

DOCUMENT RESUME

ED 201 293

HE 013 777

AUTHOR Malitz, Gerald S.
 TITLE A Classification of Instructional Programs.
 INSTITUTION National Center for Educational Statistics (ED),
 Washington, D.C.
 REPORT NO NCES-81-323
 PUB DATE Feb 81
 NOTE 211p.: An earlier draft of this report was prepared
 by the National Center for Higher Education
 Management Systems, Boulder, CO.
 AVAILABLE FROM National Center for Education Statistics, Washington,
 DC 20202.

EDRS PRICE MF01/PC09 Plus Postage.
 DESCRIPTORS Associate Degrees; Bachelors Degrees;
 *Classification; *Course Descriptions; Definitions;
 Departments; Doctoral Degrees; Elementary Schools;
 *Elementary Secondary Education; Glossaries; *Higher
 Education; High Schools; *Intellectual Disciplines;
 Junior High Schools; Majors (Students); Masters
 Degrees; Noncredit Courses; Postsecondary Education;
 Student Certification; *Units of Study

ABSTRACT

A new classification of instructional programs is presented that includes terms and definitions for describing instructional programs for all of education. The classification should be helpful in the tasks of collecting, recording, reporting, analyzing, interpreting, and disseminating data about instructional programs. Information is presented on intended uses of the classification, criteria for designing the classification, comparison between new and old classifications, conventions for classifying selected programs, and other background data. The categorization scheme distinguishes between programs on the basis of whether they culminate in a formal award, such as a degree, diploma, or certificate. The second dimension of the classification is that it distinguishes programs that differ substantively in the blend of their subject matter content. Major program categories are listed alphabetically. Additionally, all the terms used in the classification are defined. Appended materials include the following: a list of all existing National Center for Education Statistics terminology publications; comparative information for the new classification and the Higher Education General Information Survey Taxonomy and the Handbook VI vocational programs; a list of categories of the classification that are recognized as vocational education programs currently supported under the Vocational Education Act of 1963, as amended; and a list of the major contributors to the new classification. A glossary and an index that identifies programs by their codes are included. (SW)

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A Classification of Instructional Programs

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for Education
Statistics

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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ED 201-292

HE 201-766

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National Center for Education Statistics

The purpose of the Center shall be to collect and disseminate statistics and other data related to education in the United States and in other nations. The Center shall . . . collect, collate and, from time to time, report full and complete statistics on the conditions of education in the United States; conduct and publish reports on specialized analyses of the meaning and significance of such statistics . . . and review and report on education activities in foreign countries. (Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e-1).

An earlier draft of this publication was prepared by the National Center for Higher Education Management Systems, Boulder, Colorado, under contract number 3070-7-0510 with the National Center for Education Statistics.

Foreword

A current problem in collecting, reporting, and analyzing information about instructional programs is the lack of a complete and up-to-date classification structure, terminology, and definitions for describing them. This deficiency is a serious problem in achieving completeness and comparability of educational statistics.

As part of its program to provide assistance to the education community, the National Center for Education Statistics (NCES) awarded a contract to the National Center for Higher Education Management Systems (NCHEMS) of Boulder, Colorado, to develop a classification of instructional programs and to provide terms and definitions for describing instructional programs for all of education.

This classification was the result of the cumulative efforts of many people. A 16-member National Planning Committee advised NCES and NCHEMS on the project approach, the content and format of the document, the numerical coding and classification structure, and the instructional programs and additional dimensions. NCHEMS requested nominations for the Committee from a variety of educational associations whose members represented various levels of education, types of educational institutions, educational agencies, and coordinating bodies. A list of candidates was then prepared that featured a broad geographic distribution and good representation of major educational affiliations.

NCES also established a 20-member committee in Washington comprised of people from the Department of Education and other Federal agencies involved in educational data collection and reporting. This committee met with NCES and NCHEMS staff before each planning committee meeting to discuss the status of the project and the structure and form of the classification.

In addition, 7,000 copies of a field review edition were mailed to a number of individuals representing higher education institutions, vocational institutions, state agencies, education associations, and other interested parties. The reviews and comments received were of assistance in the formulation of the classification.

This instructional program classification will serve a wide range of people in the education community, from those involved in elementary programs to those involved in post-doctoral studies, including persons in the various forms of adult/continuing education and those in both the private and public sectors. It is hoped that this classification will make their tasks for collecting, recording, reporting, analyzing, interpreting, and disseminating data about instructional programs easier.

Marie D. Extridge
Administrator, National Center for
Education Statistics

February 1981

Acknowledgments

This publication was made possible by the contributions of many individuals, foremost were: Emanuel Weinstein, National Occupational Information Coordinating Committee; and Kent Bennion, Office of Vocational and Adult Education, U.S. Department of Education. In addition, members of the NCHEMS staff that worked on the project were: Ken Sauer, Dennis Jones, and Ellen Cherin. Thomas Hill of NCES edited the publication and enhanced its presentation.

How to Obtain More Information

Requests for additional information about the classification should be directed to Gerald S. Malitz, National Center for Education Statistics, (Presidential Building), 400 Maryland Avenue SW., Washington, D.C. 20202, telephone (301) 436-6348.

Information about the Center's statistical program and a catalog of NCES publications may be obtained from the Statistical Information Office, National Center for Education Statistics, (Presidential Building), 400 Maryland Avenue SW., Washington, D.C. 20202, telephone (301) 436-7900.

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Chapter I

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Introduction

At the time of its inception, the Office of Education was given responsibility for gathering data about education in the United States. Its mandate, in the legislative act that established the Office in 1867, was to "collect such statistics and facts as shall show the condition and progress of education in the several States and Territories." Since 1965 this function has been assumed by the National Center for Education Statistics (NCES). The Education Amendments of 1974 (Sec. 406(b)(1), 88 stat. 629), reaffirming the mandate of 1867, state that NCES shall "collect, collate, and, from time to time, report full and complete statistics on the condition of education in the United States."

To support this congressionally-mandated collection of data, the Office of Education--and more recently NCES--has supported the development of a series of terminology publications. (See appendix A for a complete list of NCES terminology publications issued to date). These publications were developed as two separate series, one for elementary and secondary schools and systems, the other for higher education. Terminology about community and junior colleges has variously been included in either and both series. The elementary and secondary series, initiated in the 1950s, have a two-fold purpose: (1) to create a standard terminology to guide the reporting of data and (2) to provide guidance to state and local education agencies in establishing record-keeping systems. The higher education series, the first of which was published in 1970, is directed at only the first purpose. The terminology standards contained in these publications have become widely used, in collecting data from educational institutions, not only by NCES, but by State governments and Federal agencies as well.

Two NCES publications used to classify instructional programs are the *Standard Terminology for Curriculum and Instruction in Local and State School Systems*, commonly referred to as Handbook VI and *A Taxonomy of Instructional Programs in Higher Education*, commonly referred to as the HEGIS Taxonomy. The new classification is intended to replace the Taxonomy and fill a void in Handbook VI with regards to instructional programs.

Reasons for Change

There are at least five reasons for developing a new classification. First, Handbook VI and the HEGIS Taxonomy, both published in 1970, need updating since new instructional programs have evolved or have gained new significance. Ten years ago, programs such as elementary particle physics, laser electro-optic technology, and energy conservation and use technology did not seem as important as they are today.

Second, the HEGIS Taxonomy contains no program definitions or descriptors. This deficiency diminishes the reliability and validity of HEGIS data because a program title alone often does not convey enough information about the program to indicate what degrees should be reported under that heading. It might not be apparent, for example, that a dual French-German degree should be reported under the category "foreign languages, general". Titles no less ambiguous are "health professions, general," "English, general," "educational supervision," and "international public service (other than diplomatic service)." Other difficulties can arise for someone who possesses little expertise in a given discipline and encounters two programs that superficially appear quite similar. Thus, the nonengineer might find it difficult to distinguish "geological engineering" from "geophysical engineering".

Third, the HEGIS Taxonomy and Handbook VI conflict in the area of vocational education because they approach it in markedly different ways. This confusion is particularly disconcerting to community colleges, which are required by the Federal government to report data on occupational programs according to the two classifications. Although the HEGIS Taxonomy attempts to encompass "technological and occupational curriculums," only technologies are covered for the most part. In addition, the Taxonomy inadequately represents or ignores many nontechnological programs in areas such as agriculture, home economics, and marketing. Some technological programs also appear in the Taxonomy but not in Handbook VI, and vice versa. For example, "medical record technology" is listed in the HEGIS Taxonomy but not in Handbook VI, while "environmental-control technology" (heating, cooling, refrigeration) shows up only in Handbook VI. There are difficulties even for many programs that appear in both classifications. For example, "computer operator and peripheral equipment operation technologies" in HEGIS is only roughly equivalent to the Handbook VI category "scientific data processing".

Fourth, both the HEGIS Taxonomy and Handbook VI contain weaknesses in the way instructional programs are classified and disaggregated. HEGIS offers no intermediary level of aggregation that groups together programs such as physics or chemistry. In order to get the total number of degrees granted in chemistry, one must sum data from six subspecialties. Handbook VI suffers from the same problem. Under distributive education, for example, 97 six-digit categories (the third level of disaggregation) are included in no hierarchical arrangement of two-digit categories. In some instances, Handbook VI also contains too much detail, for example, one finds the ten-digit category "housing practices" under "production management" (eight digits), "animal science" (six digits), "agricultural production" (four digits), and "agriculture" (two digits, the highest level of aggregation).

Fifth, nontraditional and adult education programs are not covered by either the HEGIS Taxonomy or Handbook VI. As a result of this deficiency, NCES surveys of adult education activities were not able to directly utilize HEGIS or Handbook VI categories.

Intended Uses of the Classification

According to 1978 data, there are in the United States over 3,100 colleges and universities, over 7,600 noncollegiate schools offering occupational programs, and over 15,000 elementary and secondary school districts. Most of these schools and colleges have developed instructional programs that meet the needs of their institution and its students, have labeled those programs in terms that identify and describe those programs in ways that best serve their internal needs, and have evolved classification and coding schemes that reflect their own arrangements and meet their management needs.

However, many times schools and colleges must communicate information about their programs with State or Federal agencies, professional or accrediting groups, and other institutions in a language that everyone understands. In this case, that means a set of data categories and definitions that are subscribed to by all parties to the information exchange (data collecting and reporting) activity. This does not mean that institutions must modify their internal systems to satisfy the needs of external reporting. To the contrary, to do so would reduce the utility of data for internal use, in most institutions the primary consideration. Rather an institution should be prepared to translate its data into a common structure for purposes of reporting data and otherwise communicating with other agencies and institutions. It is recommended that primary sources of information (i.e., schools and colleges) use this classification to structure their record-keeping system for internal use if:

- 1) it is found to be appropriate for intra-institutional use, and
- 2) external (reporting) uses are so prevalent relative to internal uses that efficiency is better served.

This classification is intended as a reference tool to assist in the collection, reporting, and interpretation of data about instructional programs. It is intended to aid those who: design data-collection instruments; respond to the questionnaires; and compile, verify, and analyze data. The classification provides a universe for designers of data-collection instruments from which program titles may be selected. Survey respondents and those who compile and verify data may view the classification as a dictionary to clarify where a particular datum should be reported. And finally, researchers and analysts can use the classification as a means of understanding the scope or content validity of a particular datum.

The classification will also provide the Federal government with a standard means of describing instructional programs that can be used in developing Federal survey instruments. NCES will use the classification for HEGIS and the Vocational Education Data System (VEDS) surveys as well as other NCES surveys. HEGIS consists of a number of individual survey instruments, one of which focuses on the number of associate, bachelor's, master's, doctor's, and first-professional degrees granted by colleges and universities. Degree data are reported by kind of degree and by

field or specialty. This classification will serve as the standard reference from which appropriate specialty categories appearing on the HEGIS form will be drawn. As a result of the 1976 Education Amendments, NCES is also charged with establishing VEDS to supply annual data on vocational education programs in secondary schools, vocational-technical schools, and colleges and universities. (Public Law 94-482, Sec. 161, 20 USC 2391). VEDS data is also collected by specialties or fields. The classification will provide the standard reference material from which the list of vocational education specialties appearing on the survey instrument will be created.

Quite apart from federal purposes and obligations, the classification has value for States and institutions. State education agencies, central offices of college and university systems, and superintendents of large school districts have data reporting needs not unlike those of the Federal government. These administrative units require standardized data on instructional programs for such functions as budgeting, funding, planning, allocating classroom space, assigning personnel, and reviewing programs. State agency personnel need standardized data from each institution within their state, for example, to compare program offerings and avoid duplications. Central university system offices and school district offices also rely upon standardized data to prepare system-wide and district-wide budgets.

The classification should also be useful to individual institutions. To keep abreast of latest developments, institutions belonging to a particular interest group frequently wish to exchange data on a regular basis. Similarly, institutions undertaking self-studies often wish to compare their own data with equivalent data from institutions of like size and complexity.

Among the many potential users of this classification are State and Federal agencies and other organizations that are not primary sources of data about instructional programs. Since they must first collect data from schools and colleges before they can either use the data or pass it on to third parties, such organizations may well find it useful to structure their record-keeping systems in accordance with the classification. Indeed, as a result of the review of the preliminary draft, the coding structure has been modified somewhat to make this particular use more easy to accommodate.

Cautionary Notes About Use

The classification describes the content of programs at three levels (two-digit, four-digit, and six-digit levels). Its design allows it to be used in collecting data at varying levels of detail. However, it must remain the responsibility of the individual or agency requesting the data to specify the level of detail appropriate to their needs. Many times, no single level of detail will yield the desired data. The classification provides the building blocks; it does not provide the blueprint for all uses. The task must lie with the user.

Finally, users should not interpret similar categorization of programs as connoting exact comparability. Programs at two institutions can be categorized and coded in exactly the same

way, and yet be different. This can occur for a variety of reasons. First, the classification represents a common framework to which institutions have translated their own data; they have the end point, but not necessarily the beginning point, of the translation process in common. Second, there are many nuances to a full description of an instructional program, nuances involving methods of teaching, prior preparation of students, mix of resources used, etc. In short, it must be recognized that comparability is a relative, not an absolute, concept. If used properly, the classification should help assure that programs categorized together are more like each other than they are like programs in other categories.

Concepts Basic to the Classification

a. The Definition of "Instructional Programs"

For purposes of this publication, instructional programs are defined as:

One or more structured learning experiences designed to accomplish a predetermined objective or set of allied objectives, such as preparation for advanced study, qualification for an occupation or range of occupations, or solely to increase knowledge or understanding.¹

Two points in particular should be noted. First, as used in this publication, instructional programs are comprised of *structured learning experiences*. This means that learning that occurs by happenstance or that accrues through experience, but in the absence of a designed intent are to be excluded. At the same time, "structured learning experience" should be interpreted broadly. Student learning contracts, organized field experiences, and other *planned* experiences can be accommodated within this definition. The important thing is that they are planned and structured; the methods by which they are carried out are not determining considerations. Included within the scope of this definition are:

- programs leading to the award of a high school diploma, college degree, or certificate of some form (programs resulting in an award are generally designed to provide one with a well-rounded education or to prepare one for further study or for entry into one or more occupations);
- programs leading to educational attainment generally commensurate with a particular age or grade level—for example, a fifth-grade instructional program (grade-level programs generally prepare an individual for the next level of education);

¹Chismore, W. Dale, and Hill, Quentin M. *A Classification of Educational Subject Matter*. State Educational Records and Reports Series, Handbook XI. U.S. Department of Health, Education, and Welfare, National Center for Educational Statistics, NCES 78-112. Washington, D.C.: U.S. Government Printing Office, 1978.

- programs intended to keep employed individuals current in their fields (so-called continuing professional education or occupational updating programs); and
- programs intended to equip individuals for leisure-time pursuits.

Second, instructional programs are planned and organized toward an end point. They can be described in terms of their explicitly stated or implied objectives; for example, preparation for advanced study, preparation for job entry, occupational or professional updating, or preparation for a licensing exam. Alternatively, instructional programs can be described or categorized according to the forms of recognition bestowed upon completion of the programs; for example, high school diplomas, certificates, or degrees. In many cases, the basic objectives are implied by the nature of the award conferred upon program completion. Because there is more commonality of practice and understanding about awards than about program purposes more abstractly stated, the latter approach has been adopted in this publication.

b. The Related Concept of Subject Matter

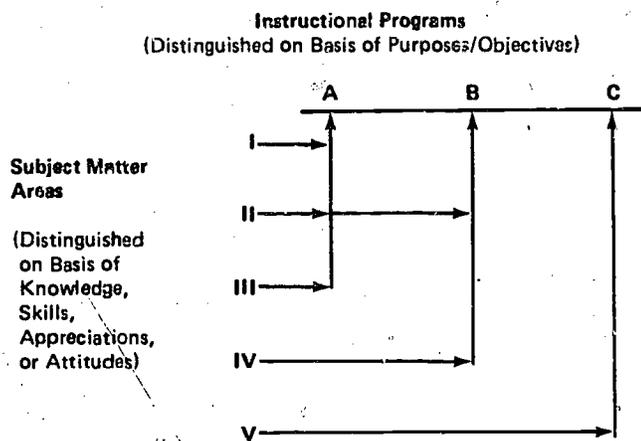
The concept of instructional programs is often confused with the concept of subject matter. This widespread confusion requires that a distinction be made between these concepts and guidelines developed for determining what should or should not be considered as an instructional program. According to NCES, subject matter is defined as:

a body of facts, understandings, processes, skills, values, and appreciations related to a specific aspect of human activity and experience. Subject matter includes the accumulated knowledge, skills, appreciations, and attitudes comprising the substance of any subject-matter area.²

Instructional programs, therefore, are distinguished by the "objective or set of objectives" they are designed to accomplish, while subject matter areas are distinguished by the substantive content of the "knowledge, skills, appreciations, or attitudes" that they embody. While these fundamental concepts are highly interrelated in that all instructional programs have a subject-matter base, they are not

synonymous. Figure 1 depicts that relationship between instructional programs and subject matter areas in a simplified fashion.

Figure 1. Relationship Between Instructional Programs and Subject Matter Areas



The relationships between Subject Matter Areas I, II, III, and Instructional Program A illustrate a common phenomenon: instructional programs generally derive from many subject matter areas. For example, an instructional program that prepares students for advanced study in physics may draw from mathematics and chemistry, in addition to physics. The relationships between Subject Matter Area II and Instructional Programs A and B illustrate that multiple instructional programs often draw from a common subject matter area. Programs designed for such different purposes as preparing students for advanced study in physics and preparing students as entry-level machinists both draw on mathematics, though at differing levels of complexity. Finally, the relationship between Subject Matter Area V and Instructional Program C shows that many instructional programs have as their sole purpose the transferral of knowledge or skills embodied in a single subject matter area. Examples of this relationship are programs to help students with a communication skill such as reading or programs to acquaint an individual with recent advances in chemistry.

The concept of an instructional program generally applies to collecting data about degrees granted and student majors, while the concept of subject matter generally applies to collecting data about either resources on or not on levels of activity--full-time equivalent (FTE) faculty assigned or student credit/contact hours generated--for instruction in a particular discipline. It is expected, in addition to its intended uses that the new classification will be widely used to describe both instructional programs and subject matter. Users should take particular care to clearly state how the classification is being used in any given application.

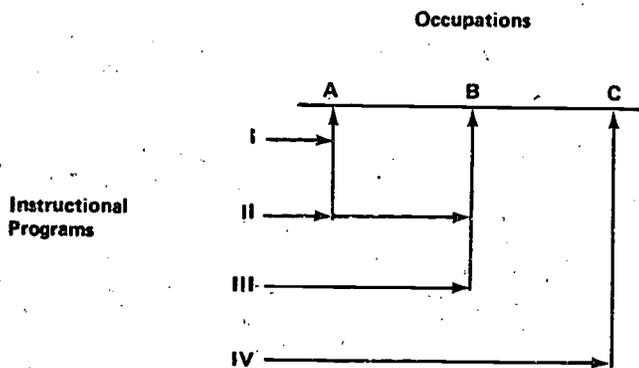
²Putnam, John F., and Chismore, W. Dale. *Standard Terminology for Curriculum and Instruction in Local and State School Systems*. State Educational Records and Reports Series, Handbook VI. U.S. Department of Health, Education, and Welfare, Office of Education, OE-23052. Washington, D.C.: U.S. Government Printing Office, 1970.

c. Relationship to Labor Market Supply and Demand

A major use of instructional program data, particularly at the State and National levels, is in the development of information for labor market supply and demand comparisons. A single classification of programs will eliminate the wide variation in classification of occupational programs which existed because of the use of both Handbook VI and the HEGIS Taxonomy. In addition, it was decided to align instructional program (supply) categories as closely as possible with occupational (demand) categories.

Figure 2 depicts the relationships between instructional programs and occupations in a simplified fashion.

Figure 2. Relationship Between Instructional Programs and Occupations



This illustration serves to indicate that:

- 1) Many occupations draw their entrants from multiple instructional programs--for example sales personnel can be trained in business, engineering, liberal arts, etc.;
- 2) Many instructional programs provide manpower supply to many occupations; liberal arts is the classic example of this phenomenon; and
- 3) There are some programs for which relationships to occupations are singular and direct.

Where the latter relationship holds, the classification structure has been designed to facilitate linkages to occupation information (the categories of Mechanics and Repairers, and Precision Production, have been developed on this basis, for example). Where the linkages are not singular, the classification reflects practice in educational institutions.

Criteria for Designing the Classification

Six criteria were used to design the classification:

1. Distinctions among programs are made on the basis of program purposes or objectives. For example, civil engineering technology is distinguished from civil engineering because the explicit purpose of the first program is to train individuals who can assist civil engineers.
2. The classification applies to all instructional programs irrespective of the organization providing the instruction. Thus the classification attempts to accommodate leisure and recreational programs offered by municipal parks and recreation departments.
3. The classification applies to all educational levels--elementary, secondary, and postsecondary. This means that a program offered mostly by secondary schools, such as industrial arts, is included.
4. In order to provide continuity, ties to existing classification schemes are maintained as long as they do not violate other criteria. Although few degrees are awarded in embryology, the field has been maintained because it appears in the HEGIS Taxonomy.
5. The classification reflects the historical traditions of the various instructional program areas. Thus the category of home economics is quite detailed whereas law is not.
6. The structure reflects an institutional or organizational perspective because institutions are the data providers. (Examples related to this criterion are provided in the following section.)

Comparison between New and Old Classifications

The following comparisons can be made:

1. For the most part, the individual programs contained in both Handbook VI (at the six-digit level and above) and the HEGIS Taxonomy have been retained except for deletions required to eliminate duplication.
2. The levels of detail are the same as for the previous classifications--the apparent change in detail for the HEGIS categories (occasioned by the move from a four- to six-digit code) results from the addition of an intermediate level of aggregation rather than from the addition of more detailed subcategories.
3. The groupings of programs have been changed in some cases to better distinguish between programs having different purposes.
4. New categories have been added both to update previous classifications and to include programs such as leisure and recreation programs not encompassed by the previous classifications.

The Classification consists of two independent dimensions, one for *program purpose* and the other for *program category*. Additional detail for the program category dimension is given in chapter 2, and definitions for program categories as well as program purposes are given in chapter 3.

Program Purpose Dimension

The categorization scheme for program purposes distinguishes between programs solely on the basis of whether or not they culminate in a formal award, such as a degree, diploma, or certificate. Although simplistic, this dichotomy has several virtues. First, it reflects a distinction assumed by institutions in describing their programs as "degree" or "nondegree". Second, this distinction further reflects the way institutions collect and report data on program enrollment and completion. Finally, unlike other alternatives, the distinction between "degree" and "nondegree" programs is operational. A search of college catalogs will typically reveal such formal statements of program purposes and objectives as to enhance the quality of life, to promote democratic ideals, to develop the whole person, and to prepare individuals for employment in particular occupations. While such statements may be more descriptive of ultimate program goals, no consensus exists that would result in standard categories along these lines. Further distinctions are needed within the two categories of program purpose. It is necessary, for example, to know whether a program results in a high school diploma or a Ph.D. In short, it is crucial to distinguish program levels within the program purpose categories. For programs culminating in formal awards, subcategories are expressed in terms of the particular award granted upon program completion, such as high school diploma or baccalaureate degree.³ For programs not resulting in a formal award, level distinctions are often not made. In instances where level distinctions are useful or necessary, programs can be categorized as "introductory", "intermediate", or "advanced". (See table 1 for a complete listing of program purpose subdivisions.)

The discussion of program purpose would not be complete without addressing the question of "purpose as identified by whom"? This question can be answered from at least three different perspectives--that of the individual learner, that of society itself, and that of the institution providing the program.

Award Programs

- 1.0 Elementary/Secondary Programs
 - 1.1 Elementary School Program
 - 1.2 Junior High School Program
 - 1.3 High School Diploma Program
- 2.0 Postsecondary Certificates/Diplomas/Degrees
 - 2.1 Postsecondary Certificate or Diploma (less than one year)
 - 2.2 Postsecondary Certificate or Diploma (one year or more but less than four years)
 - 2.3 Associate Degree
 - 2.4 Baccalaureate Degree
- 3.0 First-Professional Certificates/Degrees
 - 3.1 First-Professional Degree
 - 3.2 Post-Professional Certificate
- 4.0 Graduate Certificates/Degrees
 - 4.1 Graduate Certificate
 - 4.2 Master's Degree
 - 4.3 Intermediate Graduate Degree
 - 4.4 Doctoral Degree
 - 4.5 Post-Doctoral Award

Nonformal Award Programs

5.0 Nonformal Award Programs

The reasons learners give for participating in an educational experience are varied. This provides a difficult basis for classifying program purposes in a standardized way. A second perspective, that of society, asks what the societal benefits are of continued investment in education. The difficulty with this perspective is that societal objectives are too broadly stated to be of assistance in classifying program purposes.⁴ For this classification, the third perspective--that of the institution providing the instructional program--will be used. This choice is made purely on pragmatic grounds. The preponderance of data about instructional programs is collected from institutions, not individual students. Since we have little choice but to adopt the institution's perspective if the resulting data are to be interpreted with any consistency, program purpose should be interpreted as the purpose or objective intended by the institution offering the program.

³Further distinctions within award programs, such as grade-level descriptors, are often used. Such descriptors perhaps more appropriately describe the progress of an individual vis-a-vis a program rather than the program itself. Nevertheless, there are many instances in which all individuals at a particular grade level take the same educational program--for example, the first year of medical school. In such cases, grade-level distinctions can legitimately be used to identify and classify instructional programs.

⁴See the statements of social objectives incorporated in: Carnegie Commission on Higher Education. *The Purposes and the Performance of Higher Education in the United States: Approaching the Year 2000* (New York: McGraw Hill, 1973); Christoffel, Pamela, and Rica, Lois. *Federal Policy Issues and Data Needs in Postsecondary Education*, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 76-238. Washington, D.C.: U.S. Government Printing Office, 1976; *The Second Newman Report: National Policy and Higher Education*. Report of a Special Task Force to the Secretary of Health, Education, and Welfare (Cambridge, Ma.: The MIT Press, 1973).

Program Category Dimension

The second dimension of the classification is that which distinguishes programs that differ substantively in the blend of their subject matter content. There also exists a large number

of instructional programs that differ in subtle ways. Because of the practical limitations of large-scale data collection, structural simplicity became the guiding principle for this dimension, which took the form of a simple alphabetical listing of major program categories. (See table 2 for a complete list of the program category subdivisions.)

Table 2. Program Category Dimension

Agriculture

01. Agribusiness and Agricultural Production
02. Agricultural Sciences
03. Renewable Natural Resources

Architecture and Environmental Design

04. Architecture and Environmental Design

Area and Ethnic Studies

05. Area and Ethnic Studies

Business

06. Business and Management
07. Business and Office
08. Marketing and Distribution

Communications

09. Communications
10. Communications Technologies

Computer and Information Sciences

11. Computer and Information Sciences

Consumer, Personal, and Miscellaneous Services

12. Consumer, Personal, and Miscellaneous Services

Education

13. Education

Engineering

14. Engineering
15. Engineering and Engineering-Related Technologies

Foreign Languages

16. Foreign Languages

Health

17. Allied Health
18. Health Sciences

Home Economics

19. Home Economics
20. Vocational Home Economics

Industrial Arts

21. Industrial Arts

Law

22. Law

Letters

23. Letters

Liberal/General Studies

24. Liberal/General Studies

Library and Archival Sciences

25. Library and Archival Sciences

Life Sciences

26. Life Sciences

Mathematics

27. Mathematics

Military Sciences

28. Military Sciences
29. Military Technologies

Multi/Interdisciplinary Studies

30. Multi/Interdisciplinary Studies

Parks and Recreation

31. Parks and Recreation

Personal and Social Development

32. Basic Skills
33. Citizenship/Civic Activities
34. Health-Related Activities
35. Interpersonal Skills
36. Leisure and Recreational Activities
37. Personal Awareness

Philosophy, Religion, and Theology

38. Philosophy and Religion
39. Theology

Physical Sciences

40. Physical Sciences
41. Science Technologies

Psychology

42. Psychology

Public Affairs and Protective Services

43. Protective Services
44. Public Affairs

Social Sciences

45. Social Sciences

Trade and Industrial

46. Construction Trades
47. Mechanics and Repairers
48. Precision and Production
49. Transportation and Material Moving

Visual and Performing Arts

50. Visual and Performing Arts

The two operating principles that influenced the development of major program categories were:

1. Substantive differences take precedence over program prevalence or popularity. This means that program categories with distinctive subject matter configurations were included as separate entries, even though available data suggest that certain programs have relatively few enrollments or graduates. Thus "military sciences" programs receive equal billing with "social sciences". As a consequence of this guideline, the classification is uneven in the level of detail within program categories.
2. Overly fine distinctions among program categories were avoided. In cases where distinctions might be called for on conceptual grounds, but the distinctions were particularly subtle or were considered infeasible to apply and maintain in common usage, separate program categories were not included. To illustrate, specialties within "psychology" were maintained as separate categories even though within a given specialty some programs might have more clinical emphasis than others and thus possibly warrant a separate category.

The classification that has emerged represents an attempt to be both conceptually sound and pragmatic. When these criteria were found to be in conflict the dilemmas were resolved in favor of what would best facilitate data collection and interpretation.

Independence of the Dimensions

In conclusion, it should be reiterated that the program purpose and program category dimensions are independent. Selecting a category from one dimension is not dependent in any way upon selecting a category from the other dimension. The past practice of reserving certain program categories for use in conjunction with programs of only one purpose or level has been eliminated. For example, there is nothing inherent in the program category dimension that automatically assumes a given vocational education program is taught exclusively at either the secondary education or associate or bachelor's degree level. While certain program categories will probably be used predominately in conjunction with selected program purposes or levels, this practice should not be viewed as exclusive or mandatory.

Those familiar with the HEGIS Taxonomy will recognize that the program category dimension of the classification contains three levels of detail instead of the customary two. However, the classification is conceptually more sound because of the additional level of detail.

A convention has been followed concerning how the three levels of the program category dimension are defined. The definitions of all two-digit elements of this dimension begin with the words "a summary of groups of instructional programs", while the definitions of all four-digit elements begin with "a group of instructional programs". At the six-digit level of detail, all definitions begin with the words "an instructional program". Thus, by definition, an instructional program can only be coded at the six-digit level. This technicality explains why numerous four-digit programs have only one six-digit subdivision: it was necessary to add the six-digit entry for uniformity so that an individual instructional program under the four-digit "group of programs" would have a six-digit code by which to be classified.

Another area of concern existed in cases where there were occurrences of programs that logically could be classified under two or more two-digit categories. In most cases, a judgement was made as to which two-digit category more closely followed historical tradition or modern consensus. In other instances, a general principle was applied where appropriate. Simply stated, the principle is that programs that take much of their emphasis from one instructional area and apply that emphasis or perspective to another, are classified under the applied area. For example, although instructional program 06.1706, Real Estate Law, derives much of its subject matter from law, it is classified under category 06, business, because real estate, a subdivision of business, represents the area to which the subject matter of law is applied in this particular instance.

The following list highlights some of the occurrences alluded to in the previous paragraph:

- Agricultural Business (01.0102) and Agricultural Economics (01.0103) are classified under Agriculture instead of Business;
- Forest Engineering (03.0504) is classified under Agriculture instead of Engineering;
- Interior Design (04.0501) is classified under Architecture and Environmental Design instead of Home Economics; and
- Management Information Systems (06.1201) is classified under Business instead of Computer and Information Sciences

Cases also exist where programs are cross-referenced from one, two-digit grouping to another. This is done in cases where programs have historically been classified in either of two places, but for sake of achieving exclusivity they were put in one location. The cross-reference allows for ease in locating these programs.

One further note should be made about the program category dimension. There was no attempt to include within this framework programs that combine education and work. These programs, commonly referred to as "Experiential Education", are defined as "a set of planned educational experiences designed to enable learners to acquire attitudes, skills, and knowledge for work and other life roles by participating in work settings". It includes four major types of programs: Cooperative Vocational Education, Work Experience Education, Career Exploration, and Work Study Programs. If the demand for information concerning these types of programs arises, appropriate steps will be taken to incorporate them into the existing framework of the classification. However, they do not currently fall within the criteria that was established for designing this classification.

Conventions for Classifying Selected Programs

Undoubtedly some instructional programs may be difficult to match with this classification. The following guidelines deal with the proper classification of certain frequently encountered programs of this kind as well as unusual programs for which no appropriate categories are included in the classification. The guidelines are presented topic by topic:

1. *Classifying High School Programs Leading to a Diploma*

General academic or college preparatory programs should be classified:

- Award, High School Diploma (purpose)
- Liberal/General Studies (program category)

Occupational/vocational programs resulting in a high school diploma are classified:

- Award, High School Diploma (purpose)
- Appropriate Program Category

2. *Classifying Baccalaureate Transfer Program Offered by a Community College*

If the program is a general-purpose program, it should be classified

- Award, Associate, assuming a two-year program (purpose)
- Liberal/General Studies (program category)

If the program is designed to fulfill the first two years' requirements for a degree in a particular field (e.g., education or business), it should be classified:

- Award, Associate (purpose)
- Appropriate Program Category

3. *Classifying General Educational Development (GED) Programs*

Classified similarly to high school diplomas, that is:

- Award, High School Diploma (purpose)
- Liberal/General Studies (program category)

4. *Classifying Adult Basic Education*

These programs should be classified:

- Nonformal Award (purpose)
- Basic Skills (program category)

5. *Classifying Continuing Professional Education*

Most such programs are designed to update professionals practicing in their chosen field and are not credit courses that can be applied toward a degree in that field. As a result, programs commonly labeled "Continuing Professional Education Programs" should be classified:

- Nonformal Award (purpose)
- Appropriate Program Category

If a program labeled a "Continuing Professional Education" course is, in reality, part of a degree program, then it should be classified:

- Award, Appropriate Level (purpose)
- Appropriate Program Category

6. *Classifying Occupational Updating Programs*

These should be classified in a fashion similar to continuing professional education programs. If they are not intended to lead to a degree or certificate, then they should be classified:

- Nonformal Award (purpose)
- Appropriate Program Category

If the occupational updating program is designed to culminate in a degree or certificate, then it should be classified:

- Award, Appropriate Level (purpose)
- Appropriate Program Category

7. *Using "General" Program Subcategories*

Many of the program categories in the structure have a "general" subcategory (for example, 02.0101, "Agricultural Sciences, General"). This subcategory should be used only in those instances in which it is appropriate to connote program content covering two or more other subcategories within that category. It should not be used as a substitute for an "other" subcategory.

8. *Classifying "Other" Programs*

Many, if not all, providers of educational programs will have at least one instructional program for which there is no appropriate program element in the structure. We recommend that institutional users, for internal purposes, assign a unique number to this program within the appropriate major program category (starting from XX.78 and using sequentially decreasing codes, as necessary); however, for external purposes they should report these as XX.9999, Other. In this context, the "other" rather than the "general" subcategory should be used.

Contents of the Classification

As stated previously, chapter 2 contains a list of all subdivisions of the program purpose and program category dimensions. Chapter 3 provides a definition for each term appearing in chapter 2. Appendix A lists all existing NCES terminology publications. To provide continuity with classifications currently in use, appendixes B and C comprise crosswalks between

the new classification and the HEGIS Taxonomy and the Handbook VI vocational programs, respectively. Appendix D lists those categories of the classification that are recognized as vocational education programs currently supported under the Vocational Education Act of 1963, as amended. Appendix E lists the major contributors to the new classification and Appendix F is a glossary. An index is also included for the reader's convenience. It identifies programs by the codes used in chapters 2 and 3 rather than by page number.

