsin Heights High	0469	0060

Wisconsin Rapids	Lincoln High	6685	0160
Wisconsin Rapids	River Cities High	6685	0430
Wisconsin Rapids	Central Cities Health Institute	6685	9416
Wittenberg-Birnamwood	Wittenberg-Birnamwood High	6692	0140
Wonewoc-Union Center	Wonewoc-Center High	6713	0080
Wonewoc-Union Center	Juneau County Charter School	6713	9405
Wrightstown Community	Wrightstown High	6734	0040

Detailed Standard Occupational Classification Listing Section

Detailed Standard Occupational Classification (SOC) Codes

This is a listing of all Standard Occupational Classification (SOC) codes. This is a code table developed by the US Department of (Labor) to classify occupations. Please note that this code describes occupations held by individuals and does not describe the industries in which people work hold.

Code	Job Title or Occupation
14	Management-Related Occupations
	Accountants, Auditors, and Other Financial Specialists
	Accountants and Auditors
	Underwriters
	Loan Officers
	Financial Officers, Other
	Management Analysts
	Personnel, Training, and Labor Relations Specialists
	Purchasing Agents and Buyers
	Buyers: Wholesale and Retail Trade, Except Farm
Products	Purchasing Agents and Buyers, Farm Products
	Purchasing Agents and Buyers, N.E.C.
	Business and Promotion Agents

Inspectors and Compliance Officers
Construction Inspectors
Inspectors and Compliance Officers, Except Construction

17 Computer, Mathematical, and Operations Research Occupations

Computer Scientists
Computer Systems Analysts
Operations and Research Analysts
Operations Researchers and Analysts
Systems Researchers and Analysts, Except Computer
Mathematical Scientists
Actuaries
Statisticians

29 Registered Nurses

32 Writers, Artists, Performers, and Related Workers

Authors
Designers
Musicians and Composers
Actors and Directors
Painters, Sculptors, Craft-Artists, and Artist-Printmakers
Photographers
Dancers

36 Health Technologists and Technicians

Clinical Laboratory Technologists and Technicians
Dental Hygienists
Health Record Technologists and Technicians
Radiologic Technologists and Technicians
Licensed Practical Nurses
Dental Assistants
Health Aides, Except Nursing
Nursing Aides, Orderlies, and Attendants

Code	Job Title or Occupation
3700	Engineering and Related Technologists and Technicians Engineering Technologists and Technicians Electrical and Electronic Engineering Technologists and Technicians Industrial Engineering Technologists Mechanical Engineering Technologists & Technicians Drafting Occupations Surveying and Mapping Technicians Surveying Technicians Cartographic Technicians
38	Science Technologists and Technicians Biological Technologists and Technicians, Except Health Chemical and Nuclear Technologists and Technicians Chemical Technologists and Technicians Nuclear Technologists and Technicians Petroleum Technologists and Technicians Mathematical Technicians
39	Technicians: Except Health, Engineering, and Science Air Traffic Controllers Radio Operators Legal Technicians Programmers Programmers, Business Programmers, Scientific Programmers: Numerical, Tool, and Process Control Technical Writers
41	Sales Occupations, Commodities Sales Engineers Technical Sales Workers and Service Advisors Technical Sales Workers, Aircraft Technical Sales Workers, Agricultural Equipment and Supplies Technical Sales Workers, Electronic Equipment Technical Sales Workers: Industrial Machinery, Equipment and Supplies Technical Sales Workers: Medical and Dental Equipment and Supplies Technical Sales Workers: Chemicals & Chemical Products Sales Representatives: Commercial and Industrial Equipment and Supplies Sales Representatives, Garments and Related Textile Products Sales Representatives: Motor Vehicles and Supplies Sales Representatives; Pulp, Paper, and Paper Products Sales Representatives; Farm Products and Livestock Salespersons; Motor Vehicles, Mobile Homes, and Supplies Salespersons; Musical Instruments and Supplies Salespersons; Boats and Marine Equipment and Supplies Salespersons: Sporting Goods Salespersons: Garments and Textile Products Salespersons: Books, Stamps, Coins, and Stationery

Code Job Title or Occupation

- Salespersons: Furniture and Home Furnishings
- Salespersons, Shoes
- Salespersons: Radio, Television, High Fidelity and Household Appliances
- Salespersons: Hardware
- Salespersons: Cosmetics, Toiletries, and Allied Products
- Salespersons: Jewelry and Related Products
- 4100** Sales Clerks
- Counter Clerks
- Cashiers
- News Vendors
- Street Vendors, Door-To-Door Salesworkers, and Related Occupations
- Salesperson: Parts

- 42 Insurance, Securities, Real Estate & Business Service Sales Occupations**
- Insurance, Real Estate, and Securities Sales Occupations
- Insurance Sales Occupations
- Real Estate Sales Occupations
- Securities and Financial Service Sales Occupations
- Business Service Sales Occupations
- Business Service Sales Occupations (Except Advertising)
- Advertising and Related Sales Occupations

- 45 Supervisors; Administrative Support Occupations, Including Clerical**
- Supervisors: General Office Occupations
- Supervisors: Computer and Peripheral Equipment Operators
- Supervisors: Secretaries, Stenographers, and Typists
- Supervisors: Information Clerks
- Supervisors, Correspondence Clerks and Order Clerks
- Supervisors; Records Clerks
- Supervisors: Financial Record Processing Occupations
- Supervisors: Duplicating, Mail, and Other Office Machine Operators
- Chief Communications Operators
- Supervisors: Mail and Message Distribution Clerks
- Supervisors: Material Recording, Scheduling, and Distributing Clerks
- Supervisors: Adjusters, Investigators, and Collectors

Code	Job Title or Occupation
46	Clerical Occupations, Except Equipment Operators
	Secretaries
	Stenographers
	Typists
	General Office Occupations
	Information Clerks
	Interviewing Clerks
	Hotel Clerks
	Reservation Agents and Transportation Ticket Clerks
	Receptionists
	Correspondence Clerks and Order Clerks
	Classified Ad Clerks
	Correspondence Clerks
	Order Clerks
	Record Clerks
	Personnel Clerks, Except Payroll and Timekeeping
	Library Clerks
	File Clerks
	Financial Record Processing Occupations
	Bookkeepers and Accounting and Auditing Clerks
	Payroll and Timekeeping Clerks
	Billing Clerks
	Cost and Rate Clerks
	Mail and Message Distributing Occupations
	Postal Clerks, Except Mail Carriers
46	Mail Carriers, Post Office
	Mail Clerks, Except Post Office
	Messengers
	Material Recording, Scheduling, and Distributing Clerks
	Dispatchers
	Production and Planning Clerks
	Traffic, Shipping, and Receiving Clerks
	Stock and Inventory Clerks
	Meter Readers
	Weighers, Measurers, and Checkers
	Samplers
	Expeditors
	Adjusters, Investigators, and Collectors
	Insurance Adjusters, Examiners, and Investigators
	Investigators and Adjusters, Except Insurance
	Clerks, Social Welfare
	Bill and Account Collectors
	License Clerks
	Bank Tellers
	Proofreaders
	Statistical Clerks
	Teacher Aides

Code Job Title or Occupation

48 Computer and Peripheral Equipment Operators

Computer Operators
Peripheral Equipment Operators
Data Entry Keyers
Office Machine Operators, N.E.C.
Communications Equipment Operators
Telephone Operators
Telegraphers
Billing, Posting, and Calculating Machine Operators
Duplicating, Mail, and Other Office Machine Operators
Duplicating Machine Operators
Mail Preparing and Handling Machine Operators

51 Protective Service Occupations

Supervisors: Service Occupations, Protective
Supervisors: Firefighting and Fire Prevention Occupations
Supervisors: Police and Detectives
Supervisors: Guards
Firefighting and Fire Prevention Occupations
Fire Inspection and Fire Prevention Occupations
Police and Detectives
Correctional Institution Officers
Sheriffs, Bailiffs, and Other Law Enforcement Officers
Guards
Crossing Guards

52 Service Occupations, Except Private Household and Protective

Food and Beverage Preparation and Service Occupations
Supervisors: Food and Beverage Preparation and Service Occupations
Bartenders
Waiters and Waitresses
Cooks

52 Food Counter, Fountain, and Related Occupations

Kitchen Workers, Food Preparation
Waiters

Cleaning and Building Service Occupations, Except Private Household
Supervisors: Cleaning and Building Service Workers

Code	Job Title or Occupation
	Maids and Housemen
	Janitors and Cleaners
	Elevator Operators
	Pest Control Occupations
	Personal Service Occupations
	Supervisors; Personal Service Occupations
	Barbers
	Hairdressers and Cosmetologists
	Attendants: Amusement and Recreational Facilities
	Guides
	Ushers
	Public Transportation Attendants
	Wardrobe and Dressing Room Attendants
	Baggage Porters and Bellhops
	Welfare Service Aides
	Child Care Workers, Except Private Household
53	Private Household Occupations, (see 52)
55	Farm Operators and Managers
	Farmers: Working Proprietors
	General Farmers
	Crop, Vegetable, Fruit, and Tree Nut Farmers
	Livestock, Dairy, Poultry, and Fish Farmers
	Horticultural Specialty Farmers
	Farm Managers
	Managers: General Farm
	Managers: Crop, Vegetable, Fruit, and Tree Nut Farms
	Managers: Livestock, Dairy, Poultry, and Fish Farms
	Managers: Horticultural Specialty Farm
	Other Agricultural and Related Occupations
	Farm Occupations, Except Managerial
	Supervisors: Farm Workers
	General Farm Workers
	Field Crop and Vegetable Farm Workers (Hand)
	Orchard and Vineyard and Related Workers (Hand)
	Irrigation Workers
	Farm Machinery Operators
	Livestock Workers
	Marine Life Cultivation Workers
	Nursery Workers
	Related Agricultural Occupations
	Supervisors; Related Agricultural Workers
	Groundskeepers and Gardeners, Except Farm
	Animal Caretakers, Except Farm
	Graders and Sorters: Agricultural Products
	Inspectors: Agricultural Products

Code Job Title or Occupation

57 Forestry and Logging Occupations

Supervisors: Forestry and Logging Workers

57 Forestry Workers, Except Logging

Timber Cutting and Related Occupations

58 Fishers, Hunters, and Trappers

Fishers

Hunters and Trappers

61 Construction Trades

Brickmasons, Stonemasons, and Hard Tile Setters

Carpenters

Drywall Installers

Electricians and Power Transmission Installers

Electricians

Electrical Power Installers and Repairers

Painters, Paperhangers, and Plasterers

Painters (Construction and Maintenance)

Paperhangers

Plasterers

Plumbers, Pipefitters, and Steam Fitters

Carpet and Soft Tile Installers

Concrete and Terrazzo Finishers

Glaziers

Insulation Workers

Paving, Surfacing and Tamping Equipment Operators

Rail and Track Laying Equipment Operators

Roofers

Sheetmetal Duct Installers

Structural Metal Workers

Drillers, Earth

Airhammer Operators

Pile Driving Operators

64 Transportation and Material Moving Occupations

Supervisors: Transportation and Material Moving Occupations

Code	Job Title or Occupation
	Supervisors:Motorized Equipment Operators
	Supervisors:Motor Vehicle Operators
	Railroad Conductors and Yardmasters
	Supervisors:Material Moving Equipment Operators
	Transportation Occupations
	Motor Vehicle Operators
	Truck Drivers, Tractor-Trailer
	Truck Drivers, Heavy
	Truck Drivers, Light (Including Delivery and Route Drivers)
	Bus Drivers
	Taxicab Drivers and Chauffeurs
	Driver-Sales Workers
	Rail Transportation Occupations
	Locomotive Operating Occupations
	Railroad Brake, Signal, and Switch Operators
	Water Transportation Occupations
	Ship Captains and Mates
	Boat and Barge Operators
	Sailors and Deck Hands
	Marine Engineers
	Bridge, Lock, and Lighthouse Tenders
64	Transportation and Material Moving Occupations
	Airplane Pilots and Navigators
	Transportation Inspectors
	Material Moving Occupations, Except Transportation
	Material Moving Equipment Operators
	Operating Engineers
	Longshore Equipment Operators
	Hoist and Winch Operators
	Crane and Tower Operators
	Excavating and Loading Machine Operators
	Grader, Dozer, Scraper Operators
	Industrial Truck and Tractor Equipment Operators
	Material Moving Equipment Operators, Miscellaneous
	Freight, Stock, and Material Movers, Hand
	Garbage Collectors
	Stevedores
	Stock Handlers and Baggers
	Machine Feeders and Offbearers
	Garage and Service Station Related Occupations
	Parking Lot Attendants
	Vehicle Washers and Equipment Cleaners
67	Mechanics and Repairers
	Supervisors:Mechanics and Repairers
	Vehicle and Mobile Equipment Mechanics and Repairers
	Automobile Mechanics
	Bus and Truck Engine, and Stationary Diesel Engine Mechanics

Code Job Title or Occupation

Aircraft Engine Mechanics
Small Engine Repairers
Automobile Body and Related Repairers
Aircraft Mechanics (Except Engine Specialists)
Heavy Equipment Mechanics
Farm Equipment Mechanics
Industrial Machinery Repairers
Machinery Maintenance Occupations
Electrical and Electronic Equipment Repairers
Communications Equipment Repairers
Electric Motor, Transformer, and Related Repairers
Electronic Repairers, Commercial and Industrial Equipment
Data Processing Equipment Repairers
Electronic Repairers, Home-Entertainment Equipment
Household Appliance and Power Tool Repairers
Telephone Line Installers and Repairers
Telephone Installers and Repairers
Miscellaneous Electrical and Electronic Equipment Repairers
Heating, Air-Conditioning, and Refrigeration Mechanics
Miscellaneous Mechanics and Repairers
Camera, Watch, and Other Precision Instrument Repairers
Musical Instrument Repairers and Tuners
Locksmiths and Safe Repairers
Office Machine Repairers
Mechanical Controls and Valve Repairers
Elevator Installers and Repairers
Riggers
Millwrights
72 Precision Production Occupations
Precision Metal Workers
Tool and Die Makers
Precision Assemblers (Metal)
Machinists
Boilermakers
Precision Grinders, Filers, and Tool Sharpeners
Pattern Makers and Model Makers (Metal)

Code	Job Title or Occupation
	Lay-Out Workers (Metal)
	Precision Hand Molders and Shapers (Jewelers)
	Engravers
	Sheet Metal Workers
	Precision Metal Workers, Miscellaneous
	Precision Woodworkers
	Pattern Makers and Model Makers, Wood
	Cabinet Makers and Bench Carpenters
	Furniture Finishers
	Precision Printing Occupations
	Precision Typesetters
	Precision Lithographers and Photoengravers
	Bookbinders
	Precision Printing Occupations, Miscellaneous
	Precision Textile, Apparel, and Furnishings Workers
	Tailors and Dressmakers, Hand
	Upholsterers
	Shoemakers and Leather Workers and Repairers
	Precision Laundering, Cleaning, and Dyeing Occupations
	Apparel and Fabric Patternmakers
	Precision Apparel and Fabric Workers, Miscellaneous
	Precision Workers: Assorted Materials
	Precision Hand Molders and Shapers (Except Jewelers)
	Precision Patternmakers, Lay-Out Workers, and Cutters
	Detail Design Painters and Decorators
	Optical Goods Workers
	Dental Laboratory Technicians
	Gem and Diamond Working Occupations
	Precision Electrical and Electronic Equipment Assemblers
	Photographic Process Workers
	Precision Food Production Occupations
	Butchers and Meat Cutters
	Bakers
	Batchmakers (Candymakers, Cheesemakers, Etc.)
	Precision Food Workers, Miscellaneous
	Precision Inspectors, Testers, and Related Workers
	Precision Inspectors, Testers, and Graders
	Precision Adjusters and Calibrators
	Plant and System Operators
	Water and Sewage Treatment Plant Operators
	Gas Plant Operators
	Power Plant Operators
	Stationary Engineers
	Power Plant Systems Operators, Except Stationary Engineers
	Chemical Plant Operators
	Petroleum Plant Operators
	Plant or System Operators, Miscellaneous
72	Production Working Occupations

Code Job Title or Occupation

Supervisors: Production Occupations
Machine Setup Operators
Metalworking and Plastic Working Machine Setup Operators
Lathe and Turning Machine Setup Operators
Milling and Planing Machine Setup Operators
Punching and Shearing Machine Setup Operators
Extruding and Drawing Machine Setup Operators
Rolling Machine Setup Operators
Press and Brake Machine Setup Operators
Drilling and Boring Machine Setup Operators
Forging Machine Setup Operators
Grinding, Abrading, Buffing, and Polishing Machine Setup Operators
Lapping and Honing Machine Setup Operators
Numerical Control Machine Setup Operators
 Metalworking and Plasticworking Machine Setup Operators, Miscellaneous
Metal Fabricating Machine Setup Operators
Welding Machine Setup Operators
Soldering and Brazing Machine Setup Operators
Fabricating Machine Setup Operators, Miscellaneous
Metal and Plastic Processing Machine Setup Operators
Molding and Casting Machine Setup Operators
Plating and Coating Machine Setup Operators
Heating Equipment Setup Operators
Miscellaneous Metal and Plastic Processing Machine Setup Operators
Woodworking Machine Setup Operators
Lathe and Turning Machine Setup Operators
Router and Planer Machine Setup Operators
Sawing Machine Setup Operator
Sanding Machine Setup Operators
Shaping and Joining Machine Setup Operators
Miscellaneous Woodworking Machine Operators
Printing Machine Setup Operators
Printing Press Set Up Operators
Photoengraving and Lithographing Machine Setup Operators
Printing Machine Setup Operators, Miscellaneous
Textile Machine Setup Operators

Code	Job Title or Occupation
	Winding and Twisting Machine Setup Operators
	Knitting and Weaving Machine Setup Operators
	Assorted Materials:Machine Setup Operators
	Packaging and Filling Machine Setup Operators
	Extruding and Forming Machine Setup Operators
	Compressing and Compacting Machine Setup Operators
	Roasting and Baking Machine Setup Operators
	Folding Machine Setup Operator
	Still, Clarifying, and Precipitating Machine Setup Operators
	Crushing and Grinding Machine Setup Operators
	Slicing and Cutting Machine Setup Operators
	Machine Setup Operators, Miscellaneous
	Machine Operators and Tenders
	Metal Working and Plastic Working Machine Operators and Tenders
	Lathe and Turning Machine and Tenders
	Milling and Planing Machine Operators and Tenders
	Punching and Shearing Machine Operators and Tenders
	Extruding and Drawing Machine Operators and Tenders 72
Rolling	Machine Operators and Tenders
	Press and Brake Machine Operators and Tenders
	Drilling and Boring Machine Operators and Tenders
	Forging Machine Operators
	Grinding, Abrading, Buffing, and Polishing Machine Operators and Tenders
	Metalworking and Plastic Working Machine Operators and Tenders, Misc.
	Metal Fabricating Machine Operators and Tenders
	Welding Machine Operators and Tenders
	Soldering and Brazing Machine Operators and Tenders
	Fabricating Machine Operators and Tenders, Miscellaneous
	Metal and Plastic Processing Machine Operators and Tenders
	Molding and Casting Machine Operators and Tenders
	Plating and Coating Machine Operators and Tenders
	Heating Equipment Operators and Tenders
	Metal and Plastic Processing Machine Operators and Tenders, Misc.
	Woodworking Machine Operators and Tenders
	Lathe and Turning Machine Operators and Tenders
	Router and Planer Machine Operators and Tenders
	Sawing Machine Operators and Tenders
	Sanding Machine Operators and Tenders
	Shaping and Joining Machine Operators and Tenders
	Nailing and Tacking Machine Operators and Tenders
	Woodworking Machine Operators and Tenders, Miscellaneous
	Printing Machine Operators and Tenders
	Typesetting and Composing Machine Operators and Tenders
	Printing Machine Operators and Tenders
	Photoengraving and Lithographing Machine Operators and Tenders
Printing	Machine Operators and Tenders, N.E.C.
	Textile, Apparel, and Furnishings Machine Operators and Tenders
	Winding and Twisting Machine Operators and Tenders

Code Job Title or Occupation

Knitting and Weaving Machine Operators and Tenders
Textile Fabricating Machine Operators and Tenders
Textile Cutting Machine Operators and Tenders
Textile Sewing Machine Operators and Tenders
Shoe Machine Operators and Tenders
Pressing Machine Operators
Laundering and Dry Cleaning Machine Operators and Tenders
Machine Operators and Tenders: Assorted Materials
Cementing and Gluing Machine Operators and Tenders
Packaging and Filling Machine Operators and Tenders
Extruding and Forming Machine Operators and Tenders
Mixing and Blending Machine Operators and Tenders
Cooling and Freezing Equipment Operators and Tenders
Separating and Filtering Machine Operators and Tenders
Compressing and Compacting Machine Operators and Tenders Boiler
Operators and Tenders (Low Pressure)
Coating, Painting, and Spraying Machine Operators and Tenders
Photographic Developing Machine Operator
Roasting and Baking Machine Operators and Tenders
Washing, Cleaning, and Pickling Equipment Operators and Tenders
Folding Machine Operators and Tenders
Furnace, Kiln, and Oven Operators and Tenders
Still, Clarifier, and Precipitator Operators and Tenders
Crushing and Grinding Machine Operators and Tenders
Slicing and Cutting Machine Operators and Tenders
77 Fabricators, Assemblers, and Hand Working Occupations
Welders and Solderers
Welders and Cutters
Solderers and Brazers
Assemblers
Hand Sewing Occupations
Hand Cutting and Trimming Occupations
Hand Holding and Casting Occupations
Hand Forming and Shaping Occupations
Hand Painting, Coating, and Decorating Occupations

Code	Job Title or Occupation
	Hand Engraving and Printing Occupations
Hand Grinding and Polishing Occupations	
	Hand Working Occupations, Miscellaneous
	Production Inspectors, Testers, Samplers, and Weighers
	Production Inspectors, Checkers, and Examiners
	Production Testers
	Production Samplers and Weighers
	Graders and Sorters, Except Agricultural
	Production Expeditors

Detailed Instructional Area Classification Codes - Classification of Instructional Program Section

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
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Detailed Instructional Area Code Listing

This is a listing of detailed listing of Classification of Program codes, titles and descriptions from which the CTEERS Instructional Area Codes are derived. It is to be used as a reference for the determination of properly reporting the IAC of a CTE concentrator student. NTO (Non-Traditional Occupations) refers to the underrepresented sex within the possible occupations under to the Instructional Area Classification code.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
01.01	F	01.01	Agricultural Business and Management
		01.0101	A general program that focuses on modern business and economic principles involved in the organization, operation, and management of agricultural enterprises.
		01.0102	A program that prepares individuals to manage agricultural businesses and agriculturally related operations within diversified corporations. Includes instruction in agriculture, agricultural specialization, business management, accounting, finance, marketing, planning, human resources management, and other managerial responsibilities.
		01.0103	A program that focuses on the application of economics to the analysis of resource allocation, productivity, investment, and trends in the agricultural sector, both domestically and internationally. Includes instruction in economics and related subfields as well as applicable agricultural fields.
		01.0104	A program that prepares individuals to manage farms, ranches, and similar enterprises. Includes instruction in applicable agricultural specialization, business management, accounting, taxation, capitalization, purchasing, government programs and regulations, operational planning and budgeting, contracts and negotiation, and estate planning.
		01.0105	A program that prepares individuals to sell agricultural products and supplies, provide support services to agricultural enterprises, and purchase and market agricultural products. Includes instruction in basic business management, marketing, retailing and wholesaling operations, and applicable principles of agriculture and agricultural operations.
		01.0106	A program that prepares individuals to perform specialized support functions related to agricultural business offices and operations and to operate agricultural office equipment, software, and information systems. Includes instruction in basic agricultural business principles, office management, equipment operation, standard software, and database management.
		01.0199	Any instructional program in agricultural business and management not listed above.
01.02	F	01.02	Agricultural Mechanization
		01.0201	A program that generally prepares individuals to sell, select, and service agricultural or agribusiness technical equipment and facilities, including computers, specialized software, power units, machinery, equipment structures, and utilities. Includes instruction in agricultural power systems, planning and selecting materials for the construction of support facilities, mechanical practices associated with irrigation and water conservation, erosion control, and agricultural data processing systems.

01.0204 A program that prepares individuals to operate specialized farm, ranch, and agribusiness power equipment of a stationary, mobile, and/or handoperated nature. Includes instruction in operating specialized equipment such as terrestrial and airborne crop-spraying equipment; tractors and hauling equipment; planting and harvesting equipment; cutting equipment; power sources and systems for silos, irrigation, pumping, and applications such as dairy, feeding and shearing operations; processing equipment; and applicable electrical, mechanical, and safety principles.

01.0205 A program that prepares individuals to maintain and repair specialized farm, ranch, and agribusiness power equipment and vehicles. Includes instruction in the principles of diesel, combustion, electrical, steam, hydraulic, and mechanical systems and their application to the maintenance of terrestrial and airborne cropspraying equipment; tractors and hauling equipment; planting and harvesting equipment; cutting equipment; power sources and systems for silos; irrigation and pumping equipment; dairy, feeding, and shearing operations; and processing systems.

01.0299 Any instructional program in agricultural mechanization not listed above.

01.03

F

01.03 Agricultural Production Operations

01.0301 A program that focuses on the general planning, economics, and use of facilities, natural resources, equipment, labor, and capital to produce plant and animal products, and that may prepare individuals for work in farming, ranching, and agribusiness.

01.0302 A program that prepares individuals to select, breed, care for, process, and market livestock and small farm animals. Includes instruction in basic animal science, animal nutrition, and animal health as applied to various species and breeds; design and operation of housing, feeding, and processing facilities; and related issues of safety, applicable regulations, logistics, and supply.

01.0303 A program that prepares individuals to select, culture, propagate, harvest, and market domesticated fish, shellfish, and marine plants, both freshwater and saltwater. Includes instruction in the basic principles of aquatic and marine biology; health and nutrition of aquatic and marine life; design and operation of fish farms, breeding facilities, culture beds, and related enterprises; and related issues of safety, applicable regulations, logistics, and supply.

01.0304 A program that prepares individuals to cultivate grain, fiber, forage, oilseed, fruits and nuts, vegetables, and other domesticated plant products. Includes instruction in basic principles of plant science, health, and nutrition as applied to particular species and breeds; soil preparation and irrigation; pest management; planting and harvesting operations; product marketing; and applicable issues of safety, regulation, logistics, and supply.

01.0306 A program that prepares individuals to manage the selection and care of dairy animals and associated dairy farm and processing facilities and operations. Includes instruction in basic animal and dairy science; dairy animal nutrition and health; design and operation of dairy housing, feeding, and processing facilities and equipment; and related issues of safety, sanitation, shipping and handling, and applicable regulations.

01.0307 A program that prepares individuals to manage the selection, breeding, care, and maintenance of work, athletic, and show horses; and to manage horse farms, stables, tracks and related equipment and operations. Includes instruction in applicable principles of animal science, care, and health; stable and track management; design and operation of facilities and equipment; and related issues such as regulations, business management; and logistics.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
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01.0308 A program that focuses on agricultural principles and practices that, over the long term, enhance environmental quality, make efficient use of nonrenewable resources, integrate natural biological cycles and controls, and are economically viable and socially responsible; and that may prepare individuals to apply this knowledge to the solution of agricultural and environmental problems. Includes instruction in principles of agro-ecology, crop and soil sciences, entomology, horticulture, animal science, weed science and management, soil fertility and nutrient cycling, applied ecology, agricultural economics, and rangeland ecology and watershed management.

01.0309 A program that focuses on the application of scientific and agribusiness principles to the production of grapes, the making of wine, and the wine business. Includes instruction in grapes and wines of the world; grape production; winemaking technology; plant biology; chemistry; food science, safety, and packaging; soil science; pest management; and marketing and business management.

		01.0399	Any instructional program in agricultural production operations not listed above.
01.04	F	01.04	Agricultural and Food Products Processing
		01.0401	A program that prepares individuals to receive, inspect, store, process, and package agricultural products in the form of human food consumables, animal or plant food, or other industrial products. Includes instruction in the nutrient and industrial properties of various agricultural products; logistics and storage procedures; chemical and mechanical processing operations; packaging; safety and health requirements; and related technical and business principles.
01.05		01.05	Agricultural and Domestic Animal Services
		01.0504	A program that prepares individuals to provide cosmetic services for household pets, show animals, work animals and animal athletes. Includes instruction in skin, coat, and pelt grooming and styling; skin care; hoof, nail, and claw care; animal massage; minor first aid and veterinary referral; animal grooming products and applications; health and safety; and applicable regulations.
		01.0505	A program that prepares individuals to teach and exercise animals for leisure, sport, show, and professional purposes. Includes instruction in animal psychology, health, and safety; human-animal interaction; learning and behavior styles associated with different breeds and species; and the technical and pedagogical aspects of training animals for such specific functions as obedient household pets, performing show animals, animal athletes, care-giving (e.g., seeing-eye dogs), search and rescue, and police/security work.
		01.0507	A program that focuses on the horse, horsemanship, and related subjects and prepares individuals to care for horses and horse equipment; ride and drive horses for leisure, sport, show, and professional purposes; and manage the training of horses and riders. Includes instruction in horse breeding, nutrition, health, and safety; history of the horse and horsemanship; horse development and training; riding and equestrian technique; stable, paddock, and track management; and equipment maintenance and repair.
		01.0508	A program that prepares individuals to reproduce life-like three-dimensional representations of living animals for permanent display using elements of the deceased specimen(s) as well as artificial materials, and to manage taxidermy services and businesses. Includes instruction in specimen grading and selection, caping and fleshing, preservation procedures, tanning, drying, measurements, form and armature construction, carpentry and woodworking, molding and casting, drawing, sculptural techniques, painting and finishing techniques, basic business operations, customer communications, and applicable laws and regulations.
		01.0599	Any instructional program in agricultural and domestic animal services not listed above.
01.06	F	01.06	Applied Horticulture and Horticultural Business Services
		01.0601	A program that focuses on the general production and processing of domesticated plants, shrubs, flowers, foliage, trees, groundcovers, and related plant materials; the management of technical and business operations connected with horticultural services; and the basic scientific principles needed to understand plants and their management and care.
		01.0603	A program that focuses on domesticated plants and plant materials used for decorative and recreational applications and prepares individuals to breed, grow, and utilize ornamental plant varieties for commercial and aesthetic purposes. Includes instruction in applicable plant science subjects, the environmental design and artistic aspects of horticultural product usage, and the management of horticultural operations.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			01.0604 A program that prepares individuals to produce, store, and deliver plant species in controlled indoor environments for wholesale, commercial, research, or other purposes. Includes instruction in applicable principles of plant science; climate, irrigation, and nutrition control equipment operation and maintenance; facilities management; inventory control; safety procedures; and personnel supervision.
		01.0605	A program that prepares individuals to manage and maintain indoor and/or outdoor ornamental and recreational plants and groundcovers and related conceptual designs established by landscape architects, interior designers, enterprise owners or managers, and individual clients. Includes instruction in applicable principles of horticulture, gardening, plant and soil irrigation and nutrition, turf maintenance, plant maintenance, equipment operation and maintenance, personnel supervision, and purchasing.
		01.0606	A program that prepares individuals to operate and manage outdoor plant farms, tree and shrub nurseries, and related facilities that develop domesticated plant products for propagation, harvesting, and transplantation. Includes instruction in applicable principles of plant science, farm and business management, nursery operations, equipment operation and maintenance, safety procedures, and personnel supervision.
		01.0607	A program that focuses on turf grasses and related groundcover plants and prepares individuals to develop ornamental or recreational grasses and related products; plant, transplant, and manage grassed areas; and to produce and store turf used for transplantation. Includes instruction in applicable plant sciences, genetics of grasses, turf science, use analysis, turf management, and related economics.
		01.0608	A program that prepares individuals to operate and manage commercial and contract florist enterprises, supply and delivery services, and flower catering services. Includes instruction in the applicable principles of plant science; purchasing, storage, and delivery systems; floral design and arranging; and principles of business management.
		01.0699	Any instructional program in horticultural service operations not listed above.
01.07	F	01.07	International Agriculture
		01.0701	A program that focuses on the application of agricultural management and scientific principles to the problems of global food production and distribution, and to the study of the agricultural systems of other countries. Includes instruction in agricultural economics; comparative agricultural systems; international agribusiness and law; third-world development studies and economic development; and global applications of climate, soil, water resources, ecological and environmental studies, and animal and plant sciences.
01.08		01.08	Agricultural Public Services
		01.0801	A program that prepares individuals to provide referral, consulting, technical assistance, and educational services to gardeners, farmers, ranchers, agribusinesses, and other organizations. Includes instruction in basic agricultural sciences, agricultural business operations, pest control, adult education methods, public relations, applicable state laws and regulations, and communication skills.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		01.0802	A program that prepares individuals to apply journalistic, communication, and broadcasting principles to the development, production, and transmittal of agricultural information. Includes instruction in basic journalism, broadcasting, film/video, and communication techniques; the production of technically specialized information products for agricultural audiences; and the principles of agricultural sciences and business operations needed to develop and communicate agricultural subject matter in effective ways.
		01.0899	Any instructional program in general agricultural sciences and related services not listed above.
01.09	F	01.09	Animal Sciences
		01.0901	A general program that focuses on the scientific principles that underlie the breeding and husbandry of agricultural animals, and the production, processing, and distribution of agricultural animal products. Includes instruction in the animal sciences, animal husbandry and production, and agricultural and food products processing.
		01.0902	A program that focuses on the application of genetics and genetic engineering to the improvement of agricultural animal health, the development of new animal breeds, and the selective improvement of agricultural animal populations. Includes instruction in genetics, genetic engineering, population genetics, animal health, animal husbandry, and biotechnology.
		01.0903	A program that focuses on the application of biological and chemical principles to the study, prevention, and control of diseases in agricultural animal populations. Includes instruction in environmental science, pharmacology, animal population studies, genetics, animal physiology and diet, disease prevention, treatment methodologies, and laboratory and testing procedures.
		01.0904	A program that focuses on the biology and chemistry of proteins, fats, carbohydrates, water, vitamins, and feed additives as related to animal health and the production of improved animal products. Includes instruction in nutrition science, animal health and physiology, biochemistry, cellular and molecular biology, animal husbandry, and food science.
		01.0905	A program that focuses on the application of biological and chemical principles to the production and management of dairy animals and the production and handling of dairy products. Includes instruction in animal sciences, nutrition sciences, food science and technology, biochemistry, and related aspects of human and animal health and safety.
		01.0906	A program that focuses on the application of biological and chemical principles to the production and management of livestock animals and the production and handling of meat and other products. Includes instruction in animal sciences, range science, nutrition sciences, food science and technology, biochemistry, and related aspects of human and animal health and safety.
		01.0907	A program that focuses on the application of biological and chemical principles to the production and management of poultry animals and the production and handling of poultry products. Includes instruction in avian sciences, nutrition sciences, food science and technology, biochemistry, hatchery design, and related aspects of human and animal health and safety.
		01.0999	Any instructional program in the animal sciences not listed above.
01.10	F	01.10	Food Science and Technology
		01.1001	A program that focuses on the application of biological, chemical, and physical

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
01.11	F		principles to the study of converting raw agricultural products into processed forms suitable for direct human consumption, and the storage of such products. Includes instruction in applicable aspects of the agricultural sciences, human physiology and nutrition, food chemistry, agricultural products processing, food additives, food preparation and packaging, food storage and shipment, and related aspects of human health and safety including toxicology and pathology.
		01.1002	A program that focuses on the application of chemical, physical, and engineering principles to the development and implementation of manufacturing, packaging, storage, and distribution technologies and processes for food products. Includes instruction in food engineering, food preservation and handling, food preparation, food packaging and display, food storage and shipment, and related equipment and facilities design, operation, and maintenance.
		01.1099	Any instructional program in food sciences and technology not listed above.
		01.11	Plant Sciences
		01.1101	A general program that focuses on the scientific principles that underlie the breeding, cultivation, and production of agricultural plants, and the production, processing, and distribution of agricultural plant products. Includes instruction in the plant sciences, crop cultivation and production, and agricultural and food products processing.
		01.1102	A program that focuses on the chemical, physical, and biological relationships of crops and the soils nurturing them. Includes instruction in the growth and behavior of agricultural crops, the development of new plant varieties, and the scientific management of soils and nutrients for maximum plant nutrition, health, and productivity.
			01.1103 A program that focuses on the scientific principles related to the cultivation of garden and ornamental plants, including fruits, vegetables, flowers, and landscape and nursery crops. Includes instruction in specific types of plants, such as citrus; breeding horticultural varieties; physiology of horticultural species; and the scientific management of horticultural plant development and production through the life cycle.
			01.1104 A program that focuses on the application of genetics and genetic engineering to the improvement of agricultural plant health, the development of new plant varieties, and the selective improvement of agricultural plant populations. Includes instruction in genetics, genetic engineering, population genetics, agronomy, plant protection, and biotechnology.
			01.1105 A program that focuses on the application of scientific principles to the control of animal, insect and weed infestation of domesticated plant populations and other settings, including agricultural crops; the prevention/reduction of attendant economic loss; and the control of environmental pollution and degradation related to pest infestation and pest control measures. Includes instruction in entomology, applicable animal sciences, plant pathology and physiology, weed science, crop science, and environmental toxicology.
		01.1106	A program that focuses on the scientific study of rangelands, arid regions, grasslands, and other areas of low productivity, as well as the principles of managing such resources for maximum benefit and environmental balance. Includes instruction in livestock management, wildlife biology, plant sciences, ecology, soil science, and hydrology.
01.12	F	01.1199	Any instructional program in plant sciences not listed above.
		01.12	Soil Sciences

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| 01.1201 | A program that generally focuses on the scientific classification of soils, soil properties, and their relationship to agricultural crops. Includes instruction in soil chemistry, soil physics, soil biology, soil fertility, morphogenesis, mineralogy, hydrology, agronomy, and soil conservation and management. | | |
| | <table border="0"> <tr> <td data-bbox="662 407 760 436">01.1202</td> <td data-bbox="857 407 1485 569">A program that focuses on the application of chemical and physical principles to research and analysis concerning the nature and properties of soils and the conservation and management of soils. Includes instruction in soil and fluid mechanics, mineralogy, sedimentology, thermodynamics, geomorphology, environmental systems, analytical methods, and organic and inorganic chemistry.</td> </tr> </table> | 01.1202 | A program that focuses on the application of chemical and physical principles to research and analysis concerning the nature and properties of soils and the conservation and management of soils. Includes instruction in soil and fluid mechanics, mineralogy, sedimentology, thermodynamics, geomorphology, environmental systems, analytical methods, and organic and inorganic chemistry. |
| 01.1202 | A program that focuses on the application of chemical and physical principles to research and analysis concerning the nature and properties of soils and the conservation and management of soils. Includes instruction in soil and fluid mechanics, mineralogy, sedimentology, thermodynamics, geomorphology, environmental systems, analytical methods, and organic and inorganic chemistry. | | |
| 01.1203 | A program that focuses on application of microbiological theory and methods to the study of the organismic properties of soils, soil-plant and soil-animal interactions, and the biological components and effects of soil management strategies. Includes | | |

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			instruction in microbiology and related biological sciences, applicable animal and plant sciences, soil chemistry and physics as related to biological characteristics, and environmental science.
01.99	F	01.1299 01.9999	Any instructional program in the soil sciences not listed above. 01.99 Agriculture, Agriculture Operations, and Related Sciences, Other Any instructional program in agriculture, agricultural operations, and related sciences not listed above.
03.01	F	03.01	03.01 Natural Resources Conservation and Research 03.0101 A general program that focuses on the studies and activities relating to the natural environment and its conservation, use, and improvement. Includes instruction in subjects such as climate, air, soil, water, land, fish and wildlife, and plant resources; in the basic principles of environmental science and natural resources management; and the recreational and economic uses of renewable and nonrenewable natural resources.
		03.0103	A program that focuses on environment-related issues using scientific, social scientific or humanistic approaches or a combination. Includes instruction in the basic principles of ecology and environmental science and related subjects such as policy, politics, law, economics, social aspects, planning, pollution control, natural resources, and the interactions of human beings and nature.
		03.0104	A program that focuses on the application of biological, chemical, and physical principles to the study of the physical environment and the solution of environmental problems, including subjects such as abating or controlling environmental pollution and degradation; the interaction between human society and the natural environment; and natural resources management. Includes instruction in biology, chemistry, physics, geosciences, climatology, statistics, and mathematical modeling.
		03.0199	Any instructional program in natural resources conservation and research not listed above.
03.02	F	03.02	03.02 Natural Resources Management and Policy
		03.0201	A program that prepares individuals to plan, develop, manage, and evaluate programs to protect and regulate natural habitats and renewable natural resources. Includes instruction in the principles of wildlife and conservation biology, environmental science, animal population surveying, natural resource economics, management techniques for various habitats, applicable law and policy, administrative and communications skills, and public relations.
		03.0204	A program that focuses on the application of economic concepts and methods to the analysis of issues such as air and water pollution, land use planning, waste disposal, invasive species and pest control, conservation policies, and related environmental problems. Includes instruction in cost-benefit analysis, environmental impact assessment, evaluation and assessment of alternative resource management strategies, policy evaluation and monitoring, and descriptive and analytic tools for studying how environmental developments affect the economic system.

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03.0205	<p>A program that prepares individuals to apply the principles of marine/aquatic biology, oceanography, natural resource economics, and natural resources management to the development, conservation, and management of freshwater and saltwater environments. Includes instruction in subjects such as wetlands, riverine, lacustrian, coastal, and oceanic water resources; water conservation and use; flood control; pollution control; water supply logistics; wastewater management; aquatic and marine ecology; aquatic and marine life conservation; and the economic and recreational uses of water resources.</p>
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IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			<p>03.0206 A program that focuses on how public and/or private land and associated resources can be preserved, developed, and used for maximum social, economic, and environmental benefit. Includes instruction in natural resources management, natural resource economics, public policy, regional and land use planning, environmental impact assessment, applicable law and regulations, government and politics, principles of business and real estate land use, statistical and analytical tools, computer applications, mapping and report preparation, site analysis, cost analysis, and communications skills.</p> <p>03.0207 A program that prepares individuals to plan, develop, and manage tourism in a natural resource setting, with an emphasis on applying environmentally sound, culturally sensitive, and economically sustainable principles. Includes instruction in environmental studies; natural resource management and interpretation; tourism planning, management, and policies; public land use management and policies; communications; marketing; and public relations.</p> <p>03.0208 A program that prepares individuals to enforce natural resource and environmental protection regulations and laws; and to perform emergency duties to protect human life, property and natural resources, including fire prevention and control measures, and emergency and rescue procedures. Includes instruction in natural and physical sciences, natural resource management, outdoor field skills, firearms and outdoor equipment and vehicle operation, evidence collection and environmental sampling and monitoring, natural resource legislation, environmental compliance techniques, patrol procedures, investigation and report writing, interpersonal skills and crisis intervention, community liaison, public safety, public education, and public relations. Note: this program was re-instated after being deleted from CIP 2000; previously, it was coded as 03.0203.</p> <p>03.0299 Any instructional program in natural resources management and policy not listed above.</p>
03.03	F	03.03	<p>Fishing and Fisheries Sciences and Management</p> <p>03.0301 A program that focuses on the scientific study of the husbandry and production of non-domesticated fish and shellfish populations for recreational and commercial purposes and the management of fishing and marine/aquatic product processing to ensure adequate conservation and efficient utilization. Includes instruction in the principles of marine/aquatic biology, freshwater and saltwater ecosystems, water resources, fishing production operations and management, fishing policy and regulation, and the management of recreational and commercial fishing activities.</p>
03.05	F	03.05	<p>Forestry</p> <p>03.0501 A program that generally prepares individuals to manage and develop forest areas for economic, recreational, and ecological purposes. Includes instruction in forestrelated sciences, mapping, statistics, harvesting and production technology, natural resources management and economics, wildlife sciences, administration, and public relations.</p> <p>03.0502 A program that focuses on the application of one or more forest-related sciences to the study of environmental factors affecting forests and the growth and management of forest resources. Includes instruction in forest biology, forest hydrology, forest mensuration, silviculture, forest soils, water resources, environmental science, forest resources management, and wood science.</p>

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03.0506 A program that prepares individuals to apply principles of forestry and natural resources management to the administration of forest lands and related resources. Includes instruction in silviculture, forest mensuration, forest protection, inventorying, biometrics, geographic information systems, remote sensing, photogrammetry, forest policy and economics, forest land use planning, fire protection and management, and related administrative skills.

03.0508 A program that prepares individuals to apply the principles of forestry and related sciences to the development, care, and maintenance of individual trees and forested areas within or close to areas of dense human habitation. Includes instruction in urban environments; effects of pollution on tree species; environmental design and landscaping; urban pest infestation; urban forest management; and applicable policies and regulations.

03.0509 A program that focuses on the application of chemical, physical, and engineering principles to the analysis of the properties and behavior of wood and wood products and the development of processes for converting wood into paper and other products. Includes instruction in wood classification and testing, product development, manufacturing and processing technologies, and the design and development of related equipment and systems.

03.0510 A program that focuses on the application of forestry principles to the production, harvesting, and processing of forest resources and that prepares individuals to perform associated technical and managerial functions. Includes instruction in forest production and utilization, industrial forestry, agro-forestry, transplantation, timber harvesting, selection and identification of trees, processing technologies and systems, equipment operations and maintenance, and related management skills.

03.0511 A program that prepares individuals to assist foresters in the management and production of forest resources. Includes instruction in woods and field skills, tree identification, timber measurement, logging and timber harvesting, forest propagation and regeneration, forest fire-fighting, resource management, equipment operation and maintenance, record-keeping, sales and purchasing operations, and personnel supervision.

03.0599 Any program in forestry not listed above.

03.06 F 03.06 Wildlife and Wildlands Science and Management

03.0601 A program that prepares individuals to conserve and manage wilderness areas and the flora, marine and aquatic life therein, and manage wildlife reservations and zoological/aquarium facilities for recreational, commercial, and ecological purposes. Includes instruction in wildlife biology, marine/aquatic biology, environmental science, freshwater and saltwater ecosystems, natural resources management and policy, outdoor recreation and parks management, the design and operation of natural and artificial wildlife habitats, applicable law and regulations, and related administrative and communications skills.

03.99 F 03.99 Natural Resources and Conservation, Other

03.9999 Any instructional program in natural resources and conservation not listed above.

04.02 F 04.02 Architecture

04.0201 A program that prepares individuals for the independent professional practice of architecture and to conduct research in various aspects of the field. Includes instruction in architectural design, history, and theory; building structures and environmental systems; project and site planning; construction;

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04.04	F	04.04	<p>professional responsibilities and standards; and related cultural, social, economic, and environmental issues.</p> <p>Environmental Design</p> <p>04.0401 A program that prepares individuals to design public and private spaces, indoor and outdoor, for leisure, recreational, commercial, and living purposes, and for professional practice as environmental designers and architects. Includes instruction in the design and planning of public and private open spaces and their relationship to buildings and other aspects of the built environment; facilities management; related aspects of interior design and architecture, landscape architecture, and urban planning; and professional responsibilities and standards.</p>
04.05	F	04.05	<p>Interior Architecture</p> <p>04.0501 A program that prepares individuals to apply architectural principles in the design of structural interiors for living, recreational, and business purposes and to function as professional interior architects. Includes instruction in architecture, structural systems design, heating and cooling systems, occupational and safety standards, interior design, specific end-use applications, and professional responsibilities and standards.</p>
04.06	F	04.06	<p>Landscape Architecture</p> <p>04.0601 A program that prepares individuals for the independent professional practice of landscape architecture and research in various aspects of the field. Includes instruction in geology and hydrology; soils, groundcovers, and horticultural elements; project and site planning; landscape design, history, and theory; environmental design; applicable law and regulations; and professional responsibilities and standards.</p>
04.09	F	04.09	<p>Architectural Sciences and Technology</p> <p>04.0901 A program that prepares individuals to assist architects in developing plans and related documentation and in performing architectural office services. Includes instruction in architectural drafting, computer-assisted drafting and design, construction methods and materials, environmental systems, building codes and standards, structural principles, cost estimation, planning documentation, visual communication skills, display production, and architectural office management.</p> <p>04.0902 A program that focuses on the application of advanced technology to building design and construction, retrofitting existing buildings, and efficient operation of buildings, including lighting and daylight design, acoustics, solar design, building conservation, and energy-conscious design. Includes instruction in architecture, building technology, civil and structural engineering, mechanical engineering, environmental control systems, sustainability, and computer tools and applications.</p> <p>04.0999 Any instructional program in architectural sciences and technology not listed above.</p>
04.99	F	04.99	<p>Architecture and Related Services, Other</p> <p>04.9999 Any instructional program in architecture and related programs not listed above.</p>
09.01		09.01	<p>Communication and Media Studies</p> <p>09.0100 Instructional content for this group of programs is defined in codes 09.0100 - 09.0199.</p> <p>09.0101 A program that focuses on the scientific, humanistic, and critical study of human communication in a variety of formats, media, and contexts. Includes instruction in the theory and practice of interpersonal, group, organizational, professional, and intercultural communication; speaking and</p>

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listening; verbal and nonverbal interaction; rhetorical theory and criticism; performance studies; argumentation and persuasion; technologically mediated communication; popular culture; and various contextual applications.

- 09.0102 A program that focuses on the analysis and criticism of media institutions and media texts, how people experience and understand media content, and the roles of media in producing and transforming culture. Includes instruction in communications regulation, law, and policy; media history; media aesthetics, interpretation, and criticism; the social and cultural effects of mass media; cultural studies; the economics of media industries; visual and media literacy; and the psychology and behavioral aspects of media messages, interpretation, and utilization.
- 09.0199 Any instructional program in communication and media studies not listed above.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
09.04		09.04	Journalism
		09.0401	A program that focuses on the theory and practice of gathering, processing, and delivering news and that prepares individuals to be professional print journalists, news editors, and news managers. Includes instruction in news writing and editing; reporting; photojournalism; layout and graphic design; journalism law and policy; professional standards and ethics; research methods; and journalism history and criticism.
		09.0402	A program that focuses on the methods and techniques for reporting, producing, and delivering news and news programs via radio, television, and video/film media; and that prepares individuals to be professional broadcast journalists, editors, producers, directors, and managers. Includes instruction in the principles of broadcast technology; broadcast reporting; on- and off-camera and microphone procedures and techniques; program, sound, and video/film editing; program design and production; media law and policy; and professional standards and ethics.
		09.0404	A program that focuses on the use of still and motion photography in journalism and prepares individuals to function as news photographers and photographic editors. Includes instruction in photography, journalism, studio procedures and techniques, camera and equipment operation and technique, news editing, print and film editing, news scene composition, subject surveillance, media law and policy, news team field operations, and professional standards and ethics.
09.07	F	09.0499	Any instructional program in journalism not listed above.
		09.07	Radio, Television, and Digital Communication
		09.0701	A program that focuses on the theories, methods, and techniques used to plan, produce, and distribute audio and video programs and messages, and that prepares individuals to function as staff, producers, directors, and managers of radio and television shows and media organizations. Includes instruction in media aesthetics; planning, scheduling, and production; writing and editing; performing and directing; personnel and facilities management; marketing and distribution; media regulations, law, and policy; and principles of broadcast technology.
09.09		09.0702	A program that focuses on the development, use, critical evaluation, and regulation of new electronic communication technologies using computer applications; and that prepares individuals to function as developers and managers of digital communications media. Includes instruction in computer and telecommunications technologies and processes; design and development of digital communications; marketing and distribution; digital communications regulation, law, and policy; the study of human interaction with, and use of, digital media; and emerging trends and issues.
		09.0799	Any instructional program in radio, television, and digital communications not listed above.
		09.09	Public Relations, Advertising, and Applied Communication
09.09		09.0900	Instructional content for this group of programs is defined in codes 09.0900 - 09.0999.

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09.0901 A program that focuses on general communication processes and dynamics within organizations. Includes instruction in the development and maintenance of interpersonal group relations within organizations; decision-making and conflict management; the use of symbols to create and maintain organizational images, missions, and values; power and politics within organizations; human interaction with computer technology; and how communications socializes and supports employees and team members.

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- 09.0902 A program that focuses on the theories and methods for managing the media image of a business, organization, or individual and the communication process with stakeholders, constituencies, audiences, and the general public; and that prepares individuals to function as public relations assistants, technicians, and managers. Includes instruction in public relations theory; related principles of advertising, marketing, and journalism; message/image design; image management; special event management; media relations; community relations; public affairs; and internal communications.
- 09.0903 A program that focuses on the creation, execution, transmission, and evaluation of commercial messages in various media intended to promote and sell products, services, and brands; and that prepares individuals to function as advertising assistants, technicians, and managers. Includes instruction in advertising theory, marketing strategy, advertising design and production methods, campaign methods and techniques, media management, related principles of business management, and applicable technical and equipment skills.
- 09.0904 A program that focuses on human and media communication in the political process and that prepares individuals to function as members of political and public affairs organizations, political campaign staffs, and related government and media entities. Includes instruction in media effects, political speaking and debating, political advertising and marketing, image management, political journalism, opinion polling, and aspects of print and broadcast media related to the production and distribution of media messages in political settings.
- 09.0905 A program that focuses on how people, individually and collectively, understand and accommodate to health and illness and the role of communication and media in shaping professional health care messages and public acceptance of these messages. Includes instruction in the development and use of health-related and care-related messages and media; the goals and strategies of health care promotion; relationships, roles, situations, and social structures in the context of health maintenance and promotion; and applications to disease prevention, health advocacy, and communications concerning treatments.
- 09.0906 A program that focuses on the methods and techniques for communicating about sports in a variety of formats, media, and contexts; and that prepares individuals to be sports reporters and writers, photojournalists, radio and television announcers, producers and directors, recreational sports promoters, and public relations specialists. Includes instruction in sports writing, photography, broadcast journalism, sports production, game rules, media and public relations, and sports promotion.
- 09.0907 A program that focuses on the specialized knowledge and skills needed for effective communication in the international community and among people of different cultures; and that prepares individuals to function at the national and international levels as journalists, public relations specialists, travel industry representatives, intercultural trainers, and/or foreign service officers. Includes instruction in journalism, communications, intercultural and international relations, marketing and public relations, and global communications policy.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		09.0908	A program that focuses on the communication of technical and scientific knowledge to a variety of audiences through print, video, and digital media; and that prepares individuals to function as technical writers and editors, documentation developers, web designers, and usability specialists. Includes instruction in scientific and technical writing and editing, graphic and information design, web design, audience analysis, document usability and field testing, publications management, and applications to specific technical fields.
		09.0999	Any instructional program in organizational communication, public relations, and advertising not listed above.
09.99		09.99	Communication, Journalism, and Related Programs, Other
		09.9999	Any instructional program in communication, journalism, and related fields not listed above.
10.01	F	10.01	Communications Technology/Technician
		10.0105	A program that generally prepares individuals to function as workers and managers within communications industries. Includes instruction in business economics; basic management; principles of interpersonal and mediated communications; radio, television, and digital media production; and related aspects of technology and communications systems.
10.02	F	10.02	Audiovisual Communications Technologies/Technicians
		10.0201	A program that prepares individuals to apply technical knowledge and skills to the operation and maintenance of camera and lighting equipment and the production of finished still, video, and film products under the supervision of photographers, directors, and editors. Includes instruction in equipment setup and maintenance; lighting; power supplies; studio and film set tasks such as camera operator, grip, and best boy; plate and negative handling and development; laboratory procedures; and digital software applications.
		10.0202	A program that prepares individuals to apply technical knowledge and skills to the production of radio and television programs, and related operations, under the supervision of broadcast and studio managers, directors, editors, and producers. Includes instruction in sound, lighting, and camera operation and maintenance; power and feed control; studio operations; production preparation; broadcast engineering; related computer applications; and specialized applications such as news, entertainment, live talk, sports, commercials, and taping.
		10.0203	A program that prepares individuals to apply technical knowledge and skills to the production of sound recordings as finished products or as components of film/video, broadcast, live, or mixed media productions. Includes instruction in sound equipment operation and maintenance; music, dialogue, and sound effects recording; sound track editing; dubbing and mixing; sound engineering; tape, disk, and CD production; digital recording and transmission; amplification and modulation; and working with producers, editors, directors, artists, and production managers.
		10.0299	Any instructional program in audiovisual communications technologies not listed above.
10.03		10.03	Graphic Communications
	10.0301		A program that generally prepares individuals to apply technical knowledge and skills in the manufacture and distribution or transmission of graphic communications products. Includes instruction in the prepress, press, and postpress phases of production operations and processes such as offset lithography,

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			flexography, gravure, letterpress, screen printing, foil stamping, digital imaging, and other reproduction methods.
		10.0302	A program that prepares individuals to apply technical and managerial knowledge and skills to the processes and procedures of managing printing operations from initial design through finished product distribution. Includes instruction in the principles of graphic communications design and production; quality control; printing operations management; computerization; printing plant management; business finance and marketing; logistics and distribution; personnel supervision and leadership; and professional standards in the graphic communications industry.
		10.0303	A program that prepares individuals to apply technical knowledge and skills to the layout, design and typographic arrangement of printed and/or electronic graphic and textual products. Includes instruction in printing and lithographic equipment and operations, computer hardware and software, digital imaging, print preparation, page layout and design, desktop publishing, and applicable principles of graphic design and web page design.
		10.0304	A program that prepares individuals to use computer applications and related visual and sound imaging techniques to manipulate images and information originating as film, video, still photographs, digital copy, soundtracks, and physical objects in order to communicate messages simulating real-world content. Includes instruction in specialized camerawork and equipment operation and maintenance, image capture, computer programming, dubbing, CAD applications, and applications to specific commercial, industrial, and entertainment needs.
		10.0305	A program that generally prepares individuals to apply technical knowledge and skills to plan, prepare, and execute a variety of commercial and industrial graphic communications jobs. Includes instruction in the operation and maintenance of mechanical, electronic, and digital graphic, printing, and finishing equipment; and related processes.
		10.0306	A program that prepares individuals to apply technical knowledge and skills to prepare film, digital data, and surfaces to reproduce printed or graphic images. Includes instruction in platemaking, stripping, camerawork, imposition, digital imaging, computer direct-to-plate and direct-to-press, and related processes.
		10.0307	A program that prepares individuals to apply technical knowledge and skills to set up, operate, and maintain printing presses.
		10.0308	A program that prepares individuals to apply technical knowledge and skills to design and execute page formats, layouts and text composition, and to make typographical selections using computer graphics and other computer-assisted design programs.
		10.0399	Any instructional program in graphic communications not listed above.
11.01	F	11.01	Computer and Information Sciences, General
		11.0101	A general program that focuses on computing, computer science, and information science and systems. Such programs are undifferentiated as to title and content and are not to be confused with specific programs in computer science, information science, or related support services.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			11.0102 A program that focuses on the symbolic inference, representation, and simulation by computers and software of human learning and reasoning processes and capabilities, and the computer modeling of human motor control and motion. Includes instruction in computing theory, cybernetics, human factors, natural language processing, and applicable aspects of engineering, technology, and specific end-use applications.
		11.0103	A program that focuses on the design of technological information systems, including computing systems, as solutions to business and research data and communications support needs. Includes instruction in the principles of computer hardware and software components, algorithms, databases, telecommunications, user tactics, application testing, and human interface design.
		11.0104	A program that focuses on computer systems from a user-centered perspective and studies the structure, behavior and interactions of natural and artificial systems that store, process and communicate information. Includes instruction in information sciences, human computer interaction, information system analysis and design, telecommunications structure and information architecture and management.
		11.0199	Any instructional program in computer science not listed above.
11.02	F	11.02	Computer Programming 11.0201 A program that focuses on the general writing and implementation of generic and customized programs to drive operating systems and that generally prepares individuals to apply the methods and procedures of software design and programming to software installation and maintenance. Includes instruction in software design, low- and high-level languages and program writing; program customization and linking; prototype testing; troubleshooting; and related aspects of operating systems and networks. 11.0202 A program that prepares individuals to apply the knowledge and skills of general computer programming to the solution of specific operational problems and customization requirements presented by individual software users and organizational users. Includes training in specific types of software and its installation and maintenance. 11.0203 A program that prepares individuals to fulfill the requirements set by vendors for professional qualification as certified installation, customization, and maintenance engineers for specific software products and/or processes. Includes training in specific vendor-supported software products and their installation and maintenance.
11.03	F	11.0299	Any instructional program in computer programming not listed above.
		11.03	Data Processing
		11.0301	A program that prepares individuals to master and use computer software programs and applications for inputting, verifying, organizing, storing, retrieving, transforming (changing, updating, and deleting), and extracting information. Includes instruction in using various operating system configurations and in types of data entry such as word processing, spreadsheets, calculators, management programs, design programs, database programs, and research programs.
11.04	F	11.04	Information Science/Studies
		11.0401	A program that focuses on the theory, organization, and process of information collection, transmission, and utilization in traditional and electronic forms. Includes instruction in information classification and organization; information storage and processing; transmission, transfer, and signaling; communications and networking; systems planning and design; human interfacing and use analysis; database

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
11.05	F	11.05	<p>development; information policy analysis; and related aspects of hardware, software, economics, social factors, and capacity.</p> <p>Computer Systems Analysis</p> <p>11.0501 A program that prepares individuals to apply programming and systems analysis principles to the selection, implementation, and troubleshooting of customized computer and software installations across the life cycle. Includes instruction in computer hardware and software; compilation, composition, execution, and operating systems; low- and high-level languages and language programming; programming and debugging techniques; installation and maintenance testing and documentation; process and data flow analysis; user needs analysis and documentation; cost-benefit analysis; and specification design.</p>
11.06	M	11.06 11.0601	<p>Data Entry/Microcomputer Applications</p> <p>A program that generally prepares individuals to perform basic data and text entry using standard and customized software products. Includes instruction in keyboarding skills, personal computer and work station operation, reading draft texts and raw data forms, audio and tape dictation, and various interactive software programs used for tasks such as word processing, spreadsheets, databases, and others.</p> <p>11.0602 A program that prepares individuals to perform text typing, table construction, and document formatting tasks on personal computers at a high rate of accuracy and proficiency. Includes instruction in keyboarding skills, word processor operation, textual draft interpretation, audio and tape dictation, and specific word processing program software.</p> <p>11.0699 Any instructional program in data entry/microcomputer applications not listed above.</p>
11.07	F	11.07	<p>Computer Science</p> <p>11.0701 A program that focuses on computer theory, computing problems and solutions, and the design of computer systems and user interfaces from a scientific perspective. Includes instruction in the principles of computational science, computer development and programming, and applications to a variety of end-use situations.</p>
11.08		11.08 11.0801 11.0802	<p>Computer Software and Media Applications</p> <p>A program that prepares individuals to apply HTML, XML, Javascript, graphics applications, and other authoring tools to the design, editing, and publishing (launching) of documents, images, graphics, sound, and multimedia products on the World Wide Web. Includes instruction in Internet theory, web page standards and policies, elements of web page design, user interfaces, vector tools, special effects, interactive and multimedia components, search engines, navigation, morphing, ecommerce tools, and emerging web technologies.</p> <p>A program that prepares individuals to design and manage the construction of databases and related software programs and applications, including the linking of individual data sets to create complex searchable databases (warehousing) and the use of analytical search tools (mining). Includes instruction in database theory, logic, and semantics; operational and warehouse modeling; dimensionality; attributes and hierarchies; data definition; technical architecture; access and security design; integration; formatting and extraction; data delivery; index design; implementation problems; planning and budgeting; and client and networking issues.</p>

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		11.0803	A program that focuses on the software, hardware, and mathematical tools used to represent, display, and manipulate topological, two-, and three-dimensional objects on a computer screen and that prepares individuals to function as computer graphics specialists. Includes instruction in graphics software and systems; digital multimedia; graphic design; graphics devices, processors, and standards; attributes and transformations; projections; surface identification and rendering; color theory and application; and applicable geometry and algorithms.
		11.0804	A program focusing on the principles of applied visual simulation technology and the application of quantitative analyses to human-computer interaction. Includes instruction in object-oriented programming, artificial intelligence, computer communications and networks, computer graphics, virtual worlds and simulation systems, probability, statistics, stochastic modeling, data analysis, humanperformance evaluation, and human-behavior modeling.
		11.0899	Any instructional program in computer software and media applications not listed above.
11.09	F	11.09	Computer Systems Networking and Telecommunications
		11.0901	A program that focuses on the design, implementation, and management of linked systems of computers, peripherals, and associated software to maximize efficiency and productivity, and that prepares individuals to function as network specialists and managers at various levels. Includes instruction in operating systems and applications; systems design and analysis; networking theory and solutions; types of networks; network management and control; network and flow optimization; security; configuring; and troubleshooting.
11.10	F	11.10	Computer/Information Technology Administration and Management
		11.1001	A program that prepares individuals to manage the computer operations and control the system configurations emanating from a specific site or network hub. Includes instruction in computer hardware and software and applications; local area (LAN) and wide area (WAN) networking; principles of information systems security; disk space and traffic load monitoring; data backup; resource allocation; and setup and takedown procedures.
		11.1002	A program that prepares individuals to oversee and regulate the computer system and performance requirements of an entire organization or network of satellite users. Includes instruction in performance balancing; redundancy; local area (LAN) and wide area (WAN) network management; system migration and upgrading; outage control; problem diagnosis and troubleshooting; and system maintenance, budgeting, and management.
		11.1003	A program that prepares individuals to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems, and procedures. Includes instruction in computer architecture, programming, and systems analysis; networking; telecommunications; cryptography; security system design; applicable law and regulations; risk assessment and policy analysis; contingency planning; user access issues; investigation techniques; and troubleshooting.
		11.1004	A program that prepares individuals to develop and maintain web servers and the hosted web pages at one or a group of web sites and to function as designated webmasters. Includes instruction in computer systems and networks, server installation and maintenance, web page design and editing, information resources

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			management, web policy and procedures, Internet applications of information systems security, user interfacing and usability research, and relevant management and communications skills.
		11.1005	A program that prepares individuals to design, develops, and manage information technology projects in a variety of companies and organizations. Includes instruction in principles of project management, risk management, procurement and contract management, information security management, software management, organizational principles and behavior, communications, quality assurance, financial analysis, leadership, and team effectiveness.
		11.1006	A program that prepares individuals to provide technical assistance, support, and advice to computer users to help troubleshoot software and hardware problems. Includes instruction in computer concepts, information systems, networking, operating systems, computer hardware, the Internet, software applications, help desk concepts and problem solving, and principles of customer service.
		11.1099	Any instructional program in computer/information technology services administration and management not listed above.
11.99	F	11.99 11.9999	Computer and Information Sciences and Support Services, Other Any instructional program in computer and information sciences and support services not listed above.
12.04	M	12.04	Cosmetology and Related Personal Grooming Services
		12.0401	A program that generally prepares individuals to cut, trim, and style scalp, facial, and body hair; apply cosmetic preparations; perform manicures and pedicures; massage the head and extremities; and prepare for practice as licensed cosmetologists in specialized or full-service salons. Includes instruction in hair cutting and styling, manicuring, pedicuring, facial treatments, shampooing, chemical applications, esthetics, shop management, sanitation and safety, customer service, and applicable professional and labor laws and regulations.
		12.0402	A program that prepares individuals to shave and trim facial/neck hair and beards, cut and dress hair, fit hairpieces, give facial and scalp massages, apply cosmetic treatments, and to prepare for licensure as professional barbers at various levels. Includes instruction in facial shaving; beard and mustache shaping and trimming; shampooing; hair cutting; hair styles and styling art; facial treatments and massage; chemical applications; hair and scalp anatomy and physiology; hairpiece and toupee fitting; equipment operation; health and safety; customer service; and shop business practices.
		12.0404	A program that prepares individuals to permanently remove hair from the human scalp, face, and body using specialized charged solid needle probes, and to function as licensed electrologists and electrolysis technicians. Includes instruction in direct current electrolysis, alternating current/high frequency thermolysis, blend/dual modality treatments, equipment theory and operation, safety and sanitation, client evaluation and care, laws and regulations, and business practices.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		12.0406	A program that prepares individuals to professionally apply cosmetic makeup preparations and perform complete and specialized appearance makeovers including hairdressing, wig work, masking, temporary prosthesis applications, cosmetic applications, and related costuming for leisure or for professional stage, camera, clinical, or security purposes. Includes instruction in period and contemporary hairstyling and costuming; wig work and hairpiece application; synthetic hair and masks; cosmetic preparations and treatments; makeup artistry; attachment, removal, and camouflaging of prostheses; health and safety; client consultation and care; pre- and post-production operations; set and crew conduct and relations; script, instruction, and prescription interpretation; labor relations; and business practices.
		12.0407	A program that prepares individuals to shampoo, cut, style, set, and dress the scalp hair of women and/or men, braid hair, apply hair cosmetics and wigs, and prepare for licensure as professional cosmetologists, hairdressers, and barbers at various levels. Includes instruction in hair design theory and concepts, hair cleaning and shampooing, hair coloring, chemical applications and permanent reconstructions, hair anatomy and physiology, scalp diseases and treatments, wig and hairpiece fitting, hair braiding, customer service, shop management, equipment operation, health and safety, and applicable laws and regulations.
		12.0408	A program that prepares individuals to massage and treat the face, neck, and scalp with chemical and cosmetic preparations, and to function as licensed facial specialists in specialized and full service salons. Includes instruction in facial surface anatomy; skin properties; skin decontamination and infection control; facial massage; facial makeup; facial wrapping; selection and application of creams, lotions, oils, and other chemicals and cosmetics; European and other facial techniques; client evaluation and care; applicable laws and regulations; and business practices.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		12.0409	A program that prepares individuals to cleanse, depilate, massage, and beautify the human body and to function as licensed estheticians and skin care specialists. Includes instruction in skin anatomy, physiology, and health; principles of nutrition; decontamination and infection control; health and safety; facial and body massage; body wrapping and spa treatments; temporary hair removal including waxing and tweezing; color and skin analysis; client consultation and care; applicable laws and regulations; business practices; and sometimes related alternative healing regimens.
		12.0410	A program that prepares individuals to shape fingernails and toenails, remove unwanted skin and blemishes, apply polish and cosmetics to nails, and function as licensed manicurists or nail technicians/specialists. Includes instruction in manicuring theory; skin anatomy; nail growth, irregularities, and diseases; sterilization and sanitation; equipment and table maintenance; cuticle, blemish, and rough skin removal; nail filing, shaping, and polishing; cream application and extremity massage; nail sculpture and design art; product storage and use; customer service; laws and regulations; and business practices.
		12.0411	A program that prepares individuals to prepare and apply permanent markings, color, and cosmetic products to the face and body for aesthetic or clinical purposes; to remove unwanted markings; and to function as licensed permanent makeup artists and tattooists. Includes instruction in client consultation; sterilization and sanitation; skin anatomy, diseases, and disorders; skin preparation and anesthetics; color theory; machine theory and operation; needle selection; applications such as eyebrows, eyeliners, lips, lipliners, beauty marks, and blemish/mark removal; after care; laws and regulations; and business practices.
		12.0412	A program that prepares cosmetologists, hairstylists, and other personal grooming specialists to manage beauty parlors, shops, and full-service or specialized salons and to prepare for licensure as professional salon owners and operators. Includes instruction in cosmetic services marketing and retailing; advertising and promotion; salon management; the cosmetic and salon supply industries; hiring, supervision, and labor relations; applicable business and professional laws and regulations; professional standards and image; and customer service.
		12.0413	A program that prepares cosmetologists, barbers, stylists, nail technicians, and other grooming specialists to teach their specializations in licensed and accredited schools of cosmetology and barbering, and to prepare for licensure as instructors. Includes instruction in cosmetology arts and sciences teaching principles; student learning styles; professional curricula development; instructional planning; instructional methods and aids; student counseling and career assistance; test development; and classroom/clinic management.
		12.0414	A program that prepares individuals to massage and treat the face, neck, and body with advanced chemical and cosmetic preparations and esthetic medical treatments, and to function as licensed master or medical estheticians in dermatologists' and plastic surgeons' offices as well as in salons and spas. Includes instruction in advanced anatomy and physiology, skin properties and disorders, sanitation and infection control, advanced facial treatments, spa body treatments, advanced extractions, corrective makeup, chemical peels, micro-dermabrasion, lymphatic drainage and advanced massage techniques, pre- and post-operative esthetic skin care, client/patient evaluation and care, applicable laws and regulations, and business practices.
		12.0499	Any instructional program in cosmetology and related personal grooming services not listed above.
12.05	F	12.05	Culinary Arts and Related Services