Chapter II

Coded Classification of Instructional Programs

Program Purpose Dimension

Award Programs

1.0 Elementary/Secondary

1.1 Elementary School Program

1.2 Junior High School Program

1.3 High School Diploma Program

2.0 Postsecondary Certificates/Diplomas/Degrees

**2.1 Postsecondary Certificate or Diploma
(less than one year)**

**2.2 Postsecondary Certificate or Diploma
(one year or more but less than four years)**

2.3 Associate Degree

2.4 Baccalaureate Degree

3.0 First-Professional Certificates/Degrees

3.1 First-Professional Degree

3.2 Post-Professional Certificate

4.0 Graduate Certificates/Degrees

4.1 Graduate Certificate

4.2 Master's Degree

4.3 Intermediate Graduate Degree

4.4 Doctoral Degree

4.5 Post-Doctoral Award

Nonformal Award Programs

5.0 Nonformal Award Programs

Program Category Dimension

Agriculture

- 01. Agribusiness and Agricultural Production**
- 01.01 Agricultural Business and Management**
 - 01.0101 Agricultural Business and Management, General**
 - 01.0102 Agricultural Business**
 - 01.0103 Agricultural Economics**
 - 01.0104 Farm and Ranch Management**
 - 01.0199 Agricultural Business and Management, Other**
- 01.02 Agricultural Mechanics**
 - 01.0201 Agricultural Mechanics, General**
 - 01.0202 Agricultural Electrification, Power, and Controls**
 - 01.0203 Agricultural Mechanics, Construction, and Maintenance Skills**
 - 01.0204 Agricultural Power Machinery**
 - 01.0205 Agricultural Structures, Equipment, and Facilities**
 - 01.0206 Soil and Water Mechanical Practices**
 - 01.0299 Agricultural Mechanics, Other**
- 01.03 Agricultural Production**
 - 01.0301 Agricultural Production, General**
 - 01.0302 Animal Production**
 - 01.0303 Aquaculture**
 - 01.0304 Crop Production**
 - 01.0305 Game Farm Management**
 - 01.0399 Agricultural Production, Other**
- 01.04 Agricultural Products and Processing**
 - 01.0401 Agricultural Products and Processing, General**
 - 01.0402 Food Products**
 - 01.0403 Nonfood Products**
 - 01.0499 Agricultural Products and Processing, Other**
- 01.05 Agricultural Services and Supplies**
 - 01.0501 Agricultural Services and Supplies, General**
 - 01.0502 Agricultural Services**
 - 01.0503 Agricultural Supplies Marketing**
 - 01.0504 Animal Grooming**
 - 01.0505 Animal Training**
 - 01.0506 Horseshoeing**
 - 01.0599 Agricultural Services and Supplies, Other**

01.06	Horticulture	02.05	Soil Sciences
01.0601	Horticulture, General	02.0501	Soil Sciences, General
01.0602	Arboriculture	02.0502	Soil Chemistry
01.0603	Floriculture	02.0503	Soil Conservation
01.0604	Greenhouse Operation and Management	02.0504	Soil Management and Fertility
01.0605	Landscaping	02.0505	Soil Microbiology
01.0606	Nursery Operation and Management	02.0506	Soil Physics
01.0607	Turf Management	02.0599	Soil Sciences, Other
01.0699	Horticulture, Other		
01.07	International Agriculture	02.99	Agricultural Sciences, Other
01.0701	International Agriculture	02.9999	Agricultural Sciences, Other
01.99	Agribusiness and Agricultural Production, Other	03.	Renewable Natural Resources
01.9999	Agribusiness and Agricultural Production, Other	03.01	Renewable Natural Resources, General
		03.0101	Renewable Natural Resources, General
02.	Agricultural Sciences	03.02	Conservation and Regulation
02.01	Agricultural Sciences, General	03.0201	Conservation and Regulation, General
02.0101	Agricultural Sciences, General	03.0202	Conservation
		03.0203	Resources Protection and Regulation
		03.0299	Conservation and Regulation, Other
02.02	Animal Sciences	03.03	Fishing and Fisheries
02.0201	Animal Sciences, General	03.0301	Fishing and Fisheries, General
02.0202	Animal Breeding and Genetics	-----	Commercial Fishing Operation (see 49.0303)
02.0203	Animal Health	03.0302	Fisheries
02.0204	Animal Nutrition	03.0399	Fishing and Fisheries, Other
02.0205	Animal Physiology		
02.0206	Dairy	03.04	Forestry Production and Processing
02.0207	Fisheries Science	03.0401	Forestry Production and Processing, General
02.0208	Livestock	03.0402	Forest Production
02.0209	Poultry	03.0403	Forest Products Utilization
02.0299	Animal Sciences, Other	03.0404	Forest Products Processing Technology
		03.0405	Logging
		03.0406	Pulp and Paper Production
		03.0499	Forestry Production and Processing, Other
02.03	Food Sciences	03.05	Forestry and Related Sciences
02.0301	Food Sciences, General	03.0501	Forestry and Related Sciences, General
02.0302	Dairy Processing	03.0502	Forestry Science
02.0303	Food Distribution	03.0503	Forest Biology
02.0304	Food Engineering	03.0504	Forest Engineering
02.0305	Food Packaging	03.0505	Forest Hydrology
02.0306	Food Technology	03.0506	Forest Management
02.0399	Food Sciences, Other	03.0507	Forest Mensuration
		03.0508	Urban Forestry
		03.0509	Wood Science
		03.0599	Forestry and Related Sciences, Other
02.04	Plant Sciences	03.06	Wildlife Management
02.0401	Plant Sciences, General	03.0601	Wildlife Management
02.0402	Agronomy		
02.0403	Horticulture Science	03.99	Renewable Natural Resources, Other
02.0404	Ornamental Horticulture	03.9999	Renewable Natural Resources, Other
02.0405	Plant Breeding and Genetics		
02.0406	Plant Pathology (Applied)		
02.0407	Plant Physiology		
02.0408	Plant Protection (Pest Management)		
02.0409	Range Management		
02.0410	Turf Management Science		
02.0499	Plant Sciences, Other		

Architecture and Environmental Design

- 04. Architecture and Environmental Design
- 04.01 Architecture and Environmental Design, General
 - 04.0101 Architecture and Environmental Design, General
- 04.02 Architecture
 - 04.0201 Architecture
- 04.03 City, Community, and Regional Planning
 - 04.0301 City, Community, and Regional Planning
- 04.04 Environmental Design
 - 04.0401 Environmental Design
- 04.05 Interior Design
 - 04.0501 Interior Design
- 04.06 Landscape Architecture
 - 04.0601 Landscape Architecture
- 04.07 Urban Design
 - 04.0701 Urban Design
- 04.99 Architecture and Environmental Design, Other
 - 04.9999 Architecture and Environmental Design, Other

Area and Ethnic Studies

- 05. Area and Ethnic Studies
- 05.01 Area Studies
 - 05.0101 African Studies
 - 05.0102 American Studies
 - 05.0103 Asian Studies, General
 - 05.0104 East Asian Studies
 - 05.0105 Eastern European Studies
 - 05.0106 European Studies, General
 - 05.0107 Latin American Studies
 - 05.0108 Middle Eastern Studies
 - 05.0109 Pacific Area Studies
 - 05.0110 Russian and Slavic Studies
 - 05.0111 Scandinavian Studies
 - 05.0112 South Asian Studies
 - 05.0113 Southeast Asian Studies
 - 05.0114 Western European Studies
 - 05.0199 Area Studies, Other
- 05.02 Ethnic Studies
 - 05.0201 Afro-American (Black) Studies
 - 05.0202 American Indian Studies
 - 05.0203 Hispanic-American Studies
 - 05.0204 Islamic Studies
 - 05.0205 Jewish Studies
 - 05.0299 Ethnic Studies, Other
- 05.99 Area and Ethnic Studies, Other
 - 05.9999 Area and Ethnic Studies, Other

Business

- 06. Business and Management
- 06.01 Business and Management, General
 - 06.0101 Business and Management, General
- 06.02 Accounting
 - 06.0201 Accounting
- 06.03 Banking and Finance
 - 06.0301 Banking and Finance
- 06.04 Business Administration and Management
 - 06.0401 Business Administration and Management, General
 - 06.0402 Contract Management and Procurement/Purchasing
 - 06.0403 Product Management
 - 06.0404 Systems Efficiency Analysis
 - 06.0499 Business Administration and Management, Other
- 06.05 Business Economics
 - 06.0501 Business Economics
- 06.06 Human Resources Development
 - 06.0601 Human Resources Development
- 06.07 Institutional Management
 - 06.0701 Hotel/Motel Management
 - 06.0702 Recreational Enterprises Management
 - 06.0703 Resort Management
 - 06.0704 Restaurant Management
 - 06.0705 Transportation Management
 - 06.0799 Institutional Management, Other
- 06.08 Insurance and Risk Management
 - 06.0801 Insurance and Risk Management
- 06.09 International Business Management
 - 06.0901 International Business Management
- 06.10 Investments and Securities
 - 06.1001 Investments and Securities
- 06.11 Labor/Industrial Relations
 - 06.1101 Labor/Industrial Relations
- 06.12 Management Information Systems
 - 06.1201 Management Information Systems
- 06.13 Management Science
 - 06.1301 Business Statistics
 - 06.1302 Operations Research (Quantitative Methods)
 - 06.1399 Management Science, Other
- 06.14 Marketing Management and Research
 - 06.1401 Marketing Management
 - 06.1402 Marketing Research
 - 06.1499 Marketing Management and Research, Other

- 06.15 Organizational Behavior**
06.1501 Organizational Behavior
- 06.16 Personnel Management**
06.1601 Personnel Management
- 06.17 Real Estate**
06.1701 Real Estate, General
06.1702 Commercial Property
06.1703 Property Management
06.1704 Real Estate Appraisal
06.1705 Real Estate Finance
06.1706 Real Estate Law
06.1707 Residential Property
06.1799 Real Estate, Other
- 06.18 Small Business Management and Ownership**
06.1801 Small Business Management
06.1802 Small Business Ownership
06.1899 Small Business Management and Ownership, Other
- 06.19 Taxation**
06.1901 Taxation
- 06.20 Trade and Industrial Supervision and Management**
06.2001 Trade and Industrial Supervision and Management
- 06.99 Business and Management, Other**
06.9999 Business and Management, Other
- 07. Business and Office**
- 07.01 Accounting, Bookkeeping, and Related Programs**
07.0101 Accounting, Bookkeeping, and Related Programs, General
07.0102 Accounting and Computing
07.0103 Bookkeeping
07.0104 Machine Billing, Bookkeeping, and Computing
07.0199 Accounting, Bookkeeping, and Related Programs, Other
- 07.02 Banking and Related Financial Programs**
07.0201 Banking and Related Financial Programs, General
07.0202 Credit Collection Clerk
07.0203 Insurance Clerk
07.0204 Loan Clerk
07.0205 Teller
07.0206 Transit Clerk
07.0299 Banking and Related Financial Programs, Other
- 07.03 Business Data Processing and Related Programs**
07.0301 Business Data Processing and Related Programs, General
07.0302 Business Computer and Console Operation
07.0303 Business Data Entry Equipment Operation
07.0304 Business Data Peripheral Equipment Operation
07.0305 Business Data Programming
07.0306 Business Systems Analysis
07.0399 Business Data Processing and Related Programs, Other
- 07.04 Office Supervision and Management**
07.0401 Office Supervision and Management
- 07.05 Personnel and Training Programs**
07.0501 Personnel and Training Programs, General
07.0502 Educational Assisting and Training
07.0503 Personnel Assisting
07.0599 Personnel and Training Programs, Other
- 07.06 Secretarial and Related Programs**
07.0601 Secretarial and Related Programs, General
07.0602 Court Reporting
07.0603 Executive Secretarial
07.0604 Legal Secretarial
07.0605 Medical Secretarial
07.0606 Secretarial
07.0607 Stenographic
07.0608 Word Processing
07.0699 Secretarial and Related Programs, Other
- 07.07 Typing, General Office, and Related Programs**
07.0701 Typing, General Office, and Related Programs, General
07.0702 Clerk-Typist
07.0703 Correspondence Clerk
07.0704 Duplicating Machine Operation
07.0705 General Office Clerk
07.0706 Mail and Order Clerk
07.0707 Receptionist and Communication Systems Operation
07.0708 Shipping, Receiving, and Stock Clerk
07.0709 Traffic, Rate, and Transportation Clerk
07.0710 Typing
07.0799 Typing, General Office, and Related Programs, Other
- 07.99 Business and Office, Other**
07.9999 Business and Office, Other
- 08. Marketing and Distribution**
- 08.01 Apparel and Accessories Marketing**
08.0101 Apparel and Accessories Marketing, General
08.0102 Fashion Merchandising
08.0103 Fashion Modeling
08.0104 Footwear Marketing
08.0105 Jewelry Marketing
08.0199 Apparel and Accessories Marketing, Other

08.02 Business and Personal Services Marketing
08.0201 Business and Personal Services Marketing, General

Advertising (see 09.0201)
08.0202 Display
08.0203 Marketing of Business or Personal Services
08.0299 Business and Personal Services Marketing, Other

08.03 Entrepreneurship
08.0301 Entrepreneurship, General

Small Business Management (see 06.1801)

Small Business Ownership (see 06.1802)

08.04 Financial Services Marketing
08.0401 Financial Services Marketing, General
08.0402 Banking Marketing
08.0403 Credit Marketing
08.0404 Credit Union Marketing
08.0405 Savings and Loan Marketing
08.0406 Securities and Commodities Marketing
08.0499 Financial Services Marketing, Other

08.05 Floristry, Farm and Garden Supplies Marketing
08.0501 Floristry, Farm and Garden Supplies Marketing, General
08.0502 Farm and Garden Supplies Marketing
08.0503 Floristry
08.0599 Floristry, Farm and Garden Supplies Marketing, Other

08.06 Food Marketing
08.0601 Food Marketing, General
08.0602 Convenience Store Marketing
08.0603 Specialty Foods Marketing
08.0604 Supermarket Marketing
08.0605 Wholesale Food Marketing
08.0699 Food Marketing, Other

08.07 General Marketing
08.0701 Auctioneering
08.0702 Industrial Sales
08.0703 International Marketing

Marketing Management (see 06.1401)

Marketing Research (see 06.1402)
08.0704 Purchasing
08.0705 Retailing
08.0706 Sales
08.0707 Wholesaling
08.0799 General Marketing, Other

08.08 Home and Office Products Marketing
08.0801 Home and Office Products Marketing, General
08.0802 Appliance Marketing
08.0803 Building Materials Marketing
08.0804 Floor Coverings, Draperies, and Upholstery Marketing
08.0805 Furniture Marketing
08.0806 Hardware Marketing
08.0807 Office Products and Equipment Marketing
08.0808 Specialty Home Furnishings Marketing
08.0899 Home and Office Products Marketing, Other

08.09 Hospitality and Recreation Marketing
08.0901 Hospitality and Recreation Marketing, General

Hotel/Motel Management (see 06.0701)
08.0902 Marketing of Hotel/Motel Services
08.0903 Marketing of Recreational Services

Recreational Enterprises Management (see 06.0702)
08.0904 Recreational Products Marketing

Resort Management (see 06.0703)

Restaurant Management (see 06.0704)
08.0905 Waiter/Waitress and Related Services
08.0999 Hospitality and Recreation Marketing, Other

08.10 Insurance Marketing
08.1001 Insurance Marketing, General
08.1002 Accident and Health Insurance Marketing
08.1003 Life Insurance Marketing
08.1004 Property and Casualty Insurance Marketing
08.1099 Insurance Marketing, Other

Real Estate (see 06.17)

Real Estate, General (see 06.1701)

Commercial Property (see 06.1702)

Property Management (see 06.1703)

Real Estate Appraisal (see 06.1704)

Real Estate Finance (see 06.1705)

Real Estate Law (see 06.1706)

Residential Property (see 06.1707)

Real Estate, Other (see 06.1799)

08.11 Transportation and Travel Marketing
08.1101 Transportation and Travel Marketing, General
08.1102 Freight Transportation Marketing
08.1103 Passenger Transportation Marketing
08.1104 Tourism,

Transportation Management (see 06.0705)
08.1105 Travel Services Marketing
08.1106 Warehouse Services Marketing
08.1199 Transportation and Travel Marketing, Other

08.12 Vehicles and Petroleum Marketing
08.1201 Vehicles and Petroleum Marketing, General
08.1202 Agricultural Implements and Machinery Marketing
08.1203 Automotive Vehicles and Accessories Marketing
08.1204 Petroleum Wholesaling
08.1205 Recreational Vehicles and Accessories Marketing
08.1206 Service Station Retailing
08.1207 Vehicle Rental and Leasing
08.1299 Vehicles and Petroleum Marketing, Other

08.99 *Marketing and Distribution, Other*
08.9999 *Marketing and Distribution, Other*

Communications

09. *Communications*

09.01 *Communications, General*
09.0101 *Communications, General*

09.02 *Advertising*
09.0201 *Advertising*

09.03 *Communications Research*
09.0301 *Communications Research*

09.04 *Journalism (Mass Communications)*
09.0401 *Journalism (Mass Communications)*

09.05 *Public Relations*
09.0501 *Public Relations*

09.06 *Radio/Television News Broadcast*
09.0601 *Radio/Television News Broadcast*

09.07 *Radio/Television, General*
09.0701 *Radio/Television, General*

09.99 *Communications, Other*
09.9999 *Communications, Other*

10. *Communication Technologies*

10.01 *Communication Technologies*
10.0101 *Educational Media Technology*
10.0102 *Motion Picture Technology*
10.0103 *Photographic Technology*
10.0104 *Radio and Television Production and
Broadcasting Technology*
10.0199 *Communication Technologies, Other*

Computer and Information Sciences

11. *Computer and Information Sciences*

11.01 *Computer and Information Sciences, General*
11.0101 *Computer and Information Sciences,
General*

11.02 *Computer Programming*
11.0201 *Computer Programming*

11.03 *Data Processing*
11.0301 *Data Processing*

11.04 *Information Sciences and Systems*
11.0401 *Information Sciences and Systems*

11.05 *Systems Analysis*
11.0501 *Systems Analysis*

11.99 *Computer and Information Sciences, Other*
11.9999 *Computer and Information Sciences,
Other*

Consumer, Personal, and Miscellaneous Services

12. *Consumer, Personal, and Miscellaneous Services*

12.01 *Drycleaning and Laundering Services*
12.0101 *Drycleaning and Laundering Services,
General*
12.0102 *Drycleaning*
12.0103 *Laundering*
12.0199 *Drycleaning and Laundering Services,
Other*

12.02 *Entertainment Services*
12.0201 *Entertainment Services, General*
12.0202 *Bartending*
12.0203 *Card Dealing*
12.0204 *Umpiring*
12.0299 *Entertainment Services, Other*

12.03 *Funeral Services*
12.0301 *Funeral Services*

12.04 *Personal Services*
12.0401 *Personal Services, General*
12.0402 *Barbering*
12.0403 *Cosmetology*
12.0404 *Electrolysis*
12.0405 *Massage*
12.0499 *Personal Services, Other*

12.99 *Consumer, Personal, and Miscellaneous Services,
Other*
12.9999 *Consumer, Personal, and Miscellaneous
Services, Other*

Education

13. *Education*

13.01 *Education, General*
13.0101 *Education, General*

13.02 *Bilingual/Bicultural Education*
13.0201 *Bilingual/Bicultural Education*

13.03 *Curriculum and Instruction*
13.0301 *Curriculum and Instruction*

- 13.04 Education Administration**
- 13.0401 Education Administration, General
 - 13.0402 Administration of Special Education
 - 13.0403 Adult and Continuing Education Administration
 - 13.0404 Educational Supervision
 - 13.0405 Elementary and Secondary Education Administration
 - 13.0406 Higher Education Administration
 - 13.0407 Community College Education Administration
 - 13.0499 Education Administration, Other
- 13.05 Educational Media**
- 13.0501 Educational Media
- 13.06 Evaluation and Research**
- 13.0601 Evaluation and Research, General
 - 13.0602 Adult and Continuing Education Research
 - 13.0603 Educational Statistics and Research
 - 13.0604 Educational Testing, Evaluation, and Measurement
 - 13.0605 Elementary and Secondary Research
 - 13.0606 Higher Education Research
 - 13.0699 Evaluation and Research, Other
- 13.07 International and Comparative Education**
- 13.0701 International and Comparative Education
- 13.08 School Psychology**
- 13.0801 School Psychology
- 13.09 Social Foundations**
- 13.0901 Social Foundations
- 13.10 Special Education**
- 13.1001 Special Education, General
 - 13.1002 Education of the Culturally Disadvantaged
 - 13.1003 Education of the Deaf and Hearing Impaired
 - 13.1004 Education of the Gifted and Talented
 - 13.1005 Education of the Emotionally Handicapped
 - 13.1006 Education of the Mentally Handicapped
 - 13.1007 Education of the Multiple Handicapped
 - 13.1008 Education of the Physically Handicapped
 - 13.1009 Education of the Visually Handicapped
 - 13.1010 Remedial Education
 - 13.1011 Specific Learning Disabilities
 - 13.1012 Speech Correction
 - 13.1099 Special Education, Other
- 13.11 Student Counseling and Personnel Services**
- 13.1101 Student Counseling and Personnel Services
- 13.12 Teacher Education, General Programs**
- 13.1201 Adult and Continuing Education
 - 13.1202 Elementary Education
 - 13.1203 Junior High Education
 - 13.1204 Pre-Elementary Education
 - 13.1205 Secondary Education
 - 12.1299 Teacher Education, General Programs, Other
- 13.13 Teacher Education, Specific Subject Areas**
- 13.1301 Agricultural Education
 - 13.1302 Art Education
 - 13.1303 Business Education
 - 13.1304 Driver and Safety Education
 - 13.1305 English Education
 - 13.1306 Foreign Languages Education
 - 13.1307 Health Education
 - 13.1308 Home Economics Education
 - 13.1309 Industrial Arts Education
 - 13.1310 Marketing and Distributive Education
 - 13.1311 Mathematics Education
 - 13.1312 Music Education
 - 13.1313 Nutritional Education
 - 13.1314 Physical Education
 - 13.1315 Reading Education
 - 13.1316 Science Education
 - 13.1317 Social Science Education
 - 13.1318 Social Studies Education
 - 13.1319 Technical Education
 - 13.1320 Trade and Industrial Education
 - 13.1399 Teacher Education, Specific Subject Areas, Other
- 13.14 Teaching English as a Second Language/Foreign Language**
- 13.1401 Teaching English as a Second Language/Foreign Language
- 13.99 Education, Other**
- 13.9999 Education, Other
- Engineering**
- 14. Engineering**
- 14.01 Engineering, General
 - 14.0101 Engineering, General
 - 14.02 Aerospace, Aeronautical, and Astronautical Engineering
 - 14.0201 Aerospace, Aeronautical, and Astronautical Engineering
 - 14.03 Agricultural Engineering
 - 14.0301 Agricultural Engineering
 - 14.04 Architectural Engineering
 - 14.0401 Architectural Engineering
 - 14.05 Bioengineering and Biomedical Engineering
 - 14.0501 Bioengineering and Biomedical Engineering
 - 14.06 Ceramic Engineering
 - 14.0601 Ceramic Engineering
 - 14.07 Chemical Engineering
 - 14.0701 Chemical Engineering

14.08	Civil Engineering 14.0801 Civil Engineering	14.28	Textile Engineering 14.2801 Textile Engineering
14.09	Computer Engineering 14.0901 Computer Engineering	14.99	Engineering, Other 14.9999 Engineering, Other
14.10	Electrical, Electronics, and Communications Engineering 14.1001 Electrical, Electronics, and Communications Engineering	15.	Engineering and Engineering-Related Technologies
14.11	Engineering Mechanics 14.1101 Engineering Mechanics	15.01	Architectural Technologies 15.0101 Architectural Design and Construction Technology 15.0102 Architectural Interior Design Technology 15.0199 Architectural Technologies, Other
14.12	Engineering Physics 14.1201 Engineering Physics	15.02	Civil Technologies 15.0201 Civil Technology 15.0202 Drafting and Design Technology 15.0203 Surveying and Mapping Technology 15.0204 Urban Planning Technology 15.0299 Civil Technologies, Other
14.13	Engineering Science 14.1301 Engineering Science	15.03	Electrical and Electronic Technologies 15.0301 Computer Technology 15.0302 Electrical Technology 15.0303 Electronic Technology 15.0304 Laser Electro-Optic Technology 15.0399 Electrical and Electronic Technologies, Other
14.14	Environmental Health Engineering 14.1401 Environmental Health Engineering	15.04	Electromechanical Instrumentation and Maintenance Technologies 15.0401 Biomedical Equipment Technology 15.0402 Computer Servicing Technology 15.0403 Electromechanical Technology 15.0404 Instrumentation Technology 15.0499 Electromechanical Instrumentation and Maintenance Technologies, Other
14.15	Geological Engineering 14.1501 Geological Engineering	15.05	Environmental Control Technologies 15.0501 Air Conditioning, Heating, and Refrigeration Technology 15.0502 Air Pollution Control Technology 15.0503 Energy Conservation and Use Technology 15.0504 Sanitation Technology 15.0505 Solar Heating and Cooling Technology 15.0506 Water and Wastewater Technology 15.0599 Environmental Control Technologies, Other
14.16	Geophysical Engineering 14.1601 Geophysical Engineering	15.06	Industrial Production Technologies 15.0601 Chemical Manufacturing Technology 15.0602 Food Processing Technology 15.0603 Industrial Technology 15.0604 Manufacturing Technology 15.0605 Marine Products Technology 15.0606 Optical Technology 15.0607 Plastic Technology 15.0608 Safety Technology 15.0609 Textile Technology 15.0610 Welding Technology 15.0599 Industrial Production Technologies, Other
14.17	Industrial Engineering 14.1701 Industrial Engineering		
14.18	Materials Engineering 14.1801 Materials Engineering		
14.19	Mechanical Engineering 14.1901 Mechanical Engineering		
14.20	Metallurgical Engineering 14.2001 Metallurgical Engineering		
14.21	Mining and Mineral Engineering 14.2101 Mining and Mineral Engineering		
14.22	Naval Architecture and Marine Engineering 14.2201 Naval Architecture and Marine Engineering		
14.23	Nuclear Engineering 14.2301 Nuclear Engineering		
14.24	Ocean Engineering 14.2401 Ocean Engineering		
14.25	Petroleum Engineering 14.2501 Petroleum Engineering		
14.26	Surveying and Mapping Sciences 14.2601 Surveying and Mapping Sciences 14.2602 Cartography		
14.27	Systems Engineering 14.2701 Systems Engineering		

- 15.07 *Quality Control and Safety Technologies*
 15.0701 *Occupational Safety and Health Technology*
 15.0702 *Quality Control Technology*
 15.0799 *Quality Control and Safety Technologies, Other*

- 15.08 *Mechanical and Related Technologies*
 15.0801 *Aeronautical Technology*
 15.0802 *Agricultural Equipment Technology*
 15.0803 *Automotive Technology*
 15.0804 *Marine Propulsion Technology*
 15.0805 *Mechanical Design Technology*
 15.0899 *Mechanical and Related Technologies, Other*

- 15.09 *Mining and Petroleum Technologies*
 15.0901 *Coal Mining Technology*
 15.0902 *Mining (Excluding Coal) Technology*
 15.0903 *Petroleum Technology*
 15.0999 *Mining and Petroleum Technologies, Other*

- 15.99 *Engineering and Engineering-Related Technologies, Other*
 15.9999 *Engineering and Engineering-Related Technologies, Other*

Foreign Languages

16. *Foreign Languages*
 16.01 *Foreign Languages, Multiple Emphasis*
 16.0101 *Foreign Languages, Multiple Emphasis*
 16.02 *African (Non-Semitic) Languages*
 16.0201 *African (Non-Semitic) Languages*
 16.03 *Asiatic Languages*
 16.0301 *Chinese*
 16.0302 *Japanese*
 16.0303 *Korean*
 16.0399 *Asiatic Languages, Other*
 16.04 *Balto-Slavic Languages*
 16.0401 *Baltic Languages*
 16.0402 *Russian*
 16.0403 *Slavic Languages (Other than Russian)*
 16.05 *Germanic Languages*
 16.0501 *German*
 16.0502 *Scandinavian Languages*
 16.0503 *Yiddish*
 16.0599 *Germanic Languages, Other*
 16.06 *Greek*
 16.0601 *Greek (Classical)*
 16.0602 *Greek (Modern)*
 16.07 *Indic Languages*
 16.0701 *Hindi*
 16.0702 *Sanskrit*
 16.0799 *Indic Languages, Other*

- 16.08 *Iranian Languages*
 16.0801 *Iranian Languages*

- 16.09 *Italic Languages*
 16.0901 *French*
 16.0902 *Italian*
 16.0903 *Latin*
 16.0904 *Portuguese*
 16.0905 *Spanish*
 16.0999 *Italic Languages, Other*

- 16.10 *Native American Languages*
 16.1001 *Native American Languages*

- 16.11 *Semitic Languages*
 16.1101 *Arabic*
 16.1102 *Hebrew*
 16.1199 *Semitic Languages, Other*

- 16.99 *Foreign Languages, Other*
 16.9999 *Foreign Languages, Other*

Health

17. *Allied Health*

- 17.01 *Dental Services*
 17.0101 *Dental Assisting*
 17.0102 *Dental Hygiene*
 17.0103 *Dental Laboratory Technology*
 17.0199 *Dental Services, Other*

- 17.02 *Diagnostic and Treatment Services*
 17.0201 *Cardiopulmonary Technology*
 17.0202 *Dialysis Technology*
 17.0203 *Electrocardiograph Technology*
 17.0204 *Electroencephalograph Technology*
 17.0205 *Emergency Medical Technology-Ambulance*
 17.0206 *Emergency Medical Technology-Paramedic*
 17.0207 *Medical Radiation Dosimetry*
 17.0208 *Nuclear Medical Technology*
 17.0209 *Radiograph Medical Technology*
 17.0210 *Respiratory Therapy Technology*
 17.0211 *Surgical Technology*
 17.0212 *Ultrasound Technology*
 17.0299 *Diagnostic and Treatment Services, Other*

- 17.03 *Medical Laboratory Technologies*
 17.0301 *Blood Bank Technology*
 17.0302 *Chemistry Technology*
 17.0303 *Clinical Animal Technology*
 17.0304 *Clinical Laboratory Aide*
 17.0305 *Clinical Laboratory Assisting*
 17.0306 *Cytotechnology*
 17.0307 *Hematology Technology*
 17.0308 *Histologic Technology*
 17.0309 *Medical Laboratory Technology*
 17.0310 *Medical Technology*
 17.0311 *Microbiology Technology*
 17.0399 *Medical Laboratory Technologies, Other*

17.04	Mental Health/Human Services	17.99	Allied Health, Other
	17.0401 Alcohol/Drug Abuse Specialty		17.9999 Allied Health, Other
	17.0402 Community Health Work		
	17.0403 Genetic Counseling		
	17.0404 Home Health Aide		
	----- Medical Social Work (see 44.0702)		
	17.0405 Mental Health/Human Services Assisting	18.	Health Sciences
	17.0406 Mental Health/Human Services Technology		
	17.0407 Rehabilitation Counseling	18.01	Audiology and Speech Pathology
	17.0408 Therapeutic Child Care Work		18.0101 Audiology
	17.0499 Mental Health/Human Services, Other		18.0102 Speech Pathology
			18.0103 Speech Pathology/Audiology
			18.0199 Audiology and Speech Pathology, Other
17.05	Miscellaneous Allied Health Services		
	17.0501 Animal Technology		
	17.0502 Central Supply Technology		
	17.0503 Medical Assisting		
	17.0504 Medical Illustrating	18.02	Basic Clinical Health Sciences
	17.0505 Medical Office Management		18.0201 Clinical Anatomy
	17.0506 Medical Records Technology		18.0202 Clinical Biochemistry
	17.0507 Pharmacy Assisting		18.0203 Clinical Microbiology
	17.0508 Physician Assisting-Primary Care		18.0204 Clinical Pathology
	17.0509 Physician Assisting-Specialty		18.0205 Physiology
	17.0510 Podiatric Assisting		18.0299 Basic Clinical Health Sciences, Other
	17.0511 Veterinarian Aide		
	17.0512 Veterinarian Assisting		
	17.0513 Ward Clerk		
	17.0599 Miscellaneous Allied Health Services, Other	18.03	Chiropractic
			18.0301 Chiropractic
17.06	Nursing-Related Services		
	17.0601 Geriatric Aide		
	17.0602 Nursing Assisting	18.04	Dentistry
	17.0603 Obstetrical Technology		18.0401 Dentistry, General
	17.0604 Pediatric Aide		18.0402 Dental Public Health
	17.0605 Practical Nursing		18.0403 Endodontics
	17.0606 Ward Service Management		18.0404 Oral/Maxial Facial Surgery
	17.0699 Nursing-Related Services, Other		18.0405 Oral Pathology
			18.0406 Orthodontics
			18.0407 Pedodontics
			18.0408 Periodontics
			18.0409 Prosthodontics
			18.0499 Dentistry, Other
17.07	Ophthalmic Services		
	17.0701 Ophthalmic Dispensing		
	17.0702 Ophthalmic Laboratory Technology		
	17.0703 Ophthalmic Medical Assisting		
	17.0704 Optometric Assisting		
	17.0705 Optometric Technology		
	17.0706 Orthoptics		
	17.0799 Ophthalmic Services, Other		
17.08	Rehabilitation Services	18.05	Emergency/Disaster Science
	17.0801 Art Therapy		18.0501 Emergency/Disaster Science
	17.0802 Corrective Therapy		
	17.0803 Dance Therapy		
	17.0804 Exercise Physiology	18.06	Epidemiology
	17.0805 Manual Arts Therapy		18.0601 Epidemiology
	17.0806 Music Therapy		
	17.0807 Occupational Therapy		
	17.0808 Occupational Therapy Assisting		
	17.0809 Occupational Therapy Aide	18.07	Health Sciences Administration
	17.0810 Orthotic/Prosthetic Assisting		18.0701 Health Care Administration
	17.0811 Orthotics/Prosthetics		18.0702 Health Care Planning
	17.0812 Orthopedic Assisting		18.0703 Medical Records Administration
	17.0813 Physical Therapy		18.0799 Health Sciences Administration, Other
	17.0814 Physical Therapy Aide		
	17.0815 Physical Therapy Assisting		
	17.0816 Recreational Therapy		
	17.0817 Recreational Therapy Technology		
	17.0818 Respiratory Therapy	18.08	Hematology
	17.0819 Respiratory Therapy Assisting		18.0801 Hematology
	17.0820 Speech/Hearing Therapy Aide		
	17.0821 Speech-Language Pathology/Audiology		
	----- Therapeutic Recreation Aide (see 20.0607)		
	17.0899 Rehabilitation Services, Other	18.09	Medical Laboratory
			18.0901 Medical Laboratory

- 19.06 Human Environment and Housing**
 19.0601 Human Environment and Housing, General
 19.0602 Household Equipment
 19.0603 Housing
 ----- Interior Design (see 04.0501)
 19.0699 Human Environment and Housing, Other
- 19.07 Individual and Family Development**
 19.0701 Individual and Family Development, General
 19.0702 Adult Development
 ----- Child Development, Care, and Guidance (see 20.0102)
 19.0703 Family Counseling
 19.0704 Family Relations
 19.0705 Geriatric Services
 19.0799 Individual and Family Development, Other
- 19.08 International/Comparative Home Economics**
 19.0801 International/Comparative Home Economics
- 19.09 Textiles and Clothing**
 19.0901 Textiles and Clothing, General
 19.0902 Fashion Design
 19.0903 Textiles and Clothing, Retail
 19.0904 Textile Science
 19.0999 Textiles and Clothing, Other
- 19.99 Home Economics, Other**
 19.9999 Home Economics, Other
- 20. Vocational Home Economics**
- 20.01 Consumer and Homemaking Home Economics**
 20.0101 Comprehensive Consumer and Homemaking Home Economics
 20.0102 Child Development, Care, and Guidance
 20.0103 Clothing and Textiles
 20.0104 Consumer Education
 20.0105 Exploratory Homemaking
 20.0106 Family/Individual Health
 20.0107 Family Living and Parenthood
 20.0108 Food and Nutrition
 20.0109 Home Management
 20.0110 Housing, Home Furnishing and Equipment
 20.0199 Consumer and Homemaking Home Economics, Other
- 20.02 Child Care and Guidance Management and Services**
 20.0201 Child Care and Guidance Management and Services, General
 20.0202 Child Care Aide/Assisting
 20.0203 Child Care Management
 20.0204 Foster Care/Family Care
 20.0205 Teacher Aide
 20.0299 Child Care and Guidance Management and Services, Other
- 20.03 Clothing, Apparel, and Textiles Management, Production, and Services**
 20.0301 Clothing, Apparel, and Textiles Management, Production, and Services, General
 20.0302 Clothing Maintenance Aide
 20.0303 Commercial Garment and Apparel Construction
 20.0304 Custom Apparel/Garment Seamstress
 20.0305 Custom Tailoring and Alteration
 20.0306 Fashion/Fabric Coordination
 20.0307 Textiles Testing
 20.0308 Wedding/Specialty Consulting
 20.0399 Clothing, Apparel, and Textiles Management, Production, and Services, Other
- 20.04 Food Production, Management, and Services**
 20.0401 Food Production, Management, and Services, General
 20.0402 Baking
 20.0403 Chef/Cook
 20.0404 Dietetic Aide/Assisting
 20.0405 Food Catering
 20.0406 Food Service
 20.0407 Food Testing
 20.0408 School Food Service
 20.0499 Food Production, Management, and Services, Other
- 20.05 Home Furnishings and Equipment Management, Production, and Services**
 20.0501 Home Furnishings and Equipment Management, Production, and Services, General
 20.0502 Custom Drapery and Window Treatment Design/Making
 20.0503 Custom Slipcovering and Upholstering
 20.0504 Floral Design
 20.0505 Home Decorating
 20.0506 Home Furnishings Aide
 20.0507 Home-Service Assisting
 20.0599 Home Furnishings and Equipment Management, Production, and Services, Other
- 20.06 Institutional, Home Management, and Supporting Services**
 20.0601 Institutional, Home Management, and Supporting Services, General
 20.0602 Companion to the Aged
 20.0603 Consumer Aide/Assisting
 20.0604 Custodial Services
 20.0605 Executive Housekeeping
 20.0606 Homemaker's Aide
 20.0607 Therapeutic Recreation Aide
 20.0699 Institutional, Home Management, and Supporting Services, Other
- 20.99 Vocational Home Economics, Other**
 20.9999 Vocational Home Economics, Other

Industrial Arts

21. Industrial Arts
- 21.01 Industrial Arts
- 21.0101 Industrial Arts, General
 - 21.0102 Construction
 - 21.0103 Drafting and Design
 - 21.0104 Electricity/Electronics
 - 21.0105 Energy, Power, and Transportation
 - 21.0106 Graphic Arts
 - 21.0107 Manufacturing/Materials Processing
 - 21.0199 Industrial Arts, Other

Law

22. Law
- 22.01 Law
- 22.0101 Law
 - 22.0102 Pre-Law
 - 22.0103 Legal Assisting
 - 22.0199 Law, Other

Letters

23. Letters
- 23.01 English, General
- 23.0101 English, General
- 23.02 Classics
- 23.0201 Classics
- 23.03 Comparative Literature
- 23.0301 Comparative Literature
- 23.04 Composition
- 23.0401 Composition
- 23.05 Creative Writing
- 23.0501 Creative Writing
- 23.06 Linguistics (Includes Phonetics, Semantics, and Philology)
- 23.0601 Linguistics (Includes Phonetics, Semantics, and Philology)
- 23.07 Literature, American
- 23.0701 Literature, American
- 23.08 Literature, English
- 23.0801 Literature, English
- 23.09 Rhetoric
- 23.0901 Rhetoric

- 23.10 Speech, Debate, and Forensics
- 23.1001 Speech, Debate, and Forensics
- 23.11 Technical and Business Writing
- 23.1101 Technical and Business Writing
- 23.99 Letters, Other
- 23.9999 Letters, Other

Liberal/General Studies

24. Liberal/General Studies
- 24.01 Liberal/General Studies
- 24.0101 Liberal/General Studies
 - 24.0199 Liberal/General Studies, Other

Library and Archival Sciences

25. Library and Archival Sciences
- 25.01 Library and Archival Sciences, General
- 25.0101 Library and Archival Sciences, General
- 25.02 Archival Science
- 25.0201 Archival Science
- 25.03 Library Assisting
- 25.0301 Library Assisting
- 25.04 Library Science
- 25.0401 Library Science
- 25.05 Museology
- 25.0501 Museology
- 25.99 Library and Archival Sciences, Other
- 25.9999 Library and Archival Sciences, Other

Life Sciences

26. Life Sciences
- 26.01 Biology, General
- 26.0101 Biology, General
- 26.02 Biochemistry and Biophysics
- 26.0201 Biochemistry and Biophysics
- 26.03 Botany
- 26.0301 Botany, General
 - 26.0302 Bacteriology
 - 26.0303 Mycology
 - 26.0304 Plant Genetics
 - 26.0305 Plant Pathology
 - 26.0306 Plant Pharmacology
 - 26.0307 Plant Physiology
 - 26.0399 Botany, Other

- 26.04 Cell and Molecular Biology**
 26.0401 Cell Biology
 26.0402 Molecular Biology
 26.0499 Cell and Molecular Biology, Other
- 26.05 Microbiology**
 26.0501 Microbiology
- 26.06 Miscellaneous Specialized Areas, Life Sciences**
 26.0601 Anatomy
 26.0602 Biometrics and Biostatistics
 26.0603 Ecology
 26.0604 Embryology
 26.0605 Endocrinology
 26.0606 Histology
 26.0607 Marine Biology
 26.0608 Neurosciences
 26.0609 Nutritional Sciences
 26.0610 Parasitology
 26.0611 Radiobiology
 26.0612 Toxicology
 26.0699 Miscellaneous Specialized Areas, Life Sciences, Other

- 26.07 Zoology**
 26.0701 Zoology, General
 26.0702 Entomology
 26.0703 Genetics, Human and Animal
 26.0704 Pathology, Human and Animal
 26.0705 Pharmacology, Human and Animal
 26.0706 Physiology, Human and Animal
 26.0799 Zoology, Other

- 26.99 Life Sciences, Other**
 26.9999 Life Sciences, Other

Mathematics

- 27. Mathematics**
- 27.01 Mathematics, General**
 27.0101 Mathematics, General
- 27.02 Actuarial Sciences**
 27.0201 Actuarial Sciences
- 27.03 Applied Mathematics**
 27.0301 Applied Mathematics
- 27.04 Pure Mathematics**
 27.0401 Pure Mathematics
- 27.05 Statistics**
 27.0501 Statistics
- 27.99 Mathematics, Other**
 27.9999 Mathematics, Other

Military Sciences

- 28. Military Sciences**
- 28.01 Aerospace Science (Air Force)**
 28.0101 Aerospace Science (Air Force)
- 28.02 Coast Guard Science**
 28.0201 Coast Guard Science
- 28.03 Military Science (Army)**
 28.0301 Military Science (Army)
- 28.04 Naval Science (Navy, Marines)**
 28.0401 Naval Science (Navy, Marines)
- 28.99 Military Sciences, Other**
 28.9999 Military Sciences, Other
- 29. Military Technologies**
- 29.01 Military Technologies**
 29.0101 Military Technologies
 29.0199 Military Technologies, Other

Multi/Interdisciplinary Studies

- 30. Multi/Interdisciplinary Studies**
- 30.01 Biological and Physical Sciences**
 30.0101 Biological and Physical Sciences
- 30.02 Clinical Pastoral Care**
 30.0201 Clinical Pastoral Care
- 30.03 Engineering and Other Disciplines**
 30.0301 Engineering and Other Disciplines
- 30.04 Humanities and Social Sciences**
 30.0401 Humanities and Social Sciences
- 30.05 Peace Studies**
 30.0501 Peace Studies
- 30.06 Systems Science**
 30.0601 Systems Science
- 30.07 Women's Studies**
 30.0701 Women's Studies
- 30.99 Multi/Interdisciplinary Studies, Other**
 30.9999 Multi/Interdisciplinary Studies, Other

Parks and Recreation

- 31. Parks and Recreation**
- 31.01 Parks and Recreation, General**
 31.0101 Parks and Recreation, General

- 31.02 *Outdoor Recreation*
 - 31.0201 *Outdoor Recreation*
- 31.03 *Parks and Recreation Management*
 - 31.0301 *Parks and Recreation Management*
- 31.04 *Water Resources*
 - 31.0401 *Water Resources*
- 31.99 *Parks and Recreation, Other*
 - 31.9999 *Parks and Recreation, Other*

- 36.01 *Leisure and Recreational Activities*
 - 36.0101 *Leisure and Recreational Activities, General*
 - 36.0102 *Crafts (Leisure and Recreational)*
 - 36.0103 *Games*
 - 36.0104 *Hobbies*
 - 36.0105 *Housing/Home Maintenance*
 - 36.0106 *Nature Appreciation*
 - 36.0107 *Pet Care*
 - 36.0108 *Sports/Physical Education*
 - 36.0109 *Travel*
 - 36.0199 *Leisure and Recreational Activities, Other*

Personal and Social Development

- 32. **Basic Skills**
 - 32.01 **Basic Skills**
 - 32.0101 *Basic Skills, General*
 - 32.0102 *Academic and Intellectual Skills*
 - 32.0103 *Communication Skills*
 - 32.0104 *Computational Skills*
 - 32.0105 *Job-Seeking/Changing Skills*
 - 32.0106 *Motor Skills*
 - 32.0199 *Basic Skills, Other*

- 37. **Personal Awareness**
 - 37.01 **Personal Awareness**
 - 37.0101 *Personal Awareness, General*
 - 37.0102 *Coping Skills*
 - 37.0103 *Personal Decisionmaking*
 - 37.0104 *Self-Perception*
 - 37.0105 *Values, Attitudes, and Beliefs*
 - 37.0199 *Personal Awareness, Other*

Citizenship/Civic Activities

- 33. **Citizenship/Civic Activities**
 - 33.01 **Citizenship/Civic Activities**
 - 33.0101 *Citizenship/Civic Activities, General*
 - 33.0102 *American Citizenship*
 - 33.0103 *Civic Appreciation*
 - 33.0104 *Civic Participation*
 - 33.0199 *Citizenship/Civic Activities, Other*

Philosophy, Religion, and Theology

- 38. **Philosophy and Religion**
 - 38.01 **Philosophy**
 - 38.0101 *Philosophy*
 - 38.02 **Religion**
 - 38.0201 *Religion*
 - 38.99 **Philosophy and Religion, Other**
 - 38.9999 *Philosophy and Religion, Other*

- 34. **Health-Related Activities**
 - 34.01 **Health-Related Activities**
 - 34.0101 *Health-Related Activities, General*
 - 34.0102 *Birth-Related Health Practices*
 - 34.0103 *Health Enhancement Practices*
 - 34.0104 *Health Treatment/Prevention Practices*
 - 34.0199 *Health-Related Activities, Other*

- 39. **Theology**
 - 39.01 **Biblical Languages**
 - 39.0101 *Biblical Languages*
 - 39.02 **Bible Studies**
 - 39.0201 *Bible Studies*
 - 39.03 **Missionary Studies**
 - 39.0301 *Missionary Studies*
 - 39.04 **Religious Education**
 - 39.0401 *Religious Education*

- 35. **Interpersonal Skills**
 - 35.01 **Interpersonal Skills**
 - 35.0101 *Interpersonal Skills, General*
 - 35.0102 *Building Human Relationships*
 - 35.0103 *Perception of Others*
 - 35.0104 *Social Role Engineering*
 - 35.0199 *Interpersonal Skills, Other*

- 39.05 **Religious Music**
 - 39.0501 *Religious Music*
- 39.06 **Theological Studies**
 - 39.0601 *Theological Studies*
- 39.99 **Theology, Other**
 - 39.9999 *Theology, Other*

Leisure and Recreational Activities



Physical Sciences

40. Physical Sciences

40.01 Physical Sciences, General

40.0101 Physical Sciences, General

40.02 Astronomy

40.0201 Astronomy

40.03 Astrophysics

40.0301 Astrophysics

40.04 Atmospheric Sciences and Meteorology

40.0401 Atmospheric Sciences and Meteorology

40.05 Chemistry

40.0501 Chemistry, General

40.0502 Analytical Chemistry

40.0503 Inorganic Chemistry

40.0504 Organic Chemistry

40.0505 Pharmaceutical Chemistry

40.0506 Physical Chemistry

40.0599 Chemistry, Other

40.06 Geological Sciences

40.0601 Geology

40.0602 Geochemistry

40.0603 Geophysics and Seismology

40.0604 Paleontology

40.0699 Geological Sciences, Other

40.07 Miscellaneous Physical Sciences

40.0701 Metallurgy

40.0702 Oceanography

40.0703 Earth Science

40.0799 Miscellaneous Physical Sciences, Other

40.08 Physics

40.0801 Physics, General

40.0802 Atomic/Molecular Physics

40.0803 Electron Physics

40.0804 Elementary Particle Physics

40.0805 Fluids and Plasmas

40.0806 Nuclear Physics

40.0807 Optics

40.0808 Solid State Physics

40.0899 Physics, Other

40.09 Planetary Science

40.0901 Planetary Science

40.99 Physical Sciences, Other

40.9999 Physical Sciences, Other

41. Science Technologies

41.01 Biological Technologies

41.0101 Biological Laboratory Technology

41.0102 Oceanographic (Biological) Technology

41.0199 Biological Technologies, Other

41.02 Nuclear Technologies

41.0201 Nuclear Materials Handling Technology

41.0202 Nuclear Power Plant Operation Technology

41.0203 Nuclear Power Plant Radiation Control Technology

41.0204 Radiologic (Physical) Technology

41.0299 Nuclear Technologies, Other

41.03 Physical Science Technologies

41.0301 Chemical Technology

41.0302 Geological Technology

41.0303 Metallurgical Technology

41.0304 Meteorological Technology

41.0305 Oceanographic (Physical) Technology

41.0399 Physical Science Technologies, Other

41.99 Science Technologies, Other

41.9999 Science Technologies, Other

Psychology

42. Psychology

42.01 Psychology, General

42.0101 Psychology, General

42.02 Clinical Psychology

42.0201 Clinical Psychology

42.03 Cognitive Psychology

42.0301 Cognitive Psychology

42.04 Community Psychology

42.0401 Community Psychology

42.05 Comparative Psychology

42.0501 Comparative Psychology

42.06 Counseling Psychology

42.0601 Counseling Psychology

42.07 Developmental Psychology

42.0701 Developmental Psychology

42.08 Experimental Psychology

42.0801 Experimental Psychology

42.09 Industrial and Organizational Psychology

42.0901 Industrial and Organizational Psychology

42.10 Personality Psychology

42.1001 Personality Psychology

42.11 Physiological Psychology

42.1101 Physiological Psychology

42.12 Psycholinguistics

42.1201 Psycholinguistics

- 42.13 *Psychometrics*
 - 42.1301 *Psychometrics*
- 42.14 *Psychopharmacology*
 - 42.1401 *Psychopharmacology*
- 42.15 *Quantitative Psychology*
 - 42.1501 *Quantitative Psychology*
- 42.16 *Social Psychology*
 - 42.1601 *Social Psychology*
- 42.99 *Psychology, Other*
 - 42.9999 *Psychology, Other*

Public Affairs and Protective Services

- 43. *Protective Services*
 - 43.01 *Criminal Justice*
 - 43.0101 *Correctional Administration*
 - 43.0102 *Corrections*
 - 43.0103 *Criminal Justice Administration*
 - 43.0104 *Criminal Justice Studies*
 - 43.0105 *Criminal Justice Technology*
 - 43.0106 *Forensic Studies*
 - 43.0107 *Law Enforcement*
 - 43.0108 *Law Enforcement Administration*
 - 43.0109 *Security Services*
 - 43.0199 *Criminal Justice, Other*
 - 43.02 *Fire Protection*
 - 43.0201 *Fire Control and Safety Technology*
 - 43.0202 *Fire Protection Administration*
 - 43.0203 *Firefighting*
 - 43.0299 *Fire Protection, Other*
 - 43.99 *Protective Services, Other*
 - 43.9999 *Protective Services, Other*
- 44. *Public Affairs*
 - 44.01 *Public Affairs, General*
 - 44.0101 *Public Affairs, General*
 - 44.02 *Community Services*
 - 44.0201 *Community Services*
 - 44.03 *International Public Service*
 - 44.0301 *International Public Service*
 - 44.04 *Public Administration*
 - 44.0401 *Public Administration*
 - 44.05 *Public Policy Studies*
 - 44.0501 *Public Policy Studies*
 - 44.06 *Public Works*
 - 44.0601 *Public Sanitation*
 - 44.0602 *Public Transportation*
 - 44.0603 *Public Utilities*
 - 44.0699 *Public Works, Other*

- 44.07 *Social Work*
 - 44.0701 *Social Work, General*
 - 44.0702 *Medical Social Work*
 - 44.0799 *Social Work, Other*
- 44.99 *Public Affairs, Other*
 - 44.9999 *Public Affairs, Other*

Social Sciences

- 45. *Social Sciences*
 - 45.01 *Social Sciences, General*
 - 45.0101 *Social Sciences, General*
 - 45.02 *Anthropology*
 - 45.0201 *Anthropology*
 - 45.03 *Archeology*
 - 45.0301 *Archeology*
 - 45.04 *Criminology*
 - 45.0401 *Criminology*
 - 45.05 *Demography*
 - 45.0501 *Demography*
 - 45.06 *Economics*
 - 45.0601 *Economics*
 - 45.07 *Geography*
 - 45.0701 *Geography*
 - 45.08 *History*
 - 45.0801 *History*
 - 45.09 *International Relations*
 - 45.0901 *International Relations*
 - 45.10 *Political Science and Government*
 - 45.1001 *Political Science and Government*
 - 45.11 *Sociology*
 - 45.1101 *Sociology*
 - 45.12 *Urban Studies*
 - 45.1201 *Urban Studies*
 - 45.99 *Social Sciences, Other*
 - 45.9999 *Social Sciences, Other*

Trade and Industrial

- 46. *Construction Trades*
 - 46.01 *Brickmasonry, Stonemasonry, and Tile Setting*
 - 46.0101 *Brickmasonry, Stonemasonry, and Tile Setting, General*
 - 46.0102 *Brick, Block, and Stonemasonry*
 - 46.0103 *Tile Setting*
 - 46.0199 *Brickmasonry, Stonemasonry, and Tile Setting, Other*

- 46.02** *Carpentry*
46.0201 *Carpentry*
- 46.03** *Electrical and Power Transmission Installation*
46.0301 *Electrical and Power Transmission Installation, General*
46.0302 *Electrician*
46.0303 *Lineworker*
46.0399 *Electrical and Power Transmission Installation, Other*
- 46.04** *Miscellaneous Construction Trades*
46.0401 *Building Maintenance*
46.0402 *Concrete Placing and Finishing*
46.0403 *Construction Inspection*
46.0404 *Drywall Installation*
46.0405 *Floor Covering Installation*
46.0406 *Glazing*
46.0407 *Insulation Installation*
46.0408 *Painting and Decorating*
46.0409 *Plastering*
46.0410 *Roofing*
46.0411 *Terrazzo Installation*
46.0499 *Miscellaneous Construction Trades, Other*
- 46.05** *Plumbing, Pipefitting, and Steamfitting*
46.0501 *Plumbing, Pipefitting, and Steamfitting, General*
46.0502 *Pipefitting and Steamfitting*
46.0503 *Plumbing*
46.0599 *Plumbing, Pipefitting, and Steamfitting, Other*
- 46.99** *Construction Trades, Other*
46.9999 *Construction Trades, Other*
- 47.** *Mechanics and Repairers*
- 47.01** *Electrical and Electronics Equipment Repair*
47.0101 *Electrical and Electronics Equipment Repair, General*
47.0102 *Business Machine Repair*
47.0103 *Communication Electronics*
47.0104 *Computer Electronics*
47.0105 *Industrial Electronics*
47.0106 *Major Appliance Repair*
47.0107 *Motor Repair*
47.0108 *Small Appliance Repair*
47.0109 *Vending and Recreational Machine Repair*
47.0199 *Electrical and Electronics Equipment Repair, Other*
- 47.02** *Heating, Air Conditioning, and Refrigeration Mechanics*
47.0201 *Heating, Air Conditioning, and Refrigeration Mechanics, General*
47.0202 *Cooling and Refrigeration*
47.0203 *Heating and Air Conditioning*
47.0299 *Heating, Air Conditioning, and Refrigeration Mechanics, Other*
- 47.03** *Industrial Equipment Maintenance and Repair*
47.0301 *Industrial Equipment Maintenance and Repair, General*
47.0302 *Heavy Equipment Maintenance and Repair*
47.0303 *Industrial Machinery Maintenance and Repair*
47.0304 *Mine Equipment Maintenance and Repair*
47.0305 *Oil and Gas Drilling Equipment Operation and Maintenance*
47.0399 *Industrial Equipment Maintenance and Repair, Other*
- 47.04** *Miscellaneous Mechanics and Repairers*
47.0401 *Electromechanical, Hydraulic, and Pneumatic Instrument Repair*
47.0402 *Gunsmithing*
47.0403 *Locksmithing and Safe Repair*
47.0404 *Musical Instrument Repair*
47.0405 *Operation, Maintenance, and Repair of Audio-Visual Equipment*
47.0406 *Shoe and Boot Repair*
47.0407 *Sporting Goods Equipment Repair*
47.0408 *Watch Repair*
47.0499 *Miscellaneous Mechanics and Repairers, Other*
- 47.05** *Stationary Energy Sources*
47.0501 *Stationary Energy Sources, General*
47.0502 *Conventional Electric Power Generation*
47.0503 *Industrial Nuclear Energy*
47.0504 *Pumping Plants*
47.0599 *Stationary Energy Sources, Other*
- 47.06** *Vehicle and Mobile Equipment Mechanics and Repairers*
47.0601 *Vehicle and Mobile Equipment Mechanics and Repairers, General*
47.0602 *Aircraft Mechanics*
47.0603 *Automotive Body Repair*
47.0604 *Automotive Mechanics*
47.0605 *Diesel Engine Mechanics*
47.0606 *Small Engine Repair*
47.0699 *Vehicle and Mobile Equipment Mechanics and Repairers, Other*
- 47.99** *Mechanics and Repairers, Other*
47.9999 *Mechanics and Repairers, Other*
- 48.** *Precision Production*
- 48.01** *Drafting*
48.0101 *Drafting, General*
48.0102 *Architectural Drafting*
48.0103 *Civil/Structural Drafting*
48.0104 *Electrical/Electronics Drafting*
48.0105 *Mechanical Drafting*
48.0199 *Drafting, Other*

- 48.02 **Graphic and Printing Communications**
 - 48.0201 **Graphic and Printing Communications, General**
 - 48.0202 **Bookbinding**
 - 48.0203 **Commercial Art**
 - 48.0204 **Commercial Photography**
 - 48.0205 **Composition, Make-up, and Typesetting**
 - 48.0206 **Lithography, Photography, and Plate-making**
 - 48.0207 **Photographic Laboratory and Darkroom**
 - 48.0208 **Printing Press Operations**
 - 48.0209 **Silk Screen Making and Printing**
 - 48.0299 **Graphic and Printing Communications, Other**
- 48.03 **Leatherworking and Upholstering**
 - 48.0301 **Leatherworking and Upholstering, General**
 - 48.0302 **Saddlemaking and Repair**
 - 48.0303 **Upholstering**
 - 48.0399 **Leatherworking and Upholstering, Other**
- 48.04 **Precision Food Production**
 - 48.0401 **Precision Food Production, General**
 - 48.0402 **Meatcutting**
 - 48.0403 **Slaughtering and Butchering**
 - 48.0499 **Precision Food Production, Other**
- 48.05 **Precision Metal Work**
 - 48.0501 **Precision Metal Work, General**
 - 48.0502 **Foundry Work**
 - 48.0503 **Machine Tool Operation/Machine Shop**
 - 48.0504 **Metal Fabrication**
 - 48.0505 **Metal Pattermaking**
 - 48.0506 **Sheet Metal**
 - 48.0507 **Tool and Die Making**
 - 48.0508 **Welding, Brazing, and Soldering**
 - 48.0599 **Precision Metal Work, Other**
- 48.06 **Precision Work, Assorted Materials**
 - 48.0601 **Industrial Ceramics Manufacturing**
 - 48.0602 **Jewelry Design, Fabrication, and Repair**
 - 48.0603 **Optical Goods Work**
 - 48.0604 **Plastics**
 - 48.0699 **Precision Work, Assorted Materials, Other**
- 48.07 **Woodworking**
 - 48.0701 **Woodworking, General**
 - 48.0702 **Furniture Making**
 - 48.0703 **Millwork and Cabinet Making**
 - 48.0799 **Woodworking, Other**
- 48.99 **Precision Production, Other**
 - 48.9999 **Precision Production, Other**
- 49. **Transportation and Material Moving**
 - 49.01 **Air Transportation**
 - 49.0101 **Air Transportation, General**
 - 49.0102 **Airplane Piloting and Navigation**
 - 49.0103 **Aviation Computer Technology**
 - 49.0104 **Aviation Management**
 - 49.0105 **Air Traffic Control**
 - 49.0106 **Flight Attendants**
 - 49.0199 **Air Transportation, Other**
 - 49.02 **Vehicle and Equipment Operation**
 - 49.0201 **Vehicle and Equipment Operation, General**
 - 49.0202 **Construction Equipment Operation**
 - 49.0203 **Material Handling**
 - 49.0204 **Mining Equipment Operation**
 - 49.0205 **Truck and Bus Driving**
 - 49.0299 **Vehicle and Equipment Operation, Other**
 - 49.03 **Water Transportation**
 - 49.0301 **Water Transportation, General**
 - 49.0302 **Barge and Boat Operation**
 - 49.0303 **Commercial Fishing Operation**
 - 49.0304 **Deep Water Diving and Life Support Systems**
 - 49.0305 **Marina Operations**
 - 49.0306 **Marine Maintenance**
 - 49.0307 **Merchant Marine Officers**
 - 49.0308 **Sailors and Deckhands**
 - 49.0399 **Water Transportation, Other**
 - 49.99 **Transportation and Material Moving, Other**
 - 49.9999 **Transportation and Material Moving, Other**
- Visual and Performing Arts**
 - 50. **Visual and Performing Arts**
 - 50.01 **Visual and Performing Arts, General**
 - 50.0101 **Visual and Performing Arts, General**
 - 50.02 **Crafts**
 - 50.0201 **Crafts, General**
 - 50.0202 **Ceramics**
 - 50.0203 **Enameling**
 - 50.0204 **Fiber/Textiles/Weaving**
 - 50.0205 **Glass**
 - 50.0206 **Metal/Jewelry**
 - 50.0299 **Crafts, Other**
 - 50.03 **Dance**
 - 50.0301 **Dance**
 - 50.04 **Design**
 - 50.0401 **Design, General**
 - **Environmental Design (see 04.0401)**
 - **Fashion Design (see 19.0902)**
 - 50.0402 **Graphic Design**
 - 50.0403 **Illustration Design**
 - 50.0404 **Industrial Design**
 - **Interior Design (see 04.0501)**
 - **Medical Illustrating (see 17.0504)**
 - 50.0405 **Theatre Design**
 - 50.0499 **Design, Other**
 - 50.05 **Dramatic Arts**
 - 50.0501 **Dramatic Arts**

50.06 **Film Arts**
50.0601 *Film Arts, General*
50.0602 *Cinematography/Film*
50.0603 *Film Animation*
50.0604 *Holography*
50.0605 *Photography*
50.0606 *Video*
50.0699 *Film Arts, Other*

50.07 **Fine Arts**
50.0701 *Fine Arts, General*
50.0702 *Art Conservation*
----- *Art Education (see 13.1302)*
50.0703 *Art History and Appreciation*
----- *Art Therapy (see 17.0801)*
50.0704 *Arts Management*
50.0705 *Drawing*
50.0706 *Intermedia*
50.0707 *Kinetics*
50.0708 *Painting*
50.0709 *Sculpture*
50.0799 *Fine Arts, Other*

50.08- **Graphic Arts Technology**
50.0801 *Graphic Arts Technology*

50.09 **Music**
50.0901 *Music, General*
50.0902 *Music History and Appreciation*
50.0903 *Music Performance*
50.0904 *Music Theory and Composition*
50.0999 *Music, Other*

50.99 **Visual and Performing Arts, Other**
50.9999 *Visual and Performing Arts, Other*

Chapter III

03 42

Definitions of Instructional Programs

Program Purpose Dimension

Award Programs. Programs of instruction requiring a specified amount of educational work and resulting in a diploma, certificate, or degree conferred by the faculty and ratified by the governing board of the school or agency granting the award.

1.0 Elementary/Secondary Programs

- 1.1 **Elementary School Program.** A program of instruction usually requiring eight years of elementary school work, the completion of which results in an elementary school diploma or equivalent recognition conferred by the faculty and ratified by the governing board of the school or agency granting the diploma.
- 1.2 **Junior High School Program.** A program of instruction usually requiring three years of junior high school work, the completion of which results in a junior high school diploma or equivalent recognition conferred by the faculty and ratified by the governing board of the school or agency granting the diploma.
- 1.3 **High School Diploma Program.** A program of instruction usually requiring three or four years of high school work, the completion of which results in a high school diploma conferred by the faculty and ratified by the governing board of the school or agency granting the diploma.

2.0 Postsecondary Certificates/Diplomas/Degrees

- 2.1 **Postsecondary Certificate or Diploma (less than one year).** A program of instruction requiring less than one year of college level work, the completion of which results in a postsecondary certificate or diploma conferred by the faculty and ratified by the governing board of the institution granting the certificate or diploma.
- 2.2 **Postsecondary Certificate or Diploma (one year or more but less than four years).** A program of instruction requiring one year or more of full-time equivalent postsecondary level work, the completion of which results in a postsecondary certificate or diploma conferred by the faculty and ratified by the governing board of the institution granting the certificate or diploma.
- 2.3 **Associate Degree.** A program of instruction requiring at least two but less than four years of full-time equivalent college level work, the completion of which results in an associate degree conferred by the faculty and ratified by the governing board of the institution granting the degree.
- 2.4 **Baccalaureate Degree.** A program of instruction requiring at least four but not more than five years of full-time equivalent college academic work, the completion of which results in a baccalaureate degree conferred by the faculty and ratified by the governing board of the institution granting the degree.

3.0 First-Professional Certificates/Degrees

- 3.1 **First-Professional Degree.** A program of instruction the completion of which results in a first-professional degree conferred by the faculty and ratified by the governing board of the institution granting the degree. In addition, the first-professional degree (1) signifies completion of the academic requirements to begin practice in the profession; (2) requires at least two years of full-time equivalent college level work prior to entrance; and (3) usually requires a total of at least six years of full-time equivalent academic work to complete the degree program, including prior required college level work plus the length of the professional program itself.
- 3.2 **Post-Professional Certificate.** A program of instruction requiring significant achievement beyond the first-professional degree, the completion of which results in a formal post-professional certificate conferred by the faculty and ratified by the governing board of the institution granting the certificate.

4.0 Graduate Certificates/Degrees

- 4.1 *Graduate Certificate.* A program of instruction requiring significant achievement beyond the baccalaureate degree, the completion of which results in a formal graduate certificate conferred by the faculty and ratified by the governing board of the institution granting the certificate.
- 4.2 *Master's Degree.* A program of instruction requiring at least one but not more than two years of full-time equivalent academic work beyond the baccalaureate degree, the completion of which results in a master's degree conferred by the faculty and ratified by the governing board of the institution granting the degree.
- 4.3 *Intermediate Graduate Degree.* A program of instruction requiring at least two but not more than three years of full-time equivalent academic work beyond the baccalaureate degree, the completion of which results in an intermediate graduate degree conferred by the faculty and ratified by the governing board of the institution granting the degree.
- 4.4 *Doctoral Degree.* A program of instruction requiring at least three years of full-time equivalent academic work beyond the baccalaureate degree, the completion of which results in a doctoral degree conferred by the faculty and ratified by the governing board of the institution granting the degree.
- 4.5 *Post-Doctoral Award.* A program of instruction requiring significant achievement beyond the doctoral degree, the completion of which results in a formal post-doctoral award conferred by the faculty and ratified by the governing board of the institution granting the degree.

Nonformal Award Programs

- 5.0 **Nonformal Award Programs.** Programs of instruction intended to serve learning clientele and learning objectives that do not result in formal recognition such as a diploma, certificate, or degree.

Program Category Dimension

01. Agribusiness and Agricultural Production. A summary of groups of instructional programs that prepare individuals to apply scientific knowledge and methods, and technical skills in support of agribusiness and agricultural activities concerned with the production and propagation of crops and animals, supplies and services, mechanics, products processing and marketing, and horticulture.

01.01 Agricultural Business and Management. A group of instructional programs that prepare individuals to apply the economic and business principles involved in the organization, operation, and management of farm and agricultural business.

01.0101 Agricultural Business and Management, General. An instructional program that generally prepares individuals to apply the economic and business principles involved in the organization, operation, and management of farm and agricultural businesses.

01.0102 Agricultural Business. An instructional program that prepares individuals to apply business and economic principles relating to the purchasing, selling, producing, and marketing of agricultural products and services for maximizing profit.

01.0103 Agricultural Economics. An instructional program that prepares individuals to apply business and economic principles relating to the allocation of resources to the production and marketing of agricultural products and services in the domestic and international markets.

01.0104 Farm and Ranch Management. An instructional program that prepares individuals to manage a farm or ranch. Includes instruction in farm enterprise analysis, accounting, taxes, production, financing, capital resources, purchasing, government programs, farm inputs, performance records, contracts, estate planning, and marketing.

01.0199 Agricultural Business and Management, Other. Any instructional program in agricultural business and management not described above.

01.02 Agricultural Mechanics. A group of instructional programs that prepare individuals to select, operate, maintain, service, sell, and use agriculture/agribusiness power units, machinery, equipment, structures, and utilities. Includes instruction in agricultural power units; the planning and selection of materials for the construction of agricultural facilities; and the mechanical practices associated with irrigation, drainage, run-off, water conservation, and erosion control.

01.0201 Agricultural Mechanics, General. An instructional program that prepares individuals in a general way to select, operate, maintain, service, sell and use agriculture/agribusiness power units, machinery, equipment, structures, and utilities. Includes instruction in agricultural power units; the planning and selection of materials for the construction of agricultural facilities; and the mechanical practices associated with irrigation, drainage, run-off, water conservation, and erosion control.

01.0202 Agricultural Electrification, Power, and Controls. An instructional program that prepares individuals for the safe use of electricity, electrical power, equipment, and automatic controls.

01.0203 Agricultural Mechanics, Construction, and Maintenance Skills. An instructional program that prepares individuals to select, safely use, and maintain hand and power tools, arc and acetylene welding equipment, and construction materials.

01.0204 Agricultural Power Machinery. An instructional program that prepares individuals to select, operate, service, maintain, and repair a variety of agricultural power units and agricultural machinery and equipment. Includes instruction in gas, diesel, and electric units; welding; refrigeration; and hydraulics and other power systems.

- 01.0205** *Agricultural Structures, Equipment, and Facilities.* An instructional program that prepares individuals to plan, select materials for, construct, utilize, and maintain agricultural structures, equipment, and environmental facilities such as barns, sheds, milking parlors, manure and other waste handling structures and equipment, forage and grain storage structures, and greenhouses.
- 01.0206** *Soil and Water Mechanical Practices.* An instructional program that prepares individuals to implement soil and water management by surveying, planning, laying out, constructing, using, and maintaining irrigation, drainage, and run-off systems.
- 01.0299** *Agricultural Mechanics, Other.* Any instructional program in agricultural mechanics not described above.
- 01.03** *Agricultural Production.* A group of instructional programs that prepare individuals in planning and economically using facilities, land, water, machinery, chemicals, finance, and labor in the production of plant and animal products.
- 01.0301** *Agricultural Production, General.* An instructional program that generally prepares individuals in planning and economically using facilities, land, water, machinery, chemicals, finance, and labor in the production of plant and animal products.
- 01.0302** *Animal Production.* An instructional program that prepares individuals to operate animal production enterprises by developing competencies concerning the selection, breeding, physiology, nutrition, health, housing, feeding, and marketing of animals such as dairy cattle, beef cattle, horses, swine, sheep, poultry, bees, rabbits, cats, dogs, and earthworms.
- 01.0303** *Aquaculture.* An instructional program that prepares individuals for fish farming and marine plant production and harvesting. Includes instruction in feeding, culturing, protecting, and propagating commercially produced marine food products and seaweed, and the uses of marine foods.
- 01.0304** *Crop Production.* An instructional program that prepares individuals to operate enterprises concerned with the production of cereal grain, fiber, forage, oilseed, tree fruits and nuts, small fruits, vegetables, and other crops. Includes instruction in soils, plant nutrition, plant and seed identification, genetics, physiology, entomology, plant pathology, plant disease, and pest control, including insecticides, fungicides, herbicides, nonchemical controls, and plant genetic resistance.
- 01.0305** *Game Farm Management.* An instructional program that prepares individuals to breed, raise, and protect game animals and wildlife for conservation and stocking purposes. Includes instruction in conservation practices and may involve a study of managerial competencies unique to game farm operation.
- 01.0399** *Agricultural Production, Other.* Any instructional program in agricultural production not described above.
- 01.04** *Agricultural Products and Processing.* A group of instructional programs that prepare individuals to process food and nonfood products and to inspect those products preparatory to marketing. Includes instruction in the characteristics and properties of agricultural products and of agriculture-related processing techniques and skills (including quality control and mechanical operations involved in marking, grading, inspecting, packaging, storing, and marketing).
- 01.0401** *Agricultural Products and Processing, General.* An instructional program that generally prepares individuals to process food and nonfood products and to inspect those products preparatory to marketing. Includes instruction in the characteristics and properties of agricultural products and of agriculture-related processing techniques and skills (including quality control and mechanical operations involved in marking, grading, inspecting, packaging, storing, and marketing).
- 01.0402** *Food Products.* An instructional program that prepares individuals for activities dealing with processing food products such as meat, fish, poultry, eggs, dairy products, fruits and vegetables, and cereal grains for sale and consumption.
- 01.0403** *Nonfood Products.* An instructional program that prepares individuals for activities involved with processing nonfood products, such as cotton, tobacco, and wool.
- 01.0499** *Agricultural Products and Processing, Other.* Any instructional program in agricultural products and processing not described above.

01.05

Agricultural Services and Supplies. A group of instructional programs that prepare individuals to sell supplies for agricultural production; provide agricultural services; and purchase, grade, store, market, and transport agricultural products. Includes instruction in animal breeding, horseshoeing, small animal services, and animal hospital care services.

01.0501 Agricultural Services and Supplies, General. An instructional program that generally prepares individuals to sell supplies for agricultural production; provide agricultural services; and purchase, grade, store, market, and transport agricultural products. Includes instruction in animal breeding, horseshoeing, small animal services, and animal hospital care services.

01.0502 Agricultural Services. An instructional program that prepares individuals to provide agricultural services such as custom work, equipment operation and maintenance, management and finance. Includes instruction in small animal services including breeding, horseshoeing, pet services, and animal hospital services.

01.0503 Agricultural Supplies Marketing. An instructional program that prepares individuals for purchasing, storing, grading, transporting, and marketing agricultural supplies such as feeds, seeds, fertilizers, chemicals, machinery and parts, and products such as livestock and grains.

01.0504 Animal Grooming. An instructional program that prepares individuals to groom pets such as dogs and cats by clipping the nails, cleaning the ears, brushing the hair, bathing and drying the animal, styling the hair through the use of hair clippers and scissors and beautifying through the use of items such as bows.

01.0505 Animal Training. An instructional program that prepares individuals to teach animals to obey commands, compete in shows, or perform tricks to entertain an audience.

01.0506 Horseshoeing. An instructional program that prepares individuals to select aluminum and steel shoes (plates) and fit, shape, and nail shoes to animals' hooves.

01.0599 Agricultural Services and Supplies, Other. Any instructional program in agricultural services and supplies not described above.

01.06 Horticulture. A group of instructional programs that prepare individuals to produce, process, and market plants, shrubs, and trees used principally for ornamental, recreational, and aesthetic purposes and to establish, maintain, and manage horticultural enterprises such as arboriculture, floriculture, greenhouse operation and management, landscaping, nursery operation and management, and turf management. Includes instruction in machinery and equipment necessary for each horticultural enterprise.

01.0601 Horticulture, General. An instructional program that generally prepares individuals to produce, process, and market plants, shrubs, and trees used principally for ornamental, recreational, and aesthetic purposes and to establish, maintain, and manage horticultural enterprises such as arboriculture, floriculture, greenhouse operation and management, landscaping, nursery operation and management, and turf management. Includes instruction in machinery and equipment necessary for each horticultural enterprise.

01.0602 Arboriculture. An instructional program that prepares individuals to cultivate and maintain woody plants and trees used for decoration and shade purposes.

01.0603 Floriculture. An instructional program that prepares individuals to produce flowers, foliage, and related plant materials in fields and greenhouses for ornamental purposes, and to arrange, package, and market these materials.

01.0604 Greenhouse Operation and Management. An instructional program that prepares individuals to produce plants under glass and in other artificial environments.

01.0605 Landscaping. An instructional program that prepares individuals to locate, plant, and maintain turf, plants, shrubs, or devices for the beautification of home grounds and other areas of human habitation and recreation.

01.0606 Nursery Operation and Management. An instructional program that prepares individuals to produce turf, plants, shrubs, and/or trees for the purpose of transplanting or propagating them.

01.0607 *Turf Management.* An instructional program that prepares individuals to establish, manage, and maintain grassed areas for ornamental and/or recreational purposes.

01.0699 *Horticulture, Other.* Any instructional program in horticulture not described above.

01.07 *International Agriculture.* A group of instructional programs (see 01.0701).

01.0701 *International Agriculture.* An instructional program that prepares individuals to apply the social, biological, and agricultural sciences and technologies as they relate to food production and distribution on a world-wide scale.

01.99 *Agribusiness and Agricultural Production, Other.* A group of instructional programs in agribusiness and agricultural production not described above.

01.9999 *Agribusiness and Agricultural Production, Other.* Any instructional program in agribusiness and agricultural production not described above.

02. *Agricultural Sciences.* A summary of groups of instructional programs that describe the production, processing, and distribution of food and fiber.

02.01 *Agricultural Sciences, General.* A group of instructional programs (see 02.0101).

02.0101 *Agricultural Sciences, General.* An instructional program that generally describes the production, processing, and distribution of food and fiber.

02.02 *Animal Sciences.* A group of instructional programs that describe the theories, principles, and applications of appropriate technical skills that apply to the production and management of animals and animal products.

02.0201 *Animal Sciences, General.* An instructional program that generally describes the theories, principles, and applications of appropriate technical skills that apply to the production and management of animals and animal products.

02.0202 *Animal Breeding and Genetics.* An instructional program that describes the principles of inheritance and their applications for the improvement of agricultural animals through breeding and selection.

02.0203 *Animal Health.* An instructional program that describes the environment, drugs, antibiotics, vaccinations, blood tests, and other management factors that effect the prevention and control of diseases in agricultural animals.

02.0204 *Animal Nutrition.* An instructional program that describes the relationship in agricultural animals of proteins, fats, carbohydrates, water, minerals, vitamins, and feed additives in the production of meat, milk, eggs, and wool.

02.0205 *Animal Physiology.* An instructional program that describes the body processes and functions that relate to agricultural animal production, such as lactation, reproduction (including artificial insemination and heat detection), egg production, digestion, growth, and wool production.

02.0206 *Dairy.* An instructional program that describes the theories, principles, and applications of appropriate technical skills that apply to the production and management of milk animals and dairy products.

02.0207 *Fisheries Science.* An instructional program that describes the life processes of waterlife, including age and rate of growth, populations habitats, reproduction, and mortality.

02.0208 *Livestock.* An instructional program that describes the theories, principles, and applications of appropriate technical skills that apply to the production and management of livestock and livestock products.

02.0209 *Poultry.* An instructional program that describes the theories, principles, and applications of appropriate technical skills that apply to the production and management of poultry and poultry products.

02.0299 *Animal Sciences, Other.* Any instructional program in animal sciences not described above.

- 02.03** *Food Sciences.* A group of instructional programs that describe the principles and practices involved in converting agricultural products to forms suitable for direct human consumption, or for storage.
- 02.0301** *Food Sciences, General.* An instructional program that generally describes the principles and practices involved in converting agriculture products to forms suitable for direct human consumption or for storage.
- 02.0302** *Dairy Processing.* An instructional program that describes the principles, sciences, and practices involved with the conversion of raw milk to dairy foods including milk, cheese, and dehydrated and frozen products.
- 02.0303** *Food Distribution.* An instructional program that describes the principles and practices used in the marketing, sales, merchandising, and distribution of foods from manufacturers or processors to the consumer.
- 02.0304** *Food Engineering.* An instructional program that describes the principles and theories used in the development of equipment and facilities utilized in the processing, preservation, and handling of food products.
- 02.0305** *Food Packaging.* An instructional program that describes the principles and techniques used to develop and implement methods of preparing and packaging food products to preserve, protect, and display them.
- 02.0306** *Food Technology.* An instructional program that prepares individuals to convert plant and animal products to consumable foods and to preserve foods.
- 02.0399** *Food Sciences, Other.* Any instructional program in food sciences not described above.
- 02.04** *Plant Sciences.* A group of instructional programs that describe the theories and principles of science and practices involved in the production and management of plants for food, feed, fiber, and soil conservation.
- 02.0401** *Plant Sciences, General.* An instructional program that generally describes the theories and principles of science and practices involved in the production and management of plants for food, feed, fiber, and soil conservation.
- 02.0402** *Agronomy.* An instructional program that describes the principles and practices involved in the development, production, and management of field crops, including plant breeding, plant diseases, soils, insect control, and weed control.
- 02.0403** *Horticulture Science.* An instructional program that describes the principles and practices involved in the production of fruits and vegetables and the management of the pests of these crops.
- 02.0404** *Ornamental Horticulture.* An instructional program that describes the principles, practices, and skills applied in the production and use of decorative plants and plant material and associated business enterprises.
- 02.0405** *Plant Breeding and Genetics.* An instructional program that describes the theories and principles of inheritance, botany, statistics, and biometry through hybridization and differential selection for plant improvement.
- 02.0406** *Plant Pathology (Applied).* An instructional program that describes the principles and fundamental sciences associated with recognizing diseased plants, identifying causal agents, and preventing or reducing economic loss.
- 02.0407** *Plant Physiology.* An instructional program that describes the principles and fundamental sciences involved in the life processes of plants and plant responses to the elements of the physical environment.
- 02.0408** *Plant Protection (Pest Management).* An instructional program that describes the principles and practices of combining entomology, plant pathology, and weed science with crop production to minimize the economic loss caused by plant pests and to protect the environment.
- 02.0409** *Range Management.* An instructional program that describes the principles and practices involved in determining and applying appropriate uses of range resources to ensure sustained productivity and resource conservation.

- 02.0410** *Turf Management Science.* An instructional program that describes the principles and practices involved in the production and management of grasses and other ground covers for recreational facilities, lawns, roadsides, and similar uses.
- 02.0499** *Plant Sciences, Other.* Any instructional program in plant sciences not described above.
- 02.05** *Soil Sciences.* A group of instructional programs that describe the physical, chemical, and biological sciences and basic principles which relate to the determination of soil properties and their conservation and management for crop production or other purposes.
- 02.0501** *Soil Sciences, General.* An instructional program that generally describes the physical, chemical, and biological sciences and basic principles which relate to the determination of soil properties and their conservation and management for crop production, or other purposes.
- 02.0502** *Soil Chemistry.* An instructional program that describes fundamental chemical principles as they relate to the nature and properties of soils and the development of basic soil and crop management theories.
- 02.0503** *Soil Conservation.* An instructional program that describes the principles and practices used in managing soil and land resources to optimize productivity and minimize resource loss.
- 02.0504** *Soil Management and Fertility.* An instructional program that describes the chemical, physical, and biological principles utilized in maintaining and improving the capacity of soils to sustain high crop yields and minimize resource losses.
- 02.0505** *Soil Microbiology.* An instructional program that describes fundamental microbiological principles as they relate to the nature and properties of soils, and interaction of soil plants with physical and chemical components as they relate to soil and crop management theories.
- 02.0506** *Soil Physics.* An instructional program that describes the fundamental physical science principles as they relate to the nature and properties of soils, and the development of basic soil/crop management theories.
- 02.0599** *Soil Sciences, Other.* Any instructional program in soil sciences not described above.
- 02.99** *Agricultural Sciences, Other.* A group of instructional programs in agricultural sciences not described above.
- 02.9999** *Agricultural Sciences, Other.* Any instructional program in agricultural sciences not described above.

03. *Renewable Natural Resources.* A summary of groups of instructional programs that prepare individuals for activities involving the conservation and/or improvement of natural resources such as air, soil, water, land, fish, and wildlife for economic and recreational purposes.

- 03.01** *Renewable Natural Resources, General.* A group of instructional programs (see 03.0101).
- 03.0101** *Renewable Natural Resources, General.* An instructional program that generally prepares individuals for activities involving the conservation and/or improvement of natural resources such as air, soil, water, land, fish, and wildlife for economic and recreational purposes.
- 03.02** *Conservation and Regulation.* A group of instructional programs that prepare individuals to engage in activities concerned with the preservation, protection, and regulation of renewable natural resources.
- 03.0201** *Conservation and Regulation, General.* An instructional program that generally prepares individuals to engage in activities concerned with maintaining the stability and productivity of air, soil, water, land, fish, and wildlife.
- 03.0202** *Conservation.* An instructional program that prepares individuals to engage in activities concerned with maintaining the stability and productivity of air, soil, water, land, fish, and wildlife.
- 03.0203** *Resources Protection and Regulation.* An instructional program that prepares individuals to enforce regulations and laws pertaining to the protection and economic use of renewable natural resources.
- 03.0299** *Conservation and Regulation, Other.* Any instructional program in conservation and regulation not described above.

- 03.03** *Fishing and Fisheries.* A group of instructional programs that prepare individuals to engage in fishing for commercial purposes and to manage fish resources to optimize production.
- 03.0301** *Fishing and Fisheries, General.* An instructional program that generally prepares individuals to engage in fishing for commercial purposes and to manage fish resources to optimize production.
- *Commercial Fishing Operation.* (see 49.0303).
- 03.0302** *Fisheries.* An instructional program that prepares individuals to apply the physical and biological principles and practices which promote the understanding and management of fish resources to optimize production in fresh and salt waters.
- 03.0399** *Fishing and Fisheries, Other.* Any instructional program in fishing and fisheries not described above.
- 03.04** *Forestry Production and Processing.* A group of instructional programs that prepare individuals to produce, protect, and manage timber and specialty forest crops; maintain, operate, and repair related equipment and machinery; harvest and transport trees as a crop and select, grade, and market forest raw materials for converting into a variety of consumer goods, and to utilize the forest for multiple purposes such as game preserves and recreation.
- 03.0401** *Forestry Production and Processing, General.* An instructional program that prepares individuals in a general way to produce, protect, and manage timber and specialty forest crops; maintain, operate, and repair related equipment and machinery; harvest and transport trees as a crop and select, grade, and market forest raw materials for converting into a variety of consumer goods, and to utilize the forest for multiple purposes such as game preserves and recreation.
- 03.0402** *Forest Production.* An instructional program that prepares individuals to plant, select, identify, manage, and protect timber and specialty forest crops such as Christmas trees. Includes instruction in maintenance, safe operation, and repair of related equipment.
- 03.0403** *Forest Products Utilization.* An instructional program that prepares individuals to select, grade, and market forest raw materials for conversion to consumer goods such as paper, plywood, wallboard, turpentine, plastics, and preservation-treated wood products. Includes instruction in maintenance, safe operation, and repair of related equipment.
- 03.0404** *Forest Products Processing Technology.* An instructional program that prepares individuals to assist a manager, engineer, chemist, or forest product scientist in the measurement, analysis of quality, testing, and processing of harvested forest raw materials. Includes instruction in identifying types of raw forest materials; procedures and processes involved, including measuring, assessing quality, evaluating commercial value, and testing strength of fiber or cut products; cutting into finished or semi-finished products; drying or otherwise conditioning; finishing or laminating into plywood marketable products; and cutting, digesting, and fabricating into paperboard or other product form.
- 03.0405** *Logging.* An instructional program that prepares individuals to harvest and transport trees as a crop, and maintain, safely operate, and repair logging equipment and machinery.
- 03.0406** *Pulp and Paper Production.* An instructional program that prepares individuals in manufacturing techniques to convert logs into cellulose and wood pulp into newsprint, kraft, and other paper grades.
- 03.0499** *Forestry Production and Processing, Other.* Any instructional program in forestry production and processing not described above.
- 03.05** *Forestry and Related Sciences.* A group of instructional program that prepare individuals to apply the science, art, and practice of managing and using for human benefit the natural resources that occur on, and in association with, forest lands.
- 03.0501** *Forestry and Related Sciences, General.* An instructional program that generally prepares individuals to apply the science, art, and practice of managing and using for human benefit the natural resources that occur on, and in association with, forest lands.
- 03.0502** *Forestry Science.* An instructional program that prepares individuals to manage and use for human benefit the natural resources that occur on, and in association with, forest lands.