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
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IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		12.0500	Instructional content for this group of programs is defined in codes 12.0500 - 12.0599.
		12.0501	A program that prepares individuals to serve as professional bakers and pastry specialists in restaurants or other commercial baking establishments. Includes instruction in bread and pastry making, bread and pastry handling and storage, cake and pastry decorating, baking industry operations, product packaging and marketing operations, and counter display and service.
		12.0502	A program that prepares individuals to professionally prepare mixed alcoholic and non-alcoholic beverages and related products and manage bars, lounges, and beverage service operations in the hospitality industry. Includes instruction in mixology, oenology, accounting and cash management, inventory and cellar management, bar and lounge management, applicable laws and regulations, customer service, and labor/employment regulations.
			12.0503 A program that prepares individuals to provide professional chef and related cooking services in restaurants and other commercial food establishments. Includes instruction in recipe and menu planning, preparing and cooking of foods, supervising and training kitchen assistants, the management of food supplies and kitchen resources, aesthetics of food presentation, and familiarity or mastery of a wide variety of cuisines and culinary techniques.
		12.0504	A program that prepares individuals to plan, supervise, and manage food and beverage preparation and service operations, restaurant facilities, and catering services. Includes instruction in food/beverage industry operations, cost control, purchasing and storage, business administration, logistics, personnel management, culinary arts, restaurant and menu planning, executive chef functions, event planning and management, health and safety, insurance, and applicable law and regulations.
			12.0505 A program that prepares individuals to serve under the supervision of chefs and other food service professionals as kitchen support staff and commercial food preparation workers. Includes instruction in kitchen organization and operations, sanitation and quality control, basic food preparation and cooking skills, kitchen and kitchen equipment maintenance, and quantity food measurement and monitoring.
			12.0506 A program that prepares individuals to receive, cut, and package animal meat products in commercial establishments and to function as licensed meat cutters/butchers. Includes instruction in product recognition for beef, veal, lamb, pork, poultry, and fancy and smoked meats; retail and wholesale cutting and specialty cuts; packaging and counter display; shop safety; meat sanitation, storage and rotation; quality control; meat handling laws and regulations; and customer service.
		12.0507	A program that prepares individuals to serve food to customers in formal or informal settings. Includes instruction in the nutritional, sensory, and functional properties of food and its ingredients; food services principles; table and counter services; dining room operations and procedures; service personnel supervision and management; communication skills; business math; safety; and sanitation.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			12.0508 A program that prepares individuals in production and service used in governmental, commercial or independently owned institutional food establishments and related food industry occupations. Includes instruction in selecting, storing, preparing, and serving food and food products; basic nutrition; sanitation, and food safety; the use and care of commercial equipment; serving techniques; and the operation of institutional food establishments.
		12.0509	A program that focuses on the blending of food science and the culinary arts and that prepares individuals to work as research chefs and related research and development positions in the food industry. Includes instruction in culinary arts, food chemistry, food safety and quality, food processing, nutrition, and business management.
		12.0510	A program that prepares individuals to manage wine selection, purchasing, storage, sales, and service for a variety of establishments in the hospitality industry. Includes instruction in wine production, wine regions of the world, wine tasting, food and wine matching, service techniques, and wine program management.
		12.0599	Any instructional program in culinary arts and related services not listed above.
12.99	F	12.99	Personal and Culinary Services, Other
		12.9999	Any instructional program in personal and culinary services not listed above.
13.01		13.01	Education, General
		13.0101	A program that focuses on the general theory and practice of learning and teaching, the basic principles of educational psychology, the art of teaching, the planning and administration of educational activities, school safety and health issues, and the social foundations of education.
13.15	M	13.15	Teaching Assistants/Aides
		13.1501	A program that prepares individuals to assist a teacher in regular classroom settings or in providing instruction and supervision to special student populations, such as bilingual/bicultural students, special education students, adult learners, and students learning English. Includes instruction in techniques of general classroom supervision, maintaining order, assisting with lessons and carrying out related assignments.
		13.1502	A program that prepares individuals to serve as instructors and mentors for adults in basic or functional literacy programs in school, institutional, community, and private settings.
		13.1599	Any teaching assistant/aide program not listed above.
13.99		13.99	Education, Other
		13.9999	Any instructional program in education not listed above.
14.01	F	14.01	Engineering, General
		14.0101	A program that generally prepares individuals to apply mathematical and scientific principles to solve a wide variety of practical problems in industry, social organization, public works, and commerce. Includes instruction in undifferentiated and individualized programs in engineering.
		14.0102	A program that prepares individuals for admission or transfer to a baccalaureate- level program in any of the fields of engineering.
14.02	F	14.02	Aerospace, Aeronautical and Astronautical Engineering
		14.0201	A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of aircraft, missiles, space vehicles, and their systems; applied research on flight and orbital characteristics; and the development of systems and procedures for the launching, guidance, and control of air and space vehicles.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
14.03	F	14.03	<p>Agricultural Engineering</p> <p>14.0301 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems, equipment and facilities for production, processing, storage, handling, distribution and use of food, feed, and fiber. Includes applications to aquaculture, forestry, human and natural resources.</p>
14.04	F	14.04	<p>Architectural Engineering</p> <p>14.0401 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of materials, systems, and methods used to construct and equip buildings intended for human habitation or other purposes.</p>
14.05	F	14.05	<p>Biomedical/Medical Engineering</p> <p>14.0501 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of biomedical and health systems and products such as integrated biomedical systems, instrumentation, medical information systems, artificial organs and prostheses, and health management and care delivery systems.</p>
14.06	F	14.06	<p>Ceramic Sciences and Engineering</p> <p>14.0601 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of inorganic non-metallic materials, such as porcelains, cements, industrial ceramics, ceramic superconductors, abrasive, and related materials and systems.</p>
14.07	F	14.07	<p>Chemical Engineering</p> <p>14.0701 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems employing chemical processes, such as chemical reactors, kinetic systems, electrochemical systems, energy conservation processes, heat and mass transfer systems, and separation processes; and the applied analysis of chemical problems such as corrosion, particle abrasion, energy loss, pollution, and fluid mechanics.</p>

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
14.08	F	14.0702	<p>A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems at the interface of chemical engineering and biology, with an emphasis at the molecular level, such as biopharmaceutical processes, protein engineering, metabolic engineering, gene therapy, biomaterials, cell and tissue engineering, and drug delivery. Includes instruction in chemical engineering, thermodynamics, organic chemistry, biochemistry, momentum and heat transfer, cellular and molecular biotechnology, process design, and chemical reactor design.</p>
		14.0799	Any instructional program in chemical engineering not listed above.
		14.08	Civil Engineering
		14.0801	<p>A program that generally prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of structural, loadbearing, material moving, transportation, water resource, and material control systems; and environmental safety measures.</p>
		14.0802	<p>A program that prepares individuals to apply geotechnical engineering methods, which deal with the analysis, design and construction of earth and earth supported structures, to the application of environmental problems, such as waste containment, waste disposal, construction of landfills, soil permeation, soil analysis, and soil improvement. Includes instruction in soil mechanics, soil dynamics, soil behavior, waste management and containment systems, geo synthetics, geochemistry, earth structures, geo environmental engineering, geotechnical engineering, earthquake engineering, and foundation engineering</p>
14.09	F	14.0803	<p>A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of materials and systems used in building load-bearing structures for various purposes and in different environments, including buildings, roads, rail lines, bridges, dams, conduits, offshore platforms and work stations, and other structural shells; and the analysis of structural problems such as, failure, fabrication, safety, and natural hazards.</p>
		14.0804	<p>A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of total systems for the physical movement of people, materials and information, including general network design and planning, facilities planning, site evaluation, transportation management systems, needs projections and analysis, and analysis of costs.</p>
		14.0805	<p>A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for collecting, storing, moving, conserving and controlling surface- and groundwater, including water quality control, water cycle management, management of human and industrial water requirements, water delivery, and flood control.</p>
		14.0899	Any instructional program in civil engineering not listed above.
		14.09	Computer Engineering
14.09	F	14.0901	<p>A program that generally prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of computer hardware and software systems and related equipment and facilities; and the analysis of specific problems of computer applications to various tasks.</p>
		14.0902	A program that prepares individuals to apply mathematical and

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			A program that prepares individuals to apply mathematical and scientific principles
	F		scientific principles to the design, development, and evaluation of computer hardware and related peripheral equipment. Includes instruction in computer circuit and chip design, circuitry, computer systems design, computer equipment design, computer layout planning, testing procedures, and related computer theory and software topics.
		14.0903	A program that prepares individuals to apply scientific and mathematical principles to the design, analysis, verification, validation, implementation, and maintenance of computer software systems using a variety of computer languages. Includes instruction in discrete mathematics, probability and statistics, computer science, managerial science, and applications to complex computer systems.
		14.0999	Any instructional program in computer engineering not listed above.
14.10	F	14.10	Electrical, Electronics and Communications Engineering
		14.1001	to the design, development and operational evaluation of electrical and electronic systems and their components, including electrical power generation systems; and the analysis of problems such as superconductor, wave propagation, energy storage and retrieval, and reception and amplification.
		14.1003	A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of optical systems, lasers and related electronic devices. Includes instruction in wave theory and mechanics, electromagnetic applications, linear and non-linear optics, photon detecting, laser beam properties, directed energy, harmonic generation, optical systems, shielding and the design and implementation of related systems and equipment.
		14.1004	A program that prepares individuals to apply mathematical and scientific principles to the design, development, and maintenance of telecommunications technology, networks, and systems. Includes instruction in telecommunications, computer networking, communications networks and systems, signals, circuits, fiber optics, and wireless systems and technology.
		14.1099	Any instructional program in electrical, electronics and communications engineering not listed above.
14.11	F	14.11	Engineering Mechanics
		14.1101	A program with a general focus on the application of the mathematical and scientific principles of classical mechanics to the analysis and evaluation of the behavior of structures, forces and materials in engineering problems. Includes instruction in statics, kinetics, dynamics, kinematics, celestial mechanics, stress and failure, and electromagnetism.
14.12	F	14.12	Engineering Physics
		14.1201	A program focusing on the use of physics principles in the analysis and evaluation of engineering problems and other scientific applications. Includes instruction in high- and low-temperature phenomena, computational physics, superconductivity, applied thermodynamics, molecular and particle physics applications, and space science research.
14.13	F	14.13	Engineering Science
		14.1301	A program with a general focuses on the general application of various combinations of mathematical and scientific principles to the analysis and

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			A program that prepares individuals to apply mathematical and scientific principles evaluation of engineering problems, including applied research in human behavior, statistics, biology, chemistry, the earth and planetary sciences, atmospheric and meteorology, and computer applications.
14.14	F	14.14	Environmental/Environmental Health Engineering
			14.1401 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for controlling contained living environments and for monitoring and controlling factors in the external natural environment, including pollution control, waste and hazardous material disposal, health and safety protection, conservation, life support, and requirements for protection of special materials and related work environments.
14.18		14.18	Materials Engineering
		14.1801	A program that prepares individuals to apply mathematical and materials science principles to the design, development and operational evaluation of materials and related processes used in manufacturing in a wide variety of settings; the synthesis of new industrial materials, including marrying and bonding composites; analysis of materials requirements and specifications; and related problems of system design dependent on materials factors.
14.19	F	14.19	Mechanical Engineering
		14.1901	to the design, development and operational evaluation of physical systems used in manufacturing and end-product systems used for specific uses, including machine tools, jigs and other manufacturing equipment; stationary power units and appliances; engines; self-propelled vehicles; housings and containers; hydraulic and electric systems for controlling movement; and the integration of computers and remote control with operating systems.
14.20	F	14.20	Metallurgical Engineering
			14.2001 A program that prepares individuals to apply mathematical and metallurgical principles to the design, development and operational evaluation of metal components of structural, load-bearing, power, transmission, and moving systems; and the analysis of engineering problems such as stress, creep, failure, alloy behavior, environmental fluctuations, stability, electromagnetic and thermodynamic characteristics, optimal manufacturing processes, and related design considerations.
14.21	F	14.21	Mining and Mineral Engineering
			14.2101 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of mineral extraction, processing and refining systems, including open pit and shaft mines, prospecting and site analysis equipment and instruments, environmental and safety systems, mine equipment and facilities, mineral processing and refining methods and systems, and logistics and communications systems.
14.22	F	14.22	Naval Architecture and Marine Engineering
			14.2201 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of self-propelled, stationary, or towed vessels operating on or under the water, including inland, coastal and ocean environments; and the analysis of related engineering problems such as corrosion, power transfer, pressure, hull efficiency, stress factors, safety and life support, environmental hazards and factors, and specific use requirements.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			A program that prepares individuals to apply mathematical and scientific principles
14.23	F F	14.23	<p>Nuclear Engineering</p> <p>14.2301 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for controlling and manipulating nuclear energy, including nuclear power plant design, fission reactor design, fusion reactor design, reactor control and safety systems design, power transfer systems, containment vessels and structures design; and the analysis of related engineering problems such as fission and fusion processes, human and environmental factors, construction, and operational considerations.</p>
14.24	F	14.24	<p>Ocean Engineering</p> <p>14.2401 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems to monitor, control, manipulate and operate within coastal or ocean environments, such as underwater platforms, flood control systems, dikes, hydroelectric power systems, tide and current control and warning systems, and communications equipment; the planning and design of total systems for working and functioning in water or underwater environments; and the analysis of related engineering problems such as the action of water properties and behavior on physical systems and people, tidal forces, current movements, and wave motion.</p>
14.25	F	14.25	<p>Petroleum Engineering</p> <p>14.2501 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for locating, extracting, processing and refining crude petroleum and natural gas, including prospecting instruments and equipment, mining and drilling systems, processing and refining systems and facilities, storage facilities, transportation systems, and related environmental and safety systems.</p>
14.27	F	14.27	<p>Systems Engineering</p> <p>14.2701 to the design, development and operational evaluation of total systems solutions to a wide variety of engineering problems, including the integration of human, physical, energy, communications, management, and information requirements as needed, and the application of requisite analytical methods to specific situations.</p>
14.28	F	14.28	<p>Textile Sciences and Engineering</p> <p>14.2801 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems to test and manufacture fibers and fiber products, both synthetic and natural; to develop new and improved fibers, textiles and their uses; and to the analysis of related engineering problems such as structural factors, molecular synthesis, chemical manufacturing, weaves, strength and stress, useful life, dyes, and applications to composite systems.</p>
14.32	F	14.32	<p>Polymer/Plastics Engineering</p> <p>14.3201 A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of synthesized macromolecular compounds and their application to specific engineering uses, including the development of industrial materials with tailored properties, the design of lightweight structural components, the use of liquid or solid polymers, and the analysis and control of polymerization processes.</p>

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
14.33	F	14.33 14.3301	<p>A program that prepares individuals to apply mathematical and scientific principles</p> <p>Construction Engineering</p> <p>A program that prepares individuals to apply scientific, mathematical, and management principles to the planning, design, and building of facilities and structures. Includes instruction in civil engineering, structural principles, site analysis, computer-assisted design, geology, evaluation and testing, materials, contracting, project management, graphic communications, and applicable laws and regulations.</p>
14.34	F	14.34	<p>Forest Engineering</p> <p>14.3401 A program that prepares individuals to apply scientific, mathematical, and forestry principles to the design of mechanical devices and processes for efficient forest management, timber production and related forest logistics systems. Includes instruction in forest products processing, forest management, forest harvesting, timber structure design, production analysis, road and bridge construction, vehicle adaptation and design, and harvesting equipment design.</p>
14.35	F	14.35	<p>Industrial Engineering</p> <p>14.3501 A program that prepares individuals to apply scientific and mathematical principles to the design, improvement, and installation of integrated systems of people, material, information, and energy. Includes instruction in applied</p>
14.36		14.36	<p>mathematics, physical sciences, the social sciences, engineering analysis, systems design, computer applications, and forecasting and evaluation methodology.</p> <p>Manufacturing Engineering</p> <p>14.3601 A program that prepares individuals to apply scientific and mathematical principles to the design, development, and implementation of manufacturing systems. Includes instruction in materials science and engineering, manufacturing processes, process engineering, assembly and product engineering, manufacturing systems design, and manufacturing competitiveness.</p>
14.37		14.37 14.3701	<p>Operations Research</p> <p>A program that focuses on the development and application of complex mathematical or simulation models to solve problems involving operational systems, where the system concerned is subject to human intervention. Includes instruction in advanced multivariate analysis, application of judgment and statistical tests, optimization theory and techniques, resource allocation theory, mathematical modeling, control theory, statistical analysis, and applications to specific research problems.</p>
14.38	F	14.38	<p>Surveying Engineering</p>

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
14.39	F	14.3801 14.39	<p>A program that prepares individuals to apply scientific and mathematical principles to the determination of the location, elevations, and alignment of natural and manmade topographic features. Includes instruction in property line location, surveying, surface measurement, aerial and terrestrial photogrammetry, remote sensing, satellite imagery, global positioning systems, computer applications, and photographic data processing.</p> <p>Geological/Geophysical Engineering</p>
14.99	F	14.9999	<p>14.3901 A program that prepares individuals to apply mathematical and geological principles to the analysis and evaluation of engineering problems, including the geological evaluation of construction sites, the analysis of geological forces acting on structures and systems, the analysis of potential natural resource recovery sites, and applied research on geological phenomena.</p> <p>Engineering, Other</p>
15.01	F	15.01	<p>Any instructional program in engineering not listed above.</p> <p>Architectural Engineering Technologies/Technicians</p>
15.02	F	15.0101 15.02	<p>15.0101 A program that prepares individuals to apply basic engineering principles and technical skills in support of architects, engineers and planners engaged in designing and developing buildings, urban complexes, and related systems. Includes instruction in design testing procedures, building site analysis, model building and computer graphics, engineering drawing, structural systems testing, analysis of prototype mechanical and interior systems, test equipment operation and maintenance, and report preparation.</p> <p>Civil Engineering Technologies/Technicians</p>
15.02	F	15.0201	<p>A program that prepares individuals to apply basic engineering principles and technical skills in support of civil engineers engaged in designing and executing public works projects such as highways, dams, bridges, tunnels and other facilities. Includes instruction in site analysis, structural testing procedures, field and laboratory testing procedures, plan and specification preparation, test equipment operation and maintenance, and report preparation.</p>
15.03	F	15.03	<p>Electrical Engineering Technologies/Technicians</p> <p>15.0303 A program that prepares individuals to apply basic engineering principles and technical skills in support of electrical, electronics and communication engineers. Includes instruction in electrical circuitry, prototype development and testing, systems analysis and testing, systems maintenance, instrument calibration, and report preparation.</p> <p>15.0304 A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using lasers and other optical for commercial or research purposes. Includes instruction in laser and optical principles, testing and maintenance procedures, safety precautions, specific applications to various tasks, and report preparation.</p> <p>15.0305 A program that prepares individuals to apply basic engineering principles and technical skills to help design and implement telecommunications systems. Includes instruction in communications protocol, data networking, digital</p>

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			A program that prepares individuals to apply basic engineering principles and
			compression algorithms, digital signal processing, Internet access, object-oriented and relational databases, and programming languages.
		15.0306	A program that prepares individuals to apply basic engineering principles and technical skills to design circuits in microelectronics. Includes instruction in circuit design, circuit layout, circuit analysis, computer-aided drafting, and semi-conductor technologies.
		15.0399	Any instructional program in electrical and electronic engineering-related technologies not listed above.
15.04		15.04	Electromechanical Instrumentation and Maintenance Technologies/Technicians
		15.0401	technical skills in support of engineers engaged in developing biological or medical systems and products. Includes instruction in instrument calibration, design and installation testing, system safety and maintenance procedures, procurement and installation procedures, and report preparation.
		15.0403	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in developing and testing automated, servo-mechanical, and other electromechanical systems. Includes instruction in prototype testing, manufacturing and operational testing, systems analysis and maintenance procedures, and report preparation.
		15.0404	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in developing control and measurement systems and procedures. Includes instruction in instrumentation design and maintenance, calibration, design and production testing and scheduling, automated equipment functions, applications to specific industrial tasks, and report preparation.
		15.0405	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using robots. Includes instruction in the principles of robotics, design and operational testing, system maintenance and repair procedures, robot computer systems and control language, specific system types and applications to specific industrial tasks, and report preparation.
		15.0406	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, installing, calibrating, modifying and maintaining automated systems. Includes instruction in computer systems; electronics and instrumentation; programmable logic controllers (PLCs); electric, hydraulic and pneumatic control systems; actuator and sensor systems; process control; robotics; applications to specific industrial tasks; and report preparation.
		15.0499	Any instructional program in electromechanical instrumentation and maintenance technologies not listed above.
15.05	F	15.05	Environmental Control Technologies/Technicians

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			A program that prepares individuals to apply basic engineering principles and
	F		
		15.0501	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using air conditioning, refrigeration, ventilation, and heating systems. Includes instruction in principles of heating and cooling technology, design and operational testing, inspection and maintenance procedures, installation and operation procedures, and report preparation.
		15.0503	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing energy-efficient systems or monitoring energy use. Includes instruction in principles of energy conservation, instrumentation calibration, monitoring systems and test procedures, energy loss inspection procedures, energy conservation techniques, and report preparation.
		15.0505	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing solar-powered energy systems. Includes instruction in solar energy principles, energy storage and transfer technologies, testing and inspection procedures, system maintenance procedures, and report preparation.
		15.0506	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using water storage, waterpower, and wastewater treatment systems. Includes instruction in water storage, power and/or treatment systems and equipment; testing and inspection procedures; system maintenance procedures; and report preparation.
		15.0507	technical skills in support of engineers and other professionals engaged in developing and using indoor and outdoor environmental pollution control systems. Includes instruction in environmental safety principles, testing and sampling procedures, laboratory techniques, instrumentation calibration, safety and protection procedures, equipment maintenance, and report preparation.
		15.0508	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in identifying and disposing of hazardous materials. Includes instruction in environmental safety principles, biohazard identification, testing and sampling procedures, laboratory techniques, instrumentation calibration, hazardous waste disposal procedures and systems, safety and protection procedures, equipment maintenance, and report preparation.
		15.0599	Any instructional program in environmental control technologies not listed above.
15.06	F	15.06	Industrial Production Technologies/Technicians
		15.0607	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using industrial polymers. Includes instruction in the principles of macromolecular chemistry, polymerization and plastic manufacturing processes and equipment, design and operational testing procedures, equipment maintenance and repair procedures, safety procedures, applications to specific products, and report preparation.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			A program that prepares individuals to apply basic engineering principles and
		15.0611	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and metallurgists engaged in developing and using industrial metals and manufacturing processes. Includes instruction in principles of metallurgy, related manufacturing systems, laboratory techniques, testing and inspection procedures, instrument calibration, system and equipment maintenance and repair, applications to specific processes, and report preparation.
		15.0612	A program that prepares individuals to apply basic engineering principles and technical skills in support of industrial engineers and managers. Includes instruction in optimization theory, human factors, organizational behavior, industrial processes, industrial planning procedures, computer applications, and report and presentation preparation.
		15.0613	A program that prepares individuals to apply basic engineering principles and technical skills to the identification and resolution of production problems in the manufacture of products. Includes instruction in machine operations, production line operations, engineering analysis, systems analysis, instrumentation, physical controls, automation, computer-aided manufacturing (CAM), manufacturing planning, quality control, and informational infrastructure.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			A program that prepares individuals to apply basic engineering principles and
		15.0614	A program that prepares individuals to apply basic engineering principles and technical skills to the design and engineering of welding and joining systems and the implementation of welding processes. Includes instruction in materials science; computer-aided design; welding design; welding processes; welding metallurgy; automation and robotics; and codes, inspections, testing, and quality assurance.
		15.0615	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in the production and utilization of chemicals on an industrial scale. Includes instruction in organic chemistry, inorganic chemistry, analytical chemistry, biochemistry, thermodynamics, fluid mechanics, industrial processes, instrumental analysis, sampling and monitoring, and chemical and environmental safety.
		15.0616	technical skills to operate and monitor equipment for the fabrication of semiconductors or microchips from silicon wafers, and to troubleshoot, maintain, and repair the specialized equipment used in this process. Includes instruction in AC and DC circuits, digital fundamentals, solid state devices, manufacturing processes, vacuum principles and technology, industrial electronics, quality assurance, and semiconductor manufacturing technology.
		15.0699	Any instructional program in industrial production technologies not listed above.
15.07		15.07	Quality Control and Safety Technologies/Technicians
		15.0701	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in maintaining job-related health and safety standards. Includes instruction in safety engineering principles, inspection and monitoring procedures, testing and sampling procedures, laboratory techniques, applications to specific work environments, and report preparation.
		15.0702	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in maintaining consistent manufacturing and construction standards. Includes instruction in quality control systems management principles, technical standards applicable to specific engineering and manufacturing projects, testing procedures, inspection procedures, related instrumentation and equipment operation and maintenance, and report preparation.
		15.0703	A program that prepares individuals to apply basic engineering principles and technical skills to assist engineers and other professionals in implementing and enforcing industrial safety standards. Includes instruction in industrial processes, industrial hygiene, toxicology, ergonomics, system and process safety, safety performance measurement, human factors, human behavior, and applicable law and regulations.
		15.0704	A program that prepares individuals to apply basic engineering principles and technical skills to assist engineers and other professionals in implementing, monitoring, and enforcing hazardous materials management and removal. Includes instruction in environmental science, environmental health, human behavior, economics, management science, information systems and applications, and communication skills.
		15.0799	Any instructional program in quality control and safety technologies not listed above.
15.08	F	15.08	Mechanical Engineering Related Technologies/Technicians

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		15.0801	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, manufacturing and testing aircraft, spacecraft and their systems. Includes instruction in aircraft/spacecraft systems technology, design and development testing, prototype and operational testing, inspection and maintenance procedures, instrument calibration, test equipment operation and maintenance, and report preparation.
		15.0803	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, manufacturing and testing self-propelled ground vehicles and their systems. Includes instruction in vehicular systems technology, design and development testing, prototype and operational testing, inspection and maintenance procedures, instrument calibration, test equipment operation and maintenance, and report preparation.
		15.0805	technical skills in support of engineers engaged in the design and development phases of a wide variety of projects involving mechanical systems. Includes instruction in principles of mechanics, applications to specific engineering systems, design testing procedures, prototype and operational testing and inspection procedures, manufacturing system-testing procedures, test equipment operation and maintenance, and report preparation.
		15.0899	Any instructional program in mechanical engineering-related technologies not listed above.
15.09	F	15.09	Mining and Petroleum Technologies/Technicians
		15.0901	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in the development and operation of mines and related mineral processing facilities. Includes instruction in principles of mineral extraction and related geology, mineral field mapping and site analysis, testing and sampling methods, instrument calibration, assay analysis, test equipment operation and maintenance, mine environment and safety monitoring procedures, mine inspection procedures, and report preparation.
		15.0903	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in the development and operation of oil and natural gas extraction and processing facilities. Includes instruction in principles of petroleum extraction and related geology, petroleum field mapping and site analysis, testing and sampling methods, instrument calibration, laboratory analysis, test equipment operation and maintenance, environment and safety monitoring procedures for oil/gas fields and facilities, facility inspection procedures, and report preparation.
		15.0999	Any instructional program in mining and petroleum engineering technologies not listed above.
15.10	F	15.10	Construction Engineering Technologies
		15.1001	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers, engineering contractors and other professionals engaged in the construction of buildings and related structures. Includes instruction in basic structural engineering principles and construction techniques, building site inspection, site supervision, construction personnel

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
15.11	F	15.11	<p>A program that prepares individuals to apply basic engineering principles and supervision, plan and specification interpretation, supply logistics and procurement, applicable building codes, and report preparation.</p> <p>Engineering-Related Technologies</p>
			<p>15.1102 A program that prepares individuals to apply mathematical and scientific principles to the delineation, determination, planning and positioning of land tracts, land and water boundaries, land contours and features; and the preparation of related maps,</p>
			<p>charts and reports. Includes instruction in applied geodesy, computer graphics, photo interpretation, plane and geodetic surveying, mensuration, traversing, survey equipment operation and maintenance, instrument calibration, and basic cartography.</p>
			<p>15.1103 A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in</p>
			<p>developing and using fluid power and transportation systems. Includes instruction in fluid mechanics and hydraulics principles, fluid power systems, pipeline and pumping systems, design and operational testing, inspection and maintenance procedures, related instrumentation, and report preparation.</p>
15.12	F	15.1199 15.12 15.1201	<p>Any programs in engineering-related technologies and technicians not listed above.</p> <p>Computer Engineering Technologies/Technicians</p>
			<p>technical skills in support of computer engineers engaged in designing and developing computer systems and installations. Includes instruction in computer electronics and programming, prototype development and testing, systems installation and testing, solid state and micro miniature circuitry, peripheral equipment, and report preparation.</p>
			<p>15.1202 A program that prepares individuals to apply basic engineering principles and technical skills in support of professionals who use computer systems. Includes instruction in basic computer design and architecture, programming, problems of specific computer applications, component and system maintenance and inspection procedures, hardware and software problem diagnosis and repair, and report preparation.</p>
			<p>15.1203 A program that prepares individuals to apply basic engineering principles and technical skills to support engineers in designing computer hardware and peripheral systems. Includes instruction in computer systems design, computer architecture, computer electronics, processors, peripherals, testing equipment, and computer manufacturing processes.</p>
			<p>15.1204 A program that prepares individuals to apply basic engineering principles and technical skills to support engineers in developing, implementing, and evaluating computer software and program applications. Includes instruction in computer programming, programming languages, databases, user interfaces, networking and warehousing, encryption and security, software testing and evaluation, and customization.</p>
15.13	F	15.1299 15.13	<p>Any instructional program in computer engineering technologies not listed above.</p> <p>Drafting/Design Engineering Technologies/Technicians</p>
			<p>15.1301 A program that prepares individuals to generally apply technical skills to create working drawings and computer simulations for a variety of applications. Includes instruction in specification interpretation, dimensioning</p>

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			A program that prepares individuals to apply basic engineering principles and techniques, drafting calculations, material estimation, technical communications, computer applications, and interpersonal communications.
		15.1302	A program that prepares individuals to apply technical skills and advanced computer software and hardware to the creation of graphic representations and simulations in support of engineering projects. Includes instruction in engineering graphics, twodimensional and three-dimensional engineering design, solids modeling, engineering animation, computer-aided drafting (CAD), computer-aided design (CADD), and auto-CAD techniques.
		15.1303	A program that prepares individuals to apply technical knowledge and skills to develop working drawings and electronic simulations for architectural and related construction projects. Includes instruction in basic construction and structural design, architectural rendering, architectural-aided drafting (CAD), layout and designs, architectural blueprint interpretation, building materials, and basic structural wiring diagramming.
		15.1304	A program that prepares individuals to apply technical knowledge and skills to develop working drawing and electronic simulations in support of civil engineers, geological engineers, and related professionals. Includes instruction in basic civil engineering principles, geological and seismographic mapping, machine drafting, computer-aided drafting (CAD), pipe drafting, survey interpretation, and blueprint reading.
		15.1305	A program that prepares individuals to apply technical knowledge and skills to develop working schematics and representations in support of electrical/electronic engineers, computer engineers, and related professionals. Includes instruction in basic electronics, electrical systems and computer layouts; electrode-mechanical drafting; manufacturing circuitry; computer-aided drafting (CAD); and electrical systems specification interpretation.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		15.1306	A program that prepares individuals to apply technical knowledge and skills to develop working drawings and electronic simulations in support of mechanical and industrial engineers, and related professionals. Includes instruction in manufacturing materials and processes, mechanical drafting, electrode-mechanical drafting, basic metallurgy, geometric dimensioning and tolerancing, blueprint reading, and technical communication.
		15.1399	Any instructional program in drafting/design engineering technologies not listed above.
15.14		15.14	Nuclear Engineering Technologies/Technicians
		15.1401	A program that prepares individuals to apply basic engineering, knowledge and technical skills in support of engineer and other professionals operating nuclear facilities and engaged in nuclear applications and safety procedures. Includes instruction in physics, nuclear science, nuclear systems, nuclear plant and systems design, radiological safety, radiological applications, and applicable law and regulations.
15.15	F	15.15	Engineering-Related Fields
		15.1501	A program that focuses on the application of engineering principles to the planning and operational management of industrial and manufacturing operations, and prepares individuals to plan and manage such operations. Includes instruction in accounting, engineering economy, financial management, industrial and human resources management, industrial psychology, management information systems, mathematical modeling and optimization, quality control, operations research, safety and health issues, and environmental program management.
		15.1502	An instructional program that prepares individuals to apply mathematical and scientific principles to engineering problems involving marrying or coordinating multiple dissimilar systems to carry out single functions or achieve common purposes, organizing system components for maximum flexibility and utility, planning engineering projects involving multiple tasks and design solutions, planning design testing and evaluation procedures, resolving specification and requirement conflicts, and choosing among competing theoretical solutions. Note: this program was re-instated after being deleted from CIP 2000; previously, it was coded as 14.2901.
		15.1503	A program that focuses on the application of scientific, technological, design, and business principles to the development of packages and packaging materials, including raw material production, conversion of raw materials into usable forms, design, distribution, and post-use recycling and reuse. Includes instruction in principles of packaging, materials sciences, distribution and transportation, engineering and technology, graphic design, packaging regulations, and business and marketing.
		15.1599	Any instructional program in engineering-related fields not listed above.
15.99	F	15.99	Engineering Technologies/Technicians, Other
		15.9999	Any instructional program in engineering technologies and engineering-related fields not listed above.
19.01		19.01	Family and Consumer Sciences/Human Sciences, General
		19.0101	A general program that focuses on family and consumer sciences,

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19.02		19.02	including how individuals develop and function in family, work, and community settings and how they relate to their physical, social, emotional, and intellectual environments.
		19.0201	Family and Consumer Sciences/Human Sciences Business Services A program that focuses on the relationship between the economy and the consuming
		19.0202	individual and family. Includes instruction in consumption theory and practice, the production and distribution of retail goods and services, and the management of business enterprises.
		19.0203	A program that focuses on communication of human sciences subject matter and related consumer information to a variety of audiences through print and non-print media.
19.04		19.0203	A program that focuses on product and service promotion from the perspective of individual and family consumers and that prepares individuals to function as consumer management and marketing consultants in for-profit and non-profit enterprises. Includes instruction in applied market research, consumer behavior, product sourcing and distribution, profitability, customer feedback and evaluation methods, promotion and retailing campaign development, and applications to specific domestic and international consumer markets.
		19.0299	Any instructional program in family and consumer sciences/human sciences business services not listed above.
		19.04	Family and Consumer Economics and Related Studies
		19.0401	A general program that focuses on the design and implementation of policies and processes contributing to successful individual and family resource management. Includes instruction in financial goal-setting and strategies; household income, assets, and debt management; preventing and resolving financial difficulties; and the use of relevant public resources.
19.05	M	19.0402	A program that focuses on the application of micro- and macroeconomic theory to consumer behavior and individual and family consumption of goods and services. Includes instruction in modeling, economic forecasting, indexing, price theory, and analysis of individual commodities and services and/or groups of related commodities and services.
		19.0403	A program that focuses on providing end-use advice and representational services to individuals and groups within a variety of settings, and the analytical and research techniques needed to protect consumers from unsafe, unreliable, and/or unhealthy products and services. Includes instruction in consumer advocacy, family management systems, ecological impacts of consumption practices, and analyzing and testing product quality and safety.
		19.0499	Any instructional program in family and consumer economics and related services not listed above.
19.05	M	19.05	Foods, Nutrition, and Related Services 19.0501 A general program that focuses on the role of foods and nutrition in human health and wellness. Includes instruction in nutritional care and education, the planning and provision of food services, the development of consumable food products, lifespan nutrition and wellness, the principles of nutritional assessment, and food safety and food composition.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		19.0504	A program that focuses on the relationships between food consumption and human development and health. Includes instruction in the cellular and molecular processes of food processing in the human body, related metabolic processes, the relationship of food and nutrition to disease, and nutritional needs across the life span.
		19.0505	A program that focuses on the principles and practices relating to the administration of food service systems in institutional settings, and that prepares individuals to manage such operations in public and private facilities. Includes instruction in human nutrition, food safety, the design and organization of food service systems, purchasing, personnel management, and related business practices.
		19.0599	Any instructional program in foods, nutrition, and related services not listed above.
19.06		19.06	Housing and Human Environments
		19.0601	A general program that focuses on the behavioral, social, economic, functional, and aesthetic aspects of housing, interiors, and other built environments. Includes instruction in analyzing, planning, designing, furnishing, and equipping residential, work, and leisure spaces to meet user needs and the study of related public policies.
		19.0604	A program that focuses on strategic workplace and facility planning and that prepares individuals to function as facility and event managers and workplace consultants. Includes instruction in the principles of aesthetic and functional design, environmental psychology and organizational behavior, real estate planning, principles of occupational health and safety, event planning and management, operations management, and applicable regulatory and policy issues.
		19.0605	A program that prepares individuals to assist in home furnishings and decorations. Includes instruction in selecting, purchasing, and designing home furnishings, decorations, and equipment; floral design; accessory construction; textiles; and upholstery.
		19.0699	Any instructional program in housing and human environments not listed above.
19.07		19.07	Human Development, Family Studies, and Related Services
		19.0701	A general program that focuses on basic human developmental and behavioral characteristics of the individual within the context of the family. Includes instruction in the conditions that influence human growth and development; strategies that promote growth and development across the life span; and the study of family systems.
		19.0702	A program that focuses on the characteristics of aging populations and the needs of older individuals in family and institutional settings. Includes instruction in the biological and psychological stages of aging; the provision of dependent care; serving the social, economic, and psychological needs of aging adults; related public policy issues; and adult community resources.
		19.0704	A program that focuses on the family as a social unit in its developmental, dynamic, comparative, and structural aspects, and the significance of the family as a system that impacts individuals and society. Includes instruction in related principles of sociology, psychology, behavioral sciences, and the humanities.
		19.0706	A program that focuses on the intellectual, social, emotional, and biological development of children and the planning and design of related human services. Includes instruction in parent-child relations, parenting

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			practices, special needs of children, parental and environmental influences on child development, external support services, and related public policy issues.
		19.0707	A program that focuses on the development and implementation of public, private, and voluntary support services for individuals, families, and localities and that prepares individuals to function in a variety of occupations promoting family life, and family/community development. Includes instruction in family systems, human development, social services, community social and economic development, social policy, voluntary sector activities, and outreach and community education.
		19.0708	A program that focuses on the provision and management of child care services and that prepares individuals to plan, design, and manage child care facilities and programs that meet children's developmental needs and interests and that provide safe and healthy environments. Includes instruction in child development and psychology; home- and institution-based child care; identification of diseases, injuries, and psychological trauma and applicable referrals; parent relations; personnel and business management principles; and related laws and policies.
		19.0709	A program that prepares individuals to be primary providers of home, family, residential, or institutional-based child care services. Includes instruction in child growth and development, nutrition, recreation, planning and supervision of play and learning activities, child abuse and neglect prevention, parent-child relationships, and applicable legal and administrative requirements.
		19.0710	A program that prepares individuals to apply practical knowledge and skills to support individuals with a variety of physical, mental or developmental disabilities in a family or community setting. Includes instruction in health care, basic nutrition, pharmacology, nursing, autism, mental health, psychology, sociology, behavioral analysis, communication, intervention, counseling and community services, and developmental services, such as literacy and life skills training.
		19.0799	Any instructional program in human development, family studies, and related services not listed above.
19.09		19.09	Apparel and Textiles
		19.0901	A general program that focuses on the development of textile products and their distribution and use in terms of the psychological, social, economic, and physical needs of consumers. Includes instruction in the production, distribution, marketing, and end use of various apparel and textile products.
			19.0902 A program that focuses on the design, development, and production of textile products and related processes and systems. Includes instruction in functional and aesthetic design, human factors research, production planning, manufacturing processes, quality assessment, and distribution systems.
		19.0904	A program that focuses on the properties and processing of fibers, yarns, whole fabrics, dyes, and finishes, both natural and synthetic. Includes instruction in the chemical and physical properties of textile materials; end-use analysis; interior furnishing applications; and industrial applications.
		19.0905	A program that focuses on marketing research and management as applied to the products and services of the apparel and textile industries. Includes instruction in applicable principles of textile and apparel design and manufacturing, sales and distribution systems, domestic and international market research, profitability, consumer research, and the design and implementation of marketing campaigns.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			19.0906 A program that prepares individuals to assist in apparel and fashion selection, style coordination, customer sales and consulting, fabric selection, clothing specifications, and contract buying activities. Includes instruction in supplying regular clothing needs or acting as a consultant for special events such as weddings.
		19.0999	Any instructional program in apparel and textiles not listed above.
19.99		19.99	Family and Consumer Sciences/Human Sciences, Other
		19.9999	Any instructional program in family and consumer sciences/human sciences not listed above.
22.03	M	22.03	Legal Support Services
		22.0301	A program that prepares individuals to serve as legal office managers, special assistants, and legal secretaries. Includes instruction in office management, secretarial science, principles of U.S. or Canadian law, legal terminology and documentation, legal research, legal software applications, law office procedures, record-keeping, billing, applicable policies and regulations, and professional standards and ethics.
		22.0302	A program that prepares individuals to perform research, drafting, investigatory, record-keeping and related administrative functions under the supervision of an attorney or court. Includes instruction in legal research, drafting legal documents, appraising, pleading, courthouse procedures, and legal specializations.
		22.0303	A program that prepares individuals to record and transcribe examinations, testimony, judicial orders and instructions, legal opinions, and other formal proceedings via print or electronic methods. Includes instruction in legal terminology, legal transcription, shorthand, verbatim recording, equipment operation and procedures, applicable regulations, and professional standards and ethics.
		22.0399	Any program in legal support services not listed above.
22.99		22.99	Legal Professions and Studies, Other
		22.9999	Any program in law, legal services, and legal studies not listed above.
26.01		26.01	Biology, General
		26.0101	A general program of biology at the introductory, basic level or a program in biology or the biological sciences that is undifferentiated as to title or content. Includes instruction in general biology and programs covering a variety of biological specializations.
			26.0102 A general, program that focuses on the integrative scientific study of biological issues related to health and medicine, or a program in one or more of the biomedical sciences that is undifferentiated as to title. Includes instruction in any of the basic medical sciences at the research level; biological science research in biomedical faculties; and general studies encompassing a variety of the biomedical disciplines.
26.02		26.02	Biochemistry, Biophysics and Molecular Biology
		26.0202	A program that focuses on the scientific study of the chemistry of living systems, their fundamental chemical substances and reactions, and their chemical pathways and information transfer systems, with particular reference to carbohydrates, proteins, lipids, and nucleic acids. Includes instruction in bio-organic chemistry, protein chemistry, bioanalytical chemistry, bioseparations, regulatory biochemistry, enzymology, hormonal chemistry, calorimetry, and research methods and equipment operation.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
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26.0203 A program that focuses on the application of physics principles to the scientific study of the mechanisms of biological processes and assemblies at all levels of complexity. Includes instruction in research methods and equipment operation and applications to subjects such as bioenergetics, biophysical theory and modeling, electrophysics, membrane biology, channels, receptors and transporters, contractility and muscle function, protein shaping and folding, molecular and supramolecular structures and assemblies, and computational science.