- 03.0503 *Forest Biology.* An instructional program that prepares individuals in biological and ecological processes and systems, including physiology, forest genetics, and forest soils.
- 03.0504 *Forest Engineering.* An instructional program that prepares individuals in forest road design and construction, harvesting plans and systems, machinery design and other engineering needs.
- 03.0505 *Forest Hydrology.* An instructional program that prepares individuals in the principles and processes of the movement and disposition of water on forest and land, including watershed management.
- 03.0506 *Forest Management.* An instructional program that prepares individuals in the management and administration of forests and forest lands. Includes instruction in silviculture, forest protection, and forest policy, planning and economics.
- 03.0507 *Forest Mensuration.* An instructional program that prepares individuals to determine the dimensions, form, increment and age of trees individually, or collectively. Includes instruction in remote sensing, forest modeling, and forest biometrics.
- 03.0508 *Urban Forestry.* An instructional program that prepares individuals in the planning, care, and maintenance of individual trees, or forested areas in or close to areas of dense habitation where special practices may be needed.
- 03.0509 *Wood Science.* An instructional program that prepare individuals for occupations dealing with wood, wood anatomy and properties, wood engineering, wood utilization, and the provision of useful products. Includes instruction in production and marketing.
- 03.0599 *Forestry and Related Sciences, Other.* Any instructional program in forestry and related sciences not described above.

03.06 *Wildlife Management.* A group of instructional programs (see 03.0601).

03.0601 *Wildlife Management.* An instructional program that prepares individuals in the principles and practices used in the production and improvement of wildlife resources for aesthetic, ecological, and recreational uses of public and private lands.

03.99 *Renewable Natural Resources, Other.* A group of instructional programs in renewable natural resources not described above.

03.9999 *Renewable Natural Resources, Other.* An instructional program in renewable natural resources not described above.

04. **Architecture and Environmental Design.** A summary of groups of instructional programs that describe the methods to create, adapt, alter, preserve, and control man's physical and social surroundings.

04.01 *Architecture and Environmental Design, General.* A group of instructional programs (see 04.0101).

04.0101 *Architecture and Environmental Design, General.* An instructional program that generally describes the methods to create, adapt, alter, preserve, and control man's physical and social surroundings.

04.02 *Architecture.* A group of instructional programs (see 04.0201).

04.0201 *Architecture.* An instructional program that describes the processes that promote the use of aesthetic patterns, forms, and structures for human purposes in harmony with the environment.

04.03 *City, Community, and Regional Planning.* A group of instructional programs (see 04.0301).

04.0301 *City, Community, and Regional Planning.* An instructional program that describes the application of the planning process to the development of environmental programs designed to deal with urban, regional, and other geographically distinct areas.

04.04 *Environmental Design.* A group of instructional programs (see 04.0401).

04.0401 *Environmental Design.* An instructional program that describes the processes, procedures, observations, and techniques essential to the development of designs for interior and exterior environments.

04.05 *Interior Design.* A group of instructional programs (see 04.0501).

04.0501 *Interior Design.* An instructional program that describes the processes, procedures, observations, and techniques essential to the development of designs for interior environments.

04.06 *Landscape Architecture.* A group of instructional programs (see 04.0601).

04.0601 *Landscape Architecture.* An instructional program that describes the design processes as applied to man-made structures and objects and animate and inanimate natural materials in the landscape with the object of furthering human purposes, and synthesizing knowledge of functional relationships, human behavior, ecology, and land form, construction technology, and aesthetic sensitivity.

04.07 *Urban Design.* A group of instructional programs (see 04.0701).

04.0701 *Urban Design.* An instructional program that describes the systematic process of creating and modifying those physical elements which constitute a city; synthesizing function, aesthetic sensitivity, technology, and social, psychological, and economic well-being.

04.99 *Architecture and Environmental Design, Other.* A group of instructional programs in architecture and environmental design not described above.

04.9999 *Architecture and Environmental Design, Other.* Any instructional program in architecture and environmental design not described above.

05. *Area and Ethnic Studies.* A summary of groups of instructional programs that describe the history, society, politics, culture, and economics of either a particular geographic region or a particular subset of the population sharing common racial characteristics or common traits and customs.

05.01 *Area Studies.* A group of instructional programs that describe the history, society, politics, culture, and economics of a particular geographic region.

05.0101 *African Studies.* An instructional program that describes the history, society, politics, culture, and economics of Africa.

05.0102 *American Studies.* An instructional program that describes the history, society, politics, culture, and economics of the United States of America.

05.0103 *Asian Studies, General.* An instructional program that describes the history, society, politics, culture, and economics of Asia.

05.0104 *East Asian Studies.* An instructional program that describes the history, society, politics, culture, and economics of East Asia, including, China, Japan, and Korea.

05.0105 *Eastern European Studies.* An instructional program that describes the history, society, politics, culture, and economics of Eastern Europe.

05.0106 *European Studies, General.* An instructional program that describes the history, society, politics, culture, and economics of Europe.

05.0107 *Latin American Studies.* An instructional program that describes the history, society, politics, culture, and economics of Latin America.

05.0108 *Middle Eastern Studies.* An instructional program that describes the history, society, politics, culture, and economics of the countries lying east of the Mediterranean and Aegean Seas to India.

- 05.0109 *Pacific Area Studies.* An instructional program that describes the history, society, politics, culture, and economics of Australia, New Zealand, and the Pacific Islands.
- 05.0110 *Russian and Slavic Studies.* An instructional program that describes the history, society, politics, culture, and economics of Russia and the Slavic countries.
- 05.0111 *Scandinavian Studies.* An instructional program that describes the history, society, politics, culture, and economics of Scandinavia, including Denmark, Norway, Sweden, and Finland.
- 05.0112 *South Asian Studies.* An instructional program that describes the history, society, politics, culture, and economics of South Asia, including Pakistan, India, and Bangladesh.
- 05.0113 *Southeast Asian Studies.* An instructional program that describes the history, society, politics, culture, and economics of Southeast Asia, including Vietnam, Cambodia, Laos, Thailand, Burma, and Malaysia.
- 05.0114 *Western European Studies.* An instructional program that describes the history, society, politics, culture, and economics of Western Europe.
- 05.0199 *Area Studies, Other.* Any instructional program in area studies not described above.

05.02 *Ethnic Studies.* A group of instructional programs that describe the history, society, politics, culture, and economics of subsets of the population sharing common racial characteristics or common traits and customs.

05.0201 *Afro-American (Black) Studies.* An instructional program that describes the history, society, politics, culture, and economics of Afro-Americans.

05.0202 *American Indian Studies.* An instructional program that describes the history, society, politics, culture, and economics of American Indians.

05.0203 *Hispanic-American Studies.* An instructional program that describes the history, society, politics, culture, and economics of Hispanic-Americans.

05.0204 *Islamic Studies.* An instructional program that describes the history, society, politics, culture, and economics of Afro-Asian countries in which the population is predominantly Islamic in religious orientation.

05.0205 *Jewish Studies.* An instructional program that describes the history, society, politics, culture, and economics of the Jewish people.

05.0299 *Ethnic Studies, Other.* Any instructional program in ethnic studies not described above.

05.99 *Area and Ethnic Studies, Other.* A group of instructional programs in area and ethnic studies not described above.

05.9999 *Area and Ethnic Studies, Other.* Any instructional program in area and ethnic studies not described above.

06. **Business and Management.** A summary of groups of instructional programs that describe the processes of purchasing, selling, producing, and interchanging of goods, commodities, and services in profit making and non-profit public and private institutions and agencies.

06.01 *Business and Management, General.* A group of instructional programs (see 06.0101).

06.0101 *Business and Management, General.* An instructional program that generally describes the processes of purchasing, selling, producing, and interchanging of goods, commodities, and services in profit making and non-profit public and private institutions and agencies.

06.02 *Accounting.* A group of instructional programs (see 06.0201).

06.0201 *Accounting.* An instructional program that describes the principles, procedures, and theories of organizing, maintaining, and auditing business and financial transactions.

- 06.03** *Banking and Finance.* A group of instructional programs (see 06.0301).
- 06.0301** *Banking and Finance.* An instructional program that describes the financial management of industrial and commercial enterprises; of commercial, savings, and mortgage banking; and of investment analysis and portfolio selection.
- 06.04** *Business Administration and Management.* A group of instructional programs that describe the planning, organizing, and controlling of a business, including organizational and human aspects, with emphasis on various theories of management, the knowledge and understanding necessary for managing people and functions, and decisionmaking.
- 06.0401** *Business Administration and Management, General.* An instructional program that generally describes the planning, organizing and controlling of a business, including organizational and human aspects, with emphasis on various theories of management, the knowledge and understanding necessary for managing people and functions, and decisionmaking.
- 06.0402** *Contract Management and Procurement/Purchasing.* An instructional program that describes the methods, techniques, and processes by which contracts are obtained, monitored, and completed.
- 06.0403** *Product Management.* An instructional program that describes the systematic regulation and control of the manufacturing, fabricating, extracting, or processing of goods.
- 06.0404** *Systems Efficiency Analysis.* An instructional program that prepares individuals to study the policies, organizational structures, and administrative practices of an organization for the purpose of recommending and installing systems procedures and methods improvements. Includes instruction in the design, implementation, testing, and maintenance of various systems procedures and the preparation of valid technical research to aid engineers, management personnel, and others in effectively installing efficient operational procedures.
- 06.0499** *Business Administration and Management, Other.* Any instructional program in business administration and management not described above.
- 06.05** *Business Economics.* A group of instructional programs (see 06.0501).
- 06.0501** *Business Economics.* An instructional program that describes the principles and methods for organizing a business firm and for combining resources to produce goods and services, taking account of costs, profits, and the nature and extent of competition in markets.
- 06.06** *Human Resources Development.* A group of instructional programs (see 06.0601).
- 06.0601** *Human Resources Development.* An instructional program that describes the principles, methods, and techniques that are used to assess and meet the training and career development needs of employees.
- 06.07** *Institutional Management.* A group of instructional programs that describe the nature and application of management methods and techniques related to specific kinds of institutions.
- 06.0701** *Hotel/Motel Management.* An instructional program that describes the nature and application of management methods and techniques related to hotels and motels.
- 06.0702** *Recreational Enterprises Management.* An instructional program that describes the nature and application of management methods and techniques related to recreational enterprises.
- 06.0703** *Resort Management.* An instructional program that describes the nature and application of management methods and techniques related to resorts.
- 06.0704** *Restaurant Management.* An instructional program that describes the nature and application of management methods and techniques related to restaurants.
- 06.0705** *Transportation Management.* An instructional program that describes the nature and application of management methods and techniques related to transportation enterprises.
- 06.0799** *Institutional Management, Other.* Any instructional program in institutional management not described above.

- 06.08** *Insurance and Risk Management.* A group of instructional programs (see 06.0801).
- 06.0801** *Insurance and Risk Management.* An instructional program that describes risk analysis and personal and business insurance and their applications to life, disability, property, liability, and fiduciary trust and annuity underwriting.
- 06.09** *International Business Management.* A group of instructional programs (see 06.0901).
- 06.0901** *International Business Management.* An instructional program that describes the principles and processes of export sales, trade controls, foreign operations, attitudes, monetary problems, and other areas of concern in the international business environment as it affects, or is affected by, a company's policies, procedures, and products.
- 06.10** *Investments and Securities.* A group of instructional programs (see 06.1001).
- 06.1001** *Investments and Securities.* An instructional program that describes the securities market, investment concepts, and the effects of economic business cycles on investments. Includes instruction in the study of stocks, mutual funds, bonds, unlisted and listed securities, and yield changes as they affect long-term holdings.
- 06.11** *Labor/Industrial Relations.* A group of instructional programs (see 06.1101).
- 06.1101** *Labor/Industrial Relations.* An instructional program that describes the history and development of the labor movement, including the analysis and interpretation of Federal and State legislation, union contracts, labor negotiation, conciliation, arbitration, and grievance procedures.
- 06.12** *Management Information Systems.* A group of instructional programs (see 06.1201).
- 06.1201** *Management Information Systems.* An instructional program that describes computer-based information systems that deal with business data and are generally characterized by logical patterns of clerical work flow from the point of original data gathering to completion of necessary reports and retrieval displays.
- 06.13** *Management Science.* A group of instructional programs that describe the application of mathematical and analytical techniques such as modeling, programming, forecasting, and analysis in the design, implementation, monitoring, and control of organizational processes and operations to determine their purpose and effectiveness, and means for attaining maximum efficiency.
- 06.1301** *Business Statistics.* An instructional program that describes the application of mathematical and statistical models and methodology in business.
- 06.1302** *Operations Research (Quantitative Methods).* An instructional program that describes the principles and procedures of analyzing management problems utilizing probability theory, continuous distributions, mathematical programming, queueing theory, Markov processes, replacement maintenance and inventory models, other mathematical models, and simulation and game theory.
- 06.1399** *Management Science, Other.* Any instructional program in management science not described above.
- 06.14** *Marketing Management and Research.* A group of instructional programs that describe the principles, practices, and concepts involved in the performance of business activities which direct the transfer of goods and the acquisition of services from producer to consumer. Includes instruction in marketing functions and institutions; activities having to do with effecting change in ownership and possession of goods and services; and the study of applied economics relating to the creation of time, place, and possession utility.
- 06.1401** *Marketing Management.* An instructional program that describes applying marketing skills in a management position in any industry, generally at a mid-management level or in a management-training program, or to advance to more specialized training in marketing.

- 06.1402 *Marketing Research.* An instructional program that describes undertaking research activities such as analysis of data on products and sales, the conducting of surveys and interviews, test marketing of new products, and preparation of recommendations to clients or internal management.
- 06.1499 *Marketing Management and Research, Other.* Any instructional program in marketing management and research not described above.
- 06.15 *Organizational Behavior.* A group of instructional programs (see 06.1501).
- 06.1501 *Organizational Behavior.* An instructional program that describes the behavior and motivations of individuals functioning in groups, the influence of styles of leadership that may be used by managers, and the means of intervention that may be used to improve interpersonal relations and team behavior.
- 06.16 *Personnel Management.* A group of instructional programs (see 06.1601).
- 06.1601 *Personnel Management.* An instructional program that describes the methods, principles, procedures, and understandings necessary to manage and administer programs that are directed to the welfare and working conditions of employees in a business or other organization.
- 06.17 *Real Estate.* A group of instructional programs that describe the theories and techniques of buying, selling, appraising, renting, managing, and leasing of real property.
- 06.1701 *Real Estate, General.* An instructional program that generally describes the theories and techniques of buying, selling, appraising, renting, managing, and leasing of real property.
- 06.1702 *Commercial Property.* An instructional program that prepares individuals to facilitate and transact transfers of ownership or the leasing of land, nonresidential buildings, and other commercial properties.
- 06.1703 *Property Management.* An instructional program that describes that principles and methods of managing office buildings, apartment houses, shopping centers, small properties, and other investment property.
- 06.1704 *Real Estate Appraisal.* An instructional program that describes the techniques of general appraisal of the real estate market, including factors that affect the value of land, construction costs per square foot and cubic foot, factors in residential and commercial appraisals, and the translation of rental income into present value.
- 06.1705 *Real Estate Finance.* An instructional program that describes the principles and practices governing real estate financing. Includes instruction in mortgage and equity financing, sources of loans, loan procedures, and legislation governing mortgage lending.
- 06.1706 *Real Estate Law.* An instructional program that describes the legal principles governing real estate transactions, including sales contracts, deeds, mortgages, title insurance, and State laws.
- 06.1707 *Residential Property.* An instructional program that prepares individuals to facilitate and transact transfers of ownership of housing units for residential occupancy, including recreational properties.
- 06.1799 *Real Estate, Other.* Any instructional program in real estate not described above.
- 06.18 *Small Business Management and Ownership.* A group of instructional programs that describe the managerial functions and ownership principles involved in operating a small business.
- 06.1801 *Small Business Management.* An instructional program that describes the management functions, policies, and procedures that are characteristic of small business concerns.
- 06.1802 *Small Business Ownership.* An instructional program that prepares individuals to undertake the formation and operation of small-business enterprises (including franchise operations) for the purpose of marketing a product line or service, with emphasis given to the social responsibilities, legal requirements, and risks involved in the conduct of a private enterprise.
- 06.1899 *Small Business Management and Ownership, Other.* Any instructional program in small business management and ownership not described above.

06.19 *Taxation.* A group of instructional programs (see 06.1901).

06.1901 *Taxation.* An instructional program that describes the principles, procedures, and regulations applicable to the maintenance of records and the preparation and filing of income tax returns for individuals, partnerships, corporations, and other types of organizations.

06.20 *Trade and Industrial Supervision and Management.* A group of instructional programs (see 06.2001).

06.2001 *Trade and Industrial Supervision and Management.* An instructional program that describes supervising and managing personnel engaged in construction, mechanical repair, manufacturing, transportation, or material moving.

06.99 *Business and Management, Other.* A group of instructional programs in business and management not described above.

06.9999 *Business and Management, Other.* Any instructional program in business and management not described above.

07. *Business and Office.* A summary of groups of instructional programs that prepare individuals for a variety of activities in planning, organizing, directing, and controlling all business office systems and procedures. Includes instruction in preparing, transcribing, systematizing, and preserving written communications and records; preparing and analyzing financial records; collecting accounts and receiving and disbursing money; gathering, processing and distributing information and mail; operating office machines and electronic data processing equipment; storing, distributing, and accounting for inventories of materials; operating telephone switchboards and delivering messages; and performing other business office duties.

07.01 *Accounting, Bookkeeping, and Related Programs.* A group of instructional programs that prepare individuals to systematize information about transactions and activities into accounts and quantitative records, verify accuracy of data by applying auditing principles, prepare budgets and financial reports, operate bookkeeping machines, and pay and receive money.

07.0101 *Accounting, Bookkeeping, and Related Programs, General.* An instructional program that generally prepares individuals to systematize information about transactions and activities into accounts and quantitative records, verify accuracy of data by applying auditing principles, prepare budgets and financial reports, operate bookkeeping machines, and pay and receive money.

07.0102 *Accounting and Computing.* An instructional program that prepares individuals to perform paraprofessional duties supporting the accountant in organizing, designing, and computing numerical and financial data.

07.0103 *Bookkeeping.* An instructional program that prepares individuals to compute, classify, and record numerical data to keep financial records and ledgers and prepare tax reports and monthly statements.

07.0104 *Machine Billing, Bookkeeping, and Computing.* An instructional program that prepares individuals to utilize office machines for billing, posting, calculating, adding, listing, and mechanizing data (except data processing equipment); obtain final records of financial activities; and prepare other financial statistical reports and information.

07.0199 *Accounting, Bookkeeping, and Related Programs, Other.* Any instructional program in accounting, bookkeeping, and related programs not described above.

07.02 *Banking and Related Financial Programs.* A group of instructional programs that prepare individuals to perform financial or banking services. Includes instruction in credit collection, transit routing of notes and drafts, receiving and paying out money, and functions associated with processing loans and insurance claims.

07.0201 *Banking and Related Financial Programs, General.* An instructional program that generally prepares individuals to perform financial or banking services. Includes instruction in credit collection, transit routing of notes and drafts, receiving and paying out money, and functions associated with processing loans and insurance claims.

07.0202 *Credit Collection Clerk.* An instructional program that prepares individuals to receive, record, and collect notes, drafts, checks, and coupons drawn on local or out-of-town banks; compute interest or finance charges; issue receipts and mail collection statements; and determine the credit status of clients.

- 07.0203 *Insurance Clerk.* An instructional program that prepares individuals to examine insurance policies held for commercial or personal loans and property under control of the bank or financial institution; determine adequacy of coverage and insurance requirements; verify cash value and premium of policies; and maintain records concerning bank-owned insurance and fire protection on commodities.
- 07.0204 *Loan Clerk.* An instructional program that prepares individuals to process applications of individuals and businesses applying for loans and credit; verify credit status and limits considering applicants' assets, experience, and references; notify customers of loan status; maintain records on credit transactions, deposits, payments, and delinquent accounts; adjust incorrect loan statements; and compute interest, payment, or service charges associated with the loan.
- 07.0205 *Teller.* An instructional program that prepares individuals to receive and pay out money, and keep records of money and negotiable instruments used in various banking and financial transactions. Includes instruction in computing finance or service charges and transactions, and in operating various computing and recording office machines used in financial institutions.
- 07.0206 *Transit Clerk.* An instructional program that prepares individuals to operate machines to sort, record, proof, and prepare all transit items (e.g. check drafts, credit letters) on out-of-city banks to ensure correct routing and prompt collection, and to operate photocopy machines to duplicate transit letters, outgoing checks, and computing machine tapes to keep records of all transit items and their destinations.
- 07.0299 *Banking and Related Financial Programs, Other.* Any instructional program in banking and related financial programs not described above.
- 07.03 *Business Data Processing and Related Programs.* A group of instructional programs that prepare individuals to analyze and design data processing system configurations; write, test, monitor, debug, and maintain data processing programs; and operate computers and peripheral and data entry equipment.
- 07.0301 *Business Data Processing and Related Programs, General.* An instructional program that generally prepares individuals to analyze and design data processing system configurations; write, test, monitor, debug, and maintain data processing programs; and operate computers and peripheral and data entry equipment.
- 07.0302 *Business Computer and Console Operation.* An instructional program that prepares individuals to operate electronic data processing computers. Includes instruction in the review of program instructions, determination of procedures for a specific run, readying equipment for operation, and manipulation and monitoring of controls during operation. Instruction also is given in troubleshooting and all types of on- and off-line operations.
- 07.0303 *Business Data Entry Equipment Operation.* An instructional program that prepares individuals to operate keypunch or special-purpose key entry devices to convert source documents to machine input media for electronic data processing, verify and correct data, and monitor equipment during operation.
- 07.0304 *Business Data Peripheral Equipment Operation.* An instructional program that prepares individuals to operate on-line or off-line peripheral equipment such as sorters, collators, high-speed printers, bursting machines, tape-to-card and card-to-tape converters, and scanners.
- 07.0305 *Business Data Programming.* An instructional program that prepares individuals to convert problems into detailed flow charts; code into computer language; test, monitor, debug, document, and maintain computer programs; and design programs for specific uses and machines.
- 07.0306 *Business Systems Analysis.* An instructional program that prepares individuals to analyze specific problems for data refinement and summarization; study existing data handling systems to evaluate effectiveness; and develop new systems to meet current and projected data processing needs. Includes instruction in the preparation of technical reports and instructional manuals related to establishment of complete operational data systems.
- 07.0399 *Business Data Processing and Related Programs, Other.* Any instructional program in business data processing and related programs not described above.

07.04 *Office Supervision and Management.* A group of instructional programs (see 07.0401).

07.0401 *Office Supervision and Management.* An instructional program that prepares individuals to supervise employees; budget, analyze, and coordinate clerical and other office activities; evaluate, organize, and/or revise office operations and procedures to establish uniformity in handling correspondence, records, and other materials; design various office layouts to facilitate maximum production and efficiency; evaluate employee records; and coordinate activities of clerical department and workers.

07.05 *Personnel and Training Programs.* A group of instructional programs that prepare individuals to undertake organizational and facilitating functions associated with personnel administration.

07.0501 *Personnel and Training Programs, General.* An instructional program that generally prepares individuals to undertake organizational and facilitating functions associated with personnel administration.

07.0502 *Educational Assisting and Training.* An instructional program that prepares individuals in the facilitating functions of an organization dealing with personnel, such as teacher aides in education, training specialists in industry, and test technicians.

07.0503 *Personnel Assisting.* An instructional program that prepares individuals to assist in implementing policies relating to the personnel administration of an organization. Includes instruction in recruitment, selection, training, promotion, welfare, recreation, safety, compensation, and separation of employees.

07.0599 *Personnel and Training Programs, Other.* Any instructional program in personnel and training programs not described above.

07.06 *Secretarial and Related Programs.* A group of instructional programs that prepare individuals to record and transcribe communications and to provide administrative support.

07.0601 *Secretarial and Related Programs, General.* An instructional program that generally prepares individuals to record and transcribe communications and to abstract, classify, and file information.

07.0602 *Court Reporting.* An instructional program that prepares individuals to record examination, testimony, judicial opinions, judge's charge to jury, judgement or sentence of court, or other proceedings in court of law by machine shorthand. Includes instruction in the specialized terminology and procedures used in the legal, medical, and insurance fields; skills for recording two-, three- and four-way conversations.

07.0603 *Executive Secretarial.* An instructional program that prepares individuals to assist management by expediting and facilitating the maintenance of executive and corporation records; planning conferences; preparing record notices, minutes, and resolutions; filing corporate legal documents; and assisting in the administration of policy.

07.0604 *Legal Secretarial.* An instructional program that prepares individuals to prepare legal papers and correspondence, such as summonses, complaints, motions, and subpoenas. Includes instruction in legal terminology, procedures, and documents, as well as law library research.

07.0605 *Medical Secretarial.* An instructional program that prepares individuals to perform secretarial duties utilizing a knowledge of medical terminology and hospital, clinic, or laboratory procedures. Includes instruction in writing reports, such as case histories, and understanding legal and insurance forms.

07.0606 *Secretarial.* An instructional program that prepares individuals to carry out administrative and general office duties in a support capacity. Includes instruction in scheduling appointments, giving information to callers, taking and transcribing dictation, and relieving officials of minor administrative and business details.

07.0607 *Stenographic.* An instructional program that prepares individuals to take direct dictation of correspondence, reports, and other materials, by hand or machine and to transcribe dictated materials.

07.0608 *Word Processing.* An instructional program that prepares individuals to edit and produce written communications utilizing special-purpose machines to correct, format, and print information.

07.0699 *Secretarial and Related Programs, Other.* Any instructional program in secretarial and related programs not described above.

Typing, General Office, and Related Programs. A group of instructional programs that prepare individuals to record, duplicate, and retrieve data, including classifying, sorting, and filing correspondence, records, and other data. Includes instruction in shipping and receiving procedures, stock and inventory maintenance, and operation of office machines.

- 07.0701 *Typing, General Office, and Related Programs, General.* An instructional program that generally prepares individuals to record, duplicate, and retrieve data, including classifying, sorting, and filing correspondence, records, and other data. Includes instruction in shipping and receiving procedures, stock and inventory maintenance, and operation of office machines.
- 07.0702 *Clerk-Typist.* An instructional program that prepares individuals to use a typewriter in a variety of activities, including correspondence and compiling and typing reports, application forms, shipping tickets, and other data from clerical records. Includes instruction in filing records and reports, posting information to records, sorting and distributing mail, answering telephones, and computing with calculating machines.
- 07.0703 *Correspondence Clerk.* An instructional program that prepares individuals to compose correspondence and related items for the purpose of obtaining or giving information on merchandise, damage claims, credit, bills, or unsatisfactory service. Includes instruction in preparing materials, using a typewriter, routing correspondence, and keeping records of incoming and outgoing written correspondence.
- 07.0704 *Duplicating Machine Operation.* An instructional program that prepares individuals to operate machines for the reproduction of handwritten or typewritten material. Includes instruction in keeping records of the number of copies made and basic duplicating-machine maintenance.
- 07.0705 *General Office Clerk.* An instructional program that prepares individuals to perform a variety of clerical duties such as copying data; compiling records and reports; tabulating and posting data in record books; providing information and conducting interviews; operating office machines; and handling mail and correspondence.
- 07.0706 *Mail and Order Clerk.* An instructional program that prepares individuals to process incoming and outgoing mail for distribution by stamping, sorting, addressing and readdressing, examining, weighing, and sealing correspondence and keeping records of registered or interoffice mail; process orders for materials or merchandise received by phone, mail, or messenger; route orders to specified departments; inform customers of information related to the order; assist in the preparation of written contracts, invoices, and bills of lading; handle service orders and complaints; and compute price, discount, commission, and shipping charges.
- 07.0707 *Receptionist and Communication Systems Operation.* An instructional program that prepares individuals to answer telephone and information requests, keep records of callers, make appointments, interview people to secure required data, and make travel reservations and to operate telephone switchboards and similar equipment, relay incoming and interoffice calls, establish connections between subscribers, supply information, calculate charges, and operate telegraph and similar equipment for transmitting and receiving messages.
- 07.0708 *Shipping, Receiving, and Stock Clerk.* An instructional program that prepares individuals to assemble, pack, address, stamp, and record data on outgoing merchandise and materials; receive, unpack, verify contents, and record data on incoming merchandise and materials; make loading and unloading arrangements; store and issue supplies, materials, and equipment; maintain inventories; requisition stock; keep records; and prepare stock and inventory reports.
- 07.0709 *Traffic, Rate, and Transportation Clerk.* An instructional program that prepares individuals to calculate and compile freight rates, passenger fares, and other charges for transportation services from rate tables and tariff schedules; utilize maps to select, lay out, and measure travel routes; calculate total freight, storage, redelivery, and reconsignment charges; and answer inquiries from shippers concerning rates, routing, packing, and procedures.
- 07.0710 *Typing.* An instructional program that prepares individuals to record data by means of a typewriter or similar device. Includes instruction in typing letters, reports, stencils, forms, addresses, and other straight-copy material from rough draft or corrected copy, proofreading material typed, and using duplicating materials.
- 07.0799 *Typing, General Office, and Related Programs, Other.* Any instructional program in typing, general office, and related programs not described above.

07.99 *Business and Office, Other.* A group of instructional programs in business and office not described above.

07.9999 *Business and Office, Other.* Any instructional program in business and office not described above.

08. **Marketing and Distribution.** A summary of groups of instructional programs that prepare individuals for occupations directed toward the flow of industrial and consumer goods in channels of trade, or the provision of services to consumers or users. These programs are concerned with marketing, sales, distribution, merchandising, and management, including ownership and management of enterprises engaged in marketing. Instructional programs prepare individuals to perform one or more of the marketing functions, such as selling, buying, pricing, promoting, financing, transporting, storing, market research, and marketing management. In addition, instructional programs include varying emphases on technical knowledge of products or services marketed, related communication and computation skills, and abilities and attitudes associated with human relations and private enterprise.

08.01 *Apparel and Accessories Marketing.* A group of instructional programs that prepare individuals to perform marketing functions and tasks in retail establishments, wholesale establishments, and manufacturing firms primarily engaged in the marketing of clothing and related articles for personal wear and adornment.

08.0101 *Apparel and Accessories Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks in retail establishments, wholesale establishments, and manufacturing firms primarily engaged in the marketing of clothing and related articles for personal wear and adornment.

08.0102 *Fashion Merchandising.* An instructional program that prepares individuals to engage in the marketing of apparel and accessories, with particular emphasis given to fashion selling and buying, fashion cycles, fashion coordination, and specialized consulting services.

08.0103 *Fashion Modeling.* An instructional program that prepares individuals to model garments, such as dresses, coats, underclothing, swimwear, and suits, for garment designers, buyers, sales personnel, and customers.

08.0104 *Footwear Marketing.* An instructional program that prepares individuals to engage in the marketing of shoes, boots, slippers, and related items, with particular emphasis given to the functional and fashion aspects of all types of footwear.

08.0105 *Jewelry Marketing.* An instructional program that prepares individuals to engage in the marketing of gems, jewelry, watches, and related items, with special emphasis given to fine jewelry.

08.0199 *Apparel and Accessories Marketing, Other.* Any instructional program in apparel and accessories marketing not described above.

08.02 *Business and Personal Services Marketing.* A group of instructional programs that prepare individuals to perform marketing functions and tasks in two types of enterprises: those primarily engaged in providing services to businesses on a fee or contract basis (such as advertising agencies, publishing and broadcasting companies, display services, marketing research and consulting firms, protection agencies, building maintenance firms, and employment agencies), and those providing services to consumers (such as photography studios, barber and beauty shops, gymnasiums, funeral homes, home maintenance firms, pet care centers, and rental business other than vehicle). These programs place emphasis on the marketing activities involved in such enterprises and not on the development of manual or procedural skills that are required to perform a particular service or task. Includes instruction in preparing individuals to perform advertising and merchandise display functions as part of the operation of any enterprise.

08.0201 *Business and Personal Services Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks in two types of enterprises: those primarily engaged in providing services to business on a fee or contract basis (such as advertising agencies, publishing and broadcasting companies, display services, marketing research and consulting firms, protection agencies, building maintenance firms, and employment agencies), and those providing services to customers (such as photography studios, barber and beauty shops, gymnasiums, funeral homes, home maintenance firms, pet care centers, and rental business other than vehicle). These programs place emphasis on the marketing activities involved in such enterprises and not on the development of manual or procedural skills that are required to perform a particular service or task. Includes instruction in preparing individuals to perform advertising and merchandising display functions as part of the operation of any enterprise.

..... *Advertising.* (see 09.0201).

- 08.0202** *Display.* An instructional program that prepares individuals to assume responsibilities associated with the creation of product or institutional displays and exhibits for the purpose of stimulating sales and goodwill.
- 08.0203** *Marketing of Business or Personal Services.* An instructional program that prepares individuals to perform marketing tasks in a business or personal service enterprise, with emphasis on the technical knowledge associated with a particular service field.
- 08.0299** *Business and Personal Services Marketing, Other.* Any instructional program in business and personal services marketing not described above.
- 08.03** *Entrepreneurship.* A group of instructional programs that prepare individuals to perform marketing and management functions and tasks associated with owning and operating a business.
- 08.0301** *Entrepreneurship, General.* An instructional program that generally prepares individuals to perform marketing and management functions and tasks associated with owning and operating a business.
- *Small Business Management.* (see 06.1801).
- *Small Business Ownership.* (see 06.1802).
- 08.04** *Financial Services Marketing.* A group of instructional programs that prepare individuals to perform marketing functions and tasks, in financial institutions such as commercial banks, savings and loan associations, credit agencies, credit unions, consumer-finance companies, collection agencies, security and commodity brokerages, and credit departments of business enterprises.
- 08.0401** *Financial Services Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks, in financial institutions such as commercial banks, savings and loan associations, credit agencies, credit unions, consumer-finance companies, collection agencies, security and commodity brokerages, and credit departments of business enterprises.
- 08.0402** *Banking Marketing.* An instructional program that prepares individuals to undertake marketing functions in commercial banks to promote and transact financial and trust services, including financial counseling.
- 08.0403** *Credit Marketing.* An instructional program that prepares individuals to function as authoritative credit experts in credit departments in various business enterprises.
- 08.0404** *Credit Union Marketing.* An instructional program that prepares individuals to perform marketing functions in nonprofit financial cooperatives that provide financial services and counseling for the benefit of a defined group of people.
- 08.0405** *Savings and Loan Marketing.* An instructional program that prepares individuals to undertake marketing functions in savings and loan associations to promote and transact financial services, with major emphasis on negotiating loans.
- 08.0406** *Securities and Commodities Marketing.* An instructional program that prepares individuals to market the services of brokerages, with major emphasis on the buying and selling of securities and commodities for commercial and private investors.
- 08.0499** *Financial Services Marketing, Other.* Any instructional program in financial services marketing not described above.
- 08.05** *Floristry, Farm and Garden Supplies Marketing.* A group of instructional programs that prepare individuals to perform marketing functions and tasks in retail, wholesale, and manufacturing establishments; and with growers dealing with live plants, cut flowers, floral arrangements, artificial flowers and plants, garden supplies, equipment, and related items; and seed, fertilizers, and other supplies for farm production.
- 08.0501** *Floristry, Farm and Garden Supplies Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks in retail, wholesale, and manufacturing establishments; and with growers dealing with live plants, cut flowers, floral arrangements, artificial flowers and plants, garden supplies, equipment, and related items; and seed, fertilizers, and other supplies for farm production.

- 08.0502 *Farm and Garden Supplies Marketing.* An instructional program that prepares individuals to undertake responsibilities associated with the marketing of supplies used in agricultural production, or plants and products used in landscaping and home gardening.
- 08.0503 *Floristry.* An instructional program that prepares individuals to perform marketing functions associated with retail and wholesale floral and greenhouse operations.
- 08.0599 *Floristry, Farm and Garden Supplies Marketing, Other.* Any instructional program in floristry, farm and garden supplies marketing not described above.

08.06 *Food Marketing.* A group of instructional programs that prepare individuals to perform marketing functions and tasks in retail and wholesale establishments, and in food processing and manufacturing firms that deal primarily with food and beverage products for either home preparation and consumption, or for use in commercial and institutional food service installations.

- 08.0601 *Food Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks in retail and wholesale establishments, and in food processing and manufacturing firms that deal primarily with food and beverage products for either home preparation and consumption, or for use in commercial and institutional food service installations.
- 08.0602 *Convenience Store Marketing.* An instructional program that prepares individuals to perform marketing functions associated with the marketing of a limited line of convenience-food products.
- 08.0603 *Specialty Foods Marketing.* An instructional program that prepares individuals to undertake responsibilities in marketing at retail a specialty-food line, such as confectionery, bakery, wine and cheese, or meat.
- 08.0604 *Supermarket Marketing.* An instructional program that prepares individuals to perform marketing functions in large retail food stores.
- 08.0605 *Wholesale Food Marketing.* An instructional program that prepares individuals to engage in wholesale operations that supply a general or commodity line of food products and beverages to retailers, restaurants, and institutional users.
- 08.0695 *Food Marketing, Other.* Any instructional program in food marketing not described above.

08.07 *General Marketing.* A group of instructional programs that prepare individuals to perform marketing and management functions and tasks that can be applied broadly in any marketing environment. Principles, practices, and procedures are taught without particular identification with a specific kind of enterprise, product, or service. Extensive knowledge of a trade, product, or service area may have been already acquired by persons enrolled, either by prior training or employment experience; others may desire marketing skills for application in any enterprise or subsequent specialized training in marketing. The focus for these instructional programs may be on institutions of marketing, on specific marketing functions, or on unique kinds of marketing activity,

- 08.0701 *Auctioneering.* An instructional program that prepares individuals to sell articles at an auction to the highest bidder.
- 08.0702 *Industrial Sales.* An instructional program that prepares individuals to serve as agents or sales representatives for manufacturers and sell a special line of products to other businesses, factories, professional workers, and public and private institutions.
- 08.0703 *International Marketing.* An instructional program that prepares individuals to perform marketing activities in enterprises primarily engaged in exporting or importing industrial and consumer goods in world markets, with particular emphasis given to trade controls, foreign trade operations, locating markets, negotiation practices, monetary issues, and international public relations.

----- *Marketing Management* (see 06.1401).

----- *Marketing Research* (see 06.1402).

- 08.0704** *Purchasing.* An instructional program that prepares individuals to undertake responsibility for purchasing machinery, raw materials, and product components for manufacturing firms; office supplies, furniture, and business machines for a place of business; or the supplies and equipment needed to conduct a retail or service business.
- 08.0705** *Retailing.* An instructional program that prepares individuals to apply marketing skills in retail establishments, or to advance to more specialized training in marketing.
- 08.0706** *Sales.* An instructional program that prepares individuals to apply marketing skills in a selling capacity in any industry, or to advance to more specialized training in marketing.
- 08.0707** *Wholesaling.* An instructional program that prepares individuals to apply marketing skills in wholesale establishments, or to advance to more specialized training in marketing.
- 08.0799** *General Marketing, Other.* Any instructional program in general marketing not described above.
- 08.08** *Home and Office Products Marketing.* A group of instructional programs that prepare individuals to perform marketing functions and tasks in retail establishments, wholesale establishments, and manufacturing firms dealing with hardware and building material products and equipment primarily used for furnishing and maintaining the home; or products, equipment, and supplies used in public and private business office operations.
- 08.0801** *Home and Office Products Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks in retail establishments, wholesale establishments, and manufacturing firms dealing with hardware and building material products and equipment primarily used for furnishing and maintaining the home; or products, equipment, and supplies used in public and private business office operations.
- 08.0802** *Appliance Marketing.* An instructional program that prepares individuals to undertake the responsibilities associated with selling and marketing refrigerators, freezers, laundry equipment, stoves, and other electrical or gas appliances.
- 08.0803** *Building Materials Marketing.* An instructional program that prepares individuals to perform marketing activities primarily associated with the marketing of lumber and a general line of building materials such as millwork, roofing, wallboard, bricks, and cement; heating and air-conditioning equipment; or electrical products and supplies.
- 08.0804** *Floor Coverings, Draperies, and Upholstery Marketing.* An instructional program that prepares individuals to undertake the responsibilities associated with selling and marketing floor coverings, draperies, and upholstery services.
- 08.0805** *Furniture Marketing.* An instructional program that prepares individuals to undertake the responsibilities associated with the marketing of furniture and specialized consulting services.
- 08.0806** *Hardware Marketing.* An instructional program that prepares individuals to perform marketing activities primarily associated with the marketing of a number of basic hardware lines such as tools, builders' hardware, paint and glass, wallcoverings, and related items.
- 08.0807** *Office Products and Equipment Marketing.* An instructional program that prepares individuals to market a general line of office products and supplies or a specialty line of office furniture or office equipment such as typewriters, data processing equipment, and duplicating equipment.
- 08.0808** *Specialty Home Furnishings Marketing.* An instructional program that prepares individuals to undertake the responsibilities associated with selling and marketing a specialty line of home furnishings such as tableware, lamps, fireplace equipment, bedding, home-entertainment systems, pianos, and antiques.
- 08.0899** *Home and Office Products Marketing, Other.* Any instructional program in home and office products marketing not described above.

08.09

Hospitality and Recreation Marketing. A group of instructional programs that prepare individuals to perform marketing and management functions and tasks in any business enterprise primarily engaged in satisfying the desire of people to make productive or enjoyable use of leisure time. The hospitality industry includes lodging services and related convention services, and food and beverage services. Recreation includes products and services related to entertainment, sports, hobbies, and cultural activities.

08.0901 **Hospitality and Recreation Marketing, General.** An instructional program that generally prepares individuals to perform marketing and management functions and tasks in any business enterprise primarily engaged in satisfying the desire of people to make productive or enjoyable use of leisure time. The hospitality industry includes lodging services and related convention services and food and beverage services. Recreation includes products and services related to entertainment, sports, hobbies, and cultural activities.

Hotel/Motel Management (see 06.0701).

08.0902 **Marketing of Hotel/Motel Services.** An instructional program that prepares individuals to assume operational responsibilities associated with marketing the services of hotels and motels.

08.0903 **Marketing of Recreational Services.** An instructional program that prepares individuals to perform sales and marketing tasks in an enterprise which caters to the recreational needs of consumers, with special emphasis given to the technical knowledge associated with a particular recreational service field.

Recreational Enterprises Management (see 06.0702).

08.0904 **Recreational Products Marketing.** An instructional program that prepares individuals to undertake the marketing activities involved in selling or renting a special or full line of supplies and equipment, other than vehicles, used for recreational or sporting purposes.

Resort Management (see 06.0703).

Restaurant Management (see 06.0704).

08.0905 **Waiter/Waitress and Related Services.** An instructional program that prepares individuals to perform tasks designed to increase the sales of a particular restaurant or chain of restaurants.

08.0999 **Hospitality and Recreation Marketing, Other.** Any instructional program in hospitality and recreation marketing not described above.

08.10

Insurance Marketing. A group of instructional programs that prepare individuals to perform marketing functions and tasks related to the sale and placement of insurance contracts with carriers.

08.1001 **Insurance Marketing, General.** An instructional program that generally prepares individuals to perform marketing functions and tasks related to the sale and placement of insurance contracts with carriers.

08.1002 **Accident and Health Insurance Marketing.** An instructional program that prepares individuals to perform marketing activities associated with underwriting accident and health insurance, including group-hospitalization plans.

08.1003 **Life Insurance Marketing.** An instructional program that prepares individuals to perform marketing activities associated with underwriting life-insurance policies.

08.1004 **Property and Casualty Insurance Marketing.** An instructional program that prepares individuals to perform the marketing activities associated with underwriting fire, marine, and casualty insurance, including automobile and agricultural insurance.

08.1099 **Insurance Marketing, Other.** Any instructional program in insurance marketing not described above.

Real Estate (see 06.17).

Real Estate, General (see 06.1701).

Commercial Property (see 06.1702).

- *Property Management* (see 06.1703).
- *Real Estate Appraisal* (see 06.1704).
- *Real Estate Finance* (see 06.1705).
- *Real Estate Law* (see 06.1706).
- *Residential Property* (see 06.1707).
- *Real Estate, Other* (see 06.1799).

08.11 *Transportation and Travel Marketing.* A group of instructional programs that prepare individuals to perform marketing and management functions and tasks in enterprises engaged in passenger and freight transportation, travel services, warehousing, and other services incidental to transportation, storage, travel, or tourism.

08.1101 *Transportation and Travel Marketing, General.* An instructional program that generally prepares individuals to perform marketing and management functions and tasks in enterprises engaged in passenger and freight transportation, travel services, warehousing, and other services incidental to transportation, storage, travel, or tourism.

08.1102 *Freight Transportation Marketing.* An instructional program that prepares individuals to facilitate the provision of any form of transport used for the physical movement of raw materials, products, and personal effects.

08.1103 *Passenger Transportation Marketing.* An instructional program that prepares individuals to facilitate the provision of any form of transport used primarily for the transportation of people.

08.1104 *Tourism.* An instructional program that prepares individuals to assume initiatives in any business, agency, or institution for attracting and serving the traveling public, with the objective of stimulating the local, State, or national economy.

----- *Transportation Management* (see 06.0705).

08.1105 *Travel Services Marketing.* An instructional program that prepares individuals to furnish travel information and to act as agents in arranging tours and transportation, or to act as independent ticket agencies for transportation carriers.

08.1106 *Warehouse Services Marketing.* An instructional program that prepares individuals to undertake the marketing responsibilities associated with the storage of farm products, furniture and other household goods, or commercial products of any kind.

08.1199 *Transportation and Travel Marketing, Other.* Any instructional program in transportation and travel marketing not described above.

08.12 *Vehicles and Petroleum Marketing.* A group of instructional programs that prepare individuals to perform marketing and management functions and tasks in retail or wholesale establishments engaged in the distribution of petroleum products, or in retail, wholesale, manufacturing, and service establishments engaged in the marketing of cars, vans, trucks, mobile units, boats, other recreational vehicles, tractors, and other farm vehicles and implements, as well as related parts, accessories, equipment, and services.

08.1201 *Vehicles and Petroleum Marketing, General.* An instructional program that generally prepares individuals to perform marketing and management functions and tasks in retail or wholesale establishments engaged in the distribution of petroleum products, or in retail, wholesale, manufacturing, and service establishments engaged in the marketing of cars, vans, trucks, mobile units, boats, other recreational vehicles, tractors, and other farm vehicles and implements, as well as related parts, accessories, equipment, and services.

08.1202 *Agricultural Implements and Machinery Marketing.* An instructional program that prepares individuals to engage in the marketing of various farm implements, machinery, and vehicles.

- 08.1203 *Automotive Vehicles and Accessories Marketing.* An instructional program that prepares individuals to engage in the marketing of new and used cars, vans, trucks, and related parts.
- 08.1204 *Petroleum Wholesaling.* An instructional program that prepares individuals to perform activities involved in wholesale marketing of packaged and bottled petroleum products and gasoline from bulk-liquid-storage facilities and terminals.
- 08.1205 *Recreational Vehicles and Accessories Marketing.* An instructional program that prepares individuals to engage in the marketing of various kinds of vehicles and conveyances designed for recreational purposes, including boats and bicycles.
- 08.1206 *Service Station Retailing.* An instructional program that prepares individuals to perform activities involved in retail marketing of gasoline, lubricating oils, and related products in automobile and marine service stations.
- 08.1207 *Vehicle Rental and Leasing.* An instructional program that prepares individuals to provide marketing services relating to the renting and leasing of vehicles in a business enterprise, such as car-rental systems.
- 08.1299 *Vehicles and Petroleum Marketing, Other.* Any instructional program in vehicles and petroleum marketing not described above.
- 08.99 *Marketing and Distribution, Other.* A group of instructional programs in marketing and distribution not described above.
- 08.9999 *Marketing and Distribution, Other.* Any instructional program in marketing and distribution not described above.

09. Communications. A summary of groups of instructional programs that describe the creation, transmission, and evaluation of messages.

- 09.01 *Communications, General.* A group of instructional programs (see 09.0101).
- 09.0101 *Communications, General.* An instructional program that generally describes the creation, transmission, and evaluation of messages.
- 09.02 *Advertising.* A group of instructional programs (see 09.0201).
- 09.0201 *Advertising.* An instructional program that describes the creation, execution, transmission, and evaluation of commercial messages concerned with the promotion and sale of products and services.
- 09.03 *Communications Research.* A group of instructional programs (see 09.0301).
- 09.0301 *Communications Research.* An instructional program that describes the research methods and techniques by which the creation, transmission, and evaluation of messages can be facilitated.
- 09.04 *Journalism (Mass Communications).* A group of instructional programs (see 09.0401).
- 09.0401 *Journalism (Mass Communications).* An instructional program that describes the principles and methods of gathering, processing, evaluating, and disseminating through mass media, information about current events and issues.
- 09.05 *Public Relations.* A group of instructional programs (see 09.0501).
- 09.0501 *Public Relations.* An instructional program that describes the methods and techniques by which the public can be induced to have understanding for and goodwill towards a person, firm, or institution.
- 09.06 *Radio/Television News Broadcast.* A group of instructional programs (see 09.0601).
- 09.0601 *Radio/Television News Broadcast.* An instructional program that describes the methods and techniques by which radio and television news programs are produced and broadcasted.

09.07 *Radio/Television, General.* A group of instructional programs (see 09.0701).

09.0701 *Radio/Television, General.* An instructional program that describes the methods and techniques used to produce and broadcast programs on radio and television.

09.99 *Communications, Other.* A group of instructional programs in communications not described above.

09.9999 *Communications, Other.* Any instructional program in communications not described above.

10. **Communication Technologies.** A summary of groups of instructional programs that prepare individuals to support and assist communication professionals and skilled communication workers. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of communications.

10.01 *Communication Technologies.* A group of instructional programs that prepare individuals to support and assist communication professionals and skilled communication workers. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of communications.

10.0101 *Educational Media Technology.* An instructional program that prepares individuals to operate, adjust, make minor repairs for, and diagnose major difficulties in audiovisual devices, equipment, and systems used in education or communication applications, including loud-speaker systems, slides, movie film, or overhead projection equipment and tape-recording equipment. Includes instruction in construction of equipment; the procedures, processes, and techniques for making overhead projection materials, photographic slides, graphs, charts, tables, or other projectable materials; the administration of equipment acquisition, storage, servicing, controlling, and packaging for transportation; cost and maintenance.

10.0102 *Motion Picture Technology.* An instructional program that prepares individuals to support cinematographers or directors in the motion picture industry. Includes instruction in equipment, processes, and procedures used in producing motion pictures; components and systems of devices for photography, lighting, set design, and sound recording; and recording and rerecording sound and special effects.

10.0103 *Photographic Technology.* An instructional program that prepares individuals as highly skilled photographic technicians. Includes instruction in basic and applied physics and chemistry, with the supporting mathematics of photographic processes; light, optics, and optical systems of black-and-white and color photography; the science, design, and function of cameras and related devices such as light meters; source and applications of special photographic light; systems or mechanisms for still photography, moving pictures, photographic composition, portrait photography, and medical photography; techniques for taking, developing, mounting still pictures; and techniques for cutting, splicing, and modifying moving-picture films.

10.0104 *Radio and Television Production and Broadcasting Technology.* An instructional program that prepares individuals to support broadcast managers in the production of materials and the production and broadcasting of materials or programs. Includes instruction in the equipment, processes, and procedures used in producing and making radio or television broadcasts; various components, specialized equipment, and systems of devices employed in broadcast operations; electronic communication, both radio and television; script and program preparation; photographic and audiorecording of material to be broadcast; monitoring, modulating, and controlling the broadcast processes; and recording and storing broadcast materials.

10.0199 *Communication Technologies, Other.* Any instructional program in communications technologies not described above.

1. **Computer and Information Sciences.** A summary of groups of instructional programs that describe the coding, processing, and storage of data through repetitious and highly complex mathematical operations at high speed, and in accordance with strictly defined systems and procedures.

11.01 *Computer and Information Sciences, General.* A group of instructional programs (see 11.0101).

11.0101 *Computer and Information Sciences, General.* An instructional program that generally describes the coding, processing, and storage of data through repetitious and highly complex mathematical operations at high speed, and in accordance with strictly defined systems and procedures.

11.02 *Computer Programming.* A group of instructional programs (see 11.0201).

11.0201 *Computer Programming.* An instructional program that describes the methods and procedures used in flow charting and writing instructions in computer language for the direction of computer operation in the solution of a problem.

11.03 *Data Processing.* A group of instructional programs (see 11.0301).

11.0301 *Data Processing.* An instructional program that describes computers and computer programming.

11.04 *Information Sciences and Systems.* A group of instructional programs (see 11.0401).

11.0401 *Information Sciences and Systems.* An instructional program that describes the methods for creating, organizing, storing, and accessing organized files of information.

11.05 *Systems Analysis.* A group of instructional programs (see 11.0501).

11.0501 *Systems Analysis.* An instructional program that describes the principles and techniques involved in the design of large-scale computer programs. Includes instruction in modeling, flow charting, data organization, and the impact of the programs on organizational objectives.

11.99 *Computer and Information Sciences, Other.* A group of instructional programs in computer and information sciences not described above.

11.9999 *Computer and Information Sciences, Other.* Any instructional program in computer and information sciences not described above.

12. *Consumer Services, General, and Miscellaneous Services.* A summary of groups of instructional programs that prepare individuals to provide a variety of services to individual consumers as well as to organizations such as businesses and industries.

12.01 *Drycleaning and Laundering Services.* A group of instructional programs that prepare individuals to operate and manage drycleaning and laundering plants.

12.0101 *Drycleaning and Laundering Services, General.* An instructional program that generally prepares individuals to operate and manage drycleaning and laundering plants.

12.0102 *Drycleaning.* An instructional program that prepares individuals to operate and manage drycleaning plants. Includes instruction in receiving and inspecting garments; identifying spots; dry and wet cleaning; pressing, dyeing, sorting and wrapping apparel, household furnishings and accessories, and leather using various cleaning agents; identifying kinds of fabric; and making minor alterations and repair of articles.

12.0103 *Laundering.* An instructional program that prepares individuals to operate and manage laundering plants. Includes instruction in receiving and inspecting garments; washing, ironing, pressing, dyeing, bleaching, sorting, folding, and wrapping household articles, wearing apparel, and fabrics; using cleaning agents; and using various type of hand and power tools and equipment.

12.0199 *Drycleaning and Laundering Services, Other.* Any instructional program in drycleaning and laundering services not described above.

12.02 *Entertainment Services.* A group of instructional programs that prepare individuals to perform a variety of services related to the sale of food, beverages, and entertainment.

12.0201 *Entertainment Services, General.* An instructional program that generally prepares individuals to perform a variety of services related to the sale of food, beverages, and entertainment.

12.0202 *Bartending.* An instructional program that prepares individuals to mix and serve alcoholic and nonalcoholic drinks to patrons of a bar or other drinking establishment, following standard recipes.

12.0203 *Card Dealing.* An instructional program that prepares individuals to run a card game at a casino or other gambling establishment.

12.0204 *Umpiring.* An instructional program that prepares individuals to officiate at a variety of sporting events.

12.0299 *Entertainment Services, Other.* Any instructional program in entertainment services not described above.

12.03 *Funeral Services.* A group of instructional programs (see 12.0301).

12.0301 *Funeral Services.* An instructional program that prepares individuals to perform sanitary and embalming preparations for interment, in conformity with legal requirements. Includes instruction in human physiology and anatomy, with particular emphasis on the circulatory system; the underlying chemistry and application of embalming compounds and products; the procedures, techniques, and methods used in embalming and preparation for interment, with special emphasis on sanitation and on potential pathological hazards and precautions; and the materials and techniques of applied cosmetology used in preparation for interment.

12.04 *Personal Services.* A group of instructional programs that prepare individuals to render a variety of personal services.

12.0401 *Personal Services, General.* A instructional program that generally prepares individuals to render a variety of personal services.

12.0402 *Barbering.* An instructional program that prepares individuals to cut, shampoo, and style hair; and shave; with special attention to hygiene, skin and scalp disease, and equipment sterilization. Instruction qualifies students for licensing examinations.

12.0403 *Cosmetology.* An instructional program that prepares individuals to care for and beautify hair, complexion, and hands by giving shampoos, rinses, and scalp treatments, styling, setting, cutting, dyeing, tinting, permanent waving, and bleaching hair; and giving facials, manicures, and hand and arm massages, with emphasis on hygiene, sanitation, customer relations, and salon management. Instruction qualifies student for licensing examinations.

12.0404 *Electrolysis.* An instructional program that prepares individuals to remove hair, warts, moles, and birthmarks from an individual by means of an electric current applied to the body with a needle-shaped electrode.

12.0405 *Massage.* An instructional program that prepares individuals to administer systematic friction, stroking, slapping, kneading or tapping to stimulate circulation, increase suppleness, promote healing, and induce relaxation in the human body.

12.0499 *Personal Services, Other.* Any instructional program in personal services not described above.

12.99 *Consumer, Personal, and Miscellaneous Services, Other.* A group of instructional programs in consumer, personal, and miscellaneous services not described above.

12.9999 *Consumer, Personal, and Miscellaneous Services, Other.* Any instructional program in consumer, personal, and miscellaneous services not described above.

13. **Education.** A summary of groups of instructional programs that describe the art or processes of imparting knowledge, developing the powers of reasoning and judgment, and preparing others intellectually for a more mature life.

13.01 *Education, General.* A group of instructional programs (see 13.0101).

13.0101 *Education, General.* An instructional program that generally describes the art or processes of imparting knowledge, developing the powers of reasoning and judgment, and preparing others intellectually for a more mature life.

13.02 *Bilingual/Bicultural Education.* A group of instructional programs (see 13.0201).

13.0201 *Bilingual/Bicultural Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students in English and another language which may be their native tongue.

- 13.03 Curriculum and Instruction.** A group of instructional programs (see 13.0301).
- 13.0301 Curriculum and Instruction.** An instructional program that describes the theories, methods, and procedures of designing, controlling, developing, and integrating educational activities and programs.
- 13.04 Education Administration.** A group of instructional programs that describe the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling educational institutions and agencies.
- 13.0401 Education Administration, General.** An instructional program that generally describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling educational institutions and agencies.
- 13.0402 Administration of Special Education.** An instructional program that describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling special education programs and institutions.
- 13.0403 Adult and Continuing Education Administration.** An instructional program that describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling adult and continuing education programs and institutions.
- 13.0404 Educational Supervision.** An instructional program that describes the principles, theories, methods, and practices of directing, controlling, and administering the resources of educational institutions and agencies.
- 13.0405 Elementary and Secondary Education Administration.** An instructional program that describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling elementary and secondary education programs and institutions.
- 13.0406 Higher Education Administration.** An instructional program that describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling higher education institutions and agencies.
- 13.0407 Community College Education Administration.** An instructional program that describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling junior and community college institutions.
- 13.0499 Education Administration, Other.** Any instructional program in education administration not described above.
- 13.05 Educational Media.** A group of instructional programs (see 13.0501).
- 13.0501 Educational Media.** An instructional program that describes the principles and techniques of applying various forms of media to the process of instruction and to the production of educational materials.
- 13.06 Evaluation and Research.** A group of instructional programs that describe the principles and procedures of searching for new knowledge and providing information about educational programs, personnel, methods, and theories.
- 13.0601 Evaluation and Research, General.** An instructional program that generally describes the principles and procedures of searching for new knowledge and providing information about educational programs, personnel, methods, and theories.
- 13.0602 Adult and Continuing Education Research.** An instructional program that describes the principles and procedures of searching for new knowledge and providing information about adult and continuing education programs, personnel, methods, and theories.
- 13.0603 Educational Statistics and Research.** An instructional program that describes the application of mathematical and statistical models and research methodology in education.
- 13.0604 Educational Testing, Evaluation, and Measurement.** An instructional program that describes the principles and procedures used in the testing, evaluating, and measuring of educational programs, personnel, methods, and theories.

- 13.0605** *Elementary and Secondary Research.* An instructional program that describes the principles and procedures of searching for new knowledge and providing information about elementary and secondary education programs, personnel, methods, and theories.
- 13.0606** *Higher Education Research.* An instructional program that describes the principles and procedures of searching for new knowledge and providing information about higher education programs, personnel, methods, and theories.
- 13.0699** *Evaluation and Research, Other.* Any instructional program in evaluation and research not described above.
- 13.07** *International and Comparative Education.* A group of instructional programs (see 13.0701).
- 13.0701** *International and Comparative Education.* An instructional program that describes the similarities and differences between educational theory and practice in different countries and various cultures for the purpose of deepening understanding and solving educational problems.
- 13.08** *School Psychology.* A group of instructional programs (see 13.0801).
- 13.0801** *School Psychology.* An instructional program that describes the study, selection, and application of methods, facts, and theories of psychology that relate to individual learning in formal courses of instruction.
- 13.09** *Social Foundations.* A group of instructional programs (see 13.0901).
- 13.0901** *Social Foundations.* An instructional program that describes the impact and relationship between society and education.
- 13.10** *Special Education.* A group of instructional programs that describe the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose physical, emotional, mental, or social needs require a special curriculum and educational setting.
- 13.1001** *Special Education, General.* An instructional program that generally describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose physical, emotional, mental, or social needs require a special curriculum and educational setting.
- 13.1002** *Education of the Culturally Disadvantaged.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose behavior may be in conflict with norms of home, school, or community but is not in conflict with subgroup norms and is not related to personal distress.
- 13.1003** *Education of the Deaf and Hearing Impaired.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students who have an impairment in hearing which adversely affects their educational performance.
- 13.1004** *Education of the Gifted and Talented.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students capable of high performance, including those with demonstrated achievement or ability in any one or more of these areas—general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, or psychomotor ability.
- 13.1005** *Education of the Emotionally Handicapped.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students exhibiting one or more of the following characteristics which over a long period of time and to a marked degree adversely affects educational performance: (a) an inability to learn which cannot be explained by intellectual, sensory, or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general pervasive mood of unhappiness or depression; or (e) a tendency to develop physical symptoms or fears associated with personal or school problems.

- 13.1006 *Education of the Mentally Handicapped.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose impaired mental development adversely affects their educational performance.
- 13.1007 *Education of the Multiple Handicapped.* An instructional program that describes the theories, methods, and techniques for designing, implementing, and evaluating organized learning activities for students who have a combination of handicaps which adversely affects their educational performance.
- 13.1008 *Education of the Physically Handicapped.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students who have severe physical impairments which adversely affects their educational performance.
- 13.1009 *Education of the Visually Handicapped.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students who have a visual impairment which adversely affects their educational performance.
- 13.1010 *Remedial Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students deficient in the general competencies necessary for a regular curriculum and educational setting.
- 13.1011 *Specific Learning Disabilities.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose perception, communication, or motor skills require a special curriculum and educational setting.
- 13.1012 *Speech Correction.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students who have a speech impairment which adversely affects their educational performance.
- 13.1099 *Special Education, Other.* Any instructional program in special education not described above.
- 13.11 *Student Counseling and Personnel Services.* A group of instructional programs (see 13.1101).
- 13.1101 *Student Counseling and Personnel Services.* An instructional program that describes the theories, methods, functions, operations, and services involved in the personal, social, educational, and vocational development of students and the principles and techniques of managing, directing, and developing an organized unit providing student services within an educational institution.
- 13.12 *Teacher Education, General Programs.* A group of instructional programs that describe the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students at all levels.
- 13.1201 *Adult and Continuing Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities to meet the unique needs of adults and youths who are beyond the age of compulsory school attendance and who have either completed or interrupted their formal education.
- 13.1202 *Elementary Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students at the elementary level.
- 13.1203 *Junior High Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students at the junior high level.
- 13.1204 *Pre-Elementary Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students at the pre-elementary level.
- 13.1205 *Secondary Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students at the secondary level.
- 13.1299 *Teacher Education, General Programs, Other.* Any instructional program in teacher education, general programs not described above.

- 13.13** *Teacher Education, Specific Subject Areas.* A group of instructional programs that describe the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students in specific subject areas.
- 13.1301** *Agricultural Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, and retrain students in agricultural occupations.
- 13.1302** *Art Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of art.
- 13.1303** *Business Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of business.
- 13.1304** *Driver and Safety Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of driver and safety education.
- 13.1305** *English Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of English.
- 13.1306** *Foreign Languages Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of foreign languages.
- 13.1307** *Health Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of health education.
- 13.1308** *Home Economics Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, and retrain students for homemaking and wage earning occupations requiring the knowledge and skills of home economics subject matter.
- 13.1309** *Industrial Arts Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of industrial education.
- 13.1310** *Marketing and Distributive Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which provide students with various combinations of subject matter and learning experiences related to the flow of goods and services from the producer to the consumer.
- 13.1311** *Mathematics Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of mathematics.
- 13.1312** *Music Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of music.
- 13.1313** *Nutritional Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of nutrition.
- 13.1314** *Physical Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of physical education.
- 13.1315** *Reading Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students in reading the language arts.
- 13.1316** *Science Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of life sciences and physical sciences.
- 13.1317** *Social Science Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of the social sciences.

- 13.1318 *Social Studies Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of social studies.
- 13.1319 *Technical Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students for job opportunities in specialized technical fields or occupations.
- 13.1320 *Trade and Industrial Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students in a wide range of trade and industrial occupations.
- 13.1399 *Teacher Education, Specific Subject Areas, Other.* Any instructional program in teacher education, specific subject areas not described above.

13.14 *Teaching English as a Second Language/Foreign Language.* A group of instructional programs (see 13.1401).

13.1401 *Teaching English as a Second Language/Foreign Language.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose native language is not English.

13.99 *Education, Other.* A group of instructional programs in education not described above.

13.9999 *Education, Other.* An instructional program in education not described above.

14. **Engineering.** A summary of groups of instructional programs that describe the mathematical and natural sciences gained by study, experience, and practice and applied with judgement to develop ways to economically utilize the materials and forces of nature for the benefit of mankind.

14.01 *Engineering, General.* A group of instructional programs (see 14.0101).

14.0101 *Engineering, General.* An instructional program that generally describes the mathematical and natural sciences gained by study, experience, and practice and applied with judgement to develop ways to economically utilize the materials and forces of nature for the benefit of mankind.

14.02 *Aerospace, Aeronautical, and Astronautical Engineering.* A group of instructional programs (see 14.0201).

14.0201 *Aerospace, Aeronautical, and Astronautical Engineering.* An instructional program that describes the design, construction, operation, and maintenance of aircraft, space vehicles, and power units, and to the special programs of flight in both the earth's atmosphere and space, including the flight of air vehicles and the launching, guidance, and control of missiles, earth satellites, and space vehicles and probes.

14.03 *Agricultural Engineering.* A group of instructional programs (see 14.0301).

14.0301 *Agricultural Engineering.* An instructional program that describes the design, construction, operation, and maintenance of equipment, structures, machinery, and energy devices for the purpose of improving the production of food and fiber.

14.04 *Architectural Engineering.* A group of instructional programs (see 14.0401).

14.0401 *Architectural Engineering.* An instructional program that describes the design and application of materials, components, and structural systems for buildings, including environmental control equipment.

14.05 *Bioengineering and Biomedical Engineering.* A group of instructional programs (see 14.0501).

14.0501 *Bioengineering and Biomedical Engineering.* An instructional program that describes the application of engineering and technological concepts, principles, and practices to human and other living systems.

14.06 *Ceramic Engineering.* A group of instructional programs (see 14.0601).

14.0601 *Ceramic Engineering.* An instructional program that describes the techniques of designing, developing, and controlling processes that are involved in the manufacture of clay and ceramic-ware, porcelain, china, pottery, and related substances.

- 14.07** **Chemical Engineering.** A group of instructional programs (see 14.0701).
- 14.0701** **Chemical Engineering.** An instructional program that describes the nature of chemical processes, heat and mass transfer, the handling and treatment of liquids and gases, and physical and physical-chemical operations.
- 14.08** **Civil Engineering.** A group of instructional programs (see 14.0801).
- 14.0801** **Civil Engineering.** An instructional program that describes the conception, analysis, design, testing, construction, and operation of structures, transportation components and systems, water resource and conveyance systems, pollution control systems, water treatment systems, and appurtenant works.
- 14.09** **Computer Engineering.** A group of instructional programs (see 14.0901).
- 14.0901** **Computer Engineering.** An instructional program that describes the principles and techniques of designing and producing the mechanical, magnetic, electrical, and electronic elements of computer hardware and supporting systems.
- 14.10** **Electrical, Electronics, and Communications Engineering.** A group of instructional programs (see 14.1001).
- 14.1001** **Electrical, Electronics, and Communications Engineering.** An instructional program that describes the theory and application of electrical and electronic systems and their components, including circuits, electromagnetic fields, and energy sources.
- 14.11** **Engineering Mechanics.** A group of instructional programs (see 14.1101).
- 14.1101** **Engineering Mechanics.** An instructional program that describes the theory and practical application of the action of forces on bodies, with motion, and with statics, kinematics, and kinetics.
- 14.12** **Engineering Physics.** A group of instructional programs (see 14.1201).
- 14.1201** **Engineering Physics.** An instructional program that describes the physical principles underlying the field of engineering.
- 14.13** **Engineering Science.** A group of instructional programs (see 14.1301).
- 14.1301** **Engineering Science.** An instructional program that describes the usefulness of such subject matters as physics, chemistry, biology, and mathematics in engineering.
- 14.14** **Environmental Health Engineering.** A group of instructional programs (see 14.1401).
- 14.1401** **Environmental Health Engineering.** An instructional program that describes the techniques of identification and reduction of pollution, contamination, and deterioration of the natural environment, including the methodology for corrective action.
- 14.15** **Geological Engineering.** A group of instructional programs (see 14.1501).
- 14.1501** **Geological Engineering.** An instructional program that describes the practical application of scientific principles related to the physical history of the earth, the rocks and soils of which it is composed, and the physical changes in its structure.
- 14.16** **Geophysical Engineering.** A group of instructional programs (see 14.1601).
- 14.1601** **Geophysical Engineering.** An instructional program that describes the practical application of scientific principles related to the physics of the earth and its environment in space, including phenomena such as fields and forces, mass and motion, time and space, and matter and energy.
- 14.17** **Industrial Engineering.** A group of instructional programs (see 14.1701).
- 14.1701** **Industrial Engineering.** An instructional program that describes the organization and management of integrated systems of people, materials, and equipment for the purpose of improving production processes.

- 14.18** *Materials Engineering.* A group of instructional programs (see 14.1801).
- 14.1801** *Materials Engineering.* An instructional program that describes the structures, reactions, functions, and synthesis of metals, ceramics, plastics, textiles, pulp and paper, wood, and other materials, including the effects of their properties on systems and objects that are constructed from the specified materials.
- 14.19** *Mechanical Engineering.* A group of instructional program (see 14.1901).
- 14.1901** *Mechanical Engineering.* An instructional program that describes the design, construction, maintenance, and operation of mechanical products and related systems, including production machinery, energy conversion devices, and vehicles.
- 14.20** *Metallurgical Engineering.* A group of instructional programs (see 14.2001).
- 14.2001** *Metallurgical Engineering.* An instructional program that describes the development and control of processes for extraction of metals from their ores and metal refining, the properties of metals and alloys, and the manufacturing and processing of metals.
- 14.21** *Mining and Mineral Engineering.* A group of instructional programs (see 14.2101).
- 14.2101** *Mining and Mineral Engineering.* An instructional program that describes the techniques and procedures for locating and appraising mineral deposits, and for designing the equipment and the operation processes for extracting minerals.
- 14.22** *Naval Architecture and Marine Engineering.* A group of instructional programs (see 14.2201).
- 14.2201** *Naval Architecture and Marine Engineering.* An instructional program that describes the principles and techniques of design, construction, installation, maintenance, and operation of vehicles and equipment operating on or in the water.
- 14.23** *Nuclear Engineering.* A group of instructional programs (see 14.2301).
- 14.2301** *Nuclear Engineering.* An instructional program that describes the design, development, manufacture, construction, installation, maintenance, and repair of mechanical plants and equipment for the release, control, and utilization of nuclear energy.
- 14.24** *Ocean Engineering.* A group of instructional programs (see 14.2401).
- 14.2401** *Ocean Engineering.* An instructional program that describes wave action upon sea structures, equipment, and materials, including the development of instrumentation to determine the forces and accelerations of such action.
- 14.25** *Petroleum Engineering.* A group of instructional programs (see 14.2501).
- 14.2501** *Petroleum Engineering.* An instructional program that describes the processes of recovering and refining crude oil and gas, including the design, development, construction, installation, maintenance, and repair of related physical facilities.
- 14.26** *Surveying and Mapping Sciences.* A group of instructional programs that describe the determination and identification of the shape, contour, location, and dimensions of land or water and their features.
- 14.2601** *Surveying and Mapping Sciences.* An instructional program that describes the determination and identification of the shape, contour, location, and dimensions of land or water and their features.
- 14.2602** *Cartography.* An instructional program that describes the principles and techniques involved in designing, planning, and constructing maps.
- 14.27** *Systems Engineering.* A group of instructional programs (see 14.2701).
- 14.2701** *Systems Engineering.* An instructional program that describes the interacting, interrelated or interdependent elements forming the related engineering system.

14.28 *Textile Engineering.* A group of instructional programs (see 14.2801).

14.2801 *Textile Engineering.* An instructional program that describes the structure, reactions, functions, properties, and synthesis of textiles.

14.99 *Engineering, Other.* A group of instructional programs in engineering not described above.

14.9999 *Engineering, Other.* Any instructional program in engineering not described above.

15. **Engineering and Engineering-Related Technologies.** A summary of groups of instructional programs that prepare individuals to support and assist engineers and other professionals. Programs stress specialized, practical knowledge related to the mathematical, scientific, or technical aspects of engineering and related sciences.

15.01 *Architectural Technologies.* A group of instructional programs that prepare individuals to support and assist architects and architectural engineers. Programs stress specialized, practical knowledge related to the mathematical, scientific, or technical aspects of architecture and architectural engineering.

15.0101 *Architectural Design and Construction Technology.* An instructional program that prepares individuals to assist the architect and architectural engineer in planning and designing structures and buildings; testing materials; constructing and inspecting structures; model building and design estimating; utilizing, transporting, and storing construction materials; and dealing with contracts and specifications.

15.0102 *Architectural Interior Design Technology.* An instructional program that prepares individuals to assist architects in planning and designing interior layouts. Includes instruction in designing architectural structures; analyzing and using various types and colors of floor, wall, and ceiling coverings; windows and doors; acoustical materials; functional furnishings; electrical, heating, cooling, and other outlets; and in assessing costs related to design and furnishings.

15.0199 *Architectural Technologies, Other.* Any instructional program in architectural technologies not described above.

15.02 *Civil Technologies.* A group of instructional programs that prepare individuals to support and assist civil engineers and urban planners. Programs stress specialized, practical knowledge related to the mathematical, scientific, or technical aspects of civil engineering and urban planning.

15.0201 *Civil Technology.* An instructional program that prepares individuals to assist a civil engineer in designing, surveying, materials control, testing, and building of various structures. Includes instruction in physical sciences; mathematics; surveying; laying out roadways; preparing plans and specifications for the construction of highways, railroads, buildings, dams, and airports; structural detailing and design testing; construction estimating; and operations management.

15.0202 *Drafting and Design Technology.* An instructional program that prepares individuals to assist mechanical, electrical and electronic, architectural, chemical, civil, or other engineers in the design and drafting of electrical circuits, machines, structures, weldments, or architectural plans. Includes instruction in the preparation of engineering plans, layouts, and detailed drawings according to conventional projection principles and techniques or as specified; preparation of charts, graphs, or diagrams; model making; and the use of handbook data germane to design and drafting in various engineering fields.

15.0203 *Surveying and Mapping Technology.* An instructional program that prepares individuals to technically assist civil engineers and urban planners in the determination and description of the shape, contour, location, and dimensions of geographic areas on features.

15.0204 *Urban Planning Technology.* An instructional program that prepares individuals to work as team members with civil engineers, social scientists, and urban-planning professionals. Includes instruction in methods used in urban design and land utilization; methods of demographic study, including population growth, transportation in urban settings, and housing; building and construction codes and regulations; urban traffic management and control; distribution of water and wastewater systems; electrical systems relating to the overall planning for redevelopment of an urban area; urban mapping and engineering drawing; reading architectural or engineering drawings; methods of urban growth determination and projection; cost determination; analysis and comparison of different types of configurations and the sociological aspects of housing, transportation, recreation, park and living space, employment, and logistics in an urban setting.

15.0299 *Civil Technologies, Other.* Any instructional program in civil technologies not described above.

15.03

Electrical and Electronic Technologies. A group of instructional programs that prepare individuals to support and assist electrical and electronic engineers, and other engineers and scientists concerned with the development of lasers. Programs stress specialized, practical knowledge related to the mechanical, mathematical, scientific, or technical aspects of electrical engineering, electronic engineering, and laser development.

15.0301 Computer Technology. An instructional program that prepares individuals to support engineers and scientists in the design, development, and testing of computer and peripheral devices. Includes instruction in electronic circuitry; prototype development and testing; systems design, selection, installation, and testing; solid state and microminiature circuitry to data storage devices, and the preparation of reports and documentation of test results.

15.0302 Electrical Technology. An instructional program that prepares individuals to support an electrical engineer in the design, development, and testing of electrical circuits, devices, and systems, for generating electricity and distributing electrical power. Includes instruction in model and prototype development and testing; systems analysis and integration, including design, development of corrective and preventive maintenance techniques; application of engineering data; and the preparation of reports and test results.

15.0303 Electronic Technology. An instructional program that prepares individuals to support the electronic engineer and other professionals in the design, development, modification, and testing of electronic circuits, devices, and systems. Includes instruction in practical circuit feasibility; prototype development and testing; systems analysis, including design, selection, installation, calibration, and testing; solid-state and microminiature circuits; and the application of engineering data to specific problems in the electronics field.

15.0304 Laser/Electro-Optic Technology. An instructional program that prepares individuals to assist engineers, scientists, or plant managers in the assembly, installation, testing, adjustment, and operation of various types of lasers for various applications. Includes instruction in safety precautions and the optical, physical, and chemical theory and application of each laser device.

15.0399 Electrical and Electronic Technologies, Other. Any instructional program in electrical and electronic technologies not described above.

15.04

Electromechanical Instrumentation and Maintenance Technologies. A group of instructional programs that prepare individuals either to support or assist mechanical and electrical engineers, or to install and service electromechanical equipment. Programs stress specialized, practical knowledge related to the mechanical, mathematical, scientific, or technical aspects of mechanical and electrical engineering, biomedical engineering, computer science, and instrumentation design.

15.0401 Biomedical Equipment Technology. An instructional program that prepares individuals to manufacture, install, calibrate, operate, and maintain sophisticated life-support equipment found in hospitals, medical centers, and research laboratories. Includes instruction in the use of testing and diagnostic instruments; calibrating techniques; potential hazards and safety precautions; and methods of installation, repair, maintenance, and operation of the equipment.

15.0402 Computer Servicing Technology. An instructional program that prepares individuals to install, program, operate, maintain, service, and diagnose operational problems in computer systems arising from mechanical or electrical malfunctions in computer units or systems. Includes instruction in the underlying physical sciences and supporting mathematics of computer design, installation, construction, programming, operation, maintenance, and functional diagnosis, and how to detect, isolate, and correct malfunctions. Programs describe the electrical and electronic circuits and mechanical devices used in computer construction and their combination into systems in individual computers or computing installations, as well as instruments used to detect weaknesses or failures in electrical systems in computers.

15.0 Electromechanical Technology. An instructional program that prepares individuals to assist mechanical and electrical engineers and other managers in the design, development, and testing of electromechanical devices and systems such as plant automation, automated control systems, servomechanisms, vending machines, elevator controls, missile controls, tape-control machines, and auxiliary computer equipment. Includes instruction in assisting with feasibility testing of engineering concepts; systems analysis (including design, selection, testing, and application of engineering data); and the preparation of written reports and test results.

15.0404 Instrumentation Technology. An instructional program that prepares individuals to design, develop prototypes for, test, and evaluate control or measurement devices on systems, and to prepare graphs, written reports, and test results in support of the professional personnel working in the field of instrumentation. Includes instruction in the fields of electricity, electronics, mechanics, pneumatics, and hydraulics as they pertain to the principles of control, recording systems, automated devices, and the calibration of instrumentation units or systems.

15.0499 Electromechanical Instrumentation and Maintenance Technologies, Other. Any instructional program in electromechanical instrumentation and maintenance technologies not described above.

15.05

Environmental Control Technologies. A group of instructional programs that prepare individuals to assist in controlling either the internal temperature of commercial and industrial buildings, or the levels of toxicity of industrial wastes:

15.0501 Air Conditioning, Heating, and Refrigeration Technology. An instructional program that prepares individuals to work in engineering departments or independently as entrepreneurs capable of designing, installing, maintaining, and operating small or medium air conditioning, heating, and refrigeration systems. Instruction prepares individuals to work in a commercial organization performing special tasks relating to design, assembly, installation, servicing, operation, and maintenance of heating or cooling systems, according to the standards of the American Society of Heating, Refrigeration, and Air Conditioning Engineers, Inc. Includes instruction in air conditioning, heating, and refrigeration devices, equipment, techniques, and systems; evaluation of amount of heating, air conditioning, or refrigeration capacity needed to accomplish a particular task; and in the maintenance and operation of a system that meets the requirements of the task.

15.0502 Air Pollution Control Technology. An instructional program that prepares individuals to detect, measure, and control air pollution. Includes instruction in the chemistry of combustion from which the majority of polluting elements in the air are derived; the major sources of air pollution, such as internal combustion engines, power plants, and industrial or home use of fuels; methods of sampling smokestacks; detection and source identification and analysis of air pollutants, both gaseous and particulate; and the construction, use, calibration, and maintenance of automatic samplers, recorders, and other analytical devices.

15.0503 Energy Conservation and Use Technology. An instructional program that prepares individuals to support engineers or work independently to identify and measure quantities of energy used in heating and cooling or operating a facility or industrial process; assess efficiency in the use of energy or the amount lost through wasteful processes or lack of insulation; and prescribe remedial steps to conserve energy within the system. Includes instruction in the utilization and conversion of energy in its various forms; techniques for improving use or preventing loss of energy; and the quantification of the net minimum or optimum energy required in a given system or process.