26.0204 A program that focuses on the scientific study of the structure and function of biological macromolecules and the role of molecular constituents and mechanisms in supramolecular assemblies and cells. Includes instruction in such topics as molecular signaling and transduction, regulation of cell growth, enzyme substrates and mechanisms of enzyme action, DNA-protein interaction, and applications to fields such as biotechnology, genetics, cell biology, and physiology.

26.0205 A program that focuses on the scientific relationship of physiological function to the structure and actions of macromolecules and supramolecular assemblies such as multienzyme complexes, membranes, and viruses. Includes instruction in the chemical mechanisms of regulation and catalysis, protein synthesis and other syntheses, and biomolecular chemical reactions.

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		26.0206	A scientific program that focuses on the dynamics and interactions of macromolecules and other three-dimensional ultrastructures, the architecture of supramolecular structures, and energy transfer in biomolecular systems. Includes instruction in energy transduction, structural dynamics, mechanisms of electron and proton transfer in biological systems, bioinformatics, automated analysis, and specialized research techniques.
		26.0207	A program that focuses on the scientific study of submolecular and molecular components and assemblies of living systems and how they are organized into functional units such as cells and anatomic tissues. Includes instruction in glycoprotein, carbohydrate, protein, and nucleic acid structures and chemistry; cytoskeletal structure; nuclear and intracellular structures; molecular recognition; molecular chaperones; transcription and folding; multicellular organization; microtubules and microfilaments; cell differentiation; immunophysics; and DNA sequencing.
		26.0208	A program that focuses on the scientific study of the effects of light energy on living organisms, the manufacture and processing of luminescence by organisms, and the uses of light in biological research. Includes instruction in bioluminescence, chronobiology, photomedicine, environmental photobiology, organic photochemistry, photomorphogenesis, photoreceptors and photosensitization, molecular mechanics of photosynthesis, phototechnology, vision, ultraviolet radiation, radiation physics, and spectral research methods.
		26.0209	A program that focuses on the effects of radiation on organisms and biological systems. Includes instruction in particle physics, ionization, and biophysics of radiation perturbations, cellular and organismic repair systems, genetic and pathological effects of radiation, and the measurement of radiation dosages.
		26.0210	A program of study that combines the biological sub-disciplines of biochemistry and molecular biology. Includes instruction in general biology, general and organic chemistry, physics, biochemistry, molecular biology, immunology, microbiology, genetics, and cellular biology.
		26.0299	Any instructional program in biochemistry, biophysics and molecular biology not listed above.
26.03		26.03	Botany/Plant Biology
		26.0301	A program that focuses on the scientific study of plants, related microbial organisms, and plant habitats and ecosystem relations. Includes instruction in plant anatomy and structure, phytochemistry, cytology, plant genetics, plant morphology and physiology, plant ecology, plant taxonomy and systematics, paleobotany, and applications of biophysics and molecular biology.
		26.0305	A program that focuses on the scientific study of plant diseases and plant health, and the development of disease control mechanisms. Includes instruction in plant anatomy and physiology, pathogenesis, molecular plant virology, molecular genetics, bacterial epidemiology, causal agent identification, host/agent interactions, disease resistance and response mechanisms, developing plant disease treatments, disease prevention, and disease physiology and control.
		26.0307	A program that focuses on the scientific study of plant internal dynamics and systems, plant-environment interaction, and plant life cycles and processes. Includes instruction in cell and molecular biology; plant nutrition; plant respiration; plant growth, behavior, and reproduction; photosynthesis; plant systemics; and ecology.

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		26.0308	A program that focuses on the application of molecular biology, biochemistry, and biophysics to the study of biomolecular structures, functions, and processes specific to plants and plant substances. Includes instruction in the biochemistry of plant cells, nuclear-cytoplasmic interactions, molecular cytostructures, photosynthesis, plant molecular genetics, and the molecular biology of plant diseases.
26.04		26.0399	Any instructional program in botany/plant biology not listed above.
		26.04	<p>Cell/Cellular Biology and Anatomical Sciences</p> <p>26.0401 A program that focuses on the scientific study of the structure, function, and regulation of cells as individual units and as components of larger systems. Includes instruction in cell chemistry, cellular dynamics, cellular replication and reproduction, cell anatomy, membrane function, organelles, cell adhesion and extracellular matrices, cell dynamics and motility, meiosis and mitosis, signal transduction, regulation, recognition and defense mechanisms, the cell cycle, cell metabolism and respiration, gene expression, and studies of cell types and characteristics.</p> <p>26.0403 A program that focuses on the scientific study of organ systems, tissue structures, and whole bodies together with their cellular and structural components and dynamics. Includes instruction in cell biology and histology, structural biology, molecular mechanics, regional and gross anatomy, embryology, neuroanatomy, endocrinology and secretory dynamics, and applications to such topics as aging and disease conditions.</p> <p>26.0404 A program that focuses on the scientific study of embryology, development, and growth of animals and human beings. Includes instruction in fertilization, oogenesis, histogenesis, gastrulation, and cell differentiation; embryological development including organ and pattern formation, morphogenesis, gene regulation, cell lineage, and fate maps; disease and defect studies; transgenic and evolutionary models of growth and development; and applications to specific organisms and phyla.</p> <p>26.0406 An integrated, combined program that focuses on the scientific study of cells, cellular systems, and the molecular basis of cell structure and function. Includes instruction in cell biology, cell chemistry, molecular biology, biophysics, and structural biology.</p> <p>26.0407 An integrated, combined program that focuses on the scientific study of cell structure, function, and dynamics within the context of organismic, regional, and gross anatomical systems. Includes instruction in molecular biology, cell biology and histology, structural biology, anatomy, embryology, endocrinology, and applications to specific systems, diseases, defects, and processes.</p> <p>26.0499 Any instructional program in cell/cellular biology and anatomical sciences not listed above.</p>
26.05		26.05	<p>Microbiological Sciences and Immunology</p> <p>26.0502 A program that focuses on the scientific study of unicellular organisms and colonies, and subcellular genetic matter and their ecological interactions with human beings and other life. Includes instruction in microbial genetics, cell biology, cell physiology, virology, pathogenic microbiology, environmental microbiology, immunology, biostatistics, bioinformatics, and laboratory methods including microscopy.</p>

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26.0503 A program that focuses on the scientific study of pathogenic bacteria that are significant factors in causing or facilitating human disease. Includes instruction in the pathogenesis of bacterial diseases, bacterial genetics and physiology, bacterial anatomy and structure, antigens, bacterial reproduction, bacterial adhesion, phagocytes, and the identification of new or mutated bacteria and bacterial agents.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		26.0504	A program that focuses on the scientific study of subcellular pieces of genetic material, called viruses, that inhabit living cells in parasitological relationships and their role in disease. Includes instruction in virus taxonomy and systematics, viral structures, viral genetics, prions, virus/host cell interaction, viral pathogenesis, and applications to specific topics such as cancer biology.
		26.0505	A program that focuses on the scientific study of biological organisms living in ecologically exploitative and competitive relationships with host organisms, and the role of parasites in causing injury, disease, and environmental damage. Includes instruction in vector biology, immunoparasitology, medical parasitology, molecular biology of parasitological associations, veterinary and comparative parasitology, chemotherapeutics, and ecological and systematic parasitology.
		26.0506	A program that focuses on the scientific study of fungi, lichenous plants, eukaryotic microorganisms, myxomycetes, and plasmodiophorales and their relationship to diseases in higher plants, animals, and human beings as well as to pharmacologically useful products. Includes instruction in cell and molecular biology; histopathology; fungal growth and behavior; environmental mycology; antifungal sensitivity; mycoses; pathogens and pathogenesis; pharmacological properties; and computer and laboratory research methods.
		26.0507	A program that focuses on scientific study of the biological mechanisms involved in the pathogenesis of disease, host-pathogen interactions, and host response to disease. Includes instruction in antigen and antibody structure and function, effector mechanisms, receptors, histocompatibility, host-pathogen recognition, disease modeling, autoimmune systems, antibody formation, cytotoxic responses, regulation of immune response, virulence determinants, intercellular signaling, immunosuppression, immunotherapy, immunogenetics, disease markers, transplantation, antibody humanization, and microbial pathogenesis.
		26.0508	A program that focuses on the scientific study of the microorganisms that cause disease and the host immune response to them. Includes instruction in microbiology, microbial genetics, molecular virology, pathogenic bacteriology, disease mechanisms, immunology, immunogenetics, autoimmunity, and bioinformatics.
		26.0599	Any instructional program in the microbiological sciences and immunology not listed above.
26.07		26.07	Zoology/Animal Biology
		26.0701	A general program that focuses on the scientific study of the biology of animal species and phyla, with reference to their molecular and cellular systems, anatomy, physiology, and behavior. Includes instruction in molecular and cell biology, microbiology, anatomy and physiology, ecology and behavior, evolutionary biology, and applications to specific species and phyla.
		26.0702	A program that focuses on the scientific study of insect species and populations in respect of their life cycles, morphology, genetics, physiology, ecology, taxonomy, population dynamics, and environmental and economic impacts. Includes instruction in applicable biological and physical sciences as well as insect toxicology and the biochemical control of insect populations.
		26.0707	A program that focuses on the scientific study of function, morphology, regulation, and intercellular communications and dynamics within vertebrate and invertebrate in animal species, with comparative applications to homo sapiens and its relatives and antecedents. Includes instruction in reproduction, growth, lactation, digestion, performance, behavioral adaptation, sensory perception, motor action,

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phylogenetics, biotic and abiotic function, membrane biology, and related aspects of biochemistry and biophysics.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
26.08		26.0708	A program that focuses on the scientific study of the psychological and neurological bases of animal sensation, perception, cognition, behavior, and behavioral interactions within and outside the species. Includes instruction in ethology, behavioral neuroscience, neurobiology, behavioral evolution, cognition and sensory perception, motivators, learning and instinct, hormonal controls, reproductive and developmental biology, community ecology, functional behavior, and applications to specific behaviors and patterns as well as to specific phyla and species.
		26.0709	A program that focuses on the application of biological principles to the study of vertebrate wildlife, wildlife habitats, and related ecosystems in remote and urban areas. Includes instruction in animal ecology; adaptational biology; urban ecosystems; natural and artificial habitat management; limnology; wildlife pathology; and vertebrate zoological specializations such as mammalogy, herpetology, ichthyology, ornithology, and others.
		26.0799	Any instructional program in zoology/animal biology not listed above.
		26.08	Genetics
		26.0801	A general program that focuses on the scientific study of the organization, recombination, function, regulation, and transmission of heritable information in biological organisms at all levels of complexity. Includes instruction in Mendelian genetics, mechanisms of gene regulation, chromosome structure and replication, epigenetic phenomena, DNA repair and recombination, sex determination, genetic interactions between genomes, and molecular evolution.
		26.0802	A program that focuses on the scientific study of genetic structures and mechanisms of organisms, including bacteria, phages, and viruses. Includes instruction in the replication, expression, transfer, structure, maintenance, and stability of heritable information in DNA, RNA, and proteins; the regulation of these processes; and neurogenetics.
		26.0803	A program that focuses on the scientific study of the genetics of viruses, infectious agents, organelles, nuclear genomes, eubacteria, archaeobacteria, and eukaryotic organisms. Includes instruction in molecular genetics and evolution, parasitic and symbiotic interaction at the genetic level, epigenetic phenomena, microbial interactions, and genomics.
		26.0804	A program that focuses on the scientific study of the genetics of multicellular animal life forms from the experimental, comparative, and clinical (veterinary and medical) viewpoints. Includes instruction in molecular genetics, gene expression, gene regulation, genomics, epigenetic phenomena, DNA recombination and repair, genetic interactions at the microbial and higher levels, and molecular evolution.
	26.0805	A program that focuses on the scientific study of the genetics of multicellular plants and fungi as related to botanical research as well as to applications in comparative genetics, ecology and evolutionary studies, clinical studies, and industrial research. Includes instruction in molecular genetics, gene expression, gene regulation, genomics, epigenetic phenomena, DNA recombination and repair, genetic interactions at the microbial and higher levels, and molecular evolution.	

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
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26.0806			<p>A program that focuses on the scientific study of human genetics from the standpoint of medical applications such as clinical diagnosis, genetic engineering and therapy, transplantation, and the study of genetic diseases and disabilities and their defense. Includes instruction in human molecular genetics; genetic factors causing disease; changes in gene expression during development, differentiation, and pathogenesis; recombinant DNA; gene therapy; clinical genetics; genetic epidemiology; immunogenetics; cytogenetics; and genetics of specific disorders and diseases.</p>
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IAC Code	NTO	CIP Code	IAC Title or CIP Definition
26.09		26.0807	A program that focuses on the scientific study of whole genome sequences and patterns of gene expression. Includes instruction in molecular and cellular biology, genetics, protein technologies, genomic sciences and techniques, bioinformatics, and scientific and research ethics.
		26.0899	Any instructional program in genetics not listed above.
		26.09	Physiology, Pathology and Related Sciences
		26.0901	A general program that focuses on the scientific study of the functional dynamics, morphology, and biochemical and biophysical communications within organisms and between living systems at all levels of complexity and integration. Includes instruction in reproduction, growth, hormonal action, vascular function, respiration, digestion, sensory perception and processing, sensorimotor integration, signal encoding and conveyance, homeostasis, physical function and malfunction, evolutionary physiology, and disease processes.
		26.0902	A program that focuses on the scientific study of dynamic interactive processes and biochemical communications at the subcellular level. Includes instruction in ion channels and transporters, molecular signaling pathways, endocrine control and regulation, genetic information transfer, homeostasis and molecular control systems, electrophysiology and sensory mechanisms, protein synthesis, and applicable research methods and technologies.
		26.0903	A program that focuses on the scientific study of physiological processes operating within and among cells, and intracellular communication and behavior, in the context of larger systems and whole organisms. Includes instruction in cell and molecular biology, molecular physiology, cell cycle control, signal transduction, protein structure, membrane biochemistry and structure, ion channel physics, cell respiration and digestion, secretory functions, cell adhesion and communication, information encoding and decoding, and the relation of cell physiology to tissue, organ, and organismic functioning.
		26.0904	A program that focuses on the scientific study of the composition, manufacture, and secretion of protein compounds by cells and glands and the role of endocrine substances in bodily processes. Includes instruction in protein chemistry, protein secretion, membrane biogenesis and transfer methods, cellular communication, gene and cell regulation, cytochemistry, fractionation, radioautography, and applications such as neuroendocrinology.
		26.0905	A program that focuses on the scientific study of reproductive processes and biogenesis in animals and human beings. Includes instruction in reproductive ecology and behavior, reproductive system physiology, endocrinology, developmental biology, neuroendocrinology, evolution and types of reproductive systems, reproductive genetics, physiopathology of reproductive processes, and applications of molecular biology and biophysics to the study of reproductive physiology.
		26.0907	A program that focuses on the scientific study of the structure and functioning of the heart, vascular system, and blood in animals and human beings and the disorders and diseases associated with the cardiovascular system. Includes instruction in cardiovascular physiology, blood physiology, vasculature, vascular metabolism, neural control of cardiovascular function, microvascular permeability and membrane transport, cardiac contraction mechanisms, homeostasis, and applications to topics such as arteriosclerosis, heart disease, diabetes, vascular remodeling, transplantation, transfusion, and pacemakers and artificial organs.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		26.0908	A program that focuses on the scientific study of the physiological processes involved in physical or motor activity, including sensorimotor interactions, response mechanisms, and the effects of injury, disease, and disability. Includes instruction in muscular and skeletal anatomy; molecular and cellular basis of muscle contraction; fuel utilization; neurophysiology of motor mechanics; systemic physiological responses (respiration, blood flow, endocrine secretions, and others); fatigue and exhaustion; muscle and body training; physiology of specific exercises and activities; physiology of injury; and the effects of disabilities and disease.
		26.0909	A program that focuses on the scientific study of vision, visual processes, and related phenomena and clinical research and treatment modalities. Includes instruction in ocular anatomy and physiology, microbiology of the eye, electrophysiology, neurophysiology, corneal physiology, photochemistry, psychophysics, visual biophysics and motor systems, sensory mechanisms and photoreception, eye circulation and metabolism, geometric and physical optics, ocular development across the life span, visual stimuli and perception, color vision, eye motility, biometrics and measurement techniques, visual pathology, and environmental issues.
		26.0910	A program that focuses on the scientific study of the expression, initiation, maintenance and progression of tissue injury and disease, including death, and the relationship of pathogenesis to fundamental molecular and cellular mechanisms. Includes instruction in immunology, microbiology, gene expression, inflammation, cell injury, apoptosis, immunopathology, molecular markers of disease and toxins, neoplasia, growth regulation, and organ- and system-specific investigations.
		26.0911	A program that focuses on the scientific study of carcinogens; the onset of malignancy in cells, tissues, blood, and organs; the genetics of cancer; the anatomy and physiology of cancer cells; and the study of cancer behaviors and treatments. Includes instruction in gene expression; oncogenes and tumor suppressor genes; viral genes and cancer proliferation; regulation of signal transduction; cancer proteins; hormonal and growth factors in cancer cells; tumor promotion, progression, and metastasis; carcinogen receptors and metabolism; carcinogen ecology; immunological targeting; and studies of genetic, chemical, radiologic and other treatment therapies.
		26.0912	A program that focuses on the scientific study of the physiological processes involved in low and high-altitude flight and living in space and related low-pressure and low-gravity environments, including sensorimotor interactions, response mechanisms, and the effects of injury, disease, and disability. Includes instruction in anatomy, molecular and cellular basis of muscle contraction, fuel utilization, neurophysiology of motor mechanics, systemic physiological responses (respiration, blood flow, endocrine secretions, and others), fatigue and exhaustion, systemic environmental pathologies, muscle and body training, physiology of specific exercises and activities, physiology of injury, and the effects of disabilities and disease.
		26.0999	Any instructional program in physiology, pathology, and related sciences not listed above.
26.10		26.10	Pharmacology and Toxicology
		26.1001	A program that focuses on the scientific study of drug interactions on biological systems and organisms and the sources, chemical properties, biological effects, and therapeutic uses of drugs. Includes instruction in pharmacodynamics, pharmacokinetics, toxicology, drug therapeutics, drug action, bodily responses to

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drug events, biochemical proliferation and differentiation, apoptosis, cell biology, medicinal chemistry, and studies of specific drugs and drug interactions.

- 26.1002 A program that focuses on the scientific study of the biochemical and biophysical characteristics of drugs at the molecular level and their interaction with, and effects on, biological macromolecules and cellular structures and processes. Includes instruction in molecular biology and biophysics; pharmacology of signal transduction, transmitters, and protein synthesis and release; receptors, protein interaction and binding; drug discovery and recognition; molecular toxicology; drug design; pharmacodynamics; developmental genetics; and studies of therapeutic strategies.
- 26.1003 A program that focuses on the scientific study of drugs that modify the function of the brain and central nervous system, the effects of such drugs on health, disease, perception, motor action, and behavior; and the development of countermeasures and treatment therapies. Includes instruction in neuroanatomy, neurophysiology, behavioral neuroscience, neurobiochemistry, neuropathology, the mechanisms of brain function, medicinal chemistry, pharmaceuticals, and studies of specific drugs and drug therapies.
- 26.1004 A program that focuses on the scientific study of poisons and other biohazards; their interactions with organisms and their food and respiratory systems; and their prevention, management, and counteraction. Includes instruction in toxicological biochemistry, toxic agents and transporters, toxin fate, toxicokinetics and metabolism, toxin classification, molecular toxic mechanisms, extracellular matrices and cell function, bacterial pathogenesis and mutagenesis, pathophysiology and apoptosis, cell stress and injury, studies of specific toxins, and studies of specific organ systems and physiological functions in relation to toxicological problems.
- 26.1005 A program that focuses on the scientific study of the genetic determinants of susceptibility to external pollutants and poisons; the interaction of toxic agents with biological systems at the molecular and cellular levels; and the development of countermeasures and treatments. Includes instruction in pharmacogenetics, biomolecular structure, gene expression and regulation, transgenic modeling, toxic events signaling, transcriptional activation, mutagenesis and carcinogenesis, pulmonary toxicology, xenobiotic metabolism, oxidative stress, risk assessment, molecular dosimetry, and studies of specific toxins and treatment therapies.
- 26.1006 A program that focuses on the scientific study of the health effects associated with exposure to toxic chemicals and systems occurring in the natural, work, and living environments; the management of environmental toxins and toxicity; and the development of protections for humans, animals, and plants. Includes instruction in applied ecology; microbiology; toxin transport, fate, and degradation; dermal toxicology; reproductive and genetic toxicology; atmospheric and environmental chemistry; metals toxicology; environmental mutagens and biotransformation; nutrient interaction; chemical sensitivity, disorders, and disease; risk assessment; animal waste management; environmental health; and hazardous materials management.

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26.11		26.1007	A program with an integrated, combined approach to the study of pharmacological and toxicological issues in biology and the biomedical sciences. Includes instruction in topics such as solvents, xenobiotic metabolism, chemical toxicity, neurotoxicology, immunopharmacology, biotransformation, tissue culture and in vitro studies, biomolecular analysis, bioactivation and inactivation, enzyme regulation, chemoprevention and chemotherapy, industrial and chemical studies, radiation health, and bioinformatics.
		26.1099	Any instructional program in pharmacology and toxicology not listed above.
		26.11	Biomathematics, Bioinformatics, and Computational Biology
		26.1101	A program that focuses on the application of statistics and other computational methods to the study of problems in the biological sciences and related fields in agriculture and natural resources. Includes instruction in computational biology, mathematical statistics, matrix algebra, applied calculus, experimental design, linear modeling, sampling theory, stochastic processes, spatial and temporal analysis, longitudinal analysis, sparse/unbalanced data and complex error, and applications to such topics as population genetics, animal breeding, forest genetics, population dynamics, wildlife biometry, ecology, and agricultural and natural resource management.
		26.1102	A program that focuses on the application of descriptive and inferential statistics to biomedical research and clinical, public health, and industrial issues related to human populations. Includes instruction in mathematical statistics, modeling, clinical trials methodology, disease and survival analysis, longitudinal analysis, missing data analysis, spatial analysis, computer tomography, biostatistics consulting, and applications to such topics as genetics, oncology, pharmacokinetics, physiology, neurobiology, and biophysics.
		26.1103	A program that focuses on the application of computer-based technologies and services to biological, biomedical, and biotechnology research. Includes instruction in algorithms, network architecture, principles of software design, human interface design, usability studies, search strategies, database management and data mining, digital image processing, computer graphics and animation, CAD, computer programming, and applications to experimental design and analysis and to specific quantitative, modeling, and analytical studies in the various biological specializations.
		26.1104	A program that focuses on computational theoretical approaches to understanding biological systems, including computational models of biological processes, computational management of large-scale projects, database development and dataalgorithm development, and high-performance computing, as well as statistical and mathematical analyses.
		26.1199	Any instructional program in biomathematics, bioinformatics, and computational biology not listed above.
26.12		26.12	Biotechnology 26.1201 A program that focuses on the application of the biological sciences, biochemistry, and genetics to the preparation of new and enhanced agricultural, environmental, clinical, and industrial products, including the commercial exploitation of microbes, plants, and animals. Includes instruction in bioinformatics, gene identification, phylogenetics and comparative genomics, bioinorganic chemistry, immunoassaying, DNA sequencing, xenotransplantation, genetic engineering, industrial microbiology, drug and biologic development,

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
26.13		26.13	enzyme-based production processes, patent law, biotechnology management and marketing, applicable regulations, and biotechnology ethics. Ecology, Evolution, Systematics, and Population Biology
		26.1301	A program that focuses on the scientific study of the relationships and interactions of small-scale biological systems, such as organisms, to each other, to complex and whole systems, and to the physical and other non-biological aspects of their environments. Includes instruction in biogeochemistry; landscape and/or marine/aquatic dynamics; decomposition; global and regional elemental budgets; biotic and abiotic regulation of nutrient cycles; ecophysiology; ecosystem resilience, disturbance, and succession; community and habitat dynamics; organismal interactions (co-evolution, competition, predation); paleoecology; and evolutionary ecology.
	26.1302		A program that focuses on the scientific study of the ecology and behavior of microbes, plants, and animals inhabiting oceans, coastal waters, and saltwater wetlands and their interactions with the physical environment. Includes instruction in chemical, physical, and geological oceanography; molecular, cellular, and biochemical studies; marine microbiology; marine botany; ichthyology; mammalogy; marine population dynamics and biodiversity; reproductive biology; studies of specific species, phyla, habitats, and ecosystems; marine paleoecology and paleontology; and applications to fields such as fisheries science and biotechnology.
			26.1303 A program that focuses on the scientific study of the genetic, developmental, functional, and morphological patterns and processes, and theoretical principles; and the emergence and mutation of organisms over time. Includes instruction in molecular and morphological systematics; genetics and development; evolutionary transformation; paleobiology and paleontology; morphogenesis; mutation; locomotor, biomechanical and craniodental form and function; evolutionary theory; and systematic biology.
		26.1304	A program that focuses on the scientific study of the ecology and behavior of microbes, plants, and animals inhabiting inland fresh waters such as lakes, ponds, rivers, creeks, estuaries, and wetlands. Includes instruction in geology and hydrology; aquatic ecosystems; microbiology; mycology; botany; ichthyology; mammalogy; population biology and biodiversity; studies of specific species, phyla, and habitats; and applications to fields such as natural resources conservation, fisheries science, and biotechnology.
		26.1305	A program that focuses on the scientific study of the origins, functions, relationships, interactions, and natural history of living populations, communities, species, and ecosystems in relation to dynamic environmental processes. Includes instruction in biodiversity, molecular genetic and genomic evolution, mesoscale ecology, computational biology and modeling, conservation biology, local and global environmental change, and restoration ecology.
			26.1306 A program that focuses on the scientific study of the natural history, life cycle behavior, and ecosystem dynamics of single species and multispecies communities, and the patterns and causes of diversity within and among such populations. Includes instruction in biostatistics, population dynamics, population and quantitative genetics, RNA and DNA sequences, genomics, evolutionary ecology, natural adaptation and hybridization, geographic differentiation, life history and life cycle studies, and animal and plant demography.
			26.1307 A program that focuses on the application of the biological sciences to the specific problems of biodiversity, species preservation, ecological sustainability, and habitat fragmentation in the face of advancing human social, economic, and industrial pressures. Includes instruction in ecology, environmental

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			<p>science, biological systems, extinction theory, human-animal and human-plant interaction, ecosystem science and management, wetland conservation, field biology, forest and wildlife biology, and natural history.</p> <p>26.1308 A program that focuses on the theoretical and empirical study of the principles and processes underlying the origin and maintenance of biological taxonomic diversity; related biogeographical and evolutionary patterns; and studies of the origin, diversification, distribution, and extinction of species and lineages. Includes instruction in phylogenetic analysis, structural development and molecular evolution, classification and taxonomic theory, biological nomenclature, taxonomic assignment, evolutionary theory, biological surveys and inventories, computer modeling, and database building.</p> <p>26.1309 A program that focuses on the scientific study of disease, disability, and trauma patterns within and across populations and the development</p>
			<p>of health management mechanisms to prevent and control disease outbreaks and injurious behaviors. Includes instruction in biostatistics, biochemistry, molecular biology, immunology, disease and injury determinants, genetic disease and disability factors, behavioral studies, health services research, environmental disease and injury factors, and population studies.</p>
		26.1310	<p>A program that focuses on the scientific study of the relationships and interactions across levels of biological organization--genes and genomes, organisms, species, and ecosystems--and how these change over time, including the origins and history of species, the processes by which biodiversity has evolved, and the ecological context in which this evolution takes place. Includes instruction in animal, plant, population, functional, evolutionary, and ecosystem ecology; ecological and evolutionary genetics; molecular evolution; population and conservation biology; animal and plant diversity; biometry; and scientific and research ethics.</p>
		26.1399	<p>Any instructional program in ecology, evolution, and systematics not listed above.</p>
26.99		26.99	<p>Biological and Biomedical Sciences, Other</p> <p>26.9999 Any instructional program in the biological and biomedical sciences not listed above.</p>
30.08		30.08	<p>Mathematics and Computer Science</p> <p>30.0801 A program with a general synthesis of mathematics and computer science or a specialization which draws from mathematics and computer science.</p>
30.16		30.16	<p>Accounting and Computer Science</p>
		30.1601	<p>A program that combines accounting with computer science and/or computer studies.</p>
30.17		30.17	<p>Behavioral Sciences</p> <p>30.1701 A program with a combined or undifferentiated focus on the social sciences, psychology, and biomedical sciences to study complex problems of human individual and social growth and behavior.</p>
30.18		30.18	<p>Natural Sciences</p>
		30.1801	<p>A program with a combined or undifferentiated focus on one or more of the physical and biological sciences.</p>
30.19	M	30.19	<p>Nutrition Sciences</p>

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			30.1901 A scientific program that focuses on the utilization of food for human growth and metabolism, in both normal and dysfunctional states, from the interdisciplinary perspective of the agricultural, human, biological, and biomedical sciences. Includes instruction in food science, biochemistry, physiology, dietetics, food and nutrition studies, biotechnology, biophysics, and the clinical sciences.
31.01		31.01	Parks, Recreation and Leisure Studies
		31.0101	A program that focuses on the principles underlying recreational and leisure activities, and the practices involved in providing indoor and outdoor recreational facilities and services for the general public.
31.03		31.03	Parks, Recreation and Leisure Facilities Management
		31.0301	A program that prepares individuals to develop and manage park facilities and other indoor and outdoor recreation and leisure facilities. Includes instruction in supervising support personnel, health and safety standards, public relations, and basic business and marketing principles.
		31.0302	A program that prepares individuals to manage the operation of golf courses. Includes instruction in turf grass science and management, golf course design and construction, grounds equipment and operation, pest control, and grounds management.
		31.0399	Any instructional program in parks, recreation and leisure facilities management not listed above.
31.05		31.05	Health and Physical Education/Fitness
			31.0501 A general program that focuses on activities and principles that promote physical fitness, achieve and maintain athletic prowess, and accomplish related research and service goals. Includes instruction in human movement studies, motivation studies, rules and practice of specific sports, exercise and fitness principles and techniques, basic athletic injury prevention and treatment, and organizing and leading fitness and sports programs.
		31.0504	A program that prepares individuals to apply business, coaching and physical education principles to the organization, administration and management of athletic programs and teams, fitness/rehabilitation facilities and health clubs, sport recreation services, and related services. Includes instruction in program planning and development; business and financial management principles; sales, marketing and recruitment; event promotion, scheduling and management; facilities management; public relations; legal aspects of sports; and applicable health and safety standards.
			31.0505 A scientific program that focuses on the anatomy, physiology, biochemistry, and biophysics of human movement, and applications to exercise and therapeutic rehabilitation. Includes instruction in biomechanics, motor behavior, motor development and coordination, motor neurophysiology, performance research, rehabilitative therapies, the development of diagnostic and rehabilitative methods and equipment, and related analytical methods and procedures in applied exercise and therapeutic rehabilitation.
		31.0507	A program that prepares individuals for employment in health and fitness clubs, wellness centers, public and private recreation facilities, hospitals and corporate fitness programs where they will perform a variety of instructional and administrative duties. Includes instruction in human anatomy and physiology, fitness techniques, exercise science, personal training, nutrition, and customer service.

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		31.0508	A program that focuses on the psychological, sociological, and historical aspects of sport and physical activity. Includes instruction in theory of sport, sport psychology, sport in American society, gender and race/ethnicity and sport, and sports history.
31.99		31.0599	Any instructional program in health and physical education/fitness not listed above.
		31.99	Parks, Recreation, Leisure, and Fitness Studies, Other
		31.9999	Any instructional program in parks, recreation, leisure and fitness studies not listed above.
40.02	F	40.02	Astronomy and Astrophysics
		40.0201	A general program that focuses on the planetary, galactic, and stellar phenomena occurring in outer space. Includes instruction in celestial mechanics, cosmology, stellar physics, galactic evolution, quasars, stellar distribution and motion, interstellar medium, atomic and molecular constituents of astronomical phenomena, planetary science, solar system evolution, and specific methodologies such as optical astronomy, radioastronomy, and theoretical astronomy.
		40.0202	A program that focuses on the theoretical and observational study of the structure, properties, and behavior of stars, star systems and clusters, stellar life cycles, and related phenomena. Includes instruction in cosmology, plasma kinetics, stellar physics, convolution and non-equilibrium radiation transfer theory, non-Euclidean geometries, mathematical modeling, galactic structure theory, and relativistic astronomy.
		40.0203	A program that focuses on the scientific study of planets, small objects, and related gravitational systems. Includes instruction in the structure and

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40.05	F	40.0299 40.05	composition of planetary surfaces and interiors, planetary atmospheres, satellites, orbital mechanics, asteroids and comets, solar system evolution and dynamics, planetary evolution, gravitational physics, and radiation physics. Any instructional program in astronomy and astrophysics not listed above. Chemistry
		40.0501	A general program that focuses on the scientific study of the composition and behavior of matter, including its micro- and macro-structure, the processes of chemical change, and the theoretical description and laboratory simulation of these phenomena.
		40.0502	A program that focuses on the scientific study of techniques for analyzing and describing matter, including its precise composition and the interrelationships of constituent elements and compounds. Includes instruction in spectroscopy, chromatography, atomic absorption, photometry, chemical modeling, mathematical analysis, laboratory analysis procedures and equipment maintenance, and applications to specific research, industrial and health problems.
		40.0503	A program that focuses on the scientific study of the elements and their compounds, other than the hydrocarbons and their derivatives. Includes instruction in the characterization and synthesis of non-carbon molecules, including their structure and their bonding, conductivity, and reactive properties; research techniques such as spectroscopy, X-ray diffraction, and photoelectron analysis; and the study of specific compounds, such as transition metals, and compounds composed of inorganic and organic molecules.
		40.0504	A program that focuses on the scientific study of the properties and behavior of hydrocarbon compounds and their derivatives. Includes instruction in molecular conversion and synthesis, molecular synthesis and design, the molecular structure of living cells and systems, the mutual reactivity of organic and inorganic compounds in combination, the spectroscopic analysis of hydrocarbon compounds, and applications to specific problems in research, industry, and health.
		40.0506	A program that focuses on the scientific study of understanding and predicting the behavior of chemical systems ranging from nuclear particles to atoms, molecules, clusters, biological materials and macroscopic assemblies. Includes instruction in quantum mechanics, spectroscopy, thermodynamics, statistical mechanics, reaction dynamics, group theory, collision theory, and polymer science.
		40.0507	A program that focuses on the scientific study of synthesized macromolecules and their interactions with other substances. Includes instruction in molecular bonding theory, polymerization, properties and behavior of unstable compounds, the development of tailored polymers, transition phenomena, and applications to specific industrial problems and technologies.
		40.0508	A program that focuses on the scientific study of structural phenomena combining the disciplines of physical chemistry and atomic/molecular physics. Includes instruction in heterogeneous structures, alignment and surface phenomena, quantum theory, mathematical physics, statistical and classical mechanics, chemical kinetics, and laser physics.
		40.0509	A program that focuses on the scientific study of natural systems (air, water, and soil) through the use of chemical techniques and instrumentation, with an emphasis on the movement and fate of pollutants and chemical aspects of contaminant remediation. Includes instruction in analytical, inorganic, organic, and physical chemistry; aquatic, soil, and atmospheric chemistry; environmental engineering; environmental toxicology; and analytical methods.