15.0504 Sanitation Technology. An instructional program that prepares individuals to support sanitarians, and others responsible for health and sanitation factors, by determining the nature and amount of bacteria and chemical contaminants in water, wastewater, and food processing. Includes instruction in sampling, culturing, and identifying pathogenic or other organisms; determining the relative amounts of contaminants in food, soil, water, or other materials by taking samples and performing analyses using sophisticated chemical and biological equipment and procedures; and sanitation-related aspects of water and wastewater purification and processing systems and food processing, storage, and service. Programs prepare individuals for the licensure or certification that is required in some states for employment in government sanitation or health-related agencies.

15.0505 Solar Heating and Cooling Technology. An instructional program that prepares individuals to work with heating, cooling, and refrigeration engineers and scientists in research, design, installation, and maintenance for maximum efficiency of solar heating units for space heating, cooling, and water heating for factory, home or institutional use. Includes instruction in the design and dynamics of solar heat collecting systems; heat collection, storage, and distribution in modern heating and cooling systems; theory, procedures, and measuring devices for air conditioning, heating, and refrigeration systems; and the individual mechanisms and controls used in solar heat collecting units for air conditioning, heating, or refrigeration systems.

15.0506 *Water and Wastewater Technology.* An instructional program that prepares individuals to process, purify, store, control pollution in, distribute, and dispose of wastewater. Includes instruction in the design, construction, operation, and maintenance of equipment for water or wastewater collection, processing, pollution control, and distribution; operation of machines, devices, and control systems which use sophisticated modern instrumentation; testing of samples of materials at various stages in the process design; hydraulics; liquid collection; liquid-processing equipment; pumping and conveying; sampling and testing, both chemically and biologically; processes of purification, digestion, biological deterioration, and disintegration of wastewater products; plant layout, operation, and safety; and the regulations and standards controlling water or wastewater purification.

15.0599 *Environmental Control Technologies, Other.* Any instructional program in environmental control technologies not described above.

15.06 *Industrial Production Technologies.* A group of instructional programs that prepare individuals to supervise industrial processes or to support engineers, scientists, and other professionals who are employed by industry. Programs describe the mechanical, scientific, or technical aspects of a variety of industries, including chemical manufacturing, food processing, forest products, marine products, plastics, and textiles.

15.0601 *Chemical Manufacturing Technology.* An instructional program that prepares individuals to support chemists in the chemical-manufacturing field. Includes instruction in material handling, crushing, grinding, and sizing; extraction, distillation, evaporation, drying, absorption, and heat transfer; and assisting in design, installation, and operation of pilot plants for chemical-manufacturing processes.

15.0602 *Food Processing Technology.* An instructional program that prepares individuals to assist food chemists and food-processing engineers in processing raw foodstuffs into marketable food products by selecting and grading raw materials, and by industrial processes for extracting, converting, drying, freezing, preserving, canning, pickling, smoking, radiation, chemically treating, and packaging products. Includes instruction in the basic sciences and supporting mathematics of chemistry, microbiology, and physics as they relate to food processing, and in the processes, equipment, sanitation, inspection, handling procedures and techniques, process control and scheduling, product storage, shipping, and cost analyses of alternative processes in the industry as applied to specific products and localities.

15.0603 *Industrial Technology.* An instructional program that prepares individuals to assist an industrial engineer in production and planning; design and installation of integrated systems of materials, equipment, and personnel; and measurement, testing, and management of quality control in the manufacturing, transportation, assembly, installation, and operation of processes and products. Includes instruction in the operating of testing equipment (destructive and nondestructive), measuring devices, specification reading, and design and measurement for levels of tolerance compatible with overall production specifications.

15.0604 *Manufacturing Technology.* An instructional program that prepares individuals to technically assist in the optimization of the design, construction, and application of machinery tools, equipment, and processes used in the production of goods.

15.0605 *Marine Products Technology.* An instructional program that prepares individuals to supervise processing of marine products, including seaweed, non-vertebrate, and vertebrate marine products. Includes instruction in the anatomy and identification of marine products; the construction, mechanics, and operation of equipment; procedures, techniques, and sanitation aspects of processing, including refrigeration and chemical preservation; safe working practices; sanitation and inspection; and potential chemical, biological or bacteriological problems encountered, including any pathological condition of the product during processing.

15.0606 *Optical Technology.* An instructional program that prepares individuals to grind lenses from optical glass or from modern plastic, according to engineering specifications or optometrist prescriptions. Includes instruction in the science of optics, optical glass, and plastics used in optics; optical design and drawings; machinery, materials, and techniques required for production of optical lenses; and in the polishing of lenses or optical elements for mounting in eyeglasses or holding devices.

15.0607 *Plastic Technology.* An instructional program that prepares individuals to support plastic design engineers, scientists, managers, or entrepreneurs in the application, production, and fabrication of plastic products. Includes instruction in the chemistry and applied engineering sciences related to thermosetting, pressing, forming, molding, and producing of fiberglass or other plastics; drawings for dies, forms molds, or plastic assemblies; molding, extruding, jointing, finishing, inspecting, and controlling the quality of the products; packaging for shipment or storage; and hazards associated with production and design.

- 15.0608 *Safety Technology.* An instructional program that prepares individuals to technically assist in the maintenance of materials, equipment, and personnel for industrial, commercial, and fire safety systems.
- 15.0609 *Textile Technology.* An instructional program that prepares individuals to assist scientists, engineers, or managers in the textile industry or in related research, development, production, or servicing. Includes instruction in the nature and characteristics of textile fibers; spinning, weaving, dyeing, mordanting, fire-proofing, and static arresting; testing of fibers for tensile strength, heat resistance, crease resiliency, and laundering; equipment and machines used in marking textiles; and textile production, packaging, storage, shipment and uses.
- 15.0610 *Welding Technology.* An instructional program that prepares skilled workers at the technician level to understand, perform, and supervise or inspect a wide variety of welding processes. These include gas welding, brazing, flame cutting, metallic arc welding (manual or automatic), metallic gas or inert gas welding of ferrous and nonferrous materials, resistance welding, and fusing of glass and plastics in a welding mode. Includes instruction in the applied physics and metallurgy of the various welding processes and techniques, the composition and metallurgy of the various metals, the chemistry and physics of the welding processes, the shielding elements in the welding processes, and the various types of equipment used to accomplish each process. Programs develop an elemental understanding of design for welding fabrication; an understanding of the elements of cost and economics of welding of various types; a knowledge of the methods of nondestructive and destructive inspection of welding and welded products; and an understanding of auxiliary equipment used in the process, such as jigs, fixtures, and annealing equipment related to welding.
- 15.0699 *Industrial Production Technologies, Other.* Any instructional program in industrial production technologies not described above.
- 15.07 *Quality Control and Safety Technologies.* A group of instructional programs that prepare individuals to support a variety of engineers and industrial managers. Programs describe the mechanical, scientific, or technical aspects of industrial production, occupational health, and quality control.
- 15.0701 *Occupational Safety and Health Technology.* An instructional program that prepares individuals to work with safety engineers and managers in analyzing working conditions in places of employment to ensure maximum safety to workers and occupants. Includes instruction in safety engineering principles and science; related Federal, State, and local legislation; procedures, practices, techniques, and methods used in analyzing all aspects of working conditions in an employment establishment, including physical, water, atmospheric, and other environmental elements which may constitute hazards; determination of potentially unsafe working practices; chemical contamination of workers through the air they breathe; methods for correcting unsafe conditions or preventing them; cost analysis of various corrective measures for working conditions or practices on the job; capability in reading engineering drawings; and use of orthographic projection practices in drawing, diagramming, or sketching safety devices or plant layouts.
- 15.0702 *Quality Control Technology.* An instructional program that prepares individuals to support engineers or managers by utilizing the sciences of measurement and quality control, quality design, production and inspection, testing (both destructive and nondestructive), statistical sampling, and mathematical probability as it relates to quality control in mass-produced items manufactured by modern production procedures and processes. Includes instruction in the intensive study of the physical and related engineering sciences and supporting mathematics related to material testing devices; testing; inspection techniques; organization of systems of quality control; statistical sampling; management of quality in manufacturing, transportation, assembly, installation, and operation; assurance of maximum accuracy or quality control in all phases of manufacturing; and utilization of all components and units in modern sophisticated machine devices or systems. Special study is required to understand the operation of testing equipment (particularly non-destructive equipment), measuring devices, reading of specifications, design and measuring of tolerances to assure that a certain level of quality will be met in producing a component, unit, or system. Includes instruction in the preparation of scientific or technical reports and in the development of interpersonal skills required in the performance of tasks or in the supervision of the work of others.
- 15.0799 *Quality Control and Safety Technologies, Other.* Any instructional program in quality control and safety technologies not described above.

Mechanical and Related Technologies. A group of instructional programs that prepare individuals to support and assist a variety of engineering professionals, including aeronautical, agricultural, automotive, mechanical, electrical and electronic, architectural, chemical, civil, mining, and petroleum engineers. Programs describe the mathematical, mechanical, scientific, and technical aspects of these engineering specialties.

- 15.0801 Aeronautical Technology.** An instructional program that prepares individuals to assist the aeronautical engineer in collecting research data relevant to the operation of aircraft and the design, testing, and development of propulsion, control, and guidance systems of aircraft and aerospace vehicles.
- 15.0802 Agricultural Equipment Technology.** An instructional program that prepares individuals to assist agricultural engineers. Includes instruction in farm machinery, farm structures, and rural electrification.
- 15.0803 Automotive Technology.** An instructional program that prepares individuals to support an automotive engineer in diagnosing normal or abnormal operation and in maintaining and repairing automotive equipment. Includes instruction in the installation, maintenance, operation, repair, adjustment, or modification of automobiles, trucks, buses, and light industrial or farm equipment powered by gasoline, diesel, or turbine engines and equipped with electrical, hydraulic, pneumatic, or mechanical controls. Also includes instruction in the use and calibration of diagnostic and testing instruments and equipment.
- 15.0804 Marine Propulsion Technology.** An instructional program that prepares individuals to support propulsion engineers, ship officers, managers of marine units and fleets, or to work as manufacturers' representatives of marine propulsion units. Includes instruction in various marine propulsion units and systems and their related controls; various fuels and fuel systems and problems and hazards involved in their use; power capacity of various units; the basic design, installation, operation and maintenance and servicing of various marine propulsion units and systems; the use and design of cooling systems; operational controls; cost efficiency of various alternative propulsion systems and maintaining operation and service logs.
- 15.0805 Mechanical Design Technology.** An instructional program that prepares individuals to assist a mechanical-design or equipment-systems engineer in designing, detailing, producing, and testing machines, using appropriate available materials, processes, techniques, and facilities. Includes instruction in drafting; strength of materials; manufacturing or fabrication procedures and practices; materiel testing; component inspection; machine or unit operation; evaluation; basic physics and mechanics, and the supporting mathematics; basic mechanisms; hydraulic and pneumatics; quality control and testing; machine design; materials; specification preparation; and technical reporting.
- 15.0899 Mechanical and Related Technologies, Other.** Any instructional program in mechanical and related technologies not described above.

Mining and Petroleum Technologies. A group of instructional programs that prepare individuals to support and assist mining and petroleum engineers and managers. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of mining and petroleum engineering.

- 15.0901 Coal Mining Technology.** An instructional program that prepares individuals to assist mining engineers or managers or to assume responsibility with a degree of independence in various aspects of mining operation. Includes instruction in methods, equipment, processes, techniques, and procedures employed in underground coal mining or in strip mining; coal beneficiation and conditioning for marketing; mapping and planning the exploitation of a coal field; managing for safe mining operations; disposing of mine waste; reclaiming strip-mine areas after coal has been removed; testing and analyzing the quality of coal; measuring the levels of impurities in air in mines and identifying the nature of the impurities; constructing, operating, and maintaining specialized machinery and equipment; and planning for maximum exploitation of deposits of coal by the most economical modern methods.
- 15.0902 Mining (Excluding Coal) Technology.** An instructional program that prepares individuals to work in a supportive role to mining engineers and managers in the development and exploitation of metal or other mineral ore deposits (excluding coal and other fossil fuels). Includes instruction in elementary geology; mechanical drawing and drafting; mining methods, both open pit and underground; surveying as it applies to planning the mining of a particular ore body; mining machinery, equipment and methods used in drilling, blasting, conveying, hoisting, crushing, and beneficiation; mine safety; environmental impact; production, storage, and disposal of solid or liquid wastes; and collecting, screening, filtering, drying, processing, storing, and shipping of finished ore.

15.0903 *Petroleum Technology.* An instructional program that prepares individuals to assist in petroleum production, on-shore or off-shore exploring for petroleum fields; seismic testing of promising geological formations; drilling test wells; improving drilling technology; analyzing cores from drilling; logging cores; collecting petroleum from producing wells; delivering oil to holding points or pipelines for transporting to refineries; or capturing gas and retaining it in holding points for marketing. Includes instruction in the methods for increasing productivity of oil fields; seismic exploration; sophisticated scientific and production methods; instrumentation, machinery, equipment, techniques, and processes used in obtaining and refining crude oil into salable products; oil- or gas-well drilling; oil- or gas-well control by use of drilling muds or other techniques; charting and diagraming oil fields, oil wells, and pipelines; and designing refineries.

15.0999 *Mining and Petroleum Technologies, Other.* Any instructional program in mining and petroleum technologies not described above.

15.99 *Engineering and Engineering-Related Technologies, Other.* A group of instructional programs in engineering and engineering-related technologies not described above.

15.9999 *Engineering and Engineering-Related Technologies, Other.* Any instructional program in engineering and engineering-related technologies not described above.

16. **Foreign Languages.** A summary of groups of instructional programs that describe the structure and use of language that is common or indigenous to people of the same community or nation, the same geographical area, or the same cultural traditions; including such features as sounds, literature, syntax, phonology, morphology, semantics, sentences, prose and verse, as well as the development of skills and attitudes used in communicating and evaluating thoughts and feelings through oral and written language.

16.01 *Foreign Languages, Multiple Emphasis.* A group of instructional programs (see 16.0101).

16.0101 *Foreign Languages, Multiple Emphasis.* An instructional program that describes the language, literature, and culture of more than one specific group of people.

16.02 *African (Non-Semitic) Languages.* A group of instructional programs (see 16.0201).

16.0201 *African (Non-Semitic) Languages.* An instructional program that describes the language, literature, and culture of non-Semitic African people; languages such as Ibo, Swahili, and Yoruba are included in this category.

16.03 *Asiatic Languages.* A group of instructional programs that describe the language, literature, and culture of Asiatic peoples; languages such as Cantonese, Mandarin, Japanese, Korean, Malay, and Japanese are included in this category.

16.0301 *Chinese.* An instructional program that describes the language, literature, and culture of Chinese-speaking peoples; languages such as Cantonese and Mandarin are included in this category.

16.0302 *Japanese.* An instructional program that describes the language, literature, and culture of Japanese-speaking peoples.

16.0303 *Korean.* An instructional program that describes the language, literature, and culture of Korean-speaking peoples.

16.0399 *Asiatic Languages, Other.* Any instructional program in Asiatic languages not described above.

16.04 *Balto-Slavic Languages.* A group of instructional programs that describe the language, literature, and culture of Baltic and Slavic peoples; languages such as Latvian, Lithuanian, Russian, Polish, Belorussian, Czech, Serbo-Croatian, and Ukrainian are included in this category.

16.0401 *Baltic Languages.* An instructional program that describes the language, literature, and culture of Baltic peoples; languages such as Latvian or Lettish and Lithuanian are included in this category.

16.0402 *Russian.* An instructional program that describes the language, literature, and culture of Russian-speaking peoples.

16.0403 *Slavic Languages (Other than Russian).* An instructional program that describes the language, literature, and culture of Slavic-speaking (other than Russian-speaking) peoples; languages such as Polish, Belorussian, Czech, Serbo-Croatian and Ukrainian are included in this category.

- 16.05** *Germanic Languages.* A group of instructional program that describe the language, literature, and culture of people whose native language belongs to the Germanic branch of Indo-European languages; languages such as German, Norwegian, Swedish, Danish, and Yiddish are included in this category.
- 16.0501** *German.* An instructional program that describes the language, literature, and culture of German-speaking peoples.
- 16.0502** *Scandinavian Languages.* An instructional program that describes the language, literature, and culture of Scandinavian peoples. Languages such as Norwegian, Swedish, and Danish are included in this category.
- 16.0503** *Yiddish.* An instructional program that describes the language, literature, and culture of Yiddish-speaking peoples.
- 16.0599** *Germanic Languages, Other.* Any instructional program in Germanic languages not described above.
- 16.06** *Greek.* A group of instructional programs that describe the language, literature, and culture of Greek-speaking peoples.
- 16.0601** *Greek (Classical).* An instructional program that describes the language, literature, and culture of the ancient Greek world.
- 16.0602** *Greek (Modern).* An instructional program that describes the language, literature, and culture of Greek-speaking peoples in the modern world.
- 16.07** *Indic Languages.* A group of instructional programs that describe the language, literature, and culture of people whose native language belongs to the Indic branch of Indo-European languages; languages such as Hindi, Sanskrit, Urdu, Bengali, and Panjabi are included in this category.
- 16.0701** *Hindi.* An instructional program that describes the language, literature, and culture of Hindi-speaking peoples.
- 16.0702** *Sanskrit.* An instructional program that describes the language, literature, and culture of Sanskrit-speaking peoples.
- 16.0799** *Indic Languages, Other.* Any instructional program in Indic languages not described above.
- 16.08** *Iranian Languages.* A group of instructional programs (see 16.0801).
- 16.0801** *Iranian Languages.* An instructional program that describes the language, literature, and culture of Iranian peoples; languages such as Persian and Pashto are included in this category.
- 16.09** *Italic Languages.* A group of instructional programs that describe the language, literature, and culture of people whose native language belongs to the Italic branch of Indo-European languages; languages such as French, Italian, Latin, Portuguese, and Spanish are included in this category.
- 16.0901** *French.* An instructional program that describes the language, literature, and culture of French-speaking peoples.
- 16.0902** *Italian.* An instructional program that describes the language, literature, and culture of Italian-speaking peoples.
- 16.0903** *Latin.* An instructional program that describes the language and literature of Latin.
- 16.0904** *Portuguese.* An instructional program that describes the language, literature, and culture of Portuguese-speaking peoples.
- 16.0905** *Spanish.* An instructional program that describes the language, literature, and culture of Spanish-speaking peoples.
- 16.0999** *Italic Languages, Other.* Any instructional program in Italic languages not described above.

- 16.10** *Native American Languages*. A group of instructional programs (see 16.100?).
- 16.1001** *Native American Languages*. An instructional program that describes the language, literature, and culture of native American peoples.
- 16.11** *Semitic Languages*. A group of instructional programs that describe the language, literature, and culture of Semitic peoples; languages such as Arabic and Hebrew are included in this category.
- 16.1101** *Arabic*. An instructional program that describes the language, literature, and culture of Arabic-speaking peoples.
- 16.1102** *Hebrew*. An instructional program that describes the language, literature, and culture of Hebrew-speaking peoples.
- 16.1199** *Semitic Languages, Other*. Any instructional program in Semitic languages not described above.
- 16.99** *Foreign Languages, Other*. A group of instructional programs in foreign languages not described above.
- 16.9999** *Foreign Languages, Other*. Any instructional program in foreign languages not described above.
- 17.** **Allied Health**. A summary of groups of instructional programs that prepare individuals to assist qualified health professionals in providing diagnostic, therapeutic, preventive, restorative, and rehabilitative services to patients in health care facilities, the home, and the community.
- 17.01** *Dental Services*. A group of instructional programs that prepare individuals to provide supportive services to the dental profession, including performing dental prophylactic treatments, instructing persons in the care of teeth and mouth, and producing dentures and related appliances.
- 17.0101** *Dental Assisting*. An instructional program that prepares individuals to assist a dentist at the chairside in a dental operation, to perform reception functions, clerical functions, and selected dental laboratory procedures.
- 17.0102** *Dental Hygiene*. An instructional program that prepares individuals to provide chairside services to patients (such as performing complete oral prophylaxis and applying medication) and to provide dental health education services to individuals and community health programs, under the supervision of a dentist.
- 17.0103** *Dental Laboratory Technology*. An instructional program that prepares individuals to make and repair restorative appliances required for the oral health of the patient, as prescribed by a dentist.
- 17.0199** *Dental Services, Other*. Any instructional program in dental services not described above.
- 17.02** *Diagnostic and Treatment Services*. A group of instructional programs that prepare individuals to use equipment and medical materials for diagnostic and therapeutic purposes by learning to apply roentgen rays and radioactive substances; prepare and administer radioisotopes; operate electrocardiograph, electroencephalograph, respiratory, or dialysis equipment; provide technical assistance before, during, and after an operation; or render medical emergency treatment in a variety of situations that demand immediate care, such as heart attacks, childbirth, poisons, burns, and shock.
- 17.0201** *Cardiopulmonary Technology*. An instructional program that prepares individuals to perform a wide range of tests related to the functions and therapeutic care of the heart-lung system, operate and maintain a heart-lung machine for extra-corporeal circulation, assist in cardiac catheterization and cardiac resuscitation, and assist in the post-operative monitoring, care, and treatment of heart-lung patients.
- 17.0202** *Dialysis Technology*. An instructional program that prepares individuals to provide dialysis and intensive care to patients in a renal service, including cardiac monitoring, respiratory therapy, isolation procedures, and adjustment and maintenance of dialysis equipment.
- 17.0203** *Electrocardiograph Technology*. An instructional program that prepares individuals to operate and maintain an electrocardiograph machine to record electromotive variations in the action of the patient's heart muscle. Includes instruction in making minor repairs.

- 17.0204 *Electroencephalograph Technology.* An instructional program that prepares individuals to operate and maintain the electroencephalograph to measure impulse frequencies and differences in electrical potential between the various areas of the brain to obtain data for the physician to use in diagnosing brain disorders. Includes instruction in making minor repairs.
- 17.0205 *Emergency Medical Technology – Ambulance.* An instructional program that prepares individuals to function at the emergency level to treat various cardiopulmonary problems, using cardiac resuscitation and other emergency equipment; airway, fracture, and hemorrhage management; emergency childbirth; and special care of patients exposed to heat, cold, radiation, or contagious disease. Includes instruction in techniques and application of intravenous fluid therapy, pharmacology, and anesthetics.
- 17.0206 *Emergency Medical Technology – Paramedic.* An instructional program that prepares individuals to provide pre-hospital emergency medical care to patients of all ages. Includes knowledge about the acute, critical differences in physiology, pathophysiology, or clinical symptoms so that appropriate emergency assessment and treatment can be provided and the necessary information communicated to a responsible physician.
- 17.0207 *Medical Radiation Dosimetry.* An instructional program that prepares individuals to calculate radiation dosage in the treatment of malignant disease and plan the direction of radiation to its target in the safest way.
- 17.0208 *Nuclear Medical Technology.* An instructional program that prepares individuals to prepare and administer radioactive isotopes and to measure glandular and other bodily activity in therapeutic, diagnostic, and tracer studies, using a variety of equipment.
- 17.0209 *Radiograph Medical Technology.* An instructional program that prepares individuals to apply roentgen rays and radioactive substances to patients for diagnostic and therapeutic purposes, under the supervision of a radiologist. Includes instruction in anatomy, physiology, radiographic techniques, radiation protection, equipment maintenance, and film processing and darkroom techniques.
- 17.0210 *Respiratory Therapy Technology.* An instructional program that prepares individuals to operate and maintain equipment used in supportive respiratory functions (including the administration of oxygen and other therapeutic gases and mist inhalations) as directed by a physician, to respond to emergency situations and to provide treatment to patients with severe respiratory disorders which require intensive care. Includes instruction in making minor repairs.
- 17.0211 *Surgical Technology.* An instructional program that prepares individuals to serve as general technical assistants before, during, and after operations. Includes instruction in pre-operation patient and surgical team preparation, supply inventory maintenance, and sterilization and cleaning of equipment and operating rooms.
- 17.0212 *Ultrasound Technology.* An instructional program that prepares individuals to use acoustic energy for diagnosis, research, and therapy; operate ultrasound equipment to obtain diagnostic results; evaluate results for quality of technique; and in emergency situations, make interim reports to medical staff.
- 17.0299 *Diagnostic and Treatment Services, Other.* Any instructional program in diagnostic and treatment services not described above.
- 17.03 *Medical Laboratory Technologies.* A group of instructional programs that prepare individuals to carry out technical functions to obtain data for use in diagnosis, treatment, and control of diseases, under the supervision of medical specialists. Includes instruction in the use of technical equipment and the administration of medical and/or chemical agents.
- 17.0301 *Blood Bank Technology.* An instructional program that prepares individuals to work under the direction of a pathologist, physician, or laboratory director prepared to collect, classify, store, and process blood; including separation of components from whole blood; detection and identification of antibodies in patient and donor bloods; and selection and delivery of suitable blood for transfusion.
- 17.0302 *Chemistry Technology.* An instructional program that prepares individuals to work under the supervision of a pathologist, physician, or qualified scientist in performing qualitative and quantitative chemical analyses of body fluids and exudates, utilizing quantitative equipment and a wide range of laboratory instruments, to provide information for diagnosing and treating disease.

- 17.0303 *Clinical Animal Technology.* An instructional program that prepares individuals to provide care and treatment to laboratory animals in hospitals, veterinary clinics, and research laboratories; and to perform tests and procedures used in research and diagnosis, as prescribed and supervised by pathologists or other qualified research scientists.
- 17.0304 *Clinical Laboratory Aide.* An instructional program that prepares individuals to perform simple tasks involved in maintaining cleanliness and order in the clinical laboratory. Includes instruction in sterilization of equipment, maintaining supplies, messenger service, and related duties.
- 17.0305 *Clinical Laboratory Assisting.* An instructional program that prepares individuals to perform routine clinical laboratory procedures under the supervision of medical laboratory technicians, pathologists, or other physicians.
- 17.0306 *Cytotechnology.* An instructional program that prepares individuals to stain, mount, and screen slides of cells of the human body for determination of abnormalities such as exfoliated cells, under the supervision of a doctor.
- 17.0307 *Hematology Technology.* An instructional program that prepares individuals to work in a hospital setting under the supervision of a hematologist or laboratory director, in performing quantitative, qualitative, and coagulation tests on cellular and plasma components of blood for use in the diagnosis and treatment of disease.
- 17.0308 *Histologic Technology.* An instructional program that prepares individuals to prepare, section, and stain tissue for microscopic study by a pathologist or other clinical scientist.
- 17.0309 *Medical Laboratory Technology.* An instructional program that prepares individuals to perform bacteriological, biological, and chemical tests to provide data for diagnosis and treatment of disease, under the supervision of pathologists.
- 17.0310 *Medical Technology.* An instructional program that prepares individuals as a highly skilled laboratory scientist with a strong generalist orientation and an ability to perform complex and specialized procedures in all major areas of the clinical laboratory. The medical technologist is responsible for complex analysis requiring the exercise of individual judgment and must be able to relate findings to the presence or absence of disease. May supervise and/or teach laboratory personnel.
- 17.0311 *Microbiology Technology.* An instructional program that prepares individuals to work with a minimum of supervision by a pathologist, physician, or laboratory director, in performing bacteriological, viral, parasitological, immunologic, and serologic procedures in a clinical laboratory setting.
- 17.0399 *Medical Laboratory Technologies, Other.* Any instructional program in medical laboratory technologies not described above.
- 17.04 *Mental Health/Human Services.* A group of instructional programs that prepare individuals to assist nursing and mental health personnel in the care and treatment of the mentally ill, drug addicted, and physically handicapped. Includes instruction in new patterns of living and administering prescribed medication.
- 17.0401 *Alcohol/Drug Abuse Specialty.* An instructional program that prepares individuals to advise and assist people in their efforts to overcome personal, family, and social problems that are manifested in alcoholism and drug addiction.
- 17.0402 *Community Health Work.* An instructional program that prepares individuals to serve as liaison between professional health workers and the recipients of health services in the community. Includes instruction in the basic understanding of biology, communicable diseases, environmental health, personal hygiene, care of infants, medications, and family and community services.
- 17.0403 *Genetic Counseling.* An instructional program that prepares individuals to counsel clients as to the origin, transmission, and development of hereditary characteristics and their relations to birth abnormalities.
- 17.0404 *Home Health Aide.* An instructional program that prepares individuals to assist elderly, convalescent, or handicapped patients in their homes by providing for physical, mental, emotional, and/or social health-care needs, under the supervision of a registered nurse or physician.

..... *Medical Social Work* (see 44.0702).

17.0405 *Mental Health/Human Services Assisting.* An instructional program that prepares individuals to perform routine tasks related to the care, treatment, and rehabilitative activities for the aged, chemically dependent, mentally ill, or mentally handicapped, as supervised by a physician in a hospital or mental health clinic.

17.0406 *Mental Health/Human Services Technology.* An instructional program that prepares individuals to provide and/or assist in treatment, care, and rehabilitative activities for clients who are aged, mentally ill, mentally or physically handicapped, or chemically dependent, under the supervision of a physician. Includes instruction in new patterns of living and administering medications.

17.0407 *Rehabilitation Counseling.* An instructional program that prepares individuals to help disabled individuals become aware of and secure rehabilitation services designed to fit the disabled person for gainful employment, assist in job placement, and check on job satisfaction after employment.

17.0408 *Therapeutic Child Care Work.* An instructional program that prepares individuals under supervision, to implement activity and training programs which provide a preventive and therapeutic environment for mentally ill and emotionally disturbed children and adolescents. Trains children in self-help skills through intensive group sessions involving structured daily activities and reinforcement of other therapeutic experiences; records, evaluates, and reports progress of patients.

17.0499 *Mental Health/Human Services, Other.* Any instructional program in mental health/human services not described above.

17.05 *Miscellaneous Allied Health Services.* A group of instructional programs that prepare individuals to assist specialists in the health field in providing support functions in such areas as pharmaceuticals, central supply, medical records, and the admissions/discharge of patients.

17.0501 *Animal Technology.* An instructional program that prepares individuals to assist the veterinarian, biological researcher, or other scientist in the care and management of animals. Includes instruction in the basic principles of normal and abnormal life processes, and in routine laboratory and animal health care procedures.

17.0502 *Central Supply Technology.* An instructional program that prepares individuals to adjust, clean, sterilize, and assemble hospital equipment, supplies, and instruments according to prescribed procedures and techniques. Includes instruction in inspection, evaluation, and purchasing of equipment and materials and in the distribution and inventory of equipment supplies.

17.0503 *Medical Assisting.* An instructional program that prepares individuals to assist a physician by performing functions related to both business administration and clinical duties of a medical office. Business aspects of instruction cover insurance, accounts, reports, medical records, and medical transcription. Clinical aspects of study include preparation of the patient for examination, assessing vital signs, assisting with examination and treatment, routine laboratory procedures, and use of the electrocardiograph machine.

17.0504 *Medical Illustrating.* An instructional program that prepares individuals to demonstrate medical facts by the creation of illustrations, models, and teaching films; serves as a consultant, advisor, and administrator in the field of medical illustration.

17.0505 *Medical Office Management.* An instructional program that prepares individuals to manage the administrative and business aspects of a solo or group medical practice.

17.0506 *Medical Records Technology.* An instructional program that prepares individuals to develop statistical reports, code diseases and operations, and maintain indexes according to accepted procedures; take records to court; handle requests for medical information; record minutes of medical staff committee meetings; and supervise filing areas and activities of medical records clerks.

17.0507 *Pharmacy Assisting.* An instructional program that prepares individuals to assist the pharmacist in performing routine duties related to maintaining and dispensing pharmaceutical supplies and medications, under supervision of a registered pharmacist.

- 17.0508 *Physician Assisting-Primary Care.* An instructional program that prepares individuals to perform physician-delegated functions in the areas of general practice, including family medicine, internal medicine, obstetrics, and emergency medicine.
- 17.0509 *Physician Assisting-Specialty.* An instructional program that prepares individuals to perform functions delegated by a clinical specialist in specific areas of patient care; urology, surgery, pathology, orthopaedics, pediatrics, etc.
- 17.0510 *Podiatric Assisting.* An instructional programs that prepares individuals to support the podiatrist in servicing patients by preparing them for treatment, sterilizing the instruments, performing general office duties, and assisting the podiatrist in preparing dressings, administering treatments, and developing x-rays.
- 17.0511 *Veterinarian Aide.* An instructional program that prepares individuals to assist veterinarians in their treatment of animals by preparing animals for treatment, performing general office duties, preparing treatment rooms and maintaining inventories of equipment and supplies, and performing other duties under the supervision of the veterinarian.
- 17.0512 *Veterinarian Assisting.* An instructional program that prepares individuals to assist a veterinary doctor in providing care and treatment to animals in a veterinary hospital or clinic. Includes instruction in preparing the animal for examination, assessing vital signs, assisting with examination and treatment, sterilizing equipment, performing routine laboratory procedures, and giving injections and other medications. Also includes maintaining medical and business records, and charting and scheduling activities.
- 17.0513 *Ward Clerk.* An instructional program that prepares individuals to perform such duties as answering the telephone, relaying messages, receiving and directing visitors, transcribing orders, and preparing requisition forms in the nursing unit of a hospital or other health care facility, under the supervision of a head nurse.
- 17.0599 *Miscellaneous Allied Health Services, Other.* Any instructional program in miscellaneous allied health services not described above.

17.06

Nursing-Related Services. A group of instructional programs that prepare individuals to work under the supervision of a physician, nurse supervisor, or other qualified nursing staff member in providing nursing care to patients in hospitals, sanitariums, clinics, private homes, or other places by administering medications and treatments, assisting during treatment and examination of patients, or performing related auxiliary services.

- 17.0601 *Geriatric Aide.* An instructional program that prepares individuals to perform tasks involved in providing nursing and personal care to elderly patients under the supervision of qualified nursing staff members. Emphasis is on the maintenance of daily living activities of these patients.
- 17.0602 *Nursing Assisting.* An instructional program that prepares individuals to perform routine tasks under the supervision of a registered or licensed practical nurse, in the provision of personal care to individuals who are receiving nursing care.
- 17.0603 *Obstetrical Technology.* An instructional program that prepares individuals to assist in the care of mothers in labor and delivery rooms before, during, and after delivery under the supervision of professional personnel. Includes instruction in hygienic procedures, routine laboratory work, and sterilization of equipment and supplies.
- 17.0604 *Pediatric Aide.* An instructional program that prepares individuals to provide nursing care to ill or handicapped children (newborns, infants, children, and adolescents) in hospitals and other health-care facilities, under the supervision of qualified nursing staff members.
- 17.0605 *Practical Nursing.* An instructional program that prepares individual to assist in providing general nursing care under the direction of a registered nurse, physician, or dentist.
- 17.0606 *Ward Service Management.* An instructional program that prepares individuals to supervise and coordinate administrative management functions for one or more patient care units in a health-care facility, under the supervision of a nursing service director or administrator.
- 17.0699 *Nursing-Related Services, Other.* Any instructional program in nursing-related services not described above.

17.07

Ophthalmic Services. A group of instructional programs that prepare individuals to assist an ophthalmologist or optometrist in identifying vision defects, performing tests, administering treatment preliminary to examination or surgery, preparing and fitting eyeglasses or contact lenses, and directing corrective eye exercises.

- 17.0701 Ophthalmic Dispensing.** An instructional program that prepares individuals to adapt and fit corrective eyewear as prescribed by the ophthalmologist or optometrist.
- 17.0702 Ophthalmic Laboratory Technology.** An instructional program that prepares individuals to operate machines, to grind lenses, and fabricate eyewear to prescription.
- 17.0703 Ophthalmic Medical Assisting.** An instructional program that prepares individuals to assist the ophthalmologist in eye examinations and in the treatment of eye diseases and disorders.
- 17.0704 Optometric Assisting.** An instructional program that prepares individuals to assist in performing tests to determine defects in vision, preparing and fitting eyeglasses or contact lenses, and administering corrective eye exercises and other treatments which do not require drugs or surgery.
- 17.0705 Optometric Technology.** An instructional program that prepares individuals to perform a variety of vision care procedures or to specialize in a particular area of vision care, such as fitting of contact lenses or visual training, under the supervision of a physician or optometrist.
- 17.0706 Orthoptics.** An instructional program that prepares individuals to teach patients with correctable focusing defects to develop and use binocular vision, under the supervision of an ophthalmologist.
- 17.0799 Ophthalmic Services, Other.** Any instructional program in ophthalmic services not described above.

17.08

Rehabilitation Services. A group of instructional programs that prepare individuals to work under the direction of a physician or other appropriate specialist in assisting handicapped persons to overcome or compensate for any loss of function and in restoring the individual's physical health.

- 17.0801 Art Therapy.** An instructional program that prepares individuals to apply the principles and techniques of art to the rehabilitation of physically and mentally ill patients.
- 17.0802 Corrective Therapy.** An instructional program that prepares individuals to provide medically prescribed programs of therapeutic exercise to physically and mentally ill patients to prevent muscular deconditioning resulting from inactivity and to attain resocialization and specific psychiatric objectives.
- 17.0803 Dance Therapy.** An instructional program that prepares individuals to apply the principles and techniques of dance to the rehabilitation of physically and mentally ill patients.
- 17.0804 Exercise Physiology.** An instructional program that prepares individuals to work with clinicians in hospitals with rehabilitation programs to provide exercise stress testing and cardiovascular rehabilitation for patients.
- 17.0805 Manual Arts Therapy.** An instructional program that prepares individuals to use industrial arts, workshops, and agricultural activities to assist in the rehabilitation of patients.
- 17.0806 Music Therapy.** An instructional program that prepares individuals to use individual and group musical activities with physically and mentally ill patients to accomplish therapeutic aims, to create an environment conducive to treatment, or to influence behavior.
- 17.0807 Occupational Therapy.** An instructional program that prepares individuals to use the principles and techniques of providing therapy that offers mental diversion for the patient, frequently serves to exercise an affected part of the body, and gives vocational training that would enable them to enter the work force.
- 17.0808 Occupational Therapy Assisting.** An instructional program that prepares individuals to assist an occupational therapist in implementing the plan of therapy for a patient prescribed by a physician.
- 17.0809 Occupational Therapy Aide.** An instructional program that prepares individuals to prepare, collect, and distribute supplies and equipment; keep records; make requisitions; and assist individual patients as directed by the occupational therapist in an occupational therapy unit.

- 17.0810 *Orthotic/Prosthetic Assisting.* An instructional program that prepares individuals to assist the orthotist/prosthetist in caring for patients by making casts, measurements, and model specifications, and fitting supportive appliances and/or artificial limbs.
- 17.0811 *Orthotics/Prosthetics.* An instructional program that prepares individuals to write specifications for, make, fit, and repair braces and appliances and/or artificial limbs following the prescription of physicians.
- 17.0812 *Orthopedic Assisting.* An instructional program that prepares individuals to assist a physician by applying, adjusting, and removing casts; assembling traction apparatus; fitting strappings and splints for orthopedic patients; assembling exercise frames; and adjusting crutches and canes to fit patients. Training may include instructing patients with casts, braces, and crutches in walking and in care of the devices.
- 17.0813 *Physical Therapy.* An instructional program that prepares individuals to use the principles and techniques of treating disease, bodily weakness, or physical defects by physical remedies, including massage and gymnastics.
- 17.0814 *Physical Therapy Aide.* An instructional program that prepares individuals to assist a physical therapist by cleaning and setting up equipment, assisting in lifting and moving patients, maintaining cleanliness and order in the treatment areas, ordering and storing supplies, keeping records, and escorting patients between nursing units and therapy units.
- 17.0815 *Physical Therapy Assisting.* An instructional program that prepares individuals to assist a physical therapist in implementing the plan of therapy for a patient prescribed by a physician.
- 17.0816 *Recreational Therapy.* An instructional program that prepares individuals to plan, organize, and direct medically approved recreation programs such as sports, trips, dramatics, arts and crafts, either to help clients in recovery from illness or in coping with temporary or permanent disability.
- 17.0817 *Recreational Therapy Technology.* An instructional program that prepares individuals to assist the recreational therapist in conducting medically approved recreation programs such as sports, trips, dramatics, and arts and crafts.
- 17.0818 *Respiratory Therapy.* An instructional program that prepares individuals to administer respiratory care under the direction of a physician, evaluating the patient's progress, and making recommendations for respiratory therapy. Includes instruction in ventilatory therapy, cardio-respiratory rehabilitation, micro-environmental control, and diagnostic testing of the respiratory system (inhalation therapist).
- 17.0819 *Respiratory Therapy Assisting.* An instructional program that prepares individuals to assist a respiratory therapist in implementing the plan of therapy for a patient prescribed by a physician.
- 17.0820 *Speech/Hearing Therapy Aide.* An instructional program that prepares individuals to assist in testing, evaluating, and treating the problems of people with speech and hearing difficulties.
- 17.0821 *Speech-Language Pathology/Audiology.* An instructional program that prepares individuals to evaluate and habilitate hearing, speech, and language disorders, such as neurological disturbances, defective articulation or foreign dialect in children or adults. Includes instruction in how to plan, direct, and conduct remedial programs designed to restore or improve communication efficiency of individuals with hearing or speech impairment.
- *Therapeutic Recreation Aide* (see 20.0607).
- 17.0899 *Rehabilitation Services, Other.* An instructional program in rehabilitation services not described above.
- 17.99 *Allied Health, Other.* A group of instructional programs in allied health not described above.
- 17.9999 *Allied Health, Other.* Any instructional program in allied health not described above.

Health Sciences. A summary of groups of instructional programs that describe the restoration or preservation of health through the use of drugs, surgical operations, manipulations, or other curative or remedial methods.

18.01 *Audiology and Speech Pathology.* A group of instructional programs that describe the therapeutic techniques for treating hearing and speech disorders.

18.0101 *Audiology.* An instructional program that describes the principles and techniques of providing therapy that restores or partially restores impaired hearing.

18.0102 *Speech Pathology.* An instructional program that describes the nature and treatment of hearing and speech disorders.

18.0103 *Speech Pathology/Audiology.* An instructional program that describes the nature and treatment of hearing and speech disorders, including the principles and techniques of providing therapy that restores or partially restores normal functioning.

18.0199 *Audiology and Speech Pathology, Other.* Any instructional program in audiology and speech pathology not described above.

18.02 *Basic Clinical Health Sciences.* A group of instructional programs that describe the bodily structures and functions of humans, the principles and techniques of identifying and classifying diseases which affect them, and the foundation of scientific knowledge that is essential to the restoration and preservation of health.

18.0201 *Clinical Anatomy.* An instructional program that describes the structure and parts of the human body, including the bones, tissues, and organs, and their relationship to the restoration and preservation of good health.

18.0202 *Clinical Biochemistry.* An instructional program that describes the nature and chemical composition of the substances that make up the human body, the changes in these substances, and the energy associated with those changes.

18.0203 *Clinical Microbiology.* An instructional program that describes the nature and properties of harmful microorganisms and of the disease processes they induce in humans.

18.0204 *Clinical Pathology.* An instructional program that describes the cause and effect of diseases with emphasis on the structural and functional changes which develop during the disease process, and the systematic methods of detecting these changes.

18.0205 *Physiology.* An instructional program that describes living organisms or their parts, and their relationship to the restoration and preservation of good health.

18.0299 *Basic Clinical Health Sciences, Other.* Any instructional program in basic clinical health sciences not described above.

18.03 *Chiropractic.* A group of instructional programs (see 18.0301).

18.0301 *Chiropractic.* An instructional program that describes the principles and techniques for relieving disorders believed due to abnormal function of the nervous system by manipulation and treatment of the structures of the body, especially those of the spinal column.

18.04 *Dentistry.* A group of instructional programs that describe the prevention, diagnosis, and treatment of diseases of the teeth and gums and related parts, including the replacement of missing teeth. Includes instruction in the principles and procedures associated with an established, specialized field of dental science.

18.0401 *Dentistry, General.* An instructional program that describes the prevention, diagnosis, and treatment of diseases of the teeth and gums and related parts, including the replacement of missing teeth.

18.0402 *Dental Public Health.* An instructional program that describes the formulation and delivery of public preventive and curative dental health services.

- 18.0403 *Endodontics*. An instructional program that describes the etiology, diagnosis, prevention, and treatment of conditions that affect the dental pulp and other periodontal tissues, including pulp canal therapy and root canal therapy.
- 18.0404 *Oral/Maxial Facial Surgery*. An instructional program that describes the principles and techniques of performing restorative surgery to the area of the jaws and face and treating diseases, injuries, or deformities of the jaws and associated structures by manual manipulation or by using instruments and appliances.
- 18.0405 *Oral Pathology*. An instructional program that describes the functional and structural changes and diseases that affect the area of the mouth.
- 18.0406 *Orthodontics*. An instructional program that describes the principles and techniques involved in the prevention and correction of dental and oral anomalies.
- 18.0407 *Pedodontics*. An instructional program that describes the principles and techniques of diagnosing and treating the dental and mouth conditions of young children.
- 18.0408 *Periodontics*. An instructional program that describes the nature and treatment of diseases which affect the mucous membranes and other structures which surround and support the teeth.
- 18.0409 *Prosthodontics*. An instructional program that describes the principles and techniques of constructing artificial devices, and the restoration and maintenance of oral function by the replacement of missing teeth and other oral structures with such artificial devices.
- 18.0499 *Dentistry, Other*. Any instructional program in dentistry not described above.
- 18.05 *Emergency/Disaster Science*. A group of instructional programs (see 18.0501).
- 18.0501 *Emergency/Disaster Science*. An instructional program that describes the methods, procedures, and techniques of providing health care services to persons who need emergency treatment and are not housed in a health care facility.
- 18.06 *Epidemiology*. A group of instructional programs (see 18.0601).
- 18.0601 *Epidemiology*. An instructional program that describes the nature and treatment of epidemic diseases which affect large numbers of people at the same time, spreading from person to person in localities where it was not prevalent previously.
- 18.07 *Health Sciences Administration*. A group of instructional programs that describe administering some aspect of the health care delivery system.
- 18.0701 *Health Care Administration*. An instructional program that describes the principles and procedures of planning, organizing, and controlling a hospital or health care facility.
- 18.0702 *Health Care Planning*. An instructional program that describes the processes involved in the development of alternative ways of achieving the health goals and expectations of society, including the identification of consequences of each alternative for the purpose of guiding decision makers in their deliberations.
- 18.0703 *Medical Records Administration*. An instructional program that describes the administration of all institutional medical records.
- 18.0799 *Health Sciences Administration, Other*. Any instructional program in health sciences administration not described above.
- 18.08 *Hematology*. A group of instructional programs (see 18.0801).
- 18.0801 *Hematology*. An instructional program that describes the nature, functions, and diseases of blood and blood-forming organs and tissues in animals and humans.

- 18.09** *Medical Laboratory.* A group of instructional programs (see 18.0901).
- 18.0901** *Medical Laboratory.* An instructional program that describes the principles and practices of clinical laboratory procedures.
- 18.10** *Medicine.* A group of instructional programs that describe the principles and procedures used in the observation, diagnosis, care, and treatment of illness, disease, injury, deformity, or other anomalies in humans. Includes instruction in the principles and procedures associated with an established, specialized field of medicine.
- 18.1001** *Medicine, General.* An instructional program that describes the principles and procedures used in the observation, diagnosis, care, and treatment of illness, disease, injury, deformity, or other anomalies in humans.
- 18.1002** *Allergies and Endomology.* An instructional program that describes the diagnosis, care, and treatment of the condition of hypersensitivity of the body to specific substances that results in various types of distressful reactions.
- 18.1003** *Anesthesiology.* An instructional program that describes the principles and practices of administering substances that produce general or local insensibility to pain and other sensation.
- 18.1004** *Colon and Rectal Surgery.* An instructional program that describes the principles and techniques of treating diseases, injuries, or deformities of the colon and rectum and adjacent areas by manual manipulation or by using instruments and appliances.
- 18.1005** *Dermatology.* An instructional program that describes the skin, its structures, functions, diseases, and the treatment of skin diseases.
- 18.1006** *Emergency Medicine.* An instructional program that describes the methods, procedures, and techniques of providing health care services to persons who need emergency treatment.
- 18.1007** *Family Practice.* An instructional program that describes the prevention, diagnosis, and treatment of diseases and injuries that commonly occur in the general population.
- 18.1008** *Geriatrics.* An instructional program that describes the methods, procedures, and techniques of providing health care to the aged, and for their characteristic afflictions.
- 18.1009** *Immunology.* An instructional program that describes the phenomena of immunity from disease, the production of such immunity in humans, induced sensitivity, and allergy.
- 18.1010** *Internal Medicine.* An instructional program that describes the principles and procedures involved in the diagnosis and nonsurgical treatment of diseases of the body.
- 18.1011** *Neurological Surgery.* An instructional program that describes the principles and techniques of treating diseases, injuries, or deformities of the nervous system by manual manipulation or by using instruments and appliances.
- 18.1012** *Nuclear Medicine.* An instructional program that describes the principles and techniques of medicine that deal with the diagnosis and treatment of illnesses and injuries that are peculiar to atomic energy devices and installations.
- 18.1013** *Obstetrics and Gynecology.* An instructional program that describes the nature and treatment of diseases of women, especially those affecting the reproductive system and the process of childbirth, and of the care and treatment of women in childbirth and during the period before and after delivery.
- 18.1014** *Ophthalmology.* An instructional program that describes the anatomy, physiology, diseases and disorders, and care and treatment of the eye.
- 18.1015** *Orthodontic Surgery.* An instructional program that describes the principles and techniques involved in the prevention and correction of dental and oral anomalies by surgical procedures.



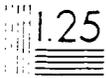
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Minimum resolution of the system is 1.0 line pairs per millimeter.

- 18.1016 *Orthopedic.* An instructional program that describes the principles and techniques of correcting or curing deformities and diseases of the spine, bones, joints, muscles, or other parts of the skeletal system.
- 18.1017 *Otorhinolaryngology/Otolaryngology.* An instructional program that describes the anatomy, physiology, disorders, diseases, and care and treatment of the ear, the nose, and the throat.
- 18.1018 *Pathology.* An instructional program that describes the principles and techniques involved in diagnosing, from body tissue, fluids, secretions, and other specimens, the presence and stage of a disease.
- 18.1019 *Pediatrics.* An instructional program that describes the principles and techniques associated with the medical and hygienic care of children and of the diagnosis and treatment of children's diseases.
- 18.1020 *Physical Medicine and Rehabilitation.* An instructional program that describes the principles and techniques of medicine which deal with the diagnosis, treatment, and prevention of disease with the aid of physical agents, such as light, heat, cold, water, and electricity, or with mechanical apparatus.
- 18.1021 *Plastic Surgery.* An instructional program that describes the principles and techniques of repairing or replacing malformed, injured, or lost organs or tissues using surgical methods.
- 18.1022 *Preventive Medicine.* An instructional program that describes the principles and techniques of medicine which deal with the promotion of physical and mental health, the prevention of disease, and the prolongation of life, as opposed to the mere treatment of existing disease.
- 18.1023 *Psychiatry.* An instructional program that describes the diagnosis, treatment, and prevention of disorders of the mind.
- 18.1024 *Neurology.* An instructional program that describes the structure, function, disorders, diseases, and care and treatment of the nervous system.
- 18.1025 *Radiology.* An instructional program that describes the principles and techniques of using roentgen rays and radioactive substances for diagnostic and therapeutic purposes.
- 18.1026 *Surgery.* An instructional program that describes the principles and techniques of treating diseases, injuries, or deformities by manual operation and manipulation or by using instruments and appliances.
- 18.1027 *Thoracic Surgery.* An instructional program that describes the principles and techniques of treating diseases, injuries, or deformities of the region of the chest by manual manipulation or by using instruments and appliances.
- 18.1028 *Urology.* An instructional program that describes the anatomy, physiology, disorders, diseases, and care and treatment of the genitourinary tract.
- 18.1099 *Medicine, Other.* Any instructional program in medicine not described above.

18.11 *Nursing.* A group of instructional programs that describe the techniques and procedures for providing care for sick, disabled, infirm, or other individuals, including the administering of medications and treatments, assisting a physician during treatments and examinations, and planning education for health maintenance.

- 18.1101 *Nursing, General.* An instructional program that generally describes the techniques and procedures for providing care for sick, disabled, infirm, or other individuals, including the administration of medication and treatments, assisting a physician during treatments and examinations, and planning education for health maintenance.
- 18.1102 *Anesthetist.* An instructional program that describes the techniques and procedures for administering anesthetics.
- 18.1103 *Maternal/Child Health.* An instructional program that describes the techniques and procedures for providing pre-natal care to pregnant women and post-natal care to new mothers and their infants.
- 18.1104 *Medical Surgical.* An instructional program that describes the techniques and procedures for providing care to patients in clinical and surgical settings.

- 18.1105 Nursing Administration.** An instructional program that describes the techniques and procedures for managing nursing personnel and services in health care delivery agencies.
- 18.1106 Psychiatric/Mental Health.** An instructional program that describes the techniques and procedures for providing care to mentally ill patients.
- 18.1107 Public Health.** An instructional program that describes the techniques and procedures for providing preventive and curative nursing services.
- 18.1199 Nursing, Other.** Any instructional program in nursing not described above.
- 18.12 Optometry.** A group of instructional programs (see 18.1201).
- 18.1201 Optometry.** An instructional program that describes the principles and techniques for testing, determining defects, and prescribing corrective means for decreasing deficiencies in an individual's vision.
- 18.13 Osteopathic Medicine.** A group of instructional programs (see 18.1301).
- 18.1301 Osteopathic Medicine.** An instructional program that describes the system of therapy utilizing accepted physical, medical, and surgical methods, of diagnosis and therapy, and emphasizing the importance of normal body mechanics and manipulation methods of detecting and correcting faulty body structure.
- 18.14 Pharmacy.** A group of instructional programs (see 18.1401).
- 18.1401 Pharmacy.** An instructional program that describes the principles and procedures of procuring, preparing, compounding, recommending, administering, and dispensing drugs, medicines, and devices used in the diagnosis, treatment, or prevention of disease.
- 18.15 Podiatry.** A group of instructional programs (see 18.1501).
- 18.1501 Podiatry.** An instructional program that describes the anatomy, physiology, disorders, diseases, and treatment of the foot and treatment of the foot.
- 18.16 Population and Family Planning.** A group of instructional programs (see 18.1601).
- 18.1601 Population and Family Planning.** An instructional program that describes the principles and procedures involved in controlling population and family size and approximate birth dates of children by the appropriate use of contraceptive techniques.
- 18.17 Pre-Dentistry.** A group of instructional programs (see 18.1701).
- 18.1701 Pre-Dentistry.** An instructional program that prepares individuals with the express purpose for entering into a program in dentistry.
- 18.18 Pre-Medicine.** A group of instructional programs (see 18.1801).
- 18.1801 Pre-Medicine.** An instructional program that prepares individuals with the express purpose for entering into a program in medicine.
- 18.19 Pre-Pharmacy.** A group of instructional programs (see 18.1901).
- 18.1901 Pre-Pharmacy.** An instructional program that prepares individuals with the express purpose for entering into a program in pharmacy.
- 18.20 Pre-Veterinary.** A group of instructional programs (see 18.2001).
- 18.2001 Pre-Veterinary.** An instructional program that prepares individuals with the express purpose for entering into a program in veterinary medicine.

18.21	Prosectoria	group of instructional programs (see 2100).			
18.2101	<i>Prosectoria</i>	An instructional program that describes principles and techniques involved in anatomical demonstration.			
18.22	Public Health	group of instructional programs (see 2200).			
18.2201	<i>Public Health Laboratory Science</i>	An instructional program that describes the principles and practices in laboratory procedures.			
18.23	Toxicology	group of instructional programs (see 2300).			
18.2301	<i>Toxicology</i>	An instructional program that describes the nature and extent of the distribution of safe levels of chemical species.			
18.24	Veterinary	group of instructional programs (see 2400).			
18.2401	<i>Veterinary Pathology</i>	An instructional program that describes the nature, prevention, and treatment of medical ailments.			
18.99	Health	group of instructional programs (see 2000).			
18.9901	<i>Health</i>	An instructional program that describes laboratory procedures.			
18.9902	<i>Health</i>	An instructional program that describes laboratory procedures not described above.			
19	Home Economics	group of instructional programs (see 1900).			
19.01	<i>Home Economics</i>	An instructional program that describes the relationship between the physical, emotional, and intellectual development of the individual and the natural and social environment. Includes the study of consumer behavior, home management, and home economics.			
19.0101	<i>Home Economics</i>	An instructional program that describes the relationship between the physical, emotional, and intellectual development of the individual and the natural and social environment. Includes the study of consumer behavior, home management, and home economics.			
19.0102	<i>Home Economics</i>	An instructional program that describes the relationship between the physical, emotional, and intellectual development of the individual and the natural and social environment. Includes the study of consumer behavior, home management, and home economics.			
19.02	Business	group of instructional programs (see 2000).			
19.0201	<i>Business</i>	An instructional program that describes the relationship between business and the home.			
19.03	Family and Community Services	group of instructional programs (see 1900).			
19.0301	<i>Family and Community Services</i>	An instructional program that describes the cultural, social, and technological influences on the family and community support services that are available.			
19.0302	<i>Family and Community Services</i>	An instructional program that describes the cultural, social, and technological influences on the family and community support services that are available.			
19.0303	<i>Family and Community Services</i>	An instructional program that describes the cultural, social, and technological influences on the family and community support services that are available.			
19.0399	<i>Family and Community Services</i>	An instructional program in family and community services not described above.			

Family/Consumer Resource Management. A general instructional program that describes the concepts, skills, and processes through which decisions about the use of resources are directed toward goal achievement in home and family living; also involved is an understanding of goal formulation and of management functions and processes through which the household and financial activities of the individuals and families are accomplished.

19.0401 Family/Consumer Resource Management, General. An instructional program that generally describes the concepts, skills, and processes through which decisions about the use of resources are directed toward goal achievement in home and family living; also involves an understanding of goal formulation and of management functions and processes through which the household and financial activities of the individuals and families are accomplished.

19.0402 Consumer Science. An instructional program that describes the attitudes, concepts, skills, and understandings of consumers which determine their satisfaction in their choice and utilization of goods and services.

19.0403 Consumer Economics. An instructional program that describes the attitudes, concepts, skills, and understandings of consumers which determine their satisfaction in their choice and utilization of goods and services.

..... **19.0404 Consumer Management.** 19.0401

19.0405 Family/Consumer Resource Management, Other. An instructional program in family/ consumer resource management which does not fall under 19.0401-19.0404.

Food Science and Handling. An instructional program that describes the role of food in human health and nutrition, with emphasis on food handling techniques and procedures for preparing meals for individuals and families.

19.0501 Food and Health Aspects. An instructional program that generally describes the role of food in human health and nutrition, with emphasis on food handling techniques, procedures, and the place of food in the diet as a family activity.

19.0502 Food Science and Handling, General. An instructional program that describes the role of food in human health and nutrition, with emphasis on food handling techniques, procedures, and the place of food in the diet as a family activity.

19.0503 Food and Health Aspects, General. An instructional program that describes the role of food in human health and nutrition, with emphasis on food handling techniques, procedures, and the place of food in the diet as a family activity.

19.0504 Food Science and Handling, Other. An instructional program that describes the role of food in human health and nutrition, with emphasis on food handling techniques, procedures, and the place of food in the diet as a family activity.

19.0599 Food Science and Handling, Other. An instructional program in food science and handling which does not fall under 19.0501-19.0504.

..... **Home Economics Education.** 19.0601-19.0602

Human Environment and Furnishings. An instructional program that describes the psychosocioeconomic and aesthetic aspects of the selection, furnishing, household equipment, interior design, and of the maintenance and repair of the home.

19.0601 Human Environment and Furnishings, General. An instructional program that generally describes the psychosocioeconomic and aesthetic aspects of the selection, furnishing, household equipment, interior design, and of the maintenance and repair of the home.

19.0602 Household Equipment. An instructional program that describes the purpose, selection, care, use, and maintenance of equipment in the home.

- 19.0603 *Housing.* An instructional program that describes how housing designs can meet the needs of individuals, families, and society. Fundamental interactions between human development and behavior and the environment are emphasized.
- *Interior Design.* (See 04.0501).
- 19.0699 *Human Environment and Housing, Other.* Any instructional program in human environment and housing not described above.
- 19.07 *Individual and Family Development.* A group of instructional programs that describe the basic development and behavioral characteristics of the individual within the context of the family from conception through death.
- 19.0701 *Individual and Family Development, General.* An instructional program that generally describes the basic developmental and behavioral characteristics of the individual within the context of the family from conception through death.
- 19.0702 *Adult Development.* An instructional program that describes the self-development and actualization of individuals through the family, including physiological and psychological aspects of human sexuality, personal hygiene, grooming, value development, interpersonal relationships, and patterns of adult living.
- *Child Development, Care, and Guidance.* (See 20.0102).
- 19.0703 *Family Counseling.* An instructional program that describes the factors affecting marital relationships, parent-child relationships, and the functioning of the family as a whole, including economic problems, separation and divorce, death, exceptional children, and illness.
- 19.0704 *Family Relations.* An instructional program that describes the family throughout the life cycle with emphasis on family structures, functions, interactions, and roles of family members.
- 19.0705 *Geriatric Services.* An instructional program that describes the characteristics, attitudes, and behavior of older people in family settings, including physical, social, economic, and psychological needs and concerns; related legislation; and community resources.
- 19.0799 *Individual and Family Development, Other.* Any instructional program in individual and family development not described above.
- 19.08 *International/Comparative Home Economics.* A group of instructional programs (see 19.0801).
- 19.0801 *International/Comparative Home Economics.* An instructional program that describes how to integrate understanding of other cultures and home economics content for the purpose of designing, providing, and evaluating home economics programs in international settings.
- 19.09 *Textiles and Clothing.* A group of instructional programs that describe the ways of meeting psychological, sociological, economic and physiological needs for clothing and textiles, including techniques of production, distribution, marketing, consumption, refurbishing, and relevant legislation.
- 19.0901 *Textiles and Clothing, General.* An instructional program that generally describes the ways of meeting psychological, sociological, economic, and physiological needs for clothing and textiles, including techniques of production, distribution, marketing, consumption, refurbishing, and relevant legislation.
- 19.0902 *Fashion Design.* An instructional program that describes the creative combination of line, form, and fabric in the production of garments and accessories for the high fashion field.
- 19.0903 *Textiles and Clothing, Retail.* An instructional program that describes the dynamic interaction within the distribution system of clothing, home furnishings, and textiles as products move to consumers.
- 19.0904 *Textile Science.* An instructional program that describes the design, production, fibers and finishes of textiles.
- 19.0999 *Textiles and Clothing, Other.* Any instructional program in textiles and clothing not described above.
- 19.99 *Home Economics, Other.* A group of instructional programs in home economics not described above.
- 19.9999 *Home Economics, Other.* Any instructional program in home economics not described above.

20. Vocational Home Economics. A summary of groups of instructional programs that emphasize the development of competencies (including skills and job attitudes) needed for securing and holding paid employment at the entry level, and/or preparing for advancement in occupations utilizing home economics education knowledge and skills. Home economics education instructional programs are developed from home economics education subject matter areas that include requirements of the specific vocations. Programs that prepare individuals for paid employment include: (1) preparation for the home economics profession; (2) assistance to professional home economists and professionals in fields related to home economics, business, and public and private agencies, and (3) other services and/or assistance directly related to home economics education subject matter areas, offered in formal and/or informal settings combined with supervised labor.

20.01 Consumer and Homemaking Home Economics. A group of instructional programs that prepares individuals at all education levels for the occupation of homemaking, emphasizing the development of attitudes, skills, and knowledge; development of understanding attitudes, standards, values, and skills relevant to individual and family living; instruction in consumer education, food and nutrition, family living and parenthood education, child development, housing, home management (including resource management), and clothing and textiles; and instruction in the improvement of the home, the quality of individual and family life, and employment opportunities. Instructional programs prepare individuals for the multiple roles of homemaker and wage earner.

20.0101 Comprehensive Consumer and Homemaking Home Economics. An instructional program that prepares individuals for the occupation of homemaker. Includes instruction in all subject matter areas concerned with the economics, social and cultural conditions, needs, and values of the individual and family, and emphasizes the basic principles and interrelationships among these areas.

20.0102 Child Development, Care, and Guidance. An instructional program that prepares individuals to understand children's physical, mental, emotional, and social growth and development, and to provide care and guidance. The program draws on aspects of the social and biological sciences, home economics, and child development as a component. Observation and actual experiences with children and their development are integral parts of the program.

20.0103 Clothing and Textiles. An instructional program that prepares individuals to understand the social, psychological, and physiological aspects of clothing and textiles; the nature, characteristics, and uses of clothing and textile products; the selection, construction, maintenance, and alteration of clothing and textile products; and the effect of consumer choices on the individual and family as well as on the clothing and textile industry.

20.0104 Consumer Education. An instructional program that prepares individuals to understand the values, needs, wants, goals, and resources that enable youth and adults to make rational choices and contribute to family stability and quality of life. Includes instruction in budgeting and financial planning; use of credit, savings, investments, taxes, consumer buying, and consumer rights and responsibilities.

20.0105 Exploratory Homemaking. An instructional program that provides individuals in middle and junior high school the opportunity to explore home economics subject matter areas. Includes instruction in the development of positive self-concepts; understanding personal growth and development; and relationships with peers and family members in becoming contributing members of the school and community.

20.0106 Family/Individual Health. An instructional program that prepares individuals to understand the related aspects of health in family living with special emphasis on nutrition, emotional health, and physical health; the relationship of the health of an individual to the well-being of the family; and the prevention of illness and the basic care of the ill and convalescent in the home, including the care of the young child and the handicapped.

20.0107 Family Living and Parenthood. An instructional program that prepares individuals to understand the nature, function, and significance of human relationships within the family unit. Includes instruction in the concepts and principles related to various family living conditions; the establishment and maintenance of relationships; and the preparation for marriage, parenthood, and family life. Instruction emphasizes the uniqueness of families and individuals, the development and growth of the individuals, and meeting the needs and interests of individuals and family members.

20.0108 Food and Nutrition. An instructional program that prepares individuals to understand the principles of nutrition; the relationship of nutrition to health and well-being; the selection, preparation, and care of food; meal management to meet individual and family food needs and patterns of eating; good economics and ecology; and optimal use of the food dollar.

- 1109 **Home Management.** An instructional program that prepares individuals to understand the establishment and maintenance of a satisfying home and family life including decisionmaking regarding human and non-human resources. Includes instruction in the societal and economic influences on individual and family values, goals, and standards; family economics; and the organization of activities in the home to successfully combine the roles of homemaker and wage earner.
- 1110 **Home Furnishing and Equipment.** An instructional program that prepares individuals to understand the social, psychological, and social influences on complex housing decisions required for a desirable living environment. Includes instruction in the human and environmental factors influencing the form and use of housing; the selection and use of housing; construction and interior design; furnishings and equipment; and the selection and use of available resources for achieving living space to meet individual and family needs.
- 1111 **Homemaking Home Economics, Other.** An instructional program in consumer and home-economics not described above.
- 1112 **Child Care and Guidance Management and Services.** A group of instructional programs that prepare individuals for child care and guidance, foster care, family day care, and teacher aide, often under the supervision of professional personnel. Includes instruction in child growth and development; program planning and management; safety and behavior guidance; recreational and play activities; child abuse and neglect; parent-child relationships; learning experiences for children; interpersonal relationships; laws, regulations, and policies relating to child-care services and maintenance of children's environments.
- 1113 **Child Care and Guidance Management and Services, General.** An instructional program that generally prepares individuals for occupations in child care and guidance, foster care, family day care, and teacher aide, often under the supervision of professional personnel. Includes instruction in child growth and development; nutrition; program planning and management; safety and behavior guidance; recreational and play activities; child abuse and neglect; parent-child relationships; learning experiences for children; interpersonal relationships; and laws, regulations, and policies relating to child-care services and maintenance of children's environments.
- 1114 **Child Care Aide/Assisting.** An instructional program that prepares individuals to assist with the care and supervision of infants and young children under the supervision of professional personnel. Includes instruction in planning, organizing, and conducting activities which promote physical, interpersonal, motor, mental, and social growth and development of acceptable behavior. Programs prepare individuals as child-care assistants to assume major responsibilities for caring and supervising the development of young children, or as child-care assistants or professionals. Also instruction is given in the supervision of other child-care personnel.
- 1115 **Child Care Management.** An instructional program that prepares individuals to develop and manage effective child care programs by providing instruction in the development of facilities; selecting staff and staffing patterns; providing a total program for children; and working with parents, community agencies and organizations, and others concerned with children.
- 1116 **Foster Care/Family Care.** An instructional program that prepares individuals to assume the duties of a foster parent or skilled family day care worker under the supervision of the sponsoring agency. Includes instruction in child growth and development; special needs of deprived or handicapped children; health and safety; nutrition; program/play activities; parental involvement; and laws, regulations, and policies related to family day care services.
- 1117 **Teacher Aide.** An instructional program that prepares individuals to assist a teacher in conducting and carrying out the objectives of a child care program(s) within the context of the school or particular setting. Includes instruction in program planning for a child's development, playground activities, the health and safety of children, and administrative and managerial activities.
- 1118 **Child Care and Guidance Management and Services, Other.** An instructional program in child care and guidance management and services not described above.

- 20.03 **Clothing, Apparel, and Textiles Management, Production, and Services.** A group of instructional programs that prepare individuals for occupations concerned with the entire spectrum of clothing, apparel, and textile management, production, and services, including but not limited to construction; fabric and fabric care; design; principles of clothing construction and selection; fitting and alterations of ready-to-wear garments; custom tailoring; clothing maintenance; and textiles testing.
- 20.031 **Clothing, Apparel and Textiles Management, Production, and Services: General.** An instructional program that generally prepares individuals for occupations concerned with the entire spectrum of clothing, apparel, and textile management, production, and services, including but not limited to construction; fabric and fabric care; design; principles of clothing construction and selection; fitting and alterations of ready-to-wear garments; custom tailoring; clothing maintenance; and textiles testing.
- 20.032 **Clothing Maintenance Aide.** An instructional program that prepares individuals to repair, clean garments and accessories according to customer preferences. Includes instruction in examining garments to determine their condition; repair, alteration, and cleaning needed; fitting and making garments for professional repair; making repairs; and with laundering and drycleaning of garments; labeling and bagging garments; and in keeping records, keeping shop orderly and clean, and constructing elements in commercial and apparel factories as needed.
- 20.033 **Commercial Garment and Apparel Construction.** An instructional program that prepares individuals to design and construct ready-to-wear garments and apparel. Includes instruction in designing and drafting patterns for standardized sizes; selecting appropriate fabric; cutting fabric with commercial cutting equipment; stitching fabric on commercial power sewing equipment; applying finishes and alterations to garments and accessories; and pressing and packing garments or apparel.
- 20.034 **Custom Apparel and Sewing Machine Seamstress.** An instructional program that prepares individuals to construct, alter, and prepare garments to customer specifications. Includes instruction in knowledge of fibers, textiles, fabrics, and notions; understanding and applying metrication in measuring and fitting as may be necessary; constructing, fitting, and preparing garments for women, men, and children according to customer specifications; operating standard or power sewing machines or various hand stitches; designing, making, and fitting patterns for individuals; laying out patterns on the fabric and cutting out fabric with hand or power driven scissors or shears; basting fabric pieces together and fitting garments to customers; sewing fabrics together with specific seam finishes for particular fabrics; refitting and adjusting garments to customers; finishing by hand or power operated equipment; and pressing to remove wrinkles and smooth seams, collars, cuffs, and so forth.
- 20.0305 **Custom Tailoring and Alteration.** An instructional program that prepares individuals to construct, alter, and repair men's, women's, and children's garments. Includes instruction in selection of design, fabric, and notions to customer specifications; taking measurements and fitting; preparing patterns; cutting, sewing, and altering by hand; and/or finishing of garments.
- 20.0306 **Fashion/Fabric Coordination.** An instructional program that prepares individuals to assist in coordinating garments for various occasions. Includes instruction in fashion design, trends, characteristic styles, and merchandising; describing to customers the garment construction, quality, and fiber content; care and durability; selecting current fashion for figure types, fitting garments on customers; planning and presenting fashion shows; developing fashion displays; assisting home sewers with construction techniques; advising on quantity of fabric needed; measuring and cutting fabric; ordering, receiving, and displaying fabric and merchandise; keeping shop and store clean and orderly; and taking inventories and replenishing stock.
- 20.0307 **Textiles Testing.** An instructional program that prepares individuals to select and correctly use tools and equipment for specific textiles tests under the direction of clothing or textile technicians. Includes instruction in identifying qualities of various fibers, yarns, and fabrics; collecting and testing fiber slivers, roving, and yarn of fabric samples, making elementary statistical calculations; recording test results; comparing test results with samples or prepared standards; reporting variation from standards to director of quality control; checking and calibrating various testing instruments using metrication; and keeping laboratories clean.

20.0302 Wedding/Specialty Consulting. An instructional program that prepares individuals to advise individuals and/or families with preparation for weddings, including wedding etiquette; selection of attire for bride, groom, attendants, and others; fitting and marking garments for needed alterations; assisting in selection of invitations, flowers, linens, and other home accessories; working with caterers and photographers; keeping records of gifts, constructing, displaying, and selling wedding attire; and conducting wedding fashion shows.

20.0399 Clothing, Apparel, and Textiles Management, Production, and Services, Other. Any instructional program in clothing, apparel, and textiles management, production, and services not described above.

20.04 Food Production, Management, and Services. A group of instructional programs that prepare individuals in managerial, production, and service skills used in institutional, commercial, or self-owned food establishments or other food industry occupations. Includes instruction in planning, selecting, storing, purchasing, preparing, and serving quantity food and food products; nutritive values; safety and sanitation precautions; use and care of commercial equipment; serving techniques; special diets; and management of food establishments.

20.0401 Food Production, Management, and Services, General. An instructional program that generally prepares individuals in managerial, production, and service skills used in institutional, commercial, or self-owned food establishments or other food industry occupations. Includes instruction in planning, selecting, storing, purchasing, preparing, and serving quantity food and food products; nutritive values; safety and sanitation precautions; use and care of commercial equipment; serving techniques; special diets; and management of food establishments.

20.0402 Baking. An instructional program that prepares individuals to engage in the preparation of bakery food products for use in commercial food establishments, for distribution, or for special functions. Includes instruction in making, freezing, and handling bakery products; decorating, counter display; and service and packaging of bakery products.

20.0403 Chef/Cook. An instructional program that prepares individuals to engage in the preparation and cooking of a variety of foods to maintain nutritive values and quality control. Instruction is given in the determination of quantity of food to be prepared and the size of servings for different types of food services; the use and care of commercial equipment; adherence to sanitation procedures for storage, preparation, and service of foods; the observation of health, safety, and sanitation precautions in the cooking areas; and the use of equipment or utensils.

20.0404 Dietetic Aide/Assisting. An instructional program that prepares individuals to utilize nutritional knowledge in preparing and serving meals to individuals with special dietary needs under the direction of a professional dietitian. Includes instruction in selecting and using specific pieces of equipment for particular tasks in food preparation and services; preparing and serving suitable foods according to diet instruction; examining assembled trays for conformance with diet regulations and nutritional values; handling foods, beverages, equipment, utensils, and table settings in order to prevent contamination; observing safety and sanitary standards and regulations; following appropriate emergency procedures; and assisting in the management of dietary facilities. Programs prepare dietetic aides to work under the direction of an assistant and a professional dietitian in performing the less complicated dietetic tasks; programs prepare dietetic assistants to work under the direction of a professional dietitian.

20.0405 Food Catering. An instructional program that prepares individuals to engage in booking, planning, and managing the preparation and service of food for special occasions. Includes instruction in arranging for equipment, tables, space, decorations, and entertainment, and for transportation of food and equipment; supervising cleanup; assisting in taking inventories; storing food and supplies; observing safety precautions; and following food handling procedures as specified by health and sanitation regulations. Programs prepare individuals both as food caterers, who perform managerial tasks and are recognized as experts in specialty food preparation and products, and as food-caterer aides, who work under the direction of food caterers.

20.0406 Food Service. An instructional program that prepares individuals to select, purchase, prepare, or produce food in quantities; preserve nutritive value of foods; follow standard recipes for quality control; prepare and serve quantity foods; receive, store, and issue foods and supplies; select and use commercial equipment for production and services; observe safety precautions and sanitation regulations; store and handle food and equipment; clean food preparation and service areas; take inventories; and work in or manage food-service establishments.

20.0407 **Testing.** An instructional program that prepares individuals to select and correctly use proper tools and equipment for specified food tests, usually under the direction of food scientists, technicians or home economists. Includes instruction in identifying qualities of various foods; collecting and testing food samples as directed; making elementary statistical calculations; recording test results; comparing test results with samples or prepared standards; reporting variations from standards to director of quality control; and cleaning and calibrating various testing instruments.

20.0408 **Food Service.** An instructional program that prepares individuals for overall planning, supervising, purchasing, preparing, and serving goods and food products in school food-service establishments. Includes instruction in planning appetizing and nutritional menus suitable for school-age students; creating an attractive and pleasant environment for serving of foods; recording meals served and food used on a daily basis; making inventory of supplies and equipment; assisting in cleaning school food-service facilities; and performing dishwashing tasks and storage of equipment or food according to health, safety, and sanitation regulations.

20.0499 **Production, Management, and Services, Other.** Any instructional program in food production, management, and services not described above.

20.05 **Home Furnishings and Equipment Management, Production, and Services.** A group of instructional programs that prepare individuals in the entire spectrum of home furnishings and equipment. Includes instruction in assisting purchasers in selecting and maintaining suitable home furnishings and/or equipment; assisting interior designers, decorators, or professional home service directors; making slipcovers, draperies, curtain and window treatments, and upholstery; and designing accessories such as floral arrangements or decorations.

20.050 **Home Furnishings and Equipment Management, Production, and Services, General.** An instructional program that generally prepares individuals in the entire spectrum of home furnishings and equipment. Includes instruction in assisting purchasers in selecting and maintaining suitable home furnishings and/or equipment; assisting interior designers, decorators, or professional home service directors; making slipcovers, draperies, curtain and window treatments, and upholstery; and designing accessories such as floral arrangements or decorations.

20.0502 **Custom Drapery and Window Treatment Design/Making.** An instructional program that prepares individuals to custom design and construct draperies and other window treatments. Includes instruction in art principles, color design, textiles, fabrics, and finishes; selecting appropriate fabrics; measuring and determining materials needed; determining cost of materials and labor; constructing various types of draperies and other window treatments; using chemical or other finishes to prolong the life of fabrics; and installing draperies or other window treatment fixtures and other materials.

20.0503 **Custom Slipcovering and Upholstering.** An instructional program that prepares individuals to upholster, reupholster, repair, and slipcover home furnishing items in accordance with customer specifications. Includes instruction in art principles, color schemes, textures, designs, and textiles; selecting fabrics, trims, and finishes appropriate for the particular item(s); measuring and determining cost of materials and labor; identifying and using chemical treatments that prolong the life of fabrics or materials; and constructing and using latest techniques and methods for upholstering, reupholstering, repairing, and slipcovering the various types of home furnishings.

20.0504 **Floral Design.** An instructional program that prepares individuals to design and fashion floral arrangements and decorations. Includes instruction in selecting appropriate containers, flowers, and accessories for special occasions or events such as weddings, dinners, banquets, and holiday celebrations; working with consumers, decorators, or caterers to plan and design floral arrangements that are appropriate and within cost limitations; arranging various floral decorations for a variety of settings, including households and commercial businesses; and packaging and delivering the decorative arrangements.

20.0505 **Home Decorating.** An instructional program that prepares individuals in processing procedures, observations, and techniques essential to the development of designs for home environments.

20.0506 **Home Furnishings Aide.** An instructional program that prepares individuals to assist customers in the selection of home furnishings and accessories to meet individual needs, preferences, and budgets. Includes instruction in how to assist interior designers/decorators in planning and decorating customer homes or offices; constructing draperies, window treatment items, and other home accessories; and coordinating arrangements of furniture, samples, and accessories in stores.

20.0507 *Home-Service Assisting.* An instructional program that prepares individuals to assist professional home-service directors in demonstrating various kinds of large and small appliances and/or household equipment to consumers; in selecting, using, and caring for equipment for maximum consumer satisfaction and energy conservation; and in the planning of kitchens, laundry areas, and other work places in homes, churches, community centers, schools, and other institutions.

20.0599 *Home Furnishings and Equipment Management, Production, and Services, Other.* Any instructional program in home furnishings and equipment management, production, and services not described above.

20.06 *Institutional, Home Management, and Supporting Services.* A group of instructional programs that prepare individuals for occupations in institutional/executive housekeeping; hotel/motel housekeeping; commercial cleaning; provision of services to the aged in their homes and in institutions; assistance in the management of household tasks; and assistance to consumers in decision making in relation to housing, food, clothing, community resources, and other homemaking concerns.

20.0601 *Institutional, Home Management, and Supporting Services, General.* An instructional program that generally prepares individuals for occupations in institutional/executive housekeeping; hotel/motel housekeeping; commercial cleaning; provision of services to the aged in their home and in institutions; assistance in the management of household tasks; and assistance to consumers in decision making in relation to housing, food, clothing, community resources, and other homemaking concerns.

20.0602 *Companion to the Aged.* An instructional program that prepares individuals to assist aged persons with personal, social, and business affairs, including grooming and dressing; care for clothing and household linens; preparation and service of meals; practice of safety measures to prevent accidents; keeping house; answering correspondence and paying bills; outings for exercise or social activities; and reading, playing games, playing cards, or other entertainment activities. Programs prepare individuals to perform other duties to protect or promote the well-being of the aged/elderly by assisting them in living independently in their own homes, thus preventing adverse effects of isolation and loneliness.

20.0603 *Consumer Aide/Assisting.* An instructional program that prepares individuals to assist consumers in making wise and satisfying selections and rational decisions in the marketplace. Includes instruction in preparing menus or recipes using food specials or in-season foods; posting unit costs; demonstrating new food products and equipment; advising consumers on the use, care, and storage of products and equipment; preparing information exhibits, displays, and handouts; performing personal shopping services; and performing other activities that are appropriate in meeting the needs of consumers.

20.0604 *Custodial Services.* An instructional program that prepares individuals to clean and care for buildings; fixtures; furnishings; floor surfaces such as linoleum, plastic, terrazzo, tile, rugs, and wood; and wall coverings such as panel, paint, plastic, wood, and synthetic materials. Instruction is given in using and caring for tools; dusting, wet mopping, scrubbing, waxing, and refinishing surfaces; cleaning toilets, windows, and walls; applying various cleaning agents, protective coatings, and disinfectants; scheduling work; and purchasing custodial supplies.

20.0605 *Executive Housekeeping.* An instructional program that prepares individuals to clean and care for floors, floor coverings, walls, woodwork, windows, window treatments, furnishings, and equipment; make beds, launder and store household linens; and use cleaning and sanitizing compounds, fluids, and chemicals correctly to protect health and safety of individuals. Advanced instruction and training prepare learners to assume executive housekeeping duties such as establishing standards and procedures for housekeeping staff; planning work schedules; making recommendations to management for repairs, replacement, or relocation of furnishings, equipment, or space; keeping inventories of supplies and equipment; and evaluating performance of staff with recommendations for promotion or dismissal.

20.0606 *Homemaker's Aide.* An instructional program that prepares individuals to assist homemakers in the management and operation of the home. Includes instruction in the care and guidance of children; care of the aged or convalescent; meal planning, marketing, and food preparation and service; laundering and caring for clothing and household linens; cleaning and caring for home furnishings, household furnishings, and household equipment; overall management and decision making; and interpersonal relationships.