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		40.0510	A program that focuses on the application of chemical techniques and instrumentation to the analysis and evaluation of physical evidence to aid in criminal investigations. Includes instruction in analytical, inorganic, organic, and physical chemistry; biochemistry; forensic toxicology; instrumental analysis; crime scene processing; criminal investigation; forensic laboratory technology; and applicable law.
		40.0511	A program that focuses on the study of mathematical and computational methods and fundamental laws of physics to describe chemical phenomena and to develop empirical models of molecules and their interactions. Includes instruction in properties of small, isolated molecules; dynamics of elementary chemical processes; reaction pathways of organic molecules; hydrogen bonding patterns in liquids; reaction rates of biological pathways; and advanced computational techniques.
40.08	F	40.0599	Any instructional program in chemistry not listed above.
		40.08	Physics
		40.0801	A general program that focuses on the scientific study of matter and energy, and the formulation and testing of the laws governing the behavior of the matter-energy continuum. Includes instruction in classical and modern physics, electricity and magnetism, thermodynamics, mechanics, wave properties, nuclear processes, relativity and quantum theory, quantitative methods, and laboratory methods.
		40.0802	A program that focuses on the scientific study of the behavior of matter-energy phenomena at the level of atoms and molecules. Includes instruction in chemical physics, atomic forces and structure, molecular orbital theory, magnetic resonance, molecular bonding, phase equilibria, quantum theory of solids, and applications to the study of specific elements and higher compounds.
		40.0804	A program that focuses on the scientific study of the basic constituents of subatomic matter and energy, and the forces governing fundamental processes. Includes instruction in quantum theory, field theory, single-particle systems, perturbation and scattering theory, matter-radiation interaction, symmetry, quarks, capture, Schrodinger mechanics, methods for detecting particle emission and absorption, and research equipment operation and maintenance.
		40.0805	A program that focuses on the scientific study of properties and behavior of matter at high temperatures, such that molecular and atomic structures are in a disassociated ionic or electronic state. Includes instruction in magnetohydrodynamics, free electron phenomena, fusion theory, electromagnetic fields and dynamics, plasma and non-linear wave theory, instability theory, plasma shock phenomena, quantitative modeling, and research equipment operation and maintenance.
		40.0806	A program that focuses on the scientific study of the properties and behavior of atomic nuclei. Includes instruction in nuclear reaction theory, quantum mechanics, energy conservation, nuclear fission and fusion, strong and weak forces, nuclear modeling, nuclear decay, nucleon scattering, pairing, photon and electron reactions, the physics of nuclear effects, statistical methods, and research equipment operation and maintenance.
		40.0807	A program that focuses on the scientific study of light energy, including its structure, properties and behavior under different conditions. Includes instruction in wave theory, wave mechanics, electromagnetic theory, physical optics, geometric optics, quantum theory of light, photon detecting, laser theory, wall and beam properties, chaotic light, non-linear optics, harmonic generation, optical systems theory, and applications to engineering problems.

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		40.0808	A program that focuses on the scientific study of macroscopic physical phenomena and properties that arise from basic microscopic interactions. Includes instruction in low-temperature and solid-state physics, x-ray physics, liquids and soft materials, including the study of semiconductors, metals, superliquids, magnets, superconductors, glasses, gels, polymers, colloids, neural networks, and macromolecules.
		40.0809	A program that focuses on the scientific study of sound, and the properties and behavior of acoustic wave phenomena under different conditions. Includes instruction in wave theory, the acoustic wave equation, energy transformation, vibration phenomena, sound reflection and transmission, scattering and surface wave phenomena, singularity expansion theory, ducting, and applications to specific research problems such as underwater acoustics, crystallography, and health diagnostics.
		40.0810	A program that focuses on the scientific and mathematical formulation and evaluation of the physical laws governing, and models describing, matter-energy phenomena, and the analysis of related experimental designs and results. Includes instruction in classical and quantum theory, relativity theory, field theory, mathematics of infinite series, vector and coordinate analysis, wave and particle theory, advanced applied calculus and geometry, analyses of continuum, cosmology, and statistical theory and analysis.
40.99		40.0899	Any instructional program in physics not listed above.
		40.99	Physical Sciences, Other
		40.9999	Any instructional program in physical sciences not listed above.
41.01		41.01	Biology Technician/Biotechnology Laboratory Technician
		41.0101	A program that prepares individuals to apply scientific principles and technical skills in support of biologists and biotechnologists in research, industrial, and government settings. Includes instruction in fermentation technology, cell culturing, protein purification, biologic synthesis, assaying and testing, quality control, industrial microbiology, bioprocessing, chromatography and bioseparation, genetic technology, laboratory and hazardous materials safety, and computer applications.
41.02		41.02	Nuclear and Industrial Radiologic Technologies/Technicians
		41.0204	A program that prepares individuals to apply scientific principles and technical skills to the operation of industrial and research testing equipment using radioisotopes. Includes instruction in x-ray analysis of materials, nondestructive testing and inspection of materials, and continuous measurement of paper or metal thickness.
		41.0205	A program that prepares individuals to apply scientific principles and technical skills in support of research scientists and operating engineers engaged in the running of nuclear reactors, and in nuclear materials processing and disposal. Includes instruction in basic nuclear physics and nuclear engineering, monitoring and safety procedures, radioactive materials handling and disposal, equipment maintenance and operation, and record keeping.
		41.0299	Any instructional program in nuclear and industrial radiologic technologies not listed above.
41.03	F	41.03	Physical Science Technologies/Technicians

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41.0301 A program that prepares individuals to apply scientific principles and technical skills in support of chemical and biochemical research and industrial operations. Includes instruction in principles of chemistry and biochemistry, technical mathematics, computer applications, radiochemistry, industrial biochemistry, chemical instrumentation, physical chemistry, laboratory research methods, industrial processing methods and equipment, and test equipment operation and maintenance.

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			41.0303 A program that prepares individuals to apply scientific principles and technical skills to the operation of chemical processing equipment in industries such as chemical manufacturing, petroleum refining, pharmaceutical manufacturing, and waste water treatment. Includes instruction in mathematics, chemistry, and physics; computer applications; chemical and refinery plant operations, processes, and equipment; safety, health, and environment; instrumentation; troubleshooting; and applications to specific industries.
41.99		41.99	Any instructional program in physical science technologies not listed above. Science Technologies/Technicians, Other
		41.9999	Any instructional program in science technologies not listed above.
42.01		42.01	Psychology, General
		42.0101	A general program that focuses on the scientific study of individual and collective behavior, the physical and environmental bases of behavior, and the analysis and treatment of behavior problems and disorders. Includes instruction in the principles of the various subfields of psychology, research methods, and psychological assessment and testing methods.
43.01	F	43.01	Criminal Justice and Corrections
		43.0102	A program that prepares individuals to study the theories and principles, of correctional science and to function as professional corrections officers and other workers in public and/or private incarceration facilities.
		43.0103	A program that prepares individuals to apply theories and practices of organization management and criminal justice to the administration of public law enforcement agencies and operations. Includes instruction in law enforcement history and theory, operational command leadership, administration of public police organizations, labor relations, incident response strategies, legal and regulatory responsibilities, budgeting, public relations, and organizational leadership.
		43.0104	A program that focuses on the criminal justice system, its organizational components and processes, and its legal and public policy contexts. Includes instruction in criminal law and policy, police and correctional systems organization, the administration of justice and the judiciary, and public attitudes regarding criminal justice issues.
		43.0106	A program that focuses on the application of the physical, biomedical, and social sciences to the analysis and evaluation of physical evidence, human testimony and criminal suspects. Includes instruction in forensic medicine, forensic dentistry, anthropology, psychology, entomology, pathology, forensic laboratory technology and autopsy procedures, DNA and blood pattern analysis, crime scene analysis, crime scene photography, fingerprint technology, document analysis, witness and suspect examination procedures, applicable law and regulations, and professional standards and ethics.
		43.0107	A program that prepares individuals to perform the duties of police and public security officers, including patrol and investigative activities, traffic control, crowd control and public relations, witness interviewing, evidence collection and management, basic crime prevention methods, weapon and equipment operation and maintenance, report preparation and other routine law enforcement responsibilities.
		43.0109	A program that prepares individuals to perform routine inspection, patrol and crime prevention services for private clients. Includes instruction in the provision of personal protection as well as property security.

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		43.0110	A program that prepares individuals to specialize in the provision of correction services to underage minor populations. Includes instruction in corrections, juvenile delinquency, juvenile development and psychology, juvenile law and justice administration, social services, record-keeping procedures, and communication skills.
		43.0111	A program that focuses on the application of clinical and criminal laboratory science, investigative techniques, and criminology to the reconstruction of crimes and the analysis of physical evidence. Includes instruction in laboratory science, laboratory procedures, criminology and police science, evidentiary testing and analysis, computer applications, record-keeping, reconstruction techniques, evidence handling and storage, and applications to specific types of evidence and crimes.
		43.0112	A program that prepares individuals to plan, manage, and supervise services providing private security protection for people and property and related investigative and consulting functions. Includes instruction in security and loss prevention services, private security and investigation techniques, security technologies, personnel management, business operations, marketing, applicable law and regulations, and client relations.
		43.0113	A program that prepares individuals to plan and manage institutional facilities and programs for housing and rehabilitating prisoners in the public and/or private sectors. Includes instruction in the principles and practice of correction, facilities planning and management, safety and security, social and health services, staff and inmate management, budgeting, communication skills, correctional psychology, and applications to specific types of correctional facilities approaches.
		43.0114	A program focusing on the principles, procedures, techniques, legal concerns, and problems associated with a criminal investigation. Includes instruction in administrative law and procedures, courtroom evidence management and preparation, case presentation and court testimony, description and identification, state and federal criminal law and procedures, informant and suspect rights, officer liability, informant and witness management, victim awareness, tactical interviewing, psychology, criminal investigation methods and procedures, report writing and documentation, investigative techniques, and case management.
		43.0115	A program focusing on the principles and procedures for managing records in police or other security offices, including storing and retrieving evidence and related data. Includes instruction in administrative law and procedures, office management, report preparation, organizational software, database software, physical and digital evidence properties, controlled storage and retrieval, investigative file inventories, case management, security systems, and communications skills.
		43.0116	A program focusing on the principles and techniques used to identify, search, seize and analyze digital media and to conduct cyber investigations against criminal and terrorist activity. Includes instruction in computer boot processes and drives, jumper setting, file access and reconstruction, hacking, network systems, cryptography, programming, investigative techniques, forensic imagery, web-based investigation methods, cyberterrorism, and applicable laws and administrative procedures.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
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43.0117	<p>A program focusing on the principles and techniques of conducting investigations into financial crime, terrorist activity, and the analysis and use of accounting data as evidence. Includes instruction in the principles of accounting, investigative auditing, computer investigations, accounting system documents and software, business corruption, criminal and terrorist financial networks, international money markets and movement, net worth analysis, financial fraud, exposing concealed assets,</p>
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IAC Code	NTO	CIP Code	IAC Title or CIP Definition
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- 43.0118 A program focusing on the preparation of law enforcement personnel to perform intelligence and surveillance operations and to analyze and use data collected via such operations. Includes instruction in the intelligence cycle, information sources, data retrieval, digital investigation, financial investigations, document analysis, external sources, geographic information systems, link analysis, operation planning and security, case management, applicable law and regulations, and case preparation.
- 43.0119 A program focusing on the principles and techniques for dealing with police emergencies such as hostage situations, bomb threats, barricades and terrorist incidents. Includes instruction in crisis management, command procedures, incident containment, information collection and debriefing, first responder negotiation, victim and criminal psychology, site survey and surveillance, special weapons and tactics, interagency communications and joint operations, pre-confrontation and contingency planning, assault and rescue operations, security and crowd control, media relations, and post-operation procedures.
- 43.0120 A program focusing on the principles and techniques of providing physical security protection to clients in various environments and situations. Includes instruction in security intelligence and information resources, operations planning and surveying, operations security, weapons and explosives, defense and offense techniques, security and surveillance systems, communications systems, perimeter and access control, weapons of mass destruction, contingency planning, crowd control, cover and evacuation, combat and vehicle techniques, and applicable legal and administrative responsibilities.
- 43.0121 A program focusing on the principles and techniques for investigating criminal behavior among government contractors and grantees at different levels. Includes instruction in financial fraud and money-laundering, auditing, computer investigations, legal concepts and applications, procurement law, non-procurement debarment, jurisdiction and lead agency, analytical methods, suspension, parallel proceedings, evidence protection, equitable considerations, investigative techniques, administrative and global solutions, case management and preparation.
- 43.0122 A program focusing on the application of law enforcement and security principles and procedures to the marine environment. Includes instruction in criminal and nautical law, nautical terminology, seamanship and vessel operation, vessel maintenance, navigation and navigation systems, meteorology, vessel and passenger safety, radar and remote sensing systems, communications systems, vessel pursuit and stop, boarding and arrest techniques, investigative and evidence techniques, weaponry and applications to specific situations such as piracy, drug trafficking and smuggling.
- 43.0123 A program focusing on the application of law enforcement principles and techniques to the protection of cultural resources and the investigation of related crimes. Includes instruction in cultural resources law, archaeological standards of value, site

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damage assessment, evidence collection, surveillance techniques, investigative techniques, case management and preparation.

records seizure, fraud and money laundering statutes, fraud case initiation, case management, and case presentation.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
43.02	F	43.0199 43.02	Any instructional program in corrections and criminal justice not listed above. Fire Protection
		43.0201	A program focusing on the application of fire science and technology to problems of reducing fire risk, limiting loss, supervising substance removal, conducting safety inspections and investigations, and advising on matters of safety procedures and fire prevention policy. Includes instruction in fire behavior, fire simulation, structural risk assessment, materials analysis, detection and suppression systems, smoke management, supply and evacuation, public education, legal aspects of fire prevention, and related research and communications methods.
		43.0202	A program focusing on the principles, theory, and practices associated with the management of fire operations, firefighting services, and community fire issues. Includes instruction in fire protection history and theory, incident command leadership, administration of public fire organizations, labor relations, emergency medical services management, fire emergency response strategies and mitigation, legal and regulatory responsibilities, budgeting, public relations, and organizational leadership.
		43.0203	A program focusing on the theory and practice of fires and fire-fighting. Includes instruction in fire chemistry and physics, combustible materials, computer science, building construction, fire codes and related laws, fire hydraulics, fire command, fire prevention/inspection, fire protection systems, fire suppression systems, fire/arson investigation, occupational safety, equipment operation, emergency medicine and communications.
		43.0204	A program focusing on the principles and practice of firefighting systems, building construction and related resources as applied to fire prevention, control, and mitigation. Includes instruction in fire hydraulics and dynamics, fire protection structures and systems design, fire behavior and combustion, fire protection hydraulics and water supply, fire protection equipment and systems, building construction for fire protection, and fire apparatus.
		43.0205	A program focusing on the theory and principles of fire combustion and behavior applied to the analysis of fires and their causes. Includes instruction in fire behavior and combustion, fire dynamics, hazardous materials chemistry, incendiary fire analysis, fire-related human behavior, forensic procedures, investigative techniques, case management and case preparation.
		43.0206	A program focusing on the application of fire science, firefighting and investigation to the prevention, control and mitigation of wildland fires and the analysis of causes. Includes instruction in fire science and behavior, wildland environments, meteorology, wildland fire hydraulics and dynamics, water and chemical supply systems, wildland firefighting operations, airborne firefighting, firebreak engineering, communications systems, wildland arson, forensic procedures, wildland fire prevention, investigation techniques, case management and preparation.
44.02	M	43.0299 44.02	Any instructional program in fire protection not listed above. Community Organization and Advocacy
		44.0201	A program that focuses on the theories, principles, and practice of providing services to communities, organizing communities and neighborhoods for social action, serving as community liaisons to public agencies, and using community resources to furnish information, instruction, and assistance to all members of a community. May prepare individuals to apply such knowledge and skills in community service positions.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
44.04	F	44.04	<p>Public Administration</p> <p>44.0401 A program that prepares individuals to serve as managers in the executive arm of local, state, and federal government and that focuses on the systematic study of executive organization and management. Includes instruction in the roles, development, and principles of public administration; the management of public policy; executive-legislative relations; public budgetary processes and financial management; administrative law; public personnel management; professional ethics; and research methods.</p>
44.05	F	44.05	<p>Public Policy Analysis</p> <p>44.0501 A program that focuses on the systematic analysis of public policy issues and decision processes. Includes instruction in the role of economic and political factors in public decision-making and policy formulation, microeconomic analysis of policy issues, resource allocation and decision modeling, cost/benefit analysis, statistical methods, and applications to specific public policy topics.</p> <p>44.0502 A program that focuses on the systematic analysis of public policy issues related to education and educational systems at the local, state, national, and international levels. Includes instruction in social and cultural issues in education, contemporary educational policies, history of education, economics of education, international and comparative education, education and social change, educational research and evaluation methods, and applications to specific public policy topics.</p> <p>44.0503 A program that focuses on the systematic analysis of public policy issues related to domestic and international health and health care systems. Includes instruction in contemporary health issues and policies, politics and economics of health care delivery, epidemiology, public health, comparative and global health, medical law and ethics, statistical methods, and applications to specific public policy topics.</p> <p>44.0504 A program that focuses on the systematic analysis of public policy issues related to relationships among nations and among governments and nongovernmental entities. Includes instruction in international politics, governance, financial policy, and security affairs; globalization; economic and social policies of developing nations; and applications to specific public policy topics such as labor and employment, immigration, and human rights.</p> <p>44.0599 Any instructional program in public policy analysis not listed above.</p>
44.07	M	44.07	<p>Social Work</p> <p>44.0701 A program that prepares individuals for the professional practice of social welfare administration and counseling, and that focus on the study of organized means of providing basic support services for vulnerable individuals and groups. Includes instruction in social welfare policy; case work planning; social counseling and intervention strategies; administrative procedures and regulations; and specific applications in areas such as child welfare and family services, probation, employment services, and disability counseling.</p> <p>44.0702 A program that prepares individuals to plan, manage, and implement social services for children, youth, and families. Includes instruction in child development and psychology, adolescence, family studies, social work, social services administration, juvenile and family law, program and facilities planning, youth leadership, counseling, probation, casework, applicable procedures and regulations, and professional standards and ethics.</p> <p>44.0799 Any program providing instruction in social work and related services not listed above.</p>
44.99	F	44.99	<p>Public Administration and Social Service Professions, Other</p>

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
45.04		44.9999	Any instructional program in public administration and services not listed above.
		45.04	Criminology
	45.0401		A program that focuses on the systematic study of crime as a sociopathological phenomenon, the behavior of criminals, and the social institutions evolved to respond to crime. Includes instruction in the theory of crime, psychological and social bases of criminal behavior, social value systems and the theory of punishment, criminal law and criminal justice systems, penology, rehabilitation and recidivism, studies of specific types of crime, social attitudes and policy, and applications to specific issues in law enforcement administration and policy.
45.05		45.05	Demography and Population Studies
		45.0501	A program that focuses on the systematic study of population models and population phenomena, and related problems of social structure and behavior. Includes instruction in population growth, spatial distribution, mortality and fertility factors, migration, dynamic population modeling, population estimation and projection, mathematical and statistical analysis of population data, population policy studies, and applications to problems in economics and government planning.
45.06		45.06	Economics
	45.0601		A general program that focuses on the systematic study of the production, conservation and allocation of resources in conditions of scarcity, together with the organizational frameworks related to these processes. Includes instruction in economic theory, micro- and macroeconomics, comparative economic systems, money and banking systems, international economics, quantitative analytical methods, and applications to specific industries and public policy issues.
	45.0602		A program that focuses on the application of economic principles and analytical techniques to the study of particular industries, activities, or the exploitation of particular resources. Includes instruction in economic theory; microeconomic analysis and modeling of specific industries, commodities; the economic consequences of resource allocation decisions; regulatory and consumer factors; and the technical aspects of specific subjects as they relate to economic analysis.
		45.0603	A program that focuses on the systematic study of mathematical and statistical analysis of economic phenomena and problems. Includes instruction in economic statistics, optimization theory, cost/benefit analysis, price theory, economic modeling, and economic forecasting and evaluation.
	45.0604		A program that focuses on the systematic study of the economic development process and its application to the problems of specific countries and regions. Includes instruction in economic development theory, industrialization, land reform, infrastructural development, investment policy, the role of governments and business in development, international development organizations, and the study of social, health, and environmental influences on economic development.
	45.0605		A program that focuses on the systematic study and analysis of international commercial behavior and trade policy. Includes instruction in international trade theory, tariffs and quotas, commercial policy, trade factor flows, international finance and investment, currency regulation and trade exchange rates and markets, international trade negotiation, and international payments and accounting policy.
45.11		45.0699	Any instructional program in economics not listed above.
		45.11	Sociology
	45.1101		A program that focuses on the systematic study of human social institutions and social relationships. Includes instruction in social theory, sociological research methods, social organization and structure, social stratification and hierarchies,

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45.12		45.12	<p>dynamics of social change, family structures, social deviance and control, and applications to the study of specific social groups, social institutions, and social problems.</p> <p>Urban Studies/Affairs</p> <p>45.1201 A program that focuses on the application of social science principles to the study of urban institutions and the forces influencing urban social and political life. Includes instruction in urban theory, the development and evolution of urban areas, urban sociology, principles of urban and social planning, and the politics and economics of urban government and services.</p>
46.01	F	46.01	<p>Mason/Masonry</p> <p>46.0101 A program that prepares individuals to apply technical knowledge and skills in the laying and/or setting of exterior brick, concrete block, hard tile, marble and related materials, using trowels, levels, hammers, chisels, and other hand tools. Includes instruction in technical mathematics, blueprint reading, structural masonry, decorative masonry, foundations, reinforcement, mortar preparation, cutting and finishing, and applicable codes and standards.</p>
46.02	F	46.02	<p>Carpenters</p> <p>46.0201 A program that prepares individuals to apply technical knowledge and skills to lay out, cut, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in technical mathematics, framing, construction materials and selection, job estimating, blueprint reading, foundations and roughing-in, finish carpentry techniques, and applicable codes and standards.</p>
46.03	F	46.03	<p>Electrical and Power Transmission Installers</p> <p>46.0301 A program that generally prepares individuals to apply technical knowledge and skills to install indoor and outdoor residential, commercial, and industrial electrical systems, and associated power transmission lines. Includes instruction in electricity, safety procedures, wiring, insulation and grounding, schematic blueprint interpretation, equipment operation and maintenance, and applicable codes and standards.</p> <p>46.0302 A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair electric apparatus and systems such as residential, commercial, and industrial electric-power wiring; and DC and AC motors, controls, and electrical distribution panels. Includes instruction in the principles of electronics and electrical systems, wiring, power transmission, safety, industrial and household appliances, job estimation, electrical testing and inspection, and applicable codes and standards.</p> <p>46.0303 A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain and repair local, long-distance, and rural electric power cables and communication lines; erect and construct pole and tower lines; and install underground lines and cables. Includes instruction in cable installation and repair, fibre-optic technology, trenching, mobile equipment and crane operation, highvoltage installations, maintenance and inspection, safety, remote communications, and applicable codes and standards.</p> <p>46.0399 Any instructional program in electrical and power transmission installation not listed above.</p>
46.04	F	46.04	<p>Building/Construction Finishing, Management, and Inspection</p> <p>46.0401 A program that prepares individuals to apply technical knowledge and skills to keep a building functioning, and to service a variety of structures including commercial</p>

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and industrial buildings and mobile homes. Includes instruction in the basic maintenance and repair skills required to service building systems, such as air conditioning, heating, plumbing, electrical, major appliances, and other mechanical systems.

- 46.0402 A program that prepares individuals to prepare, construct, and finish buildings, components, and related structures using compound masonry mixtures of stone, gravel, sand, cement, and water. Includes instruction in site preparation, applied mathematics, mixing formulas and applications, job estimation, concrete design, finishing techniques, mold preparation, reinforcement installation, site safety, and equipment operation and maintenance.
- 46.0403 A program that prepares individuals to apply industrial, labor, and governmental standards and laws to the oversight of construction projects and the maintenance of completed buildings and other structures. Includes instruction in construction processes and techniques, materials analysis, occupational safety and health, industry standards, building codes and specifications, blueprint interpretation, testing equipment and procedures, communication skills, accident investigation, and documentation.
- 46.0404 A program that prepares individuals to apply technical knowledge and skills to install, tape, and plaster drywall installations in interior and exterior construction jobs. Includes instruction in drywall handling and transport, cutting and mounting, taping and spackling, finishing, job analysis and estimation, site safety, tool operation and maintenance, blueprint and specification interpretation, and applicable codes and standards.
- 46.0406 A program that prepares individuals to apply technical knowledge and skills to install and repair fixtures, sheets, windows, and skylights made of glass, plexiglass, and other transparent materials. Includes instruction in site measurement, job analysis and estimation, material cutting and trimming, window and door installation, site safety, equipment operation and maintenance, specification interpretation, and applicable codes and standards.
- 46.0408 A program that prepares individuals to apply technical knowledge and skills to finish exterior and interior structural surfaces by applying protective or decorative coating materials, such as paint, lacquer, and wallpaper. Includes instruction in surface preparation; selecting, preparing, and applying paints and other coatings; hanging wallpaper; equipment operation and maintenance; finish selection; safety and clean-up; environmental effects on finishes; adhesion properties; and applicable codes and standards..
- 46.0410 A program that prepares individuals to apply technical knowledge and skills to prepare, install, and maintain exterior roofing materials and roofs. Includes instruction in building materials, flashing, lag bolts, site safety, equipment operation and maintenance, layering, site preparation, basic internal structural design, finishing, waterproofing, and applicable codes and standards.
- 46.0411 A program that prepares individuals to construct industrial, storage, and commercial metal structures using prefabricated framing and siding components. Includes instruction in sheet metal working, ironworking, assembly and fastening techniques, blueprint reading, site preparation, structural design principles, safety, and applicable codes and regulations.

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		46.0412	A program that prepares individuals to supervise, manage, and inspect construction sites, buildings, and associated facilities. Includes instruction in site safety, personnel supervision, labor relations, diversity training, construction documentation, scheduling, resource and cost control, bid strategies, rework prevention, construction insurance and bonding, accident management and investigation, applicable law and regulations, and communication skills.
		46.0413	A program that prepares individuals to plan, prepare, install, and repair carpet; linoleum; vinyl; ceramic, marble, quarry, mosaic, and terazzo tiles; and wood materials on floors, walls, and stairs. Includes instruction in measuring, cutting, and installing materials; use of hand and power-operated equipment; estimation of material and labor costs; and safety training.
		46.0414	A program that prepares individuals to apply insulation materials to pipes, boilers, ducts, refrigeration systems, and related equipment to reduce the passage of heat, cold, sound, or fire. Includes instruction in insulation specifications, measuring and cutting insulating material, applying and securing insulation, installing vapor barriers, insulation system maintenance, asbestos removal and abatement, and safety training.
		46.0415	A program that prepares individuals to apply technical knowledge and skills to residential and commercial building construction and remodeling. Includes instruction in construction equipment and safety; site preparation and layout; construction estimating; blueprint reading; building codes; framing; masonry; heating, ventilation, and air conditioning; electrical and mechanical systems; interior and exterior finishing; and plumbing.
		46.0499	Any instructional program in building/construction finishing, management, and inspection not listed above.
46.05	F	46.05	Plumbing and Related Water Supply Services
		46.0502	A program that prepares individuals to design, install, and test industrial and commercial piping systems and automatic fire and exposure protection systems. Includes instruction in water systems, steam systems, heating and cooling systems, lubricating systems, piping materials, installation tools operation and maintenance, valve installation and repair, technical mathematics, blueprint interpretation, and applicable codes and standards.
		46.0503	A program that prepares individuals to practice as licensed plumbers by applying technical knowledge and skills to lay out, assemble, install, and maintain piping fixtures and systems for steam, natural gas, oil, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems in home and business environments. Includes instruction in source determination, water distribution, waster removal, pressure adjustment, basic physics, technical mathematics, blueprint reading, pipe installation, pumps, welding and soldering, plumbing inspection, and applicable codes and standards.
		46.0504	A program that prepares individuals to apply technical knowledge and skills to set up, maintain, repair, and operate well drilling equipment; locate, drill, construct, and develop water, gas, and oil wells; and test and monitor wells to ensure adequate flow. Includes applications to home, business, and industrial uses.
		46.0505	A program that prepares individuals to apply technical knowledge and skills in using a variety of explosive materials to aid in the construction process. Includes

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instruction in safety procedures for storing, handling, placement, charge power determination, drilling, pounding, building demolition, preparing rocky surfaces for building foundations and demolition of explosives.

46.0599 Any instructional program in plumbing and related water supply services not listed above.

46.99 **F** **46.99** **Construction Trades, Other**

46.9999 Any instructional program in construction trades not listed above.

47.01 **F** **47.01** **Electrical/Electronics Maintenance and Repair Technology**

47.0101 A program that generally prepares individuals to apply technical knowledge and skills to operate, maintain, and repair electrical and electronic equipment. Includes instruction in electrical circuitry, simple gearing, linkages and lubrication of machines and appliances, and the use of testing equipment.

47.0102 A program that prepares individuals to apply technical knowledge and skills to maintain and repair a variety of office machines, such as typewriters, word processing and dictation machines, calculators, data processing equipment, duplicating machines, and mailing machines. Includes instruction in diagnostic techniques, the use of testing equipment, and the principles of mechanics, electricity, and electronics as they relate to the repair of business machines.

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		47.0103	A program that prepares individuals to apply technical knowledge and skills to assemble, install, operate, maintain, and repair one- and two- way communications equipment and systems, including television cable systems and mobile or stationary communication devices. Includes instruction in diagnostic techniques, the use of testing equipment and the principles of mechanics, electricity, and electronics as they relate to the repair of communications systems.
		47.0104	A program that prepares individuals to apply technical knowledge and skills to assemble, install, operate, maintain, and repair computers and related instruments. Includes instruction in power supplies, number systems, memory structure, buffers and registers, microprocessor design, peripheral equipment, programming, and networking.
		47.0105	A program that prepares individuals to apply technical knowledge and skills to assemble, install, operate, maintain, and repair electrical/electronic equipment used in industry and manufacturing. Includes instruction in installing, maintaining and testing various types of equipment.
		47.0106	A program that prepares individuals to apply technical knowledge and skills to repair, install, and service major gas, electric, and microwave consumer appliances such as stoves, refrigerators, dryers, water heaters, washers, dishwashers, and commercial units such as ice makers and coffee makers.
		47.0110	A program that prepares individuals to apply technical knowledge and skills to install and repair household, business, and industrial security alarms, sensors, video and sound recording devices, identification systems, protective barriers, and related technologies.
		47.0199	Any instructional program in electrical and electronics equipment installation and repair not listed above.
47.02			F 47.02 Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician (HAC, HACR, HVAC, HVACR)
		47.0201	A program that prepares individuals to apply technical knowledge and skills to repair, install, service and maintain the operating condition of heating, air conditioning, and refrigeration systems. Includes instruction in diagnostic techniques, the use of testing equipment and the principles of mechanics, electricity, and electronics as they relate to the repair of heating, air conditioning and refrigeration systems.
47.03	F	47.03	Heavy/Industrial Equipment Maintenance Technologies
		47.0302	A program that prepares individuals to apply technical knowledge and skills in the field maintenance and repair of heavy equipment, and in the general maintenance and overhaul of such equipment. Includes instruction in inspection, maintenance, and repair of tracks, wheels, brakes, operating controls, pneumatic and hydraulic systems, electrical circuitry, engines and in techniques of welding and brazing.
		47.0303	A program that prepares individuals to apply technical knowledge and skills to repair and maintain industrial machinery and equipment such as cranes, pumps, engines and motors, pneumatic tools, conveyor systems, production machinery, marine deck machinery, and steam propulsion, refinery, and pipelinedistribution systems.
		47.0399	Any instructional program in industrial equipment maintenance and repair not listed above.
47.04	F	47.04	Precision Systems Maintenance and Repair Technologies
		47.0402	A program that prepares individuals to apply technical knowledge

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			A program that prepares individuals to apply technical knowledge and skills to and skills to make, repair, maintain, and modify firearms according to blueprints or customer specifications, using specialized hand tools and machines.
		47.0403	A program that prepares individuals to apply technical knowledge and skills to make, repair, maintain, modify, and open locks; to make keys; to enter and change lock and safe combinations; and install and repair safes.
		47.0404	make, repair, maintain, and tune acoustic and electric musical instruments. Includes instruction in methods and equipment for making musical instruments, electronic instrument amplification systems, techniques of cleaning, and methods of tuning musical instruments.
		47.0408	A program that prepares individuals to apply technical knowledge and skills to make repairs, and maintain timepieces, time-measuring devices, and jewelry items. Includes instruction in mechanical timekeeping systems, digital timekeeping systems, timesetting, casting, engraving, polishing, stonemasonry, soldering, fine microscopic work, equipment and tool maintenance, redesign and restyling techniques, and customer relations.
		47.0409	A program that prepares individuals to apply technical knowledge and skills to maintain inventory control, care for inventory, and make minor repairs to warehouse equipment.
		47.0499	Any instructional program in miscellaneous mechanics and repairers not listed above.
47.06	F	47.06	Vehicle Maintenance and Repair Technologies
		47.0600	Instructional content for this group of programs is defined in codes 47.0600 - 47.0699.
		47.0603	A program that prepares individuals to apply technical knowledge and skills to repair, reconstruct and finish automobile bodies, fenders, and external features. Includes instruction in structure analysis, damage repair, non-structural analysis, mechanical and electrical components, plastics and adhesives, painting and refinishing techniques, and damage analysis and estimating.
		47.0604	A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles. Includes instruction in brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems.
		47.0605	A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain diesel engines in vehicles such as automobiles, buses, ships, trucks, railroad locomotives, and construction equipment; as well as stationary diesel engines in electrical generators and related equipment.
		47.0606	A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain small internal-combustion engines used on portable power equipment such as lawnmowers, chain saws, rotary tillers, and snowmobiles.
		47.0607	A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all aircraft components other than engines, propellers, avionics, and instruments. Includes instruction in layout and fabrication of sheet metal, fabric, wood, and other materials into structural members, parts, and fittings, and replacement of damaged or worn parts such as control cables and hydraulic units.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		47.0608	A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of aircraft powerplant and related systems. Instruction includes engine inspection and maintenance, lubrication and cooling, electrical and ignition systems, carburetion, fuels and fuel systems, propeller and fan assemblies.
		47.0609	A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of aircraft operating, control, and electronic systems. Includes instruction in flight instrumentation, aircraft communications and homing systems, radar and other sensory systems, navigation aids, and specialized systems for various types of civilian and military aircraft.
		47.0610	A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain bicycles and other human-powered vehicles. Includes instruction in lubrication, adjustments of moving parts, and wheel building.
		47.0611	repair, service, and maintain motorcycles and other similar powered vehicles. Includes instruction in lubrication and cooling systems, electrical and ignition systems, carburetion, fuel systems and adjustments of moving parts.
		47.0612	A program that prepares individuals to apply technical knowledge and skills to test, repair, service, and maintain vehicle emission systems in accordance with relevant laws and regulations.
		47.0613	A program that prepares individuals to apply technical knowledge and skills to the specialized maintenance and repair of trucks, buses, and other commercial and industrial vehicles. Includes instruction in diesel engine mechanics, suspension and steering, brake systems, electrical and electronic systems, preventive maintenance inspections, drive trains, gasoline engine mechanics, HVAC systems, and auxiliary equipment installation and repair.
		47.0614	A program that prepares individuals to apply technical knowledge and skills to the maintenance of alternative fuel vehicles and the conversion of standard vehicles to AFV status. Includes instruction in electrical vehicles, liquefied petroleum gas (LPG) vehicles, compressed natural gas (CNG) vehicles, hybrid fuel technology, electrical and electronic systems, engine performance, diagnosis and repair, and conversion/installation.
		47.0615	A program that prepares individuals to apply technical knowledge and skills to the building and reconstruction of automotive and commercial vehicle engines. Includes instruction in cylinder head and block, crack repair, crankshaft inspection and repair, connecting rods and pistons, balancing, block preparation, disassembly and repair, engine assembly, gas and diesel technology, and inspection and machining.
		47.0616	A program that prepares individuals to apply technical knowledge and skills to repair outboard and inboard engines; test, maintain, and repair steering devices and electrical systems; repair metal, wood, and fiberglass hulls and vessel components; fabricate and maintain sails; and repair and balance propellers and drive shafts.
		47.0617	A program that prepares individuals to apply technical knowledge and skills to increase the power of diesel and automotive engines; enhance the performance of automobiles; and repair, service, and maintain high performance vehicles. Includes instruction in adding performance accessories; modifying powertrains; tuning custom engines, suspension, and exhaust systems; and using dynamometers and other diagnostic equipment.

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		47.0618	A program that prepares individuals to apply technical knowledge and skills to build, test, inspect, repair, service and maintain recreational vehicles, systems, and interior and exterior components. Includes instruction in brake, hydraulic, and towing systems; electrical systems; propane systems and propane and electric appliances; carpentry; plumbing; welding; and structural frames.
		47.0699	Any instructional program in vehicle and mobile equipment mechanics and repairs not listed above.
47.99	F	47.99	Mechanic and Repair Technologies/Technicians, Other
		47.9999	Any instructional program in mechanics and repairs not listed above.
48.05	F	48.05	Precision Metal Working
		48.0501	A program that prepares individuals to apply technical knowledge and skills to plan, manufacture, assemble, test, and repair parts, mechanisms, machines, and structures in which materials are cast, formed, shaped, molded, heat treated, cut, twisted, pressed, fused, stamped or worked.
		48.0503	A program that prepares individuals to apply technical knowledge and skills to fabricate and modify metal parts in support of other manufacturing, repair or design activities, or as an independent business.
		48.0506	A program that prepares individuals to apply technical knowledge and skills to form, shape, bend and fold extruded metals, including the creation of new products, using hand tools and machines such as cornice brakes, forming rolls, and squaring shears.
		48.0507	operate machine tools used in the forming of metal components, as well as the fabrication of special tools, dies, jigs and fixtures used in cutting, working and finishing metal components.
		48.0508	A program that prepares individuals to apply technical knowledge and skills to join or cut metal surfaces. Includes instruction in arc welding, resistance welding, brazing and soldering, cutting, high-energy beam welding and cutting, solid state welding, ferrous and non-ferrous materials, oxidation-reduction reactions, welding metallurgy, welding processes and heat treating, structural design, safety, and applicable codes and standards.
		48.0509	A program that prepares individuals to make and install structural, ornamental, and reinforcing metal structures and supports. Includes instruction in drafting, technical mathematics, blueprint interpretation, welding, riveting, beam placement, ornamental design, structural reinforcement, crane operation, safety, and applicable codes and standards.
		48.0510	A program that prepares individuals to apply technical knowledge and skills to operate computer numerically controlled (CNC) machine tools, such as lathes, mills, precision measuring tools, and related attachments and accessories, to perform machining functions, such as cutting, drilling, shaping, and finishing products and component parts. Includes instruction in CNC terminology, setup, programming, operations, and troubleshooting; blueprint reading; machining; lathe and mill operations; technical mathematics; computer literacy; CAD/CAM systems; shop and safety practices; equipment capabilities; and regulations and laws.
		48.0511	A program that prepares individuals to apply technical knowledge and skills to further process ferrous and/or non-ferrous metal plates or shapes, and to manufacture and/or install products as interpreted through technical drawings. Includes instruction in trade tools, shop equipment, reading and interpreting

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			A program that prepares individuals to apply technical knowledge and skills to blueprints, material handling, welding, thermal cutting, metallurgy, template pattern development, plate and structural fabrication, destructive and nondestructive testing, inspection, shipment preparation and fabrication installation.
48.07	F	48.0599 48.07	Any instructional program in precision metal work not listed above. Woodworking
		48.0701	A program that generally prepares individuals to apply technical knowledge and skills to lay out and shape stock; assemble wooden articles or subassemblies; mark, bind, saw, carve, and sand wooden products; repair wooden articles, and use a variety of hand and power tools.
		48.0702	A program that prepares individuals to apply technical knowledge and skills to prepare and execute furniture design projects, assemble and finish furniture articles or subassemblies, repair furniture, and use a variety of hand and power tools.
		48.0703	A program that prepares individuals to apply technical knowledge and skills to set up, operate and repair industrial woodworking machinery, and to use such machinery to design and fabricate wooden components and complete articles.
48.99		48.0799 48.99	Any instructional program in woodworking not listed above. Precision Production, Other
		48.9999	Any instructional program in precision production not listed above.
49.01	F	49.01	Air Transportation
		49.0101	A program that focuses on the general study of aviation and the aviation industry, including in-flight and ground support operations. Includes instruction in the technical, business, and general aspects of air transportation systems.

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		49.0102	A program that prepares individuals to apply technical knowledge and skills to the flying and/or navigation of commercial passenger and cargo, agricultural, public service, corporate and rescue fixed wing aircraft. Includes instruction in principles of aircraft design and performance, aircraft flight systems and controls, flight crew operations and procedures, radio communications, navigation procedures and systems, airways safety and traffic regulations, and governmental rules and regulations pertaining to piloting aircraft. Programs may qualify individuals to sit for the FAA commercial and airline aircrew examinations.
		49.0104	A program that prepares individuals to apply technical knowledge and skills to the management of aviation industry operations and services. Includes instruction in airport operations, ground traffic direction, ground support and flightline operations, passenger and cargo operations, flight safety and security operations, aviation industry regulation, and related business aspects of managing aviation enterprises.
		49.0105	A program that prepares individuals to apply technical knowledge and skills to airtraffic management and control, usually with additional training at the FAA Flight Control Center in a cooperative education program. Includes instruction in flight control, the use of radar and electronic scanning devices, plotting of flights, radio communication, interpretation of weather conditions affecting flights, flight instrumentation used by pilots, and maintenance of flight-control center or controltower log books.
		49.0106	A program that prepares individuals to apply technical knowledge and skills to the performance of a variety of personal services conducive to the safety and comfort of airline passengers during flight, including verifying tickets, explaining the use of safety equipment, providing passenger services, and responding to in-flight emergencies.
		49.0108	A program that prepares individuals to apply technical knowledge and skills to the training of pilots or navigators, to prepare them to fly and/or navigate commercial passenger and cargo, agricultural, public service, corporate and rescue aircraft, and fixed or rotary wing aircraft. Includes instruction in principles of aircraft design and performance, aircraft flight systems and controls, flight crew operations and procedures, radio communications and navigation procedures and systems, airways safety and traffic regulations, and governmental rules and regulations pertaining to piloting aircraft. Programs may qualify individuals to administer the FAA commercial air crew examinations.
		49.0199	Any instructional program in aviation and air transportation services not listed above.
49.02	F	49.02	Ground Transportation
		49.0202	A program that prepares individuals to apply technical knowledge and skills to operate and maintain a variety of heavy equipment, such as a crawler tractors, motor graders and scrapers, shovels, rigging devices, hoists, and jacks. Includes instruction in digging, ditching, sloping, stripping, grading, and backfilling, clearing and excavating.
		49.0205	A program that prepares individuals to apply technical knowledge and skills to drive trucks and buses, delivery vehicles, for-hire vehicles and other commercial vehicles, or to instruct commercial vehicle operators. Includes instruction in operating gas, diesel, or electrically-powered vehicles; loading and unloading cargo or passengers; reporting delays or accidents on the road; verifying load against shipping papers; arranging transportation for personnel; and keeping records of receipts and fares.
		49.0206	A program that prepares individuals to hoist and swing loads via complex rotating machinery that is driver operated. Includes instruction in crane operational

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			characteristics, load and capacity chart usage, emergency control skills, safety, specific types of mobile cranes and loading devices, applicable codes and standards, and applications to particular types of jobs and loads.
		49.0207	A program that prepares individuals to control the movement of traffic through construction and maintenance zones and to protect the safety of work crews, drivers, and pedestrians. Includes instruction in flagging duties and responsibilities, the traffic control zone, flagging signals, pavement markers, freeway flagging, utility flagging, emergency response flagging, and night traffic control.
		49.0208	A program that prepares individuals to apply technical knowledge and skills to the operation of railroads and other aspects of the railway industry, including railroad and railyard service. Includes instruction in railway culture, operating skills, General Code of Operation rules, conductor service, signal systems, switching, transportation of hazardous materials, safety, and railway telecommunications systems.
		49.0299	Any instructional program in vehicle and equipment operation not listed above.
49.03	F	49.03	Marine Transportation
		49.0303	A program that prepares individuals to apply technical knowledge and skills to function as commercial fishermen, fishing operations supervisors or in related fishing industry operations. Includes instruction in fishing vessel operation; fishing equipment operation and maintenance; equipment repair; catch identification, sorting, and storage; safety procedures; record keeping; and applicable legal regulations.
		49.0304	A program that prepares individuals to apply technical knowledge and skills to function as professional deep-water or scuba divers, diving instructors, or diving support personnel. Includes instruction in the use of diving equipment and related specialized gear; diving safety procedures; operation and maintenance of underwater life-support systems; underwater communication systems; decompression systems; underwater salvage; exploration, rescue, and photography; and installation and fitting of underwater mechanical systems and their maintenance, repair or demolition.
		49.0309	A program that prepares individuals to serve as captains, executive officers, engineers and ranking mates on commercially licensed inland, coastal and oceangoing vessels. Includes instruction in maritime traditions and law, maritime policy, economics and management of commercial marine operations, basic naval architecture and engineering, shipboard power systems engineering, crew supervision, and administrative procedures.
		49.0399	Any instructional program in water transportation not listed above.
49.99	F	49.99	Transportation and Materials Moving, Other
		49.9999	Any instructional program in transportation and materials moving not listed above.
50.04		50.04	Design and Applied Arts
		50.0401	A program in the applied visual arts that focuses on the general principles and techniques for effectively communicating ideas and information, and packaging products, in digital and other formats to business and consumer audiences, and that may prepare individuals in any of the applied art media.
		50.0402	A program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences via illustrations and other forms of digital or printed media. Includes instruction in concept design, layout, paste-up, and techniques such as

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engraving, etching, silkscreen, lithography, offset, drawing and cartooning, painting, collage, and computer graphics.

50.0404 A program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences via the creation of effective forms, shapes, and packaging

50.0406 A program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences, and recording events and people, via digital, film, still and video photography. Includes instruction in specialized camera and equipment operation and maintenance, applications to commercial and industrial needs, and photography business operations.

50.0407 A program that prepares individuals to apply artistic principles and techniques to the professional design of commercial fashions, apparel, and accessories, and the management of fashion development projects. Includes instruction in apparel design; accessory design; the design of men's', women's', and children's' wear; flat pattern design; computer-assisted design and manufacturing; concept planning; designing in specific materials; labor and cost analysis; history of fashion; fabric art and printing; and the principles of management and operations in the fashion industry.

50.0408 A program in the applied visual arts that prepares individuals to apply artistic principles and techniques to the professional planning, designing, equipping, and furnishing of residential and commercial interior spaces. Includes instruction in computer applications, drafting, and graphic techniques; principles of interior lighting, acoustics, systems integration, and color coordination; furniture and furnishings; textiles and their finishing; the history of interior design and period styles; basic structural design; building codes and inspection regulations; and applications to office, hotel, factory, restaurant and housing design.

50.0409 A program that prepares individuals to apply artistic and computer techniques to the interpretation of technical and commercial concepts. Includes instruction in computer-assisted art and design, printmaking, concepts sketching, technical drawing, color theory, imaging, studio technique, still and life modeling, multimedia applications, communication skills and commercial art business operations.

50.0410 A program that prepares individuals to use artistic techniques to develop and execute interpretations of the concepts of authors and designers to specifications. Includes instruction in book illustration, fashion illustration, map illustration, rendering, exhibit preparation, textual layout, cartooning, and the use of various artistic techniques as requested by clients.

50.0411 A program that focuses on the design, development, and programming of interactive media entertainment, including computer and video games, virtual environments, Internet applications, and other interactive media. Includes instruction in theory of games, turn-based games, real-time games, visual and interactive design, story development, animation, simulation, and programming.

50.0499 Any instructional program in design and applied arts not listed above.

50.06

50.06 Film/Video and Photographic Arts

50.0601 A program in the visual arts that focuses on the study of the history, development, theory, and criticism of the film/video arts, as well as the basic principles of film making and film production.

for manufactured products. Includes instruction in designing in a wide variety of

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plastic and digital media, prototype construction, design development and refinement, principles of cost saving, and product structure and performance criteria relevant to aesthetic design parameters.

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		50.0602	A program that prepares individuals to communicate dramatic information, ideas, moods, and feelings through the making and producing of films and videos. Includes instruction in theory of film, film technology and equipment operation, film production, film directing, film editing, cinematographic art, film audio, techniques for making specific types of films and/or videos, media technologies, computer image making, multi-media production, and the planning and management of film/video operations.
		50.0605	A program that focuses on the principles and techniques of communicating information, ideas, moods, and feelings through the creation of images on photographic film, plates, and digital images and that may prepare individuals to be professional photographic artists. Includes instruction in camera and equipment operation and maintenance, film and plate developing, light and composition, films and printing media, color and special effects, photographic art, photographic history, use of computer applications to record or enhance images and applications to the photography of various subjects.
		50.0607	A program that prepares individuals to produce nonfiction film and video. Includes instruction in film and video writing, directing, and production; film studies; history of the documentary; research techniques; videography; editing; and business aspects of film production.
		50.0699	Any instructional program in film/video and photographic arts not listed above.
50.07		50.07	Fine and Studio Arts
		50.0701	A general program that focuses on the introductory study and appreciation of the visual arts. Includes instruction in art, photography, and other visual communications media.
		50.0702	A program that prepares individuals to generally function as creative artists in the visual and plastic media. Includes instruction in the traditional fine arts media (drawing, painting, sculpture, printmaking, CAD/CAM) and/or modern media (ceramics, textiles, intermedia, photography, digital images), theory of art, color theory, composition and perspective, anatomy, the techniques and procedures for maintaining equipment and managing a studio, and art portfolio marketing.
		50.0703	A program that focuses on the study of the historical development of art as social and intellectual phenomenon, the analysis of works of art, and art conservation. Includes instruction in the theory of art, art history research methods, connoisseurship, the preservation and conservation of works of art, and the study of specific periods, cultures, styles, and themes.
		50.0705	A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions through representation by lines made on a surface. Includes instruction in eye-hand coordination; line, value, shape, and perspective; figure and still life drawing; the use of media such as pen and ink, pencil, charcoal, pastel, and brush; and personal style development.
		50.0706	A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions in either two or three dimensions, through simultaneous use of a variety of materials and media.
		50.0708	A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by the application of paints and related chemical color substances to canvases or other materials. Includes instruction in color and color mixing, surface preparation, composition, oil and acrylic media, watercolor media, painting techniques, and personal style development.

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		50.0709	A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by creating three-dimensional art works. Includes instruction in the analysis of form in space; round and relief concepts; sculptural composition; modern and experimental methods; different media such as clay, plaster, wood, stone, and metal; techniques such as carving, molding, welding, casting, and modeling; and personal style development.
		50.0710	A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by rendering art concepts onto surfaces and transferring images, via ink or dyes, onto paper or fabric. Includes instruction in monochrome and color printing; tonality; chemistry; equipment set-up and maintenance; techniques such as serigraphy, lithography, intaglio, woodcut, block, stencil, relief, etching, and composite; and personal style development.
		50.0711	A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by producing art works out of clay and similar materials. Includes instruction in handbuilt and wheelthrown techniques; molding; slips and glazes; trimming and decorating; firing and kiln operation; oxidation; mixed media; ceramic murals; and personal style development.
		50.0712	A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by constructing art works from woven or non-woven fabrics and fibrous materials. Includes instruction in weaving techniques and loom operation; non-woven techniques such as knitting, coiling, netting, and crocheting; quilting; dyeing and pigmentation; printing and other finishing techniques; pattern design; tapestry; and personal style development.
		50.0713	A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by fashioning art works from gems, other stones, and precious metals. Includes instruction in gemology, metalsmithing and finishing, stone cutting and polishing, metal and non-metal casting and molding, electroforming, metal coloring, enameling, photo etching, lapidary technique and art, design concepts, and personal style development.
		50.0799	Any instructional program in fine arts and art studies not listed above.
50.09		50.09	Music
		50.0901	A general program that focuses on the introductory study and appreciation of music and the performing arts. Includes instruction in music, dance, and other performing arts media.
		50.0902	A program that focuses on the study of the historical evolution of music as a social and intellectual phenomenon, the development of musical instruments and techniques, and the analysis and criticism of musical literature. Includes instruction in music history research methods, aesthetic analysis of musical compositions, history of musical writing and notation, the development of musical instruments, the development of music theory, and the study of specific periods, cultural traditions, styles, and themes.
		50.0903	A program that generally prepares individuals to master musical instruments and performing art as solo and/or ensemble performers. Includes instruction on one or more specific instruments from various instrumental groupings.
		50.0904	A program that focuses on the study of the principles of sound manipulation as applied to the creation of music, and the techniques of creating and arranging music. Includes instruction in aural theory, melody, counterpoint, complex harmony, modulation, chromatics, improvisation, progressions, musical writing, instrumentation, orchestration, electronic and computer applications, studies of specific musical styles, and development of original creative ability.

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IAC Code	NTO	CIP Code	IAC Title or CIP Definition
50.0905			A program that focuses on the systematic study of the forms and methods of music art, and the functions of music, in Western and non-Western societies and cultures. Includes instruction in music theory, musicological research methods, and studies of specific cultural styles such as jazz, folk music, rock, ethnic musical traditions, and the music of non-Western cultures.
50.0906			A program that prepares individuals to master the art of leading bands, choirs, orchestras and other ensembles in performance, and related music leadership. Includes instruction in score analysis and arranging, rehearsal and performance leadership, music coaching, arrangement and performance planning, ensemble operations management, and applications to specific school or professional ensembles.
50.0907			A program that prepares individuals to master the piano, organ, or related keyboard instruments and performing art as solo, ensemble, and/or accompanist performers. Includes instruction in piano and keyboard pedagogy, ensemble playing, accompanying, service playing, repertoire, keyboard and pedal skills, recital, and personal style development.
50.0908			A program that prepares individuals to master the human voice and performing art as solo and/or ensemble performers in concert, choir, opera, or other forms of singing. Includes instruction in voice pedagogy, diction, vocal physiology and exercise, expressive movement, repertoire, recital, and personal style development.
50.0910			A program that prepares individuals to study and master the performance and composition of Jazz. Includes instruction in the history of Jazz and related musical styles such as the Blues, Jazz composition and theory, improvisation, Jazz instrument and ensemble performance, and related topics.
50.0911			A program that prepares individual to master a stringed instrument and performing arts as solo, ensemble and/or accompanist performers. Includes instruction in playing and personal style development.
50.0912			A program that prepares individuals to provide musical instruction and tutoring to clients in private and institutional settings. Includes instruction in music theory, music composition, mastery of one or more instruments, familiarity with various musical genres and styles, principles of music education, and client communications.
50.0913			A program that focuses on the creative aspects of the blending of music and technology; and that prepares individuals to apply technical knowledge and skills to the composition, recording, synthesis, and performance of music; audio-visual production; scoring for film and multimedia; and software and multimedia development. Includes instruction in music theory, music history, composition, acoustics, recording technology, computer composition, electronic music synthesis, technology-based performance, 3D sound and spatial audio, and music business and law.
			50.0914 A program that prepares individuals to master a brass instrument and performing art as solo, ensemble, and/or accompanist performers. Includes instruction in playing and personal style development.
50.0915			A program that prepares individuals to master a woodwind instrument and performing art as solo, ensemble, and/or accompanist performers. Includes instruction in playing and personal style development.

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		50.0916	A program that prepares individuals to master percussion instruments and performing art for a variety of musical settings, including orchestral, solo, chamber, commercial, or nontraditional. Includes instruction in playing and personal style development.
		50.0999	Any instructional program in music not listed above.
50.99		50.99	Visual and Performing Arts, Other
		50.9999	Any instructional program in visual and performing arts not listed above.
51.01	F	51.01	Chiropractic
		51.0101	A program that prepares individuals for the independent professional practice of chiropractic, a health care and healing system based on the application of noninvasive treatments and spinal adjustments to alleviate health problems caused by vertebral misalignments affecting bodily function as derived from the philosophy of Daniel Palmer. Includes instruction in the basic medical sciences, chiropractic theory and science, postural and spinal analysis, diagnostic radiology and ultrasound, adjustment technique, patient counseling, professional standards and ethics, and practice management.
51.02	M	51.02	Communication Disorders Sciences and Services
		51.0201	A program that focuses on the application of biomedical, psychological, and physical principles to the study of the scientific bases, development, and treatment of speech, language, hearing, and cognitive communication problems caused by disease, injury, or disability. Includes instruction in language science, hearing science, speech and voice science, biology of communication, behavioral linguistics, psychology, and applications to the development of diagnostic and rehabilitative strategies and technologies.
		51.0202	A program that prepares individuals to diagnose and treat hearing loss and other disorders involving the ear, advise patients on means to use their remaining hearing, and select and fit hearing aids and other devices. Includes instruction in acoustics, anatomy and physiology of hearing, hearing measurement, auditory pathology, middle and inner ear analysis, rehabilitation therapies and assistive technologies, and pediatric and other special applications.
		51.0203	A program that prepares individuals to evaluate the speaking, language interpretation, and related physiological and cognitive capabilities of children and/or adults and develop treatment and rehabilitative solutions in consultation with clinicians and educators. Includes instruction in the anatomy and physiology of speech and hearing, biomechanics of swallowing and vocal articulation, communications disorders, psychology of auditory function and cognitive communication, language assessment and diagnostic techniques, and rehabilitative and management therapies.
		51.0204	An integrated program that prepares individuals to work as both audiologists and speech-language pathologists. Includes instruction in a variety of communication disorder studies, audiology, speech pathology, language acquisition, and the design and implementation of comprehensive therapeutic and rehabilitative solutions to communications problems.
		51.0299	Any instructional program in communications disorders sciences and services not listed above.
51.04	F	51.04	Dentistry
		51.0401	A program that prepares individuals for the independent

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professional practice of dentistry/dental medicine, encompassing the evaluation, diagnosis, prevention, and treatment of diseases, disorders, and conditions of the oral cavity, maxillofacial area, and adjacent structures and their impact on the human body and health. Includes instruction in the basic biomedical sciences, occlusion, dental health and prevention, oral pathology, cariology, operative dentistry, oral radiology, principles of the various dental specialties, pain management, oral medicine, clinic and health care management, patient counseling, and professional standards and ethics.

51.05	F	51.05	Advanced/Graduate Dentistry and Oral Sciences
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			51.0501 An integrated or undifferentiated program that generally prepares dentists in one or more of the oral sciences and advanced/graduate dentistry specialties.
		51.0502	A program that focuses on the advanced study of dental clinical techniques and dental practice issues. Includes instruction in subjects such as the history of dentistry, advanced dental practice management, dental ethics and jurisprudence, social and behavioral science studies of dentistry, advanced restorative dentistry, oral medicine, oral radiology, advanced clinical procedures and technology, and others.
			51.0503 A program that focuses on the scientific study of the growth, development, diseases, healing properties, and neurological components of the oral cavity, related tissues and organs, and associated craniofacial areas. Includes instruction in oral microbiology microanatomy, craniofacial pain, humoral aspects of disease, etiology and histology of caries, plaque ecology, wound healing, oral disease epidemiology, oral manifestations of systemic disease, lesions, normal and pathologic physiology, and related molecular and physical studies.
			51.0504 A program that focuses on the scientific study of dental disease prevention and control, community dental health promotion, and prepares dentists and public health professionals to function as dental health specialists. Includes instruction in preventive dentistry, the relationship of oral disease to health and quality of life, patient and practitioner behavior, dental epidemiology, nutrition and dental health, dental care policy and delivery, oral health program planning and administration, biostatistics, and research methods.
		51.0505	A program that focuses on the scientific study of the biomaterials and inert and active compounds used in dental procedures; the development of dental materials; and their effects on the living tissues of the oral cavity and systemic bodily health. Includes instruction in materials science, dental bioengineering, biocompatibility of materials, physics and mechanics of dental materials, elastic and plastic deformation, surface bonding, and applications to fixed and removable prostheses and restorative procedures.
		51.0506	A program that focuses on the advanced study of the morphology, physiology, and pathology of human dental pulp and periradicular tissues, and prepares dentists to diagnose and treat internal diseases and injuries of teeth. Includes instruction in theory and practice of endodontics; pulpal disease; relationship of endodontic conditions to other dental/oral health issues; endodontic operative technique; and patient care and management.
		51.0507	A program that focuses on the advanced study of the diagnosis and intrusive and adjunctive treatment of diseases, injuries, and defects of the oral and maxillofacial regions, including functional and aesthetic aspects. Includes instruction in pharmacology, analgesia, anesthesia, anxiety control, surgical procedures and techniques, surgical instrumentation, exodontia, oral diseases and malfunctions, soft and hard tissue pathology, dentoalveolar surgery, infection management, and prosthetic implantation.

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51.0508	<p>A program that focuses on the advanced study of the guidance of growing dental structures and the correction of misalignments, disproportionate growth, and traumas caused by genetics, disease, injuries, and dysfunctional behaviors. Includes instruction in craniofacial growth and development, malocclusion, design and fabrication of orthodontic appliances, craniofacial alignment, physiological function and analysis, cephalometrics, model analysis, space analysis, surgical orthodontics, cleft lip and palate, and treatment planning and management.</p>
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		51.0509	A program that focuses on the advanced study of the therapeutic and preventive care of the oral health of children from birth through adolescence, and the care of adults with physical, mental, and emotional disabilities. Includes instruction in developmental oral biology, preventive medicine, diet therapy and counseling, patient management, pediatric restorative procedures, pulp therapy, trauma management, anesthesia, treatment planning, patient management, and the treatment of handicapped patients.
		51.0510	A program that focuses on the advanced study of the etiology and treatment of diseases of the gingivae (gum tissue) and supporting bone, nerve, and vascular structures. Includes instruction in periodontium pathology, diagnostic procedures and equipment, occlusion, nutritional aspects of periodontology, surgical treatments, and patient care and management.
		51.0511	A program that focuses on the advanced study of the restoration and maintenance of teeth, oral function, and aesthetic form through the use of single or compound materials, structures, and artificial devices. Includes instruction in implant dentistry, surgical procedures, denture design and fabrication, fixed and removable prosthodontics, restorative techniques, occlusion therapy and devices, geriatric dentistry, cosmetic dentistry, and temporomandibular joint dysfunction.
		51.0599	Any instructional program in advanced/graduate dentistry and oral sciences not listed above.
51.06	M	51.06	Dental Support Services and Allied Professions
		51.0601	A program that prepares individuals to provide patient care, take dental radiographs (x-ray photographs), prepare patients and equipment for dental procedures, and discharge office administrative functions under the supervision of dentists and dental hygienists. Includes instruction in medical record-keeping, general office duties, reception and patient intake, scheduling, equipment maintenance and sterilization, basic radiography, pre- and post-operative patient care and instruction, chairside assisting, taking tooth and mouth impressions, and supervised practice.
		51.0602	A program that prepares individuals to clean teeth and apply preventive materials, provide oral health education and treatment counseling to patients, identify oral pathologies and injuries, and manage dental hygiene practices. Includes instruction in dental anatomy, microbiology, and pathology; dental hygiene theory and techniques; cleaning equipment operation and maintenance; dental materials; radiology; patient education and counseling; office management; supervised clinical training; and professional standards.
		51.0603	A program that prepares individuals, under the supervision of dentists, to design and construct dental prostheses such as caps, crowns, bridges, dentures, splints, and orthodontic appliances. Includes instruction in dental anatomy, dental materials, ceramics technology, impressions, complete dentures, partial dentures, orthodontics, crowns and bridges, sculpture, bonding and assembly techniques, and equipment operation.
		51.0699	Any instructional program in dental services and allied professions not listed above.
51.07		51.07	Health and Medical Administrative Services
		51.0701	A program that prepares individuals to develop, plan, and manage health care operations and services within health care facilities and across health care systems. Includes instruction in planning, business management, financial management, public relations, human resources management, health care systems operation and management, health care resource allocation and policy making, health law and regulations, and applications to specific types of health care services.

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		51.0702	A program that prepares individuals to apply managerial principles to the administration of hospitals, clinics, nursing homes, and other health care facilities. Includes instruction in facilities planning, building and operations management, business management, financial management and insurance, fund-raising and marketing, public relations, human resources management and labor relations, health care facilities operations, principles of health care delivery, and applicable law and regulations.
		51.0703	A program that prepares individuals, under the supervision of nurses or ward supervisors, to perform routine administrative and reception duties in a patient care unit within a hospital or other health care facility. Includes instruction in receiving and directing visitors, transcribing medical and nursing orders, preparing requisition forms, scheduling patient appointments and procedures, monitoring patients and personnel, and interpersonal skills.
		51.0704	A program that prepares individuals, under the supervision of nursing or medical service administrators, to supervise and coordinate the operations of one or more patient care units in hospitals or other health care facilities. Includes instruction in planning and initiating administrative procedures, personnel supervision, interpersonal skills, general and/or specialized health care operations and procedures, and consultation with other medical, nursing, and administrative team members.
		51.0705	A program that prepares individuals to manage the specialized business functions of a medical or clinical office. Includes instruction in business office operations, business and financial record-keeping, personnel supervision, medical and health care policy administration, conference planning, scheduling and coordination, public relations, and applicable law and regulations.
		51.0706	A program that prepares individuals to plan, design, and manage systems, processes, and facilities used to collect, store, secure, retrieve, analyze, and transmit medical records and other health information used by clinical professionals and health care organizations. Includes instruction in the principles and basic content of the biomedical and clinical sciences, information technology and applications, data and database management, clinical research methodologies, health information resources and systems, office management, legal requirements, and professional standards.
		51.0707	A program that prepares individuals, under the supervision of health information administrators and other professionals, to construct medical records and clinical databases, perform manipulations on retrieved data, control the security and quality of records, and supervise data entry and technical maintenance personnel. Includes instruction in clinical and biomedical science data and information requirements, database management, data coding and validation, information security, quality control, health information content and structure, medical business procedures, and legal requirements.
		51.0708	A program that prepares individuals to execute verbatim medical conference minutes, medical reports, and medical orders. Includes instruction in dictation and simultaneous recording, analysis of notes and visual evidence, medical terminology, data processing applications and skills, formal medical report and correspondence formats, professional standards, and applicable law and regulations.
		51.0709	A program that prepares individuals to apply computer programming, troubleshooting, and information technology skills to the installation, maintenance, and upgrade of standard, customized, or proprietary medical software and associated hardware. Includes instruction in computer programming, systems analysis, networking, telecommunications, medical records and informatics

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software applications, information technology, systems administration, computer security, and applicable regulations and certifications or licenses.

- 51.0710 A program that prepares individuals, under the supervision of office managers and other professionals, to perform routine administrative duties in a medical, clinical, or health care facility/system office environment. Includes instruction in general office skills, data processing, office equipment operation, principles of medical record-keeping and business regulations, medical/clinical office procedures, and communications skills.
- 51.0711 A program that prepares individuals, under the supervision of physicians, nurses, or other health care professionals, to perform medical office or facilities management services and perform one or more clinical allied health specialties. Includes instruction in health care management; medical office administration; medical law and regulations; training in one or more diagnostic, treatment, therapy, or laboratory specialties at the assistant level or above; and applicable professional standards and ethics.
- 51.0712 A program that prepares individuals, under the supervision of office managers, nurses, or physicians, to provide customer service, visitor reception, and patient intake and discharge services. Includes instruction in medical office and health care facility procedures, medical terminology, interpersonal skills, record-keeping, customer service, telephone skills, data entry, interpersonal communications skills, and applicable policies and regulations.
- 51.0713 A program that prepares individuals to perform specialized data entry, classification, and record-keeping procedures related to medical diagnostic, treatment, billing, and insurance documentation. Includes instruction in medical records and insurance software applications, basic anatomy and physiology, medical terminology, fundamentals of medical science and treatment procedures, data classification and coding, data entry skills, and regulations relating to Medicare and insurance documentation.
- 51.0714 A program that prepares individuals to perform and manage the medical and health insurance operations in a medical office, health care facility, health maintenance organization, or insurance provider. Includes instruction in health and medical insurance processes; health insurance law, policy, and regulations; insurance records and paperwork administration; insurance office administration; health/medical insurance software applications; personnel supervision; business mathematics; billing and collection procedures; medical terminology; and communications skills.
- 51.0715 A program that prepares individuals to perform specialized investigatory, analytical, evaluative, and consultative functions related to health/medical insurance operations and their regulation. Includes instruction in health and medical insurance processes and procedures, health insurance law and regulations, health care industry law, record-keeping, analytic and investigatory techniques, evaluation methods, field operations methods, office procedures, related software applications, oral and written communications skills, interviewing techniques, and professional standards and ethics.

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		51.0716	A program that prepares individuals to perform the duties of special assistants and personal secretaries for practicing physicians and nurses, health care facilities and services administrators, and other health care professionals. Includes instruction in business and medical communications, medical terminology, principles of health care operations, public relations and interpersonal communications, software applications, record-keeping and filing systems, scheduling and meeting planning, applicable policy and regulations, and professional standards and ethics.
		51.0717	A program that prepares individuals to perform credentialing, privileging, personnel management, and accreditation compliance services for hospitals and other health care facilities and organizations. Includes instruction in medical staff organization and management, medical terminology, credentialing and re-credentialing, health care accreditation and regulatory standards, health care law, meeting and negotiation management, and office information systems management.
		51.0718	A program that prepares individuals to apply managerial principles to the administration of nursing homes, assisted living facilities, adult day care, home health services, and other long term care settings and agencies serving the elderly and disabled. Includes instruction in social and clinical aspects of aging, health care delivery systems, nursing home administration, assisted living administration, aging policy and government programs, ethics, business management, financial management, human resource management, marketing, and applicable laws and regulations.
		51.0719	A program that prepares individuals for careers as clinical research administrators or clinical research coordinators where they work under the supervision of a Principal Investigator to organize, coordinate and administer clinical research trials. Includes instruction in pharmacology, medical terminology, foundations of clinical research, project management, ethics, research design and data management, and legal and regulatory compliance .
		51.0799	Any instructional program in health and medical administrative services not listed above.
51.08	M	51.08	Allied Health and Medical Assisting Services
		51.0801	A program that prepares individuals, under the supervision of physicians, to provide medical office administrative services and perform clinical duties including patient intake and care, routine diagnostic and recording procedures, pre-examination and examination assistance, and the administration of medications and first aid. Includes instruction in basic anatomy and physiology; medical terminology; medical law and ethics; patient psychology and communications; medical office procedures; and clinical diagnostic, examination, testing, and treatment procedures.
		51.0802	A program that prepares individuals, under the supervision of physicians or laboratory scientists or technologists, to perform waived testing procedures (Clinical Laboratory Improvement Amendments of 1988), phlebotomy, and other duties in support of laboratory teams. Includes instruction in clinical procedures, various laboratory tests, laboratory mathematics, computer technology, equipment operation and maintenance, sterilization and safety, communications skills, and interpersonal skills.

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51.0803			A program that prepares individuals, under the supervision of occupational therapists, to direct patient participation in skill-enhancing, learning, and motivational tasks; correct or diminish pathologies; and to provide direct health education and promotion services. Includes instruction in human life span development, occupational therapy principles and practice skills, treatment planning and implementation, record-keeping and documentation, patient education and intervention, activity and program direction, and assistive services management.
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		51.0805	A program that prepares individuals, under the supervision of pharmacists, to prepare medications, provide medications and related assistance to patients, and manage pharmacy clinical and business operations. Includes instruction in medical and pharmaceutical terminology, principles of pharmacology and pharmaceuticals, drug identification, pharmacy laboratory procedures, prescription interpretation, patient communication and education, safety procedures, record-keeping, measurement and testing techniques, pharmacy business operations, prescription preparation, logistics and dispensing operations, and applicable standards and regulations.
		51.0806	A program that prepares individuals, under the supervision of a physical therapist, to implement physical therapy treatment care plans, train patients, conduct treatment interventions, use equipment, and observe and record patient progress. Includes instruction in applied anatomy and physiology, applied kinesiology, principles and procedures of physical therapy, basic neurology and orthopedics, physical therapy modalities, documentation skills, psychosocial aspects of health care, wound and injury care, electrotherapy, working with orthotics and prostheses, and personal and professional ethics.
		51.0808	A program that prepares individuals, under the supervision of veterinarians, laboratory animal specialists, and zoological professionals, to provide patient management, care, and clinical procedures assistance as well as owner communication. Includes instruction in animal nursing care, animal health and nutrition, animal handling, clinical pathology, radiology, anesthesiology, dental prophylaxis, surgical assisting, clinical laboratory procedures, office administration skills, patient and owner management, and applicable standards and regulations.
		51.0809	A program that prepares individuals to assist anesthesiologists and nurse anesthetists in developing and implementing patient anesthesia care plans, including preoperative, surgical theater, recovery room, and postoperative/intensive care procedures. Includes instruction in patient data collection, catheter insertion, airway management and drug administration, assisting the administration and monitoring of regional and peripheral nerve blockades, support therapy, adjusting anesthetic levels during surgery, interoperative monitoring, postoperative procedures, pain clinics and patient education, and administrative tasks.
		51.0810	A program that prepares individuals to assist licensed EMTs, under the supervision of a physician, to prepare and transport ill or injured patients, and to operate emergency vehicles and equipment such as life support units. Includes instruction in first aid and emergency medicine field techniques, patient stabilization and care, medical field communications, equipment operation and maintenance, emergency vehicle operation, and applicable standards and regulations.
		51.0811	A program that prepares individuals, under the supervision of pathologists, to assist in the performance of autopsies, obtaining and preparing surgical specimens, preparing autopsy reports, and interacting with other clinicians, officials, and individuals. Includes instruction in anatomy; physiology; medical terminology; general, systemic, forensic, and pediatric pathology; autopsy procedures; surgical technique; medical photography; tissue preparation; record keeping and laboratory administration; interpersonal skills; and applicable standards and regulations.
		51.0812	A program that prepares individuals to administer general respiratory care procedures under the supervision of respiratory therapists in a variety of clinical settings. Includes instruction in patient data collection and monitoring, airway management, installation of nebulizers and other respiratory assistance devices,

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application and monitoring of breathing gases, equipment operation and maintenance, safety and sanitation procedures, and applicable regulations.

- 51.0813 A program that prepares individuals, under the supervision of a chiropractor, to provide patient management, examination, and treatment services. Includes instruction in the principles and procedures of chiropractic, radiographic X-Ray procedures and techniques, X-Ray film analysis and media studies, orthopedic and neurological testing, clinical laboratory procedures, patient management and education, office administrative skills, and applicable law and regulations.
 - 51.0814 A program that prepares individuals, under the supervision of a physician, to perform patient assessment, patient management, selected imaging procedures and to make initial observations of diagnostic images. Includes instruction in radiologic procedures and techniques, cross sectional anatomy, pharmacology, pathophysiology, patient assessment, patient care and management, and radiation biology.
 - 51.0815 A program that prepares individuals to provide lactation management services and breastfeeding support to women, and to work as a Lactation Consultant in a variety of clinical settings. Includes instruction in anatomy and physiology of lactation, nutrition, breastfeeding techniques and technologies, common concerns and solutions, management of special situations, breastfeeding instruction, professional and legal concerns, and advocacy.
 - 51.0816 A program that prepares individuals, under the supervision of speech-language pathologists, to assist in the provision of speech-language pathology services to individuals of all ages, including screenings and assessments, following treatment plans or protocols, documenting and reporting patient performance, performing checks and maintenance of equipment, and providing support in research projects. Includes instruction in speech and language development, phonetics, childhood and adult communication disorders, speech and hearing screening, and clinical procedures in speech-language pathology.
 - 51.0899 Any instructional program in allied health and medical assisting services not listed above.
- 51.09 Allied Health Diagnostic, Intervention, and Treatment Professions**
- 51.0901 A program that prepares individuals to perform invasive, noninvasive, and peripheral examinations of the cardiovascular system at the request of physicians to aid in diagnoses and therapeutic treatments. Includes instruction in reviewing and recording patient histories and clinical data, patient care, investigative and examination procedures, diagnostic procedures, data analysis and documentation, physician consultation, equipment operation and monitoring, and professional standards and ethics.
 - 51.0902 A program that prepares individuals, under the supervision of physicians and nurses, to administer EKG and ECG diagnostic examinations and report results to the treatment team. Includes instruction in basic anatomy and physiology, the cardiovascular system, medical terminology, cardiovascular medications and effects, patient care, EKG and ECG administration, equipment operation and maintenance, interpretation of cardiac rhythm, patient record management, and professional standards and ethics.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		51.0903	A program that prepares individuals, under the supervision of a physician, to study and record electrical activity in the brain and nervous system for purposes of patient monitoring and supporting diagnoses. Includes instruction in patient communication and care; taking and abstracting patient histories; application of recording electrodes; EEG, EP, and PSG equipment operation and procedural techniques; and data recording and documentation.
		51.0904	A program that prepares individuals, under the remote supervision of physicians, to recognize, assess, and manage medical emergencies in prehospital settings and to supervise Ambulance personnel. Includes instruction in basic, intermediate, and advanced EMT procedures; emergency surgical procedures; medical triage; rescue operations; crisis scene management and personnel supervision; equipment operation and maintenance; patient stabilization, monitoring, and care; drug administration; identification and preliminary diagnosis of diseases and injuries; communication and computer operations; basic anatomy, physiology, pathology, and toxicology; and professional standards and regulations.
		51.0905	A program that prepares individuals, under the supervision of physicians, to employ radioactive and stable nuclides in diagnostic evaluations and therapeutic applications while monitoring for patient health and safety. Includes instruction in nuclear physics, health physics, instrumentation and statistics, biochemistry, immunology, radiopharmacology, radiation biology, clinical nuclear medicine, radionuclide therapy, computer applications, safety regulations, equipment operation, quality control, laboratory procedures, taking patient histories, patient evaluation and monitoring, emergency first aid, administration and record-keeping, and personnel supervision.
		51.0906	A program that prepares individuals, under the supervision of physicians and nurses, to operate extracorporeal circulation and autotransfusion equipment during medical procedures and surgeries where the support or temporary replacement of a patient's own respiratory or circulatory system is required. Includes instruction in equipment selection and operation, physician and medical team consultation, patient condition monitoring, procedural techniques, and principles of respiratory and circulatory physiology.
		51.0907	A program that prepares individuals to administer prescribed courses of radiation treatment, manage patients undergoing radiation therapy, and maintain pertinent records. Includes instruction in applied anatomy and physiology, oncologic pathology, radiation biology, radiation oncology procedures and techniques, radiation dosimetry, tumor localization, treatment planning, patient communication and management, data collection, record-keeping, and applicable standards and regulations.
		51.0908	A program that prepares individuals, under the supervision of physicians, to assist in developing respiratory care plans, administer respiratory care procedures, supervise personnel and equipment operation, maintain records, and consult with other health care team members. Includes instruction in the applied basic biomedical sciences; anatomy, physiology, and pathology of the respiratory system; clinical medicine; therapeutic procedures; clinical expressions; data collection and record-keeping; patient communication; equipment operation and maintenance; personnel supervision; and procedures for special population groups.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		51.0909	A program that prepares individuals, under the supervision of physicians and surgical nurses, to maintain, monitor, and enforce the sterile field and adherence to aseptic technique by preoperative, surgical team, and postoperative personnel. Includes instruction in instrument and equipment sterilization and handling, surgical supplies management, wound exposure and closure, surgical computer and robot operation and monitoring, maintenance of hemostasis, and patient and team scrubbing.
		51.0910	A program that prepares individuals, under the supervision of physicians, to utilize medical ultrasound techniques to gather sonographic data used to diagnose a variety of conditions and diseases. Includes instruction in obtaining, reviewing, and integrating patient histories and data; patient instruction and care; anatomic, physiologic and pathologic data recording; sonographic data processing; sonography equipment operation; and professional standards and ethics.
		51.0911	A program that prepares individuals, under the supervision of physicians, to provide medical imaging services to patients and attending health care professionals. Includes instruction in applied anatomy and physiology, patient positioning, radiographic technique, radiation biology, safety and emergency procedures, equipment operation and maintenance, quality assurance, patient education, and medical imaging/radiologic services management.
		51.0912	A program that prepares individuals to practice medicine, including diagnoses and treatment therapies, under the supervision of a physician. Includes instruction in the basic medical and clinical sciences and specialized preparation in fields such as family medicine, pediatrics, obstetrics, gynecology, general surgery, psychiatry, and behavioral medicine; the delivery of health care services to homebound patients, rural populations, and underserved populations; and community health services.
		51.0913	A program that prepares individuals to work in consultation with, and under the supervision of physicians to prevent and treat sports injuries and associated conditions. Includes instruction in the identification, evaluation, and treatment of athletic injuries and illnesses; first aid and emergency care; therapeutic exercise; anatomy and physiology; exercise physiology; kinesiology and biomechanics; nutrition; sports psychology; personal and community health; knowledge of various sports and their biomechanical and physiological demands; and applicable professional standards and regulations.
		51.0914	A program that focuses on the application of genetics to the therapeutic treatment of diseases and inherited abnormalities through the targeted modification of gene expression, and prepares individuals to administer genetic therapies. Includes instruction in medical genetics, genome analysis, pharmacology of gene transfer, viral vectors, nonviral therapeutic techniques, genetic screening, targeted gene delivery, vector production, safety and quality assurance, clinical trials management, and bioethics.
		51.0915	A program that prepares individuals, under the supervision of physicians and nurses, to perform both cardiovascular and pulmonary diagnostic and therapeutic procedures. Includes instruction in cardiopulmonary pharmacology; anatomy and physiology of the heart, peripheral vascular system, and lungs; pulmonary and cardiovascular disease and dysfunction; peripheral vascular Doppler procedures; invasive and non-invasive cardiology; pulmonary function tests; blood gas analysis; echocardiograph procedures; bronchoscopy; patient management; patient history taking and record-keeping; applications to clinical research; and emergency procedures.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		51.0916	A program that prepares individuals, under the supervision of health physicists, occupational safety and health specialists, and public health officials, to monitor and control radiation exposure and implement preventive measures in health care, work, and natural environments. Includes instruction in radiation physics, environmental radioactivity, radiological instrumentation, electronics of radiation detection equipment, radioactive waste management and control, safety and handling procedures, decontamination procedures, radioactivity testing and analysis, and communications skills.
		51.0917	A program that prepares individuals to work under the supervision of a physician to provide comprehensive evaluation and treatment of sleep disorders. Includes instruction in human anatomy and physiology, polysomnographic technology, polysomnography scoring, neuroanatomy and neurophysiology of sleep, sleep disorders, and medical terminology.
		51.0918	A program that prepares individuals to test the hearing of, and to select, fit and dispense appropriate hearing aids for, patients. Includes instruction in acoustics, anatomy and physiology of the ear, hearing testing, hearing aid fitting and technology, health promotion and rehabilitation, counseling and communication, business management, and professional ethics.
		51.0919	A program that prepares registered radiographers to become registered mammographers. Includes instruction in anatomy and physiology, mammography instrumentation, mammography positioning, principles and procedures of mammography, and quality assurance.
		51.0920	A program that prepares individuals who are AART-certified radiological technicians to utilize MRI technology to obtain still and moving images of various vascular structures in the human body that aid the physician in the diagnosis or treatment of disease and injury. Includes instruction in MRI imaging, sectional anatomy and pathology, MRI technology, MRI techniques and procedures, MRI physics, and clinical training.
		51.0999	Any instructional program in allied health diagnostic, intervention, and treatment professions not listed above.
51.10	M	51.10	Clinical/Medical Laboratory Science/Research and Allied Professions
		51.1001	A program that prepares individuals to perform routine and specialized blood testing procedures, collect and process blood donations, and support physicians and other clinicians administering transfusion therapy. Includes instruction in basic cellular biology, immunohematology, blood bank procedures, blood typing, antigen and antibody identification tests, hemolytic and transfusion responses and diseases, donor selection, blood drawing and storage, blood separation, viral marker testing, laboratory and personnel supervision, safety and sterilization, and applicable laws and regulations.
		51.1002	A program that prepares individuals to work with pathologists to detect changes in body cells that may indicate, and permit diagnosis of, the early development of cancers and other diseases. Includes instruction in biochemistry, microbiology, applied mathematics, microscopy, slide preparation, identification of cellular structures and abnormalities, and laboratory procedures and safety.
		51.1003	A program that prepares individuals, under the supervision of clinical laboratory scientists and health care professionals, to perform tests and analyses of blood samples. Includes instruction in clinical laboratory procedures; blood anatomy and physiology; cellular and molecular biology; blood pathology and disease indicators; quantitative, qualitative, and coagulation testing methodologies; equipment operation and maintenance; and record-keeping.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
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IAC Code	NTO	CIP Code	IAC Title or CIP Definition
51.1004			A program that prepares individuals, under the supervision of clinical laboratory scientists/medical technologists, to perform routine medical laboratory procedures and tests and to apply preset strategies to record and analyze data. Includes instruction in general laboratory procedures and skills; laboratory mathematics; medical computer applications; interpersonal and communications skills; and the basic principles of hematology, medical microbiology, immunohematology, immunology, clinical chemistry, and urinalysis.
51.1005			A program that prepares individuals to conduct and supervise complex medical tests, clinical trials, and research experiments; manage clinical laboratories; and consult with physicians and clinical researchers on diagnoses, disease causation and spread, and research outcomes. Includes instruction in the theory and practice of hematology, clinical chemistry, microbiology, immunology, immunohematology, physiological relationships to test results, laboratory procedures and quality assurance controls, test and research design and implementation, analytic techniques, laboratory management, data development and reporting, medical informatics, and professional standards and regulations.
51.1006			A program that prepares individuals, under the supervision of ophthalmologists and optometrists, to cut, grind, edge, and finish corrective lenses and to fabricate eyewear. Includes instruction in optical theory, applied mathematics, lens surfacing and finishing, tinting and coating, impact resistance treatment and testing, frame construction and repair, prescription interpretation, equipment operation and maintenance, follow-up adjustment, record-keeping, and laboratory safety procedures.
		51.1007	A program that prepares individuals, at the request of physicians, researchers, and laboratory scientists, to identify tissue structures and cell components and relate these findings to physiological functions and to the detection and diagnosis of diseases and other abnormalities. Includes instruction in medical chemistry, histochemistry, biochemistry, anatomy, physiology, medical informatics, applied mathematics, electron microscopy, instrumentation, quality control procedures, data recording and analysis, laboratory administration, medical terminology, and professional standards and ethics.
		51.1008	A program that prepares individuals, under the supervision of histotechnologists and other clinical laboratory scientists, to prepare and process tissue samples and perform routine histologic procedures and tests. Includes instruction in fixation, dehydration, embedding, sectioning, decalcification, microincineration, mounting, routine and special steaming, laboratory mathematics, laboratory procedures and safety, instrumentation and microscopy, computer applications, preparation of museum specimens, and recording and administrative procedures.
		51.1009	A program that prepares individuals, under the supervision of physicians and other health care professionals, to draw blood samples from patients using a variety of intrusive procedures. Includes instruction in basic vascular anatomy and physiology, blood physiology, skin puncture techniques, venipuncture, venous specimen collection and handling, safety and sanitation procedures, and applicable standards and regulations.
		51.1010	A program that prepares individuals to perform analyses of the human genome and chromosomes for the research and diagnosis of genetic diseases and defects, in preparation for organ transplants, and in support of

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		51.1011	A program that prepares individuals to administer hemodialysis treatments to patients with renal failure under the supervision of a nurse or physician. Includes instruction in basic anatomy and physiology, dialysis prescription interpretation, dialysite preparation, extracorporeal circuit and dialyzer set-up and maintenance, equipment monitoring, patient preparation, taking vital signs, documentation and communication, venipuncture and local anesthesia administration, emergency intervention, safety and sanitation, and professional standards and ethics.
		51.1012	A program that prepares individuals to clean, sterilize, and assemble surgical instruments, equipment, and supplies for use in operating rooms and other medical and surgical facilities. Includes instruction in sterilization; infection control; decontamination; and surgical instrumentation processing, distribution, and recordkeeping.
		51.1099	Any instructional program in clinical/medical laboratory science and allied professions not listed above.
51.11		51.11	Health/Medical Preparatory Programs
		51.1101	A program that prepares individuals for admission to a professional program in dentistry.
		51.1102	A program that prepares individuals for admission to a professional program in medicine, osteopathic medicine, or podiatric medicine.
		51.1103	A program that prepares individuals for admission to a professional program in pharmacy.
		51.1104	A program that prepares individuals for admission to a professional program in veterinary medicine.
		51.1105	A program that prepares individuals for admission to a professional program in Nursing.
		51.1106	A program that prepares individuals for admission to a professional program in chiropractic medicine.
		51.1107	A program that prepares individuals for admission to a professional program in occupational therapy.
		51.1108	A program that prepares individuals for admission to a professional program in optometry.
		51.1109	A program that prepares individuals for admission to a professional program in physical therapy.
		51.1199	Any instructional program in health and medical professional preparation not listed above.
51.15	M	51.15	Mental and Social Health Services and Allied Professions
		51.1501	A program that prepares individuals to help prevent substance abuse, counsel individuals and families with drug and alcohol problems, and perform intervention and therapeutic services for persons suffering from addiction. Includes instruction in individual and group counseling skills, psychology of addiction, sociology, crisis intervention, substance abuse identification methodologies, substance abuse treatment modalities, substance abuse prevention and treatment resources, pharmacology and behavioral aspects of abused substances, treatment evaluation, patient observation and education, group dynamics, professional standards and ethics, and applicable law and regulations. treatments for cancers and leukemias. Includes instruction in chromosome analysis, fluorescent in situ hybridization (FISH), molecular genetic techniques, cytotechnology, and photomicrography.

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51.1502 A program that prepares individuals, under the supervision of psychiatrists, psychologists, nurses, and other mental health care professionals, to provide direct patient care services, assist in developing and implementing treatment plans, administer medications, and perform related administrative functions. Includes instruction in mental health theory, applied psychopathology, patient communication and management, crisis intervention, psychotropic medication, mental health treatment procedures, substance abuse, record-keeping, clinical administrative skills, and applicable standards and regulations.

51.1503 A program that prepares individuals for the specialized professional practice of social work, in collaboration with other health care professionals, in hospitals and other health care facilities and organizations. Includes instruction in social work, psychiatric case work, clinical interviewing techniques, therapeutic intervention strategies, patient testing and evaluation, patient and family counseling, social rehabilitation, patient care planning, record-keeping, and support services liaison.

51.1504 A program that prepares individuals to serve as facilitators, advocates, and referral professionals linking health care and related social services with affected recipient communities. Includes instruction in public and community health, human and social services, health services administration, group counseling, health education, group advocacy, cross-cultural and multilingual communication, and applicable laws and policies.

51.1505 A program that prepares individuals for the independent professional practice of marriage and family therapy, involving the diagnosis of cognitive, affective, and behavioral domain disorders, both mental and emotional, within the context of marriage and family systems and the application of short- and long-term therapeutic strategies in family group contexts. Includes instruction in psychotherapy, family systems and studies, small group intervention and therapy, marital problems, depression, identification of psychopathologies and behavioral disorders, holistic health care, practice management, applicable regulations, and professional standards and ethics.

51.1506 A program that prepares individuals, including but not limited to, ordained clergy and other counseling professionals to respond to the emotional and/or spiritual needs of patients and families in health care emergencies and other situations, and to consult with and counsel other health care professionals. Includes instruction in advanced interpersonal communication; individual and small group counseling; interdisciplinary teamwork; crisis management; extended care relationships; selfanalysis; medical ethics; pastoral care art; spiritual dimensions of human growth and health; counseling psychology and therapy; and applications to grief, death, emotional collapse, injury, individual/family adjustment, and chronic illness situations.

51.1507 A program that prepares individuals to practice the provision of psychoanalytic counseling to individuals and groups based on the psychodynamic principles evolved from authorities such as Freud, Adler, and Jung. Includes instruction in selfanalysis, personality theory, dream analysis, free association and transference theory and techniques, psychodynamic theory, developmental processes, applications to specific clinical conditions, practice management, and professional standards and ethics.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		51.1508	A program that prepares individuals to provide evaluations, referrals, and short-term counseling services to help people prevent or remediate personal problems, conflicts, and emotional crises. Includes instruction in human development, psychopathology, individual and group counseling, personality theory, career assessment, patient screening and referral, observation and testing techniques, interviewing skills, professional standards and ethics, and applicable laws and regulations.
		51.1509	A program that prepares individuals to counsel patients and families concerning inherited genetic disorders and diseases; assess risk factors and planning options associated with potential and actual inherited conditions; and serve as patient advocates and provide referral services in relation to private and public support services. Includes instruction in clinical/medical genetics, methods of genetic testing, interviewing and counseling skills, genetic and support services delivery, principles of public health, medical ethics, law and regulations, patient advocacy, and professional standards.
		51.1599	Any instructional program in mental and social health services and allied professions not listed above.
51.18		51.18	Ophthalmic and Optometric Support Services and Allied Professions
		51.1801	A program that prepares individuals to adapt and fit corrective eyewear, including eyeglasses and contact lenses, as prescribed by ophthalmologists or optometrists; to assist patients in selecting appropriate frames; and to prepare work orders for ophthalmic laboratory technicians. Includes instruction in geometrical optics, ophthalmic optics, anatomy of the eye, optical instrumentation, use and maintenance of adjustment and cleaning tools, prescription interpretation, contact lens adaptation and fitting, prosthesis fitting, facial and eye measuring, pathology identification, record-keeping, and patient and business administrative tasks.
		51.1802	A program that prepares individuals to assist optometrists in providing patient care, administering examinations and treatments, and performing office administrative functions. Includes instruction in applied anatomy and physiology of the eye, visual testing, patient communication, patient preparation, medications and administration, dispensing and fitting of eyeglasses and contact lenses, record-keeping, and office management skills.
		51.1803	A program that prepares individuals to assist ophthalmologists and optometrists in examining and treating patients with vision problems, vision disorders, and eye diseases. Includes instruction in taking patient histories, administering directed treatments and topical medications, diagnostic test procedures and equipment operation, anatomical and functional ocular measurements, patient care and instruction, ophthalmic and surgical equipment maintenance, safety and sterilization procedures, and office administrative procedures.
		51.1804	A program that prepares individuals, under the supervision of ophthalmologists, to analyze, evaluate, and treat specific disorders of vision, eye movement, and eye alignment in children and adults. Includes instruction in eye anatomy, neuroanatomy, physiology, pharmacology, ophthalmic optics, diagnostic testing and measurement, orthoptic treatment therapy, systemic ocular diseases and disorders, principles of surgery, examination techniques, patient

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education, child psychology and development, learning disabilities, medical writing, and record-keeping.

51.1899 Any instructional program in ophthalmic and optometric support services and allied professions not listed above.

51.20

51.20 Pharmacy, Pharmaceutical Sciences, and Administration

51.2001 A program that prepares individuals for the independent or employed practice of preparing and dispensing drugs and medications in consultation with prescribing physicians and other health care professionals, and for managing pharmacy practices and counseling patients. Includes instruction in mathematics, physics, chemistry, biochemistry, anatomy, physiology, pharmacology, pharmaceutical chemistry, pharmacognosy, pharmacy practice, pharmacy administration, applicable regulations, and professional standards and ethics.

51.2002 A program that prepares individuals to apply managerial, social, and economic sciences to the study and management of the distribution and use of pharmaceutical products and the provision of pharmacy services. Includes instruction in research design and methods, statistics, social and organizational behavior, pharmacoeconomics, management of pharmacy services, outcomes research, product planning and reimbursement, cost-benefit analysis, drug marketing, pharmacy and pharmaceuticals law and regulation, risk assessment, and organization of the health care system.

51.2003 A program that focuses on the scientific study of the formulation of medicinal substances into product vehicles capable of being stored, transported, and then introduced into the patient and behaving in ways optimal to therapeutic interaction. Includes instruction in statistics, biopharmaceutics, drug metabolism, pharmacokinetics, pharmacodynamics, physical pharmacy, pharmacological analysis, drug design and development, pharmacological biotechnology, chemical separations, spectroscopy, drug-host interactions, immunology, quantitative drug measurement, enzymatic transformations, and metabolic excretion.

51.2004 A program that focuses on the application of chemistry to the study of biologically and clinically active substances, biological and pharmacological interactions, and the development of associated research methods, techniques, and clinical trial procedures. Includes instruction in organic chemistry, biochemistry, molecular graphics, rational drug design, toxicology, molecular biology, pharmacology, enzyme mechanisms, receptor theory, neurochemistry, drug metabolism, drug synthesis, biological mechanisms of drug action, research tools and techniques, and laboratory safety.

51.2005 A program that focuses on the scientific study of biologically active compounds found in naturally occurring sources such as plants, animals, and microbes and their use and/or modification as medicinal substances. Includes instruction in medicinal chemistry, organic medicinals, pharmacological therapeutics, pharmacokinetics, molecular biology, structural chemistry, enzymes, nucleic acids, economic botany, ethnobotany, bioprospecting, bioassay, compound identification and isolation, mass spectrometry, and analytical instrumentation and techniques.

51.2006 A program that focuses on the scientific application of pharmacology, pharmaceuticals, and industrial management to the development, production, marketing, and distribution of pharmaceutical products. Includes instruction in industrial microbiology, plasmids, expression vectors, protein chemistry, assay and evaluation, drug synthesis and purification, quality control, industrial management, production security, patent procedures, intellectual property

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regulations and issues, patent enforcement and defense, and research design and testing.

51.2007 A program that focuses on the application of economics and policy analysis to the study of the relationship of pharmacy services and pharmaceutical processes and products to the health care system and their impact on health care organizations. Includes instruction in health economics, pharmacoeconomics, health care systems, health care organization and management, statistics and biostatistics, outcomes research, health care policy, pharmacy services, and pharmaceutical industry operations.

51.2008 A program that prepares individuals to deliver specialized pharmacy services and produce pharmaceutical products in clinical settings in conjunction with other health care professionals. Includes instruction in biostatistics; clinical pharmacokinetics; biopharmaceutics; neuropharmacology; pharmacodynamics; drug metabolism; clinical sampling and research design; drug delivery systems; chemotherapy; pharmacotherapy; clinical pharmacy management; medical and research ethics; and applications to nuclear, nutrition support, oncology, psychiatric, and therapeutic pharmacy.

51.2009 A program that focuses on the application of pharmaceutical sciences and pharmacy to the study of pharmaceuticals production and distribution, and prepares individuals to manage pharmaceutical industry operations. Includes instruction in pharmacoeconomics, industrial management, operations management, preformulation evaluation, product formulation/reformulation, drug product development, stability testing, dosage design, pilot scale-up, drug marketing, quality control, drug information, and legal and regulatory affairs.

51.2010 A program that focuses on the basic sciences that underlie drugs and drug therapy and that prepares individuals for further study and/or careers in pharmaceutical science and research, pharmaceutical administration and sales, biotechnology, drug manufacturing, regulatory affairs, and related fields. Includes instruction in mathematics, biology, chemistry, physics, statistics, pharmaceuticals, pharmacology and toxicology, dosage formulation, manufacturing, quality assurance, and regulations.

51.2011 A program that combines the study of basic and pharmaceutical sciences with marketing and management studies; and that prepares individuals for careers in pharmaceutical sales, marketing, management, and related fields within the health care industry. Includes instruction in biology, chemistry, pharmaceuticals, pharmacology, health care systems, issues and structure of pharmaceutical industry, management, pharmaceutical marketing, pharmaceutical and medical product management, and legal issues.

51.2099 Any instructional program in pharmacy, pharmaceutical sciences, and administration not listed above.

51.22

51.22 Public Health

51.2201 A program that generally prepares individuals to plan, manage, and evaluate public health care services; to function as public health professionals in public agencies, the private sector, and other settings; and to provide leadership in the field of public health. Includes instruction in epidemiology, biostatistics, public health principles, preventive medicine, health policy and regulations, health care services and related administrative functions, public health law enforcement, health economics and budgeting, public communications, and professional standards and ethics.

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- 51.2202 A program that focuses on the application of environmental sciences, public health, the biomedical sciences, and environmental toxicology to the study of environmental factors affecting human health, safety, and related ecological issues, and prepares individuals to function as professional environmental health specialists. Includes instruction in epidemiology, biostatistics, toxicology, public policy analysis, public management, risk assessment, communications, environmental law, occupational health and safety emergency response, and applications such as air quality, food protection, radiation protection, solid and hazardous waste management, water quality, soil quality, noise abatement, housing quality, and environmental control of recreational areas.
- 51.2205 A program that focuses on the application of physics, nuclear science, and engineering physics to diagnostic, treatment, and therapeutic processes and public health protection. Includes instruction in radiation biophysics, biophysics, health effects of natural and artificially induced radiation, hazard evaluation, environmental radioactivity, nuclear physics, engineering physics, radiobiology, medical radiology, calibration and dosage theory, computer applications and medical informatics, and specific research problems.
- 51.2206 A program that prepares public health specialists to monitor and evaluate health and related safety standards in industrial, commercial, and government workplaces and facilities. Includes instruction in occupational health and safety standards and regulations; health-related aspects of various occupations and work environments; health hazard testing and evaluation; test equipment operation and maintenance; industrial toxicology; worker health and safety education; and the analysis and testing of job-related equipment, behavior practices, and protective devices and procedures.
- 51.2207 A program that focuses on the application of educational and communications principles and methods to the promotion of preventive health measures and the education of targeted populations on health issues, and prepares individuals to function as public health educators and health promotion specialists. Includes instruction in human development, health issues across the life span, populationspecific health issues, principles and methods of public health education, administration of health education campaigns and programs, evaluation methods, public communications, and applications to specific public health subjects and issues.
- 51.2208 A program that prepares public health specialists to plan and manage health services in local community settings, including the coordination of related support services, government agencies, and private resources. Includes instruction in public health, community health services and delivery, health behavior and cultural factors, local government operations, human services, health communication and promotion, health services administration in local settings, environmental health, preventive and comparative medicine, epidemiology, biostatistics, family and community health, and applicable law and regulations.
- 51.2209 A program that focuses on the application of public health specializations, public policy studies, and the social and behavioral sciences to issues of health affecting women, children, and families; and prepares individuals to function as maternal and child health specialists. Includes instruction in research design and testing, program evaluation, public policy analysis, public finance, economics of health care, community health, family development and dynamics, women's studies, social psychology, fetal and child development, biostatistics, health education and

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promotion, nutrition, neonatal development, psychology, and social services delivery.

51.2210 A program that focuses on the application of public health specializations, the social and behavioral sciences, and policy and communications methods to the study of health problems in low- and middle-income countries and regions, and prepares individuals to function as professional international health specialists. Includes instruction in health education and promotion, research design and evaluation, infectious disease epidemiology, international health policy and management, public nutrition and food security, information systems, program evaluation, medical anthropology, international communication, behavioral sciences, maternal and child health, demography and population policy, and health care finance and economics.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			51.2211 A program that focuses on the application of policy analysis, public administration, business management, and communications to the planning and management of health services delivery systems in the public and private sectors, and prepares individuals to function as health services administrators and managers. Includes instruction in health systems planning, public health organization and management, public health policy formulation and analysis, finance, business and operations management, economics of health care, organizational and health communications, marketing, human resources management, and public health law and regulations.
		51.2212	A program that focuses on the biological, behavioral, and socio-cultural determinants of health and health behavior, and the interventions and policies aimed at improving community and population health. Includes instruction in behavioral sciences, public health practice and policy, human services, and research methods.
		51.2299	Any instructional program in public health not listed above.
51.23		51.23	Rehabilitation and Therapeutic Professions
		51.2301	A program that prepares individuals, in consultation with other rehabilitation team members or in private practice, to use drawing and other art media forms to assess, treat, and rehabilitate individuals with mental, emotional, developmental, or physical disorders. Includes instruction in art, history and theory of art therapy, art therapeutic techniques, psychopathology, patient assessment and diagnosis, cultural diversity issues, legal and ethical practice issues, and professional standards and regulations.
		51.2302	A program that prepares individuals, in consultation with other rehabilitation team members or in private practice, to use the therapeutic application of creative dance movement to assist in promoting client rehabilitation and physical, emotional, and mental health. Includes instruction in neuroanatomy, personality development, movement and motor behavior, psychology, dance, creative expression modalities, improvisation, group psychology and leadership, client evaluation and supervision, dance therapy practice, and professional standards and ethics.
		51.2305	A program that prepares individuals, in association with a rehabilitation team or in private practice, to use music in therapeutic relationships to address patients' physical, psychological, cognitive, emotional, and social needs. Includes instruction in music theory and performance, human growth and development, biomedical sciences, abnormal psychology, disabling conditions, patient assessment and diagnosis, treatment plan development and implementation, clinical evaluation, record-keeping, and professional standards and ethics.
		51.2306	A program that prepares individuals to assist patients limited by physical, cognitive, psychosocial, mental, developmental, and learning disabilities, as well as adverse environmental conditions, to maximize their independence and maintain optimum health through a planned mix of acquired skills, performance motivation, environmental adaptations, assistive technologies, and physical agents. Includes instruction in the basic medical sciences, psychology, sociology, patient assessment and evaluation, standardized and non-standardized tests and measurements, assistive and rehabilitative technologies, ergonomics, environmental health, special education, vocational counseling, health education and promotion, and professional standards and ethics.

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51.2307 A program that prepares individuals, in consultation with physicians and other therapists, to design and fit orthoses for patients with disabling conditions of the limbs and/or spine, and prostheses for patients who have partial or total absence of a limb or significant superficial deformity. Includes instruction in biomechanics, gait analysis, pathomechanics, kinesiology, pathology, neuroanatomy, materials science, diagnostic imaging, patient analysis and measurement, impression taking, model rectification, assistive/restorative technology and engineering applications, product finishing, diagnostic and definitive fitting and alignment, power devices, postoperative management, and patient counseling and follow-up.

51.2308 A program that prepares individuals to alleviate physical and functional impairments and limitations caused by injury or disease through the design and implementation of therapeutic interventions to promote fitness and health. Includes instruction in functional anatomy and physiology, kinesiology, neuroscience, pathological physiology, analysis of dysfunction, movement dynamics, physical growth process, management of musculoskeletal disorders, clinical evaluation and measurement, client assessment and supervision, care plan development and documentation, physical therapy modalities, rehabilitation psychology, physical therapy administration, and professional standards and ethics.

51.2309 A program that prepares individuals to plan, organize, and direct recreational activities designed to promote health and well-being for patients who are physically, mentally, or emotionally disabled. Includes instruction in the foundations of therapeutic recreation, leisure education and counseling, program planning, therapeutic recreational modalities, basic anatomy and physiology, psychology, medical terminology, human growth and development, patient observation and evaluation, special needs populations, and professional standards and ethics.

51.2310 A program that prepares individuals to counsel and assist disabled individuals and recovering patients in order to achieve their greatest physical, mental, social, educational, and vocational potential. Includes instruction in patient evaluation and testing, rehabilitation program planning, patient support services and referral, job analysis, adjustment psychology, rehabilitation services provision, patient counseling and education, applicable law and regulations, and professional standards and ethics.

51.2311 A program that prepares individuals, under the direction of physicians, to treat the effects of disease, injury, and congenital disorders through therapeutic exercise and education. Includes instruction in human anatomy, human physiology, kinesiology, biomechanics, therapeutic exercise and adapted physical education, human growth and development, motor learning and performance, testing and measurement, first aid and cardiopulmonary resuscitation, psychology, rehabilitation procedures, patient assessment and management, and professional standards and ethics.

51.2312 A program that prepares individuals to apply the principles of psychology, engineering, and occupational therapy to the design and implementation of technological interventions and systems to promote patient rehabilitation and function. Includes instruction in ergonomics, seating and mobility design, universal and near environment systems design, rehabilitation research, rehabilitation biomechanics, access and communications design, microprocessor-

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based technologies, neurological trauma, standards and testing, and service delivery management.

51.2313 A program that prepares health and human service professionals to integrate the use of animals into their treatment practices in order to facilitate change in people with mental and physical disabilities. Includes instruction in psychology, psychology of disabilities, animal behavior, animal training, the human-animal bond, integration of animals into therapeutic settings, and ethical and cultural issues.

51.2314 A program that focuses on human function, disability, and rehabilitation from the perspectives of the health sciences, social sciences, psychology, engineering, and related fields. Includes instruction in psychological, social, and cultural aspects of disability and rehabilitation; sensory and motor function and dysfunction; biomechanics and kinesiology; assistive technology; rehabilitation instrumentation and methodology; statistics; and health and rehabilitation policy.

51.2399 Any instructional program in rehabilitation and therapeutic professions not listed above.

51.24

51.24 **Veterinary Medicine**

51.2401 A program that prepares individuals for the independent professional practice of veterinary medicine, involving the diagnosis, treatment, and health care management of animals and animal populations and the prevention and management of zoonosis. Includes instruction in the veterinary basic sciences, infectious and noninfectious disease, diagnostic procedures, veterinary clinical medicine, obstetrics, radiology, anesthesiology, surgery, toxicology, animal health and preventive medicine, clinical nutrition, practice management, and professional standards and ethics.

51.25

51.25 **Veterinary Biomedical and Clinical Sciences**

51.2501 An integrated program of study in one or more of the veterinary medical or clinical sciences or a program undifferentiated as to title.

51.2502 A program that focuses on the scientific study of the structure of small and large animal cellular, organ, tissue, and body systems and their relation to physiologic function, disease, and therapeutic treatment. Includes instruction in histology, ultrastructure, molecular biology, biochemistry, developmental biology, neuroscience, electrophysiology, electron microscopy, computer imaging, and applications to specific species.

51.2503 A program that focuses on the scientific study of the functional dynamics of animal biological systems and their relationship to the diagnosis and treatment of disease and injury. Includes instruction in mammalian and non-mammalian physiology, laboratory physiology, physiological responses to the environment, endocrinology, animal biotechnology, mechanisms of hormone action, organ systems, metabolism, and pathophysiology.

51.2504 A program that focuses on the scientific study of the microbial causation and immunologic processes related to animal disease, prevention, and treatment. Includes instruction in bacteriology, mycology, virology, immune response mechanisms, humoral and cell function, cancer defenses, immune system dysfunction, immunologic diseases, parasitology, pathogenesis, and disease vectors.

51.2505 A program that focuses on the scientific study of the development and process of disease in domestic and wild animals and applications to diagnosis, prevention, and treatment. Includes instruction in pathogenesis, immunoparasitology, viral therapy, inherited metabolic diseases, environmental

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toxicology, anatomical and clinical pathology, necropsy and biopsy techniques, clinical laboratory analysis, pathological interpretation, and disease diagnosis.

51.2506 A program that focuses on the scientific study of specific environmental and food hazards affecting domestic and wild animals and the development and action of chemical antidotes and treatments. Includes instruction in small and large animal

toxicology and pharmacology, neurotoxicology, pharmacodynamics, pharmacokinetics, neuropharmacology, xenobiotics, drug resistance, pesticides, toxicological pathology, genetic and molecular toxicology, environmental toxicology, drug and toxicant analysis and evaluation, and environmental radiology.

51.2507 A program that focuses on the scientific study of the internal medicine and invasive and noninvasive treatment of herd, work, sport, and food animals. Includes instruction in equine medicine, swine and dairy medicine, food animal medicine, pathophysiology, large animal diseases, large animal anesthesiology and surgical procedures, preoperative and postoperative care, and specific medical specialties such as dentistry, ophthalmology, oncology, obstetrics/theriogenology, and orthopedics.

51.2508 A program that focuses on the scientific study of the internal medicine and invasive and noninvasive treatment of companion and household animals. Includes instruction in avian medicine, pet care, companion animal medicine, pathophysiology, small animal diseases, small animal anesthesiology and surgical procedures, preoperative and postoperative care, and specific medical specialties such as dentistry, ophthalmology, oncology, obstetrics/theriogenology, and orthopedics.

51.2509 A program that focuses on the scientific study of animal models of human disease and related experimental procedures, and prepares veterinarians and animal health specialists to manage the laboratory use and care of experimental animals. Includes instruction in laboratory animal husbandry, laboratory animal disease, biohazard control, gnotobiology, breeding, comparative anatomy and physiology, comparative gene mapping, protein function, physical and mathematical modeling, computer modeling, stem cell technology, colony and genetic stock management, cryopreservation, applicable regulations, and bioethics.

51.2510 A program that focuses on the study of the prevention and control of communicable animal diseases, diseases affecting humans, and prepares veterinarians to function as public health specialists. Includes instruction in animal epidemiology, biostatistics, food safety and quality assurance, food toxicology, zoonotic and infectious diseases, disease vectors and transference, production medicine, animal health, veterinary public health practice, and inspection and evaluation methods.

51.2511 A program that focuses on the scientific study of zoonotic infectious diseases, disease mechanisms, and prevention and treatment strategies. Includes instruction in disease pathogenesis, vector biology, mycobacterial infection, blood parasites, retroviruses, food-borne diseases, new infectious agents, ecotoxicology, mechanisms of disease transfer, antibody resistance, comparative pathology, communicable diseases, and disease prevention and eradication.

51.2599 Any instructional program in veterinary biomedical and clinical sciences not listed above.

51.26 M 51.26 Health Aides/Attendants/Orderlies

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		51.2601	A program that prepares individuals to provide routine care and assistance to patients under the direct supervision of other health care professionals, and/or to perform routine maintenance and general assistance in health care facilities and laboratories.
			51.2602 A program that prepares individuals to provide routine care and support services for homebound disabled, recovering, or elderly people. Includes instruction in basic nutrition, home sanitation, infection control, first aid, taking vital signs, personal hygiene, interpersonal communication skills, supervised home management, emergency recognition and referral, geriatric care, and legal and ethical responsibilities.
			51.2603 A program that prepares individuals to administer prescribed medications; observe and report patient reactions and side effects; and perform related emergency and recording duties under the supervision of nurses and/or physicians. Includes instruction in basic anatomy and physiology, common medications and their effects, taking vital signs, oxygen administration, medication administration and application, record-keeping, and patient observation.
			51.2604 A program that prepares individuals to assist in rehabilitation services under the supervision of physical therapists, occupational therapists, speech-language pathologists, and other therapeutic professionals, and to perform routine functions in support of rehabilitation. Includes instruction in roles and responsibilities of rehabilitation providers, basic function of the human body, disabling conditions, therapeutic skills, client management, and communication skills.
		51.2699	Any other instructional program that prepares individuals to provide routine patient care and assistance.
51.27		51.27	Medical Illustration and Informatics
			51.2703 A program that prepares individuals to apply the principles and techniques of art and computer-assisted imaging, graphics, and animation to create visual materials to facilitate the recording and dissemination of biomedical knowledge for educational, research, and clinical purposes. Includes instruction in anatomy, physiology, pathology, histology, embryology, neuroanatomy, medical terminology, artistic media and techniques, illustration techniques, threedimensional modeling, prosthetics, data display design, exhibit design and production, medical photography, multimedia, computer graphics and animation, digital imaging, business management, production technology, and instructional design.
		51.2706	A program that focuses on the application of computer science and software engineering to medical research and clinical information technology support, and the development of advanced imaging, database, and decision systems. Includes instruction in computer science, health information systems architecture, medical knowledge structures, medical language and image processing, quantitative medical decision modeling, imaging techniques, electronic medical records, medical research systems, clinical decision support, and informatics aspects of specific research and practice problems.
		51.2799	Any instructional program in medical illustration and informatics not listed above.
51.31	M	51.31	Dietetics and Clinical Nutrition Services

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51.3101 A program that prepares individuals to integrate and apply the principles of the food and nutrition sciences, human behavior, and the biomedical sciences to design and manage effective nutrition programs in a variety of settings. Includes instruction in human nutrition; nutrient metabolism; the role of foods and nutrition in health promotion and disease prevention; planning and directing food service activities; diet and nutrition analysis and planning; supervision of food storage and preparation; client education; and professional standards and regulations.

51.3102 A program that prepares individuals to apply the principles of dietetics and the biomedical and nutrition sciences to design and manage effective nutrition programs as part of clinical treatment and therapy programs, and to manage health care facility food services. Includes instruction in human nutrition, nutrient metabolism, the role of foods and nutrition in health promotion and disease prevention, nutrition as a treatment regime, planning and directing hospital food service programs, diet and nutrition analysis and planning, supervision of food

storage and preparation, special diets, client education, and professional standards and regulations.

51.3103 A program that prepares individuals, under the supervision of registered dietitians and nutritionists, to implement nutritional and dietetic plans and provide direct client and patient services. Includes instruction in human nutrition, client interviewing and record keeping, dietary planning, food preparation and safety, food worker supervision, food service establishment monitoring and inspection, and applicable procedures and regulations.

51.3104 A program that prepares individuals to assist registered dietitians in planning, preparing and serving meals to individuals with specific dietary needs. Includes instruction in equipment use, food preparation, diet regulations, food handling, safety and sanitary standards and administrative techniques and procedures.

51.3199 Any instructional program in dietetics and clinical nutrition services not listed above.

51.38

M 51.38 Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing

51.3801 A program that generally prepares individuals in the knowledge, techniques and procedures for promoting health, providing care for sick, disabled, infirmed, or other individuals or groups. Includes instruction in the administration of medication and treatments, assisting a physician during treatments and examinations, Referring patients to physicians and other health care specialists, and planning education for health maintenance.

51.3802 A program that prepares registered nurses to manage Nursing personnel and services in hospitals and other health care delivery agencies. Includes instruction in principles of health care administration, resource and financial management, health care law and policy, medical personnel management, and managed care operations.

51.3803 A program that prepares registered nurses to provide general care for adult patients. Includes instruction in adult primary care, adult pathophysiology, clinical management of medication and treatments, patient assessment and education, patient referral, and planning adult health maintenance programs.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		51.3804	A program that prepares registered nurses to administer anesthetics and provide care for patients before, during and after anesthesia. Includes instruction in the biochemistry and physics of anesthesia; advanced anatomy and physiology; clinical pharmacology of anesthetics and adjunctive drugs; pain management; acute care and operating room practice; clinical technology and procedures; emergency intervention; patient assessment and education; and legal issues.
		51.3805	A program that prepares registered nurses to provide independent general care for family groups and individuals in the context of family living. Includes instruction in family theory and intervention, role synthesis, family primary care, nursing practice and health care policy, holistic practice, pediatric practice, gerontological practice, health assessment, clinical pharmacotherapeutics, clinical techniques, and pathopsychology.
		51.3806	A program that prepares registered nurses to provide prenatal care to pregnant women and to mothers and their newborn infants. Includes instruction in perinatal and newborn health assessment, stabilization, and care; pathophysiology of pregnancy, fetuses, and the newborn; clinical management of high-risk pregnancies and newborns; perinatal and neonatal technology and clinical procedures; and patient education.
		51.3807	A program that prepares registered nurses to independently deliver babies and treat mothers in the prenatal, delivery, and post-delivery periods. Includes instruction in pre-delivery screening, physician referral, and the care of infants during the delivery and immediate post-delivery phases.
		51.3808	A research program that focuses on the study of advanced clinical practices, research methodologies, the administration of complex nursing services, and that prepares nurses to further the progress of nursing research through experimentation and clinical applications.
		51.3809	A program that prepares registered nurses to provide care for children from infancy through adolescence. Includes instruction in the administration of medication and treatments, assisting physicians, patient examination and referral, and planning and delivering health maintenance and health education programs.
		51.3810	A program that prepares registered nurses to promote mental health and provide nursing care to patients with mental, emotional or behavioral disorders, in mental institutions or other settings. Includes instruction in psychopathology, behavioral health, counseling and intervention strategies, psychoeducation, mental health assessment and dual diagnosis, stabilization and management of psychotic illness, psychiatric care and rehabilitation, substance abuse, and crisis intervention.
		51.3811	A program that prepares registered nurses to promote health and provide preventive and curative nursing services for groups or communities under the supervision of a public health agency. Includes instruction in community and rural health, family therapy and intervention, disease prevention, health education, and community health assessment.
		51.3812	A program that prepares registered nurses to provide care to patients before and during surgery, and provide tableside assistance to surgeons. Includes instruction in operating room safety and preparation, aseptic technique, anesthesia, patient preparation, surgical instruments and procedures, sterilization and disinfecting,

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surgical drugs and solutions, hemostasis, emergency procedures, and patient/family education.

51.3813 A program that prepares registered nurses to deliver direct patient and client care in clinical settings. Includes instruction in clinical pharmacotherapeutics, advanced clinical practice, holistic nursing, nursing practice and health care policy, administration and consultation services, health assessment, patient stabilization and care, and patient education.

51.3814 A program that prepares registered nurses to provide specialized care to patients with life-threatening problems, including those in intensive care facilities and on life support. Includes instruction in adult, neonatal, and pediatric critical care; technical skills; patient monitoring and assessment; normal and abnormal readings; and troubleshooting.

51.3815 A program that prepares registered nurses to deliver nursing health care services to workers and worker populations in clinical settings and at job sites. Includes instruction in public and community health, occupational safety and health, occupational health surveillance, case management, fitness for duty testing, medication, allergies and immunization, emergency and ambulatory care, and applicable laws and regulations.

51.3816 A program that prepares registered nurses to deliver advanced, direct patient care in emergency and trauma settings. Includes instruction in advanced health assessment, pharmacology, physiology, emergency management, trauma conditions, trauma assessments and acute care.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		51.3817	A program that prepares registered nurses to teach in academic and clinical settings, including staff development. Includes instruction in advanced nursing practice, nursing role development, curriculum and instruction, program and course design, clinical instruction, and evaluation of learning.
		51.3818	A practice-focused program that prepares registered nurses for increasingly complex evidence-based nursing practice, including translating research into practice, evaluating evidence, applying research in decision-making, and implementing viable clinical innovations to change practice. Includes instruction in healthcare delivery systems, health economics and finance, health policy, research methods, translating evidence into practice, concepts in population health, and nursing leadership.
		51.3819	A program that prepares registered nurses to provide a combination of active and compassionate therapies intended to comfort and support patients and their families who are living with life-threatening illness. Includes instruction in pathophysiology, palliative care processes, pain management, pharmacology, loss, grief, death, and bereavement.
		51.3820	A program that prepares registered nurses for careers as clinical nurse leaders in which they work as part of an interdisciplinary team that provides direct medical care for patients based on evidence-based practice and research. Includes instruction in pharmacology, pathophysiology, epidemiology, research in nursing methods, advanced health assessment, statistics, and clinical practice management.
		51.3821	A program that prepares registered nurses to provide health care to aging and elderly patients. Includes instruction in geriatric primary care, geriatric diagnosis, mental health and aging, primary care management, geriatric acute and chronic illness, advanced nursing practices for geriatric patients, evidence-based nursing practice, advanced physiology, pathophysiology, pharmacology, and pharmacotherapeutics.
		51.3822	A program that prepares registered nurses to provide health care specific to women. Includes instruction in the wellness and care of women, gynecology, obstetrics, advanced nursing practices for women, evidence-based nursing practice, advanced physiology and pathophysiology, advanced pharmacology, and pharmacotherapeutics.
		51.3899	Any instructional program in registered nursing, nursing administration, nursing research, and clinical nursing not listed above.
51.39	M	51.39	Practical Nursing, Vocational Nursing and Nursing Assistants
		51.3901	A program that prepares individuals to assist in providing general nursing care under the direction of a registered nurse, physician or dentist. Includes instruction in taking patient vital signs, applying sterile dressings, patient health education, and assistance with examinations and treatment.
		51.3902	A program that prepares individuals to perform routine nursing-related services to patients in hospitals or long-term care facilities, under the training and supervision of a registered nurse or licensed practical nurse.
		51.3999	Any instructional program in practical nursing, vocational nursing, and nursing assistants not listed above.
52.02	F	52.02	Business Administration, Management and Operations
		52.0201	A program that generally prepares individuals to plan, organize, direct, and control the functions and processes of a firm or organization. Includes instruction in management theory, human resources management and behavior, accounting and other quantitative methods, purchasing and logistics, organization and production, marketing, and business decision-making.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		52.0202	A program that prepares individuals to manage and/or administer the processes by which a firm or organization contracts for goods and services to support its operations, as well as contracts it to sell to other firms or organizations. Includes instruction in contract law, negotiations, buying procedures, government contracting, cost and price analysis, vendor relations, contract administration, auditing and inspection, relations with other firm departments, and applications to special areas such as high-technology systems, international purchasing, and construction.
		52.0203	A program that prepares individuals to manage and coordinate all logistical functions in an enterprise, ranging from acquisitions to receiving and handling, through internal allocation of resources to operations units, to the handling and delivery of output. Includes instruction in acquisitions and purchasing, inventory control, storage and handling, just-in-time manufacturing, logistics planning, shipping and delivery management, transportation, quality control, resource estimation and allocation, and budgeting.
		52.0204	A program that prepares individuals to supervise and manage the operations and personnel of business offices and management-level divisions. Includes instruction in employee supervision, management, and labor relations; budgeting; scheduling and coordination; office systems operation and maintenance; office records management, organization, and security; office facilities design and space management; preparation and evaluation of business management data; and public relations.
		52.0205	A program that prepares individuals to manage and direct the physical and/or technical functions of a firm or organization, particularly those relating to development, production, and manufacturing. Includes instruction in principles of general management, manufacturing and production systems, plant management, equipment maintenance management, production control, industrial labor relations and skilled trades supervision, strategic manufacturing policy, systems analysis, productivity analysis and cost control, and materials planning.
		52.0206	A program that prepares individuals to manage the business affairs of non-profit corporations, including foundations, educational institutions, associations, and other such organizations, and public agencies and governmental operations. Includes instruction in business management, principles of public administration, principles of accounting and financial management, human resources management, taxation of non-profit organizations, and business law as applied to non-profit organizations.
		52.0207	A program that prepares individuals to supervise and monitor customer service performance and manage frontline customer support services, call centers/help desks, and customer relations. Includes instruction in customer behavior, specialized information technology and systems management, developing and using customer service databases, user surveys and other feedback mechanisms, strategic and performance planning and analysis, operations management, personnel supervision, and communications and marketing skills.
		52.0208	A program that prepares individuals to plan, manage, supervise, and market electronic business operations, products, and services provided online via the Internet. Includes instruction in business administration, information technology, information resources management, web design, computer and Internet law and policy, computer privacy and security, e-trading, insurance, electronic marketing, investment capital planning, enterprise operations, personnel supervision, contracting, and product and service networking.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
52.03		52.0209	A program that prepares individuals to plan, administer, and coordinate physical transportation operations, networks, and systems. Includes instruction in transportation systems and technologies; traffic logistics and engineering; multi- and intermodal transportation systems; regional integration; facilities design and construction; transportation planning and finance; demand analysis and forecasting; carrier management; behavioral issues; transportation policy and law; intelligent systems; and applications to aviation, maritime, rail, and highway facilities and systems.
	52.0210	A program that prepares individuals to manage projects, programs and organizations involving basic and applied research, or specialized technology applications, in the public or private sectors. Includes instruction in all aspects of business management applied to the leadership and control of scientific, clinical, engineering and social scientific enterprises; the management of related operational, security and logistical issues; and technical competence in one or more research disciplines.	
	52.0211	A program that prepares individuals to apply quantitative and qualitative knowledge, skills, tools, and techniques to manage projects in a wide range of fields and occupations. Includes instruction in project planning, risk management, cost and time management, contracts and procurement, accounting, statistics, decision making, and human resources.	
	52.0212	A program that prepares individuals to manage the operations of a wide variety of retail businesses, including department stores; independent and chain stores; fashion, food and beverage, and pharmaceutical establishments; and online retail businesses. Includes instruction in retail management, merchandise management, customer service management, marketing, organizational behavior, accounting, finance, business law, and personnel management.	
	52.0213	A program that focuses on leadership skills that can be applied to a business, government, non-profit, or educational setting. Includes instruction in organizational planning, dynamics of leadership, finance, team building, conflict resolution and mediation, communication and other management skills.	
	52.0299	Any instructional program in business and administration not listed above.	
	52.03	Accounting and Related Services	
	52.0301	A program that prepares individuals to practice the profession of accounting and to perform related business functions. Includes instruction in accounting principles and theory, financial accounting, managerial accounting, cost accounting, budget control, tax accounting, legal aspects of accounting, auditing, reporting procedures, statement analysis, planning and consulting, business information systems, accounting research methods, professional standards and ethics, and applications to specific for-profit, public, and non-profit organizations.	
	52.0302	A program that prepares individuals to provide technical administrative support to professional accountants and other financial management personnel. Includes instruction in posting transactions to accounts, record-keeping systems, accounting software operation, and general accounting principles and practices.	
	52.0303	A program that prepares individuals, including certified accountants, to perform independent internal and external appraisals to evaluate organizational financial and operational activities, ensure compliance with laws and policies, safeguard assets, and promote effective planning and resource allocation. Includes instruction in advanced accounting, audit tools and techniques, sampling, risk and control, audit planning, audit function management, law and regulations, environmental auditing, information technology applications, professional standards and ethics, and specific industry and service sector problems.	

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
52.04	M	52.0304	An integrated or combined program in accounting and finance that prepares individuals to function as accountants and financial managers or analysts.
		52.0305	An integrated or combined program in accounting and business administration/management that prepares individuals to function as accountants and business managers.
		52.0399	Any instructional program in accounting not listed above.
		52.04	Business Operations Support and Assistant Services
		52.0401	A program that generally prepares individuals to perform the duties of administrative assistants and/or secretaries and stenographers. Includes instruction in business communications, principles of business law, word processing and data entry, office machines operation and maintenance, office procedures, public relations, secretarial accounting, filing systems and records management, and report preparation.
		52.0402	A program that prepares individuals to perform the duties of special assistants and/or personal secretaries for business executives and top management. Includes instruction in business communications, principles of business law, public relations, scheduling and travel management, secretarial accounting, filing systems and records management, conference and meeting recording, report preparation, office equipment and procedures, office supervisory skills, and professional standards and legal requirements.
		52.0406	A program that prepares individuals to perform frontline public relations duties for a business, organization, or answering service. Includes instruction in telephone answering techniques, responding to information requests, keeping caller and/or visitor records, placing business calls, operating telephone switchboards and/or other communications equipment, relaying incoming and interoffice calls, schedule maintenance, and public relations skills.
		52.0407	A program that prepares individuals to support business information operations by using computer equipment to enter, process, and retrieve data for a wide variety of administrative purposes. Includes instruction in using basic business software and hardware, business computer networking, principles of desktop publishing, preparing mass mailings, compiling and editing spreadsheets, list maintenance, preparing tables and graphs, receipt control, and preparing business performance reports.
		52.0408	A program that prepares individuals to provide basic administrative support under the supervision of office managers, administrative assistants, secretaries, and other office personnel. Includes instruction in typing, keyboarding, filing, general business correspondence, office equipment operation, and communications skills.
		52.0409	A program that prepares individuals to provide administrative, technical, and managerial support in the operation of warehouses, control of inventory, parts identification, and the performance of counter services for customers. Includes instruction in record-keeping, equipment operation, database entry, supply logistics, shop operations and math, and customer and supplier relations.

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52.0410 A program that prepares individuals to perform duties associated with managing revenue-based customs, traffic, or transportation services, such as control of domestic and international traffic, toll roads and waterways, and to assist in the dispatch and control of fleet-based traffic for businesses and public services. Includes instruction in record-keeping; preparation of customs and transportation documentation; operation of communications equipment; basic transportation operations management; tariffs, rates and fares; revenue collection and changemaking; and interpretation of customs or transportation regulations and related legislation, policies, and procedures.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
			52.0411 A program that prepares individuals to assist customers with inquiries and problems in frontline call centers, help desks, teleservice centers, and online. Includes instruction in user interfaces and user behavior, principles of hardware and software systems operation, customer interaction skills, telephone and e-mailing skills, data entry, and database and Internet searching and retrieval.
			52.0499 Any instructional program in administrative and secretarial services not listed above.
52.06		52.06	Business/Managerial Economics
		52.0601	A program that focuses on the application of economics principles to the analysis of the organization and operation of business enterprises. Includes instruction in monetary theory, banking and financial systems, theory of competition, pricing theory, wage and salary/incentive theory, analysis of markets, and applications of econometrics and quantitative methods to the study of particular businesses and business problems.
52.07	F	52.07	Entrepreneurial and Small Business Operations
			52.0701 A program that generally prepares individuals to perform development, marketing and management functions associated with owning and operating a business.
		52.0702	A program that prepares individuals to manage and operate franchises. Includes instruction in legal requirements, set-up costs and capitalization requirements, financing, and applications to specific franchise opportunities.
		52.0703	A program that prepares individuals to develop and manage independent small businesses. Includes instruction in business administration; enterprise planning and entrepreneurship; start-up; small business operations and problems; personnel supervision; capitalization and investment; taxation; business law and regulations; ecommerce; home business operations; and applications to specific sectors, products, and services.
			52.0799 Any instructional program in enterprise management and entrepreneurship not listed above.
52.08		52.08	Finance and Financial Management Services
			52.0801 A program that generally prepares individuals to plan, manage, and analyze the financial and monetary aspects and performance of business enterprises, banking institutions, or other organizations. Includes instruction in principles of accounting, financial instruments, capital planning, funds acquisition, asset and debt management, budgeting, financial analysis, and investments and portfolio management.
		52.0803	A program that prepares individuals to perform a wide variety of customer services in banks, insurance agencies, savings and loan companies, and related enterprises. Includes instruction in communications and public relations skills, business equipment operation, and technical skills applicable to the methods and operations of specific financial or insurance services.
			52.0804 A program that prepares individuals to plan and manage the financial interests and growth of individuals and institutions. Includes instruction in portfolio management, investment management, estate planning, insurance, tax planning, strategic investing and planning, financial consulting services, and client relations.

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52.0806	A program that prepares individuals to manage international financial operations and related currency transactions. Includes instruction in international banking, international monetary and financial policy, money and capital markets, foreign exchange, risk analysis, and international cash flow operations.
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IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		52.0807	A program that prepares individuals to manage assets placed in capital markets, and related technical operations. Includes instruction in security analysis, debt and equity analysis, investment strategies, securities markets, computer-assisted research, portfolio management, portfolio performance analysis, and applications to specific investment problems and business situations.
		52.0808	A program that prepares individuals to manage the financial assets and budgets of public sector organizations. Includes instruction in public trusts and investments; the laws and procedures used to plan, prepare and administer public agency budgets; and the preparation and analysis of public budget projections and policies.
		52.0809	A program that prepares individuals to perform and/or manage operations concerning personal and corporate credit, collateral, loan processing, and related financial agency communications. Includes instruction in general finance and banking principles, insurance, real estate, taxation, business law and regulations, quantitative methods, financial computer systems applications, database management, communications skills, business and office management, and professional standards and ethics.
		52.0899	Any instructional program in financial management and services not listed above.
52.09		52.09	Hospitality Administration/Management
		52.0901	A program that prepares individuals to serve as general managers and directors of hospitality operations on a system-wide basis, including both travel arrangements and promotion and the provision of traveler facilities. Includes instruction in principles of operations in the travel and tourism, hotel and lodging facilities, food services, and recreation facilities industries; hospitality marketing strategies; hospitality planning; management and coordination of franchise and unit operations; business management; accounting and financial management; hospitality transportation and logistics; and hospitality industry policies and regulations.
		52.0903	A program that prepares individuals to manage travel-related enterprises and related convention and/or tour services. Includes instruction in travel agency management, tour arranging and planning, convention and event planning, travel industry operations and procedures, tourism marketing and promotion strategies, travel counseling, travel industry law, international and domestic operations, and travel and tourism policy.
		52.0904	A program that prepares individuals to manage operations and facilities that provide lodging services to the traveling public. Includes instruction in hospitality industry principles; supplies purchasing, storage and control; hotel facilities design and planning; hospitality industry law; personnel management and labor relations; financial management; marketing and sales promotion; convention and event management; front desk operations; and applications to specific types of hotels and motel operations.
		52.0905	A program that prepares individuals to plan, manage, and market restaurants, food services in hospitality establishments, food service chains and franchise networks, and restaurant supply operations. Includes instruction in hospitality administration, food services management, wholesale logistics and distribution, franchise operations, business networking, personnel management, culinary arts, business planning and capitalization, food industry operations, marketing and retailing, business law and regulations, finance, and professional standards and ethics.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		52.0906	A program that prepares individuals to plan, manage, and market comprehensive vacation facilities and services and related products. Includes instruction in hospitality administration, hotel/motel management, restaurant and food services management, facilities planning, leisure studies, recreation administration, marketing, recreation equipment and grounds operations and maintenance, business finance, insurance and taxation, event management and guest services, personnel management, travel and logistics management, safety and health services, professional standards and ethics, and applications to specific vacation types and locations.
		52.0907	A program that prepares individuals to plan, budget, and implement conferences, meetings, and other special events in the public or private sectors. Includes instruction in principles of meeting and event planning; special event management; budgets and finance; site selection; contracts, vendors, and negotiations; marketing and promotions; food and beverage management; audio-visual basics and meeting technology; and hospitality law.
		52.0908	A program that prepares individuals to manage casinos and gaming establishments. Includes instruction in casino operations, casino security and surveillance, principles of the gaming industry, ethics, and gaming law.
		52.0909	An instructional program that prepares individuals to manage operations and facilities that provide food and/or lodging services to the traveling public. Includes instruction in hospitality industry principles; supplies purchasing, storage, and control; hotel and restaurant facilities design and planning; hospitality industry law; personnel management and labor relations; financial management; facilities management; marketing and sale promotion strategies; convention and event management; front desk operations; and applications to specific types of hotel, motel, and/or restaurant operations. Note: this program was re-instated after being deleted from CIP 2000; previously, it was coded as 52.0902.
		52.0999	Any instructional program in hospitality service management not listed above.
52.10		52.10	Human Resources Management and Services
		52.1001	A program that generally prepares individuals to manage the development of human capital in organizations, and to provide related services to individuals and groups. Includes instruction in personnel and organization policy, human resource dynamics and flows, labor relations, sex roles, civil rights, human resources law and regulations, motivation and compensation systems, work systems, career management, employee testing and assessment, recruitment and selection, managing employee and job training programs, and the management of human resources programs and operations.
		52.1002	A program that focuses on employee-management interactions and the management of issues and disputes regarding working conditions and worker benefit packages, and that may prepare individuals to function as labor or personnel relations specialists. Includes instruction in labor history, policies and strategies of the labor movement, union organization, labor-management negotiation, labor law and contract interpretation, labor economics, welfare and benefit packages, grievance procedures, and labor policy studies.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		52.1003	A program that focuses on the scientific study of the behavior and motivations of individuals functioning in organized groups, and its application to business and industrial settings. Includes instruction in organization theory, industrial and organizational psychology, social psychology, sociology of organizations, reinforcement and incentive theory, employee relations strategies, organizational power and influence, organization stratification and hierarchy, leadership styles, and applications of operations research and other methodologies to organizational analysis.
			52.1004 A program that focuses on the study of various aspects of work, labor organization and policy, and labor movements from the perspective of the social sciences and history. Includes instruction in labor history; political and ideological issues; worker movements and social organizations; civil rights; labor law and policy studies; labor economics; international and comparative labor studies; and applications to specific industries, groups, locations, and time periods.
			52.1005 A program that prepares individuals to apply integrated training, organizational development, and career planning and counseling skills to the design, management, and evaluation of programs to improve individual productivity, employability, and job satisfaction and organizational effectiveness. Includes instruction in psychology; organizational behavior; principles of adult education; occupational counseling; skill testing and evaluation; program design; consulting practice; organizational development; and applications to issues such as training, management development, customer service, and total quality management.
		52.1099	Any instructional program in human resources management not listed above.
52.11	F	52.11	International Business
		52.1101	A program that prepares individuals to manage international businesses and/or business operations. Includes instruction in the principles and processes of export sales, trade controls, foreign operations and related problems, monetary issues, international business policy, and applications to doing business in specific countries and markets.
52.12		52.12	Management Information Systems and Services
		52.1201	A program that generally prepares individuals to provide and manage data systems and related facilities for processing and retrieving internal business information; select systems and train personnel; and respond to external data requests. Includes instruction in cost and accounting information systems, management control systems, personnel information systems, data storage and security, business systems networking, report preparation, computer facilities and equipment operation and maintenance, operator supervision and training, and management information systems policy and planning.
			52.1206 A program that prepares individuals to apply principles of information technology, computer systems management, and business operations to the planning, management, and evaluation of information services in organizations. Includes instruction in telecommunications, systems planning and integration, information policy, information security, contracting and purchasing, budgeting, information technology, operations management, human resources, communications skills, and applicable law and regulations.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		52.1207	A program that focuses on the study of knowledge management in government agencies and corporations for the purpose of supporting stated organizational goals and objectives, and prepares individuals to function as information resource managers. Includes instruction in information technology, principles of computer and information systems, management information systems, applicable policy and regulations, and operations and personnel management.
		52.1299	Any program in business information and data processing services not listed above.
52.13		52.13	Management Sciences and Quantitative Methods
		52.1301	A general program that focuses on the application of statistical modeling, data warehousing, data mining, programming, forecasting and operations research techniques to the analysis of problems of business organization and performance. Includes instruction in optimization theory and mathematical techniques, data mining, data warehousing, stochastic and dynamic modeling, operations analysis, and the design and testing of prototype systems and evaluation models.
		52.1302	A program that focuses on the application of mathematical statistics to the description, analysis, and forecasting of business data. Includes instruction in statistical theory and methods, computer applications, data analysis and display, long- and short-term forecasting methods, and market performance analysis.
		52.1304	A program that focuses on the mathematical and statistical analysis of risk, and their applications to insurance and other business management problems. Includes instruction in forecasting theory, quantitative and non-quantitative risk measurement methodologies, development of risk tables, secondary data analysis, and computerassisted research methods.
		52.1399	Any instructional program in business quantitative methods and management science not listed above.
52.14		52.14	Marketing
		52.1401	A program that generally prepares individuals to undertake and manage the process of developing consumer audiences and moving products from producers to consumers. Includes instruction in buyer behavior and dynamics, principle of marketing research, demand analysis, cost-volume and profit relationships, pricing theory, marketing campaign and strategic planning, market segments, advertising methods, sales operations and management, consumer relations, retailing, and applications to specific products and markets.
		52.1402	A program that prepares individuals to provide analytical descriptions of consumer behavior patterns and market environments to marketing managers and other business decision-makers. Includes instruction in survey research methods, research design, new product test marketing, exploratory marketing, consumer needs and preferences analysis, geographic analysis, and applications to specific products and markets.
		52.1403	A program that prepares individuals to perform marketing activities in enterprises primarily engaged in exporting or importing goods and services in world markets. Includes instruction in international trade controls, foreign trade operations, locating markets, negotiation practices, monetary issues, and international public relations.
		52.1499	Any instructional program in general marketing and marketing research not listed above.
52.16		52.16	Taxation

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		52.1601	A program that prepares individuals to provide tax advice and management services to individuals and corporations. Includes instruction in tax law and regulations, tax record systems, individual and corporate income taxation, tax planning, partnerships and fiduciary relationships, estates and trusts, property depreciation, capital gains and losses, dispositions, transfers, liquidity, valuation, and applications to specific tax problems.
52.17		52.17	Insurance
		52.1701	A program that prepares individuals to manage risk in organizational settings and provide insurance and risk-aversion services to businesses, individuals, and other organizations. Includes instruction in casualty insurance and general liability, property insurance, employee benefits, social and health insurance, loss adjustment, underwriting, risk theory, and pension planning.
52.18		52.18	General Sales, Merchandising and Related Marketing Operations

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		52.1801	A program that focuses on the general process and techniques of direct wholesale and retail buying and selling operations and introduces individuals to related careers. Includes instruction in the principles of entrepreneurial economics, basic sales skills, the distribution channels for goods and services, and supervised practical application experiences.
		52.1802	A program that prepares individuals to function as professional buyers of resale products and product lines for stores, chains, and other retail enterprises. Includes instruction in product evaluation, merchandising, applicable aspects of brand and consumer research, principles of purchasing, and negotiation skills.
		52.1803	A program that prepares individuals to perform operations associated with retail sales in a variety of settings. Includes instruction in over-the-counter and other direct sales operations in business settings, basic bookkeeping principles, customer service, team/staff leadership and supervision, floor management, and applicable technical skills.
		52.1804	A program that prepares individuals to possess the skills associated with direct promotion of products and services to potential customers and to function as independent sales representatives and managers. Includes instruction in consumer psychology, image projection, public speaking and interpersonal communications, sales organization and operations, customer relations, professional standards and ethics, and applicable technical skills.
		52.1899	Any instructional program in merchandising, sales, and related marketing operations not listed above.
52.19		52.19	Specialized Sales, Merchandising and Marketing Operations
		52.1901	A program that prepares individuals for professional careers as auctioneers and auction managers, and for meeting applicable state licensing requirements. Includes instruction in bid calling, public speaking, ringworking, auction techniques, salesmanship skills, auction clerking and cashiering, auction advertising, working independently or with auction houses, contracts and agency, applicable sales law, and managing both general auctions and auctions specializing in commodities such as antiques, consignments, farm equipment, industrial equipment, real estate, livestock, and automobiles.
		52.1902	A program that prepares individuals to promote product lines/brands, and organize promotional campaigns, at the wholesale level to attract retailer interest, wholesale purchasing, and supply contracts. Includes instruction in wholesaling, wholesale advertising, selling, and customer relations.
		52.1903	A program that prepares individuals to present and display fashion, apparel, and accessories products in wholesale and retail settings, either on the person or via props and natural or artificial settings. Includes instruction in modeling skills, health and cosmetic principles, fashion show management, display design and production, and applicable aspects of advertising and fashion photography.
		52.1904	A program that prepares individuals to perform operations connected with the distribution and sale of apparel and accessories. Includes instruction in wholesaling and retailing, apparel technologies, distribution, customer sales and service skills, and principles of consumer research and sales forecasting.
		52.1905	A program that prepares individuals to provide direct retail services to hotel and motel clients and customers in a variety of settings. Includes instruction in the principles of hotel/motel operations, customer sales and assistance operations and techniques, telephone operations, and basic office management.

IAC Code	NTO	CIP Code	IAC Title or CIP Definition
		52.1906	A program that prepares individuals to perform marketing and sales operations connected with the promotion of tourism in public and private sector settings. Includes instruction in principles of marketing research and advertising, promotional campaign organization, media relations, and applicable technical and administrative skills.
		52.1907	A program that prepares individuals to perform operations connected with the distribution and sale of replacement parts and other end-use supplies in the automotive, marine, and aviation industries. Includes instruction in wholesaling and retailing, principles of vehicular technologies, storage and distribution, customer sales and service skills, and principles of consumer research and sales forecasting.
		52.1908	A program that prepares individuals to perform marketing and operational tasks associated with the provision of personal and financial services. Includes instruction in banking, marketing research, advertising, promotional campaign organization, insurance, media relations, and applicable technical and administrative skills.
		52.1909	A program that prepares individuals to perform marketing and sales operations connected with the promotion of special products, including floristry, food, and home and office products. Includes instruction in principles of marketing research and advertising, promotional campaign organization, media relations, and applicable technical and administrative skills.
		52.1910	A program that prepares individuals to provide marketing services in the hospitality and leisure fields. Includes instruction in hospitality operations, customer sales and assistance operations and techniques, telephone operations, basic office management, retail sports, recreation equipment, food and beverage.
			52.1999 Any instructional program in sales, marketing, and distribution operations not listed above.
52.99		52.99	Business, Management, Marketing, and Related Support Services, Other
			52.9999 Any instructional program in business, management, marketing and related support services not listed above.

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