20.0607 *Therapeutic Recreation Aide.* An instructional program that prepares individuals to assist a therapeutic recreation technician in providing recreational activities to patients. Instruction may be given in collecting, setting up, ordering, and storing equipment and supplies; maintaining records; escorting patients between nursing units and therapy centers; and maintaining cleanliness and order in treatment areas.

20.0699 *Institutional, Home Management, and Supporting Services, Other.* Any instructional program in institutional, home management, and supporting programs not described above.

20.99 *Vocational Home Economics, Other.* A group of instructional programs in vocational home economics not described above.

20.9999 *Vocational Home Economics, Other.* Any instructional program in vocational home economics not described above.

21. **Industrial Arts.** A summary of groups of instructional programs that provide individuals with knowledge that: (a) pertains to the body of related subject matter, or related courses, organized for the development of understanding about all aspects of industry and technology, including learning experiences involving activities such as experimenting, designating, constructing, evaluating, and using tools, machines, materials, and processes; and (b) assists individuals in making informed and meaningful occupational choices or which prepare them for entry into advanced trade and industrial or technical education programs.

21.01 *Industrial Arts.* A group of instructional programs that provide individuals with knowledge that: (a) pertains to the body of related subject matter, or related courses, organized for the development of understanding about all aspects of industry and technology, including learning experiences involving activities such as experimenting, designating, constructing, evaluating, and using tools, machines, materials, and processes; and (b) assists individuals in making informed and meaningful occupational choices or which prepare them for entry into advanced trade and industrial or technical education programs.

21.0101 *Industrial Arts, General.* An instructional program that provides the student with general exploratory experiences and insights into trade and industrial career opportunities so that the individual can make meaningful occupational and educational choices. Instruction is provided in using tools, equipment, materials, and products associated with industry and technology; role playing in simulated enterprises associated with a number of career areas; studying and analyzing the materials, products, processes, problems, uses, developments, and contributions of many of the elements in various career areas; studying the organization of numerous industries and businesses while experiencing typical aspects of many; and researching, planning, designing, constructing, evaluating, and generalizing in association with problems, projects related to various careers.

21.0102 *Construction.* An instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes occupational and basic technical information and laboratory experiences directly related to current practices in the construction industry. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Individuals are provided with the information and basic skills concerned with the erection, installation, maintenance, or repair of residential and industrial structures. Instructional activities are centered around building structures using a variety of construction materials and processes involving design, masonry, carpentry, electricity, sheet-metal, and plumbing.

21.0103 *Drafting and Design.* An instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes occupational and basic technical information and laboratory experiences directly related to drafting in industry. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Instructional activities involve lettering, freehand sketching, orthographic projection, geometric construction, dimensioning, sectioning, reproduction, pictorial drawing and auxiliary views using technical drawing instruments and techniques.

21.0104 *Electricity/Electronics.* An instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes occupational and basic technical information and laboratory experiences directly related to electricity and electronics. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Individuals are provided with the fundamentals of the theory, measurement, control, and applications of electrical energy. Instructional activities include reading instructions, interpreting schematics, setting up experimental apparatus, making measurements, testing circuits, and recording results.

21.0105 *Energy, Power, and Transportation.* An instructional program that prepares individuals for understanding the energy, power, and transportation industries and occupations by utilizing exploratory experiences and laboratory activities. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Instructional activities focus on the theory, maintenance, and servicing of machines and devices with emphasis on energy sources, small gas engines, basic electricity, and methods of transmitting power.

21.0106 *Graphic Arts.* An instructional program that prepares individuals for enrollment in advanced vocational and technical education programs by providing exploratory experiences and laboratory activities related to graphic arts. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. The program focuses on the fundamentals of graphic arts, including the study of information and skills concerned with graphic reproduction using the tools, material and processes of the printing industry. Instructional experiences include designing, composing, printing, and evaluating reproduction techniques.

21.0107 *Manufacturing Materials Processing.* An instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes operational and basic technical information and laboratory experiences directly related to the manufacturing processes used by industry. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Instructional activities focus on the study of the information and the basic skills concerned with industrial-technical materials and processes, including their properties and utilization as they are fabricated into usable products. Instructional activities involve hand and machine processes for the fabrication, analysis, or testing of metals, woods, and plastics.

21.0199 *Industrial Arts, Other.* Any instructional program in industrial arts not described above.

22. **Law.** A summary of groups of instructional programs that describe the principles and procedures, in the form of legislation, decisions, regulations, and orders, developed and enforced by institutions of government in order to maintain social order.

22.01 *Law.* A group of instructional programs that describe the principles and procedures, in the form of legislation, decisions, regulations, and orders, developed and enforced by institutions of government in order to maintain social order.

22.0101 *Law.* An instructional program that describes the principles and procedures, in form of legislation, decisions, regulations, and orders, developed and enforced by institutions of government in order to maintain social order.

22.0102 *Pre-Law.* An instructional program that prepares individuals to be admitted to and pursue a professional career in law.

22.0103 *Legal Assisting.* An instructional program that prepares individuals to assist professional lawyers or to work in courthouses. Includes instruction in basic principles of law; legal documentation; legal-library operations and utilization; civil and criminal law, legal records; courts; and legal procedures.

22.0199 *Law, Other.* Any instructional program in law not described above.

23. **Letters.** A summary of groups of instructional programs that describe sounds, literature, syntax, phonology, morphology, semantics, sentences, prose and verse, as well as the development of skills and attitudes used in communicating and evaluating thought and feelings through oral and written language.

23.01 *English, General.* A group of instructional programs (see 23.0101).

23.0101 *English, General.* An instructional program that generally describes the skills and techniques essential to learning the English language.

23.02 *Classics.* A group of instructional programs (see 23.0201).

23.0201 *Classics.* An instructional program that describes the language and literature of the ancient Greco-Roman world in English translation.

- 23.03** *Comparative Literature.* A group of instructional programs (see 23.0301).
- 23.0301** *Comparative Literature.* An instructional program that describes the comparison of various aspects of literature, based on selected dimensions such as genre, theme, literary period, and language source.
- 23.04** *Composition.* A group of instructional programs (see 23.0401).
- 23.0401** *Composition.* An instructional program that describes the principles and techniques of selecting, combining, arranging, and developing ideas, and expressing them in appropriate written forms such as narration, exposition, or persuasion.
- 23.05** *Creative Writing.* A group of instructional programs (see 23.0501).
- 23.0501** *Creative Writing.* An instructional program that describes the techniques of composition of such forms of literature as the short story, verse, drama, and others that involve some degree of spontaneity and exercise of the imagination on the part of the writer.
- 23.06** *Linguistics (includes Phonetics, Semantics, and Philology).* A group of instructional programs (see 23.0601).
- 23.0601** *Linguistics (Includes Phonetics, Semantics, and Philology).* An instructional program that describes the descriptive, historical, and theoretical aspects of language, its nature, structure, varieties, and development, including especially sound systems (phonology), grammatical systems (morphology, syntax), lexical systems (vocabulary, semantics), and writing systems.
- 23.07** *Literature, American.* A group of instructional programs (see 23.0701).
- 23.0701** *Literature, American.* An instructional program that describes American writings in prose or verse, especially those of an imaginative or critical character, including biography, criticism, drama, essay, fiction, poetry, myths, and legends.
- 23.08** *Literature, English.* A group of instructional programs (see 23.0801).
- 23.0801** *Literature, English.* An instructional program that describes British writings in prose or verse, especially those of an imaginative or critical character, including biography, drama, essay, criticism, fiction, poetry, myths and legends.
- 23.09** *Rhetoric.* A group of instructional programs (see 23.0901).
- 23.0901** *Rhetoric.* An instructional program that describes the effective use of language, including an examination of the patterned use of language for its effects.
- 23.10** *Speech, Debate, and Forensics.* A group of instructional programs (see 23.1001).
- 23.1001** *Speech, Debate, and Forensics.* An instructional program that describes strategies for improving competence in speaking and listening and the application of forms of argument to testing ideas or reaching decisions.
- 23.11** *Technical and Business Writing.* A group of instructional programs (see 23.1101).
- 23.1101** *Technical and Business Writing.* An instructional program that describes the theory, methods, and skills needed for writing scientific, technical, and business papers, and monographs.
- 23.99** *Letters, Other.* A group of instructional programs in letters not described above.
- 23.9999** *Letters, Other.* Any instructional program in letters not described above.
- 24.** **Liberal/General Studies.** A summary of groups of instructional programs that describes the foundation necessary for understanding self and society through an appreciation of the concerns of civilization and our common heritage.
- 24.01** *Liberal/General Studies.* A group of instructional programs (see 24.0101).
- 24.0101** *Liberal/General Studies.* An instructional program that describes the foundation necessary for understanding self and society through an appreciation of the concerns of civilization and our common heritage.
- 24.0199** *Liberal/General Studies, Other.* Any instructional program in liberal/general studies not described above.

25. Library and Archival Sciences. A summary of groups of instructional programs that describe the knowledge and skills required to develop, organize, store, retrieve, administer, and facilitate the use of collections of information in such formats as books, documents, manuscripts, machine-readable data bases, filmed and recorded materials, specimens, and artifacts.

25.01 Library and Archival Sciences, General. A group of instructional programs (see 25.0101).

25.0101 Library and Archival Sciences, General. An instructional program that generally describes the knowledge and skills required to develop, organize, store, retrieve, administer, and facilitate the use of collections of information in such formats as books, documents, manuscripts, machine-readable data bases, filmed and recorded materials, specimens, and artifacts.

25.02 Archival Science. A group of instructional programs (see 25.0201).

25.0201 Archival Science. An instructional group that describes the collection, organization, preservation, service, and retrieval of public records, documents of historical significance, and other archival materials.

25.03 Library Assisting. A group of instructional programs (see 25.0301).

25.0301 Library Assisting. An instructional program that prepares individuals to assist professional librarians. Includes instruction in principles, systems, processes, and procedures in library operation; library resources and services; processes of acquisition, cataloging, storage, and display systems; discovery and retrieval of requested materials; management of books, periodicals, and other printed materials; technological media such as audiovisual and education equipment; public services such as library loans; and data-processing implications for automation of records in libraries.

25.04 Library Science. A group of instructional programs (see 25.0401).

25.0401 Library Science. A group of instructional programs that describes the attitudes, knowledge, and skills of library materials and libraries.

25.05 Museology. A group of instructional programs (see 25.0501).

25.0501 Museology. An instructional program that describes the attitudes, knowledge, and skills required to develop, organize, administer, store and retrieve, and facilitate the use of museums and museum materials including art galleries and zoological gardens.

25.99 Library and Archival Sciences, Other. A group of instructional programs in library and archival sciences not described above.

25.9999 Library and Archival Sciences, Other. Any instructional program in library and archival sciences not described above.

26. Life Sciences. A summary of groups of instructional programs that describe the systematic study of living organisms.

26.01 Biology, General. A group of instructional programs (see 26.0101).

26.0101 Biology, General. An instructional program that generally describes life forms, including the structure, function, reproduction, growth, heredity, evolution, behavior, and distribution of living organisms.

26.02 Biochemistry and Biophysics. A group of instructional programs (see 26.0201).

26.0201 Biochemistry and Biophysics. An instructional program that describes the chemistry of living systems, the biological phenomena that result from the interactions among these systems, including energy changes, and biological phenomena using physical principles and methods.

26.03 Botany. A group of instructional programs that describe the structure, function, reproduction, growth, heredity, evolution, and descriptions of plant life.

26.0301 Botany, General. An instructional program that generally describes the structure, function, reproduction, growth, heredity, evolution, and descriptions of plant life.

26.0302 Bacteriology. An instructional program that describes the morphology, physiology, metabolism, and growth of bacteria, and their effects upon substances and other organisms.

- 26.0303 *Mycology.* An instructional program that describes the morphology, physiology, taxonomy, and ecology of fungi.
- 26.0304 *Plant Genetics.* An instructional program that describes the inheritance of traits and characters in plants.
- 26.0305 *Plant Pathology.* An instructional program that describes the nature, causes, and development of plant diseases.
- 26.0306 *Plant Pharmacology.* An instructional program that describes the therapeutic and toxic effects of drugs, including pharmacodynamic behavior, metabolism, interactions with other chemicals, and their biochemical and physiological effects on plants.
- 26.0307 *Plant Physiology.* An instructional program that describes the study of plant functions, including such metabolic processes as photosynthesis, respiration, assimilation, and transpiration.
- 26.0399 *Botany, Other.* Any instructional program in botany not described above.
- 26.04 *Cell and Molecular Biology.* A group of instructional programs that describe the cell as a unit of organization in plants and animals, and the molecular structure and processes of living organisms.
- 26.0401 *Cell Biology.* An instructional program that describes the cell as a unit of organization in plants and animals.
- 26.0402 *Molecular Biology.* An instructional program that describes the molecular structure and processes of living organisms.
- 26.0499 *Cell and Molecular Biology, Other.* Any instructional program in cell and molecular biology not described above.
- 26.05 *Microbiology.* A group of instructional programs (see 26.0501).
- 26.0501 *Microbiology.* An instructional program that describes micro-organisms including bacteria, viruses, protista, protozoans, and certain fungi.
- 26.06 *Miscellaneous Specialized Areas, Life Sciences.* A group of instructional programs that describe specialized areas of the life sciences not described elsewhere in life sciences.
- 26.0601 *Anatomy.* An instructional program that describes the structure of plants and animals including their tissues, organs, and systems.
- 26.0602 *Biometrics and Biostatistics.* An instructional program that describes the application of mathematical and statistical models and methodology in biology.
- 26.0603 *Ecology.* An instructional program that describes the interrelationships among organisms and their environments.
- 26.0604 *Embryology.* An instructional program that describes the formation, development, structure, and functional activities of embryos, organisms in the state of development before emergence from the egg or before metamorphosis.
- 26.0605 *Endocrinology.* An instructional program that describes the endocrine glands and their secretions in relation to their processes or functions, including their care and treatment.
- 26.0606 *Histology.* An instructional program that describes the microscopic structures, compositions, and functions of organic tissues in plants, animals, and human beings through selection and preparation of microscopic section.
- 26.0607 *Marine Biology.* An instructional program that describes the nature and interrelationships of salt-water organisms and their aquatic environments.

- 26.0608 *Neuro Sciences.* An instructional program that describes the anatomy, physiology, biochemistry, and molecular biology of nerves and nervous tissues and their relation to behavior and learning.
- 26.0609 *Nutritional Sciences.* An instructional program that describes the science of food in relationship to human needs, the nutrients and other substances of food, and the processes by which the organism ingests, digests, absorbs, transports, utilizes, and excretes food substances.
- 26.0610 *Parasitology.* An instructional program that describes the structure, reproduction, development, distribution, and control of plant and animal parasites.
- 26.0611 *Radiobiology.* An instructional program that describes the nature and effects of radiation on organisms and biological systems.
- 26.0612 *Toxicology.* An instructional program that describes the nature, source, identification, and characteristics of poisons, toxic substances, and exogenous chemical agents which can cause death, illness, or injury upon contact with, or ingestion into the body, including the detection and measurement of their effects and the use of antidotes and other curatives.
- 26.0699 *Miscellaneous Specialized Areas, Life Sciences, Other.* Any instructional program in specialized areas of life sciences not described above.

26.07 *Zoology.* A group of instructional programs that describe animals, including their structure, reproduction, growth, heredity, evolution, behavior, and distribution.

- 26.0701 *Zoology, General.* An instructional program that generally describes animals, including their structure, function, reproduction, growth, heredity, evolution, behavior, and distribution.
- 26.0702 *Entomology.* An instructional program that describes insects, including life cycle, morphology, physiology, ecology, and taxonomy.
- 26.0703 *Genetics, Human and Animal.* An instructional program that describes the inheritance of traits and character in human beings and animals.
- 26.0704 *Pathology, Human and Animal.* An instructional program that describes the nature, causes, and development of human and animal diseases.
- 26.0705 *Pharmacology, Human and Animal.* An instructional program that describes the therapeutic and toxic effects of drugs, including pharmacodynamic behavior, metabolism, interactions with other chemicals, and the biochemical, and physiological effects on human beings and animals.
- 26.0706 *Physiology, Human and Animal.* An instructional program that describes human and animal functions, including processes such as respiration, circulation, digestion, excretion, and reproduction.
- 26.0799 *Zoology, Other.* Any instructional program in zoology not described above.

26.99 *Life Sciences, Other.* A group of instructional programs in life sciences not described above.

26.9999 *Life Sciences, Other.* Any instructional program in life sciences not described above.

27. **Mathematics.** A summary of groups of instructional programs that describe the sciences of logical symbolic language and their applications.

27.01 *Mathematics, General.* A group of instructional programs (see 27.0101).

27.0101 *Mathematics, General.* An instructional program that generally describes the sciences of logical symbolic language and their applications.

27.02 *Actuarial Sciences.* A group of instructional programs (see 27.0201).

27.0201 *Actuarial Sciences.* An instructional program that describes the mathematical and statistical methodology dealing with problems of risks in insurance.

- 27.03** *Applied Mathematics.* A group of instructional programs (see 27.0301).
- 27.0301** *Applied Mathematics.* An instructional program that describes the real world systems by deterministic and probabilistic means.
- 27.04** *Pure Mathematics.* A group of instructional programs (see 27.0401).
- 27.0401** *Pure Mathematics.* An instructional program that describes number, form, arrangement, and associated relationships using rigorously defined literal numerical and operational symbols.
- 27.05** *Statistics.* A group of instructional programs (see 27.0501).
- 27.0501** *Statistics.* An instructional program that describes the probabilistic models involving a finite number of outcomes and the science of collecting, describing, and interpreting numerical data.
- 27.99** *Mathematics, Other.* A group of instructional programs in mathematics not described above.
- 27.9999** *Mathematics, Other.* Any instructional program in mathematics not described above.

28. Military Sciences. A summary of groups of instructional programs that describe the causative factors and tactical principles of warfare, armed conflict, and defense.

- 28.01** *Aerospace Science (Air Force).* A group of instructional programs (see 28.0101).
- 28.0101** *Aerospace Science (Air Force).* An instructional program that describes the purpose and objectives of the United States Air Force and all its branches, its rank structure, its customs and traditions, and its importance in national defense and security.
- 28.02** *Coast Guard Science.* A group of instructional programs (see 28.0201).
- 28.0201** *Coast Guard Science.* An instructional program that describes the purpose and objectives of the United States Coast Guard and all its branches, its rank structure, its customs and traditions, and its importance in national defense and security.
- 28.03** *Military Science (Army).* A group of instructional programs (see 28.0301).
- 28.0301** *Military Science (Army).* An instructional program that describes the purpose and objectives of the United States Army and all its branches, its rank structure, its customs and traditions, and its importance in national defense and security.
- 28.04** *Naval Science (Navy, Marines).* A group of instructional programs (see 28.0401).
- 28.0401** *Naval Science (Navy, Marines).* An instructional program that describes the purpose and objectives of the United States Navy and Marine Corps and all its branches, its rank structure, its customs and traditions, and its importance in national defense and security.
- 28.99** *Military Sciences, Other.* A group of instructional programs in military sciences not described above.
- 28.9999** *Military Sciences, Other.* Any instructional program in military sciences not described above.

29. Military Technologies. A summary of groups of instructional programs that prepare individuals to undertake the broad range of technical tasks required to keep the armed forces combat ready. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of military science in a variety of areas such as military communications and weapons systems.

- 29.01** *Military Technologies.* A group of instructional programs (see 29.0101).
- 29.0101** *Military Technologies.* An instructional program that prepares individuals to undertake the broad range of technical tasks required to keep the armed forces combat ready. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of military science in a variety of areas such as military communications and weapons systems.
- 29.0199** *Military Technologies, Other.* Any instructional program in military technologies not described above.

- 30. Multi/Interdisciplinary Studies.** A summary of groups of instructional programs, the components of which, derive from two or more separate conventional academic instructional programs.
- 30.01 Biological and Physical Sciences.** A group of instructional programs (see 30.0101).
- 30.0101 Biological and Physical Sciences.** An instructional program that describes either a general synthesis of one or more of the biological and physical sciences (for example, applied science or general science), or a specialization which draws from the biological and physical sciences (for example, environmental science/studies).
- 30.02 Clinical Pastoral Care.** A group of instructional programs (see 30.0201).
- 30.0201 Clinical Pastoral Care.** An instructional program that describes the methods, theories, and techniques of providing care and counseling through the relationship of theology to the practice of the ministry.
- 30.03 Engineering and Other Disciplines.** A group of instructional programs (see 30.0301).
- 30.0301 Engineering and Other Disciplines.** An instructional program that describes either a general synthesis of one or more of the engineering and other disciplines (for example, engineering and mathematics, or engineering and physics), or a specialization which draws from engineering and other disciplines.
- 30.04 Humanities and Social Sciences.** A group of instructional programs (see 30.0401).
- 30.0401 Humanities and Social Sciences.** An instructional program that describes either a general synthesis of one or more of the humanities and social sciences (for example, humanities), or a specialization which draws from the humanities and social sciences (for example, behavioral science, classical civilization, or human development).
- 30.05 Peace Studies.** A group of instructional programs (see 30.0501).
- 30.0501 Peace Studies.** An instructional program that describes the peace development process including the analysis of peace and war systems, dispute settlement techniques, social movements, working for creative change, world order studies, and conflict analysis and regulation.
- 30.06 Systems Science.** A group of instructional programs (see 30.0601).
- 30.0601 Systems Science.** An instructional program that describes a multidisciplinary approach to the study of innate complexity which by synthesizing systemic findings from the natural, social, technological, behavioral and life sciences, and other specialized fields brings holistic perspectives to the solution of problems within a general context.
- 30.07 Women's Studies.** A group of instructional programs (see 30.0701).
- 30.0701 Women's Studies.** An instructional program that describes the history, society, politics, culture, and economics of women.
- 30.99 Multi/Interdisciplinary Studies, Other.** A group of instructional programs in multi/interdisciplinary studies not described above.
- 30.9999 Multi/Interdisciplinary Studies, Other.** Any instructional program in multi/interdisciplinary studies not described above.
- 1. Parks and Recreation.** A summary of groups of instructional programs that describe the principles and procedures of providing parks and recreational facilities and services for the benefit of the general public.
- 31.01 Parks and Recreation, General.** A group of instructional programs (see 31.0101).
- 31.0101 Parks and Recreation, General.** An instructional program that generally describes the principles and procedures of providing parks and recreational facilities and services for the benefit of the general public.

- 31.02** **Outdoor Recreation.** A group of instructional programs (see 31.0201).
- 31.0201** **Outdoor Recreation.** An instructional program that describes the establishing, maintaining, and operating of recreational facilities.
- 31.03** **Parks and Recreation Management.** A group of instructional programs (see 31.0301).
- 31.0301** **Parks and Recreation Management.** An instructional program that prepares individuals to plan and maintain recreational facilities and programs for public or private agencies.
- 31.04** **Water Resources.** A group of instructional programs (see 31.0401).
- 31.0401** **Water Resources.** An instructional program that describes the physical, biological, and social sciences and practices which are essential to the understanding and management of water resources for optimum yield and use, as well as conservation.
- 31.99** **Parks and Recreation, Other.** A group of instructional programs in parks and recreation not described above.
- 31.9999** **Parks and Recreation, Other.** Any instructional program in parks and recreation not described above.

32. Basic Skills. A summary of groups of instructional programs that describe the fundamental skills a person is normally thought to need in order to function productively in society.

- 32.01** **Basic Skills.** A group of instructional programs that describe the fundamental skills a person is normally thought to need in order to function productively in society.
- 32.0101** **Basic Skills, General.** An instructional program that generally describes the fundamental skills a person is normally thought to need in order to function productively in society.
- 32.0102** **Academic and Intellectual Skills.** An instructional program that describes the ability to reason through analytical and logical thinking.
- 32.0103** **Communication Skills.** An instructional program that describes the development of reading, writing, and speaking abilities that are needed to perform day-to-day tasks and which form the basis of later learning and achievement.
- 32.0104** **Computational Skills.** An instructional program that describes the development of mathematical abilities that are needed to perform day-to-day tasks and which form the basis of later learning and achievement.
- 32.0105** **Job-Seeking/Changing Skills.** An instructional program that describes the development of skills that are generally needed in order to obtain a job: how to assess one's own capabilities and skills, how to find and use information sources on job openings, how to fill out an application, and how to handle an interview.
- 32.0106** **Motor Skills.** An instructional program that describes the enhancement of muscular development and coordination.
- 32.0199** **Basic Skills, Other.** Any instructional program in basic skills not described above.

33. Citizenship/Civic Activities. A summary of groups of instructional programs that describe how individuals can facilitate governmental functions and contribute to the well-being of their community through civic action.

- 33.01** **Citizenship/Civic Activities.** A group of instructional programs that describe how individuals can facilitate governmental functions and contribute to the well-being of their community through civic action.
- 33.0101** **Citizenship/Civic Activities, General.** An instructional program that generally describes how individuals can facilitate governmental functions and contribute to the well-being of their community through civic action.
- 33.0102** **American Citizenship.** An instructional program that describes the improvement of an individual's capacity to understand and function as a citizen through a general understanding of the basic principles of American government, voting rights, and so forth.

- 33.0103 *Civic Appreciation.* An instructional program that describes an increased awareness of an individual's community through understanding local government and history.
- 33.0104 *Civic Participation.* An instructional program that describes the improvement of an individual's capacity to actively participate within the community in specific voluntary functions such as an election official.
- 33.0199 *Citizenship/Civic Activities, Other.* Any instructional program in citizenship/civic activities not described above.

34. Health-Related Activities. A summary of groups of instructional programs that describe the promotion of the health of individuals.

34.01 Health-Related Activities. A group of instructional programs that describe the promotion of the health of individuals.

- 34.0101 *Health-Related Activities, General.* A group of instructional programs that generally describes the promotion of the health of individuals.
- 34.0102 *Birth-Related Health Practices.* An instructional program that describes all facets of childbirth including pre- and post-natal care, care of the newborn, and family planning techniques.
- 34.0103 *Health Enhancement Practices.* An instructional program that describes the principles, techniques, and methods by which individuals can improve their overall physical and emotional well-being.
- 34.0104 *Health Treatment/Prevention Practices.* An instructional program that describes the principles, techniques, and methods by which individuals can improve or maintain their current physical well-being or focus on a specialized area of health care such as weight loss or stress management.
- 34.0199 *Health-Related Activities, Other.* Any instructional program in health-related activities not described above.

35. Interpersonal Skills. A summary of groups of instructional programs that describe how to effectively live and interact with others, social organization, being a congenial friend and companion, establishing courses of action for others, and influencing others to follow.

35.01 Interpersonal Skills. A group of instructional programs that describe how to live and interact with others, social organization, being a congenial friend and companion, establishing courses of action for others, and influencing others to follow.

- 35.0101 *Interpersonal Skills, General.* An instructional program that generally describes how to effectively live and interact with others, social organization, being a congenial friend and companion, establishing courses of action for others, and influencing others to follow.
- 35.0102 *Building Human Relationships.* An instructional program that describes how to increase one's ability to establish and develop mutually satisfactory ties with other human beings.
- 35.0103 *Perception of Others.* An instructional program that describes how to elevate an individual's awareness and capacity to interact with others.
- 35.0104 *Social Role Engineering.* An instructional program that describes how to increase one's ability to understand and cope with others falling in specific roles or groups in society.
- 35.0199 *Interpersonal Skills, Other.* An instructional program in interpersonal skills not described above.

36. Leisure and Recreational Activities. A summary of groups of instructional programs that describe the development of an appreciation for and competency in recreational and leisure-related activities.

36.01 Leisure and Recreational Activities. A group of instructional programs that describe the development of an appreciation for and competency in recreational and leisure-related activities.

- 36.0101 *Leisure and Recreational Activities, General.* An instructional program that generally describes the development of an appreciation for and competency in recreational leisure-related activities.

- 36.0102 *Crafts (Leisure and Recreational)*. An instructional program that describes how to increase one's skills to fashion objects in a specialized area of handwork.
- 36.0103 *Games*. An instructional program that describes how to increase one's ability to engage in specialized activities for amusement or pleasure.
- 36.0104 *Hobbies*. An instructional program that describes how to increase one's interest in a specialized area as a recreational pursuit.
- 36.0105 *Housing/Home Maintenance*. An instructional program that describes how to improve an individual's capacity to perform home repairs and maintenance as well as to acquire additional skills to construct or remodel a home.
- 36.0106 *Nature Appreciation*. An instructional program that describes how to increase one's understanding and knowledge of the natural environment in which we live.
- 36.0107 *Pet Care*. An instructional program that describes how to increase one's ability to care for domesticated animals kept for pleasure.
- 36.0108 *Sports/Physical Education*. An instructional program that describes how to increase one's ability to engage in a particular recreational activity that generally requires physical exertion.
- 36.0109 *Travel*. An instructional program that describes a particular area through an organized trip or tour or increases an individual's ability to undertake a journey.
- 36.0199 *Leisure and Recreational Activities, Other*. Any instructional program in leisure and recreational activities not described above.

37. Personal Awareness. A summary of groups of instructional programs that describe a person's self-perception, values, attitudes, beliefs, and emotional responses.

- 37.01 *Personal Awareness*. A group of instructional programs that describe a person's self-perception, values, attitudes, beliefs, and emotional responses.
 - 37.0101 *Personal Awareness, General*. An instructional program that generally describes a person's self-perception, values, attitudes, beliefs, and emotional responses.
 - 37.0102 *Coping Skills*. An instructional program that describes how to recognize and deal with a person's own emotions in response to events in their lives, such as a death of a spouse, or another close relative.
 - 37.0103 *Personal Decisionmaking*. An instructional program that describes how to develop individuals' abilities to assess decisions affecting their lives and to make life choices consistent with needs and beliefs.
 - 37.0104 *Self-Perception*. An instructional program that describes how to develop, clarify, or modify the views a person holds about himself.
 - 37.0105 *Values, Attitudes, and Beliefs*. An instructional program that describes how to examine, evaluate, or modify the basic tenets and behavior patterns on the basis of which one conducts their life.
 - 37.0199 *Personal Awareness, Other*. Any instructional program in personal skills not described above.

38. Philosophy and Religion. A summary of groups of instructional programs that describe the critical examination of the categories for describing reality, the nature and contexts of human experience, the methodology of rational inquiry and criteria of practice (Philosophy); and the investigation of organized forms, beliefs, and practices related to eternal principles or transcendent spiritual entities (Religion).

- 38.01 *Philosophy*. A group of instructional programs (see 38.0101).
- 38.0101 *Philosophy*. An instructional program that describes the basic truths and principles of being, and of knowledge, or conduct in such fields as ethics, metaphysics, and logic.

38.02 Religion. A group of instructional programs (see 38.0201).

38.0201 Religion. An instructional program that describes the origin, histories, organized forms, beliefs, worship, and practices of specific religions.

38.99 Philosophy and Religion, Other. A group of instructional programs in philosophy and religion not described above.

38.9999 Philosophy and Religion, Other. Any instructional program in philosophy and religion not described above.

39. Theology. A summary of groups of instructional programs that describe the practice and application of theological principles and procedures as they apply to the planning, managing, and organizing of religious activities.

39.01 Biblical Languages. A group of instructional languages (see 39.0101).

39.0101 Biblical Languages. An instructional program that describes the Greek and Hebrew languages as used in the Bible.

39.02 Bible Studies. A group of instructional programs (see 39.0201).

39.0201 Bible Studies. An instructional program that describes the ways in which the Bible has been interpreted and utilized in the continuing evolution of religious traditions.

39.03 Missionary Studies. A group of instructional programs (see 39.0301).

39.0301 Missionary Studies. An instructional program that describes the theories and practices of the Church throughout the world.

39.04 Religious Education. A group of instructional programs (see 39.0401).

39.0401 Religious Education. An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities in religion.

39.05 Religious Music. A group of instructional programs (see 39.0501).

39.0501 Religious Music. An instructional program that describes the relationship of theology to the practice of the ministry and all of its associated aspects.

39.06 Theological Studies. A group of instructional programs (see 39.0601).

39.0601 Theological Studies. An instructional program that describes the relationship of theology to the practice of the ministry and all of its associated aspects.

39.99 Theology, Other. A group of instructional programs in theology not described above.

39.9999 Theology, Other. Any instructional program in theology not described above.

40. Physical Sciences. A summary of instructional programs that describes inanimate objects, processes of matter, energy, and associated phenomena.

40.01 Physical Sciences, General. A group of instructional programs (see 40.0101).

40.0101 Physical Sciences, General. An instructional program that generally describes the major topics, concepts, processes, and interrelationships of nonliving matter and associated phenomena.

40.02 Astronomy. A group of instructional programs (see 40.0201).

40.0201 Astronomy. An instructional program that describes matter and energy in the universe, including the solar system, stars, galaxies, and nebula.

- 40.03 *Astrophysics.* A group of instructional programs (see 40.0301).
- 40.0301 *Astrophysics.* An instructional program that describes the physical and chemical composition of celestial bodies, and of the interactions between matter and radiation within celestial bodies and in interstellar space.
- 40.04 *Atmospheric Sciences and Meteorology.* A group of instructional programs (see 40.0401).
- 40.0401 *Atmospheric Sciences and Meteorology.* An instructional program that describes the chemical and physical properties of the mass of air surrounding the earth, and weather, including air masses and their motions, temperature, atmospheric pressure, clouds, and precipitation, and their relatively short-term interrelation on local, regional, and global scales.
- 40.05 *Chemistry.* A group of instructional programs that describe the micro and macro structure of matter, of the changes matter undergoes, of the energy involved in these changes, and of the models that interpret and the theories and laws that describe these phenomena.
- 40.0501 *Chemistry, General.* A group of instructional programs that generally describes the micro and macro structure of matter, of the changes matter undergoes, of the energy involved in these changes, and of the models that interpret and the theories and laws that describe these phenomena.
- 40.0502 *Analytical Chemistry.* An instructional program that describes the chemical and physical methods and techniques needed to qualitatively, quantitatively, and often structurally characterize a sample, including the proper procedures for obtaining representative samples for analyses and the statistical procedures or evaluating the precision and accuracy of the results.
- 40.0503 *Inorganic Chemistry.* An instructional program that describes all the elements and their compounds, including the isolation, compositions, structures, physical and spectroscopic properties, syntheses, energy relationships, and chemical transformations of these substances, but excluding the hydrocarbons and most of their derivatives.
- 40.0504 *Organic Chemistry.* An instructional program that describes the hydrocarbons and their derivatives, either synthetic or produced by living organisms, including the isolation, compositions, structures, physical and spectroscopic properties, syntheses, energy relationships, and chemical transformations of these substances.
- 40.0505 *Pharmaceutical Chemistry.* An instructional program that describes the chemical and physical properties of organic and inorganic compounds which have medical or pharmaceutical uses, including the synthesis of organic drugs and inorganic pharmaceutical chemistry.
- 40.0506 *Physical Chemistry.* An instructional program that describes the theoretical and experimental investigation of matter, with emphasis on the most fundamental aspects of structure and bonding, and the relationships to the mechanisms and energy changes of transformation.
- 40.0599 *Chemistry, Other.* Any instructional program in chemistry not described above.
- 40.06 *Geological Sciences.* A group of instructional programs that describe the history of the earth and other celestial bodies, especially as recorded in rocks.
- 40.0601 *Geology.* An instructional program that describes the earth and other celestial bodies, including their composition, structure, history, and related changes.
- 40.0602 *Geochemistry.* An instructional program that describes the chemical composition, structure, and reaction of earth materials.
- 40.0603 *Geophysics and Seismology.* An instructional program that describes the effects of physical phenomena on the earth, and earthquakes and artificially produced vibrations in the earth.
- 40.0604 *Paleontology.* An instructional program that describes the fossil evidences of prehistoric life.
- 40.0699 *Geological Sciences, Other.* Any instructional program in geological sciences not described above.

40.07 *Miscellaneous Physical Sciences.* A group of instructional programs that describe specialized areas of the physical sciences not reflected in the other physical sciences groupings.

40.0701 *Metallurgy.* An instructional program that describes the chemical and physical properties of metals.

40.0702 *Oceanography.* An instructional program that describes the ocean and its phenomena, including the physical and chemical properties of water; the topography and composition of the ocean bottom; waves, currents, and tides; and the formation of islands.

40.0703 *Earth Science.* An instructional program that generally describes the origin and structure of the earth.

40.0799 *Miscellaneous Physical Sciences, Other.* Any instructional program in miscellaneous physical sciences not described above.

40.08 *Physics.* A group of instructional programs that describe the physical properties and interactions of matter and energy, including equilibrium, power, wave phenomena, mechanics, heat, electricity, magnetism, sound, light, special relativity, and the particular nature of matter.

40.0801 *Physics, General.* An instructional program that generally describes the physical properties and interactions of matter and energy, including equilibrium, power, wave phenomena, mechanics, heat, electricity, magnetism, sound, light, special relativity, and the particular nature of matter.

40.0802 *Atomic/Molecular Physics.* An instructional program that describes the properties and behavior of matter on the smallest scale at which chemical elements can be identified.

40.0803 *Electron Physics.* An instructional program that describes the behavior and properties of the electron.

40.0804 *Elementary Particle Physics.* An instructional program that describes the fundamental particles of matter that are smaller than an atom, including protons, neutrons, and alpha and beta particles.

40.0805 *Fluids and Plasmas.* An instructional program that describes the properties and behavior of fluids, i.e., liquids, gases, and plasmas.

40.0806 *Nuclear Physics.* An instructional program that describes the intrinsic properties of nucleons and the nucleon-nucleon interaction, nuclear models, and nuclear reactions.

40.0807 *Optics.* An instructional program that describes the nature and propagation of light.

40.0808 *Solid State Physics.* An instructional program that describes the electrical, magnetic, thermal, and optical properties and processes within solids, including theories of conduction of metals, semiconductors, and crystals.

40.0899 *Physics, Other.* Any instructional program in physics not described above.

40.09 *Planetary Science.* A group of instructional programs (see 40.0901).

40.0901 *Planetary Science.* An instructional program that describes the geology of planets other than the earth.

40.99 *Physical Sciences, Other.* A group of instructional programs in the physical sciences not described above.

40.9999 *Physical Sciences, Other.* Any instructional program in physical sciences not described above.

41. *Science Technologies.* A summary of groups of instructional programs that prepare individuals to support and assist various scientists and engineers. Programs stress specialized, practical knowledge related to the mechanical, mathematical, scientific, or technical aspects of various biological, physical, and nuclear sciences.

41.01 *Biological Technologies.* A group of instructional programs that prepare individuals to support and assist biologists in a variety of settings, including commercial, governmental, educational, or other research, biological or pharmaceutical laboratories.

41.0101 *Biological Laboratory Technology.* An instructional program that prepares individuals to support biological scientists in commercial, governmental, or other biological or pharmaceutical laboratories, or to assist teachers in biological-science classrooms or laboratory situations. Includes instruction in identification of biological and zoological specimens (both microorganisms and macroorganisms) and in preparing or processing specimens for biological-science research or operational procedures.

- 41.0102 *Oceanographic (Biological) Technology.* An instructional program that prepares individuals to support marine biologists or oceanographers in collecting or identifying samples of marine organisms, invertebrates, or vertebrates; identifying them biologically; and determining the degree of normalcy or abnormalcy of the specimens. Includes instruction in the biology of marine organisms; processes and materials for collecting, identifying, preserving, dissecting, describing, staining, drawing, and labelling marine organisms found in oceans, lakes, rivers, and stream systems; the development, maintenance, and exploration of fisheries and marine plants; ecology; and effective functioning on board all type of boats and ships.
- 41.0199 *Biological Technologies, Other.* Any instructional program in biological technologies not described above.
- 41.02 *Nuclear Technologies.* A group of instructional programs that prepare individuals to support professionals engaged in developing, manufacturing, testing, researching, maintaining, storing, and handling materials in the nuclear science and energy field. Includes instruction in nuclear physics, radioisotopes, nuclear instrumentation, and safety procedures.
- 41.0201 *Nuclear Materials Handling Technology.* An instructional program that prepares individuals to support nuclear scientists and engineers in handling nuclear materials and in fabricating, labeling, packaging, and safely transporting nuclear fuel elements and radioactive nuclear power plant wastes. Includes instruction in nuclear radiation, design and fabrication of nuclear fuel elements, detection and intensity measurement of radioactivity, and related safety procedures.
- 41.0202 *Nuclear Power Plant Operation Technology.* An instructional program that prepares individuals to become licensed nuclear power plant operators. Includes instruction in radiology, radiation detection, design, control, materials, processes, material balances, equipment, piping systems, and instrumentation in the nuclear power plant, with emphasis on safety procedures and precautions.
- 41.0203 *Nuclear Power Plant Radiation Control Technology.* An instructional program that prepares individuals to detect radioactive materials, to measure intensity or level of radiation, to protect workers, and to decontaminate radioactive areas caused by spills, mishandled materials, or other unusual causes. Includes instruction in nuclear and radiation physics, detection and measurement of radioactive materials, mandated codes and permissible levels of radiation, calibration and use of detecting instruments, radiation by-products, and radioisotopes and their control.
- 41.0204 *Radiologic (Physical) Technology.* An instructional program that prepares individuals to use radioactive isotopes for industrial, commercial, and research purposes such as determining the flow of underground streams, measuring rainfall in areas remote from human habitation, nondestructive testing and inspection of materials, and continuous measurement of paper or metal thickness.
- 41.0299 *Nuclear Technologies, Other.* Any instructional program in nuclear technologies not described above.
- 41.03 *Physical Science Technologies.* A group of instructional programs that prepare individuals to support and assist physical scientists and other related professionals. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of the physical sciences.
- 41.0301 *Chemical Technology.* An instructional program that prepares individuals to support chemists in researching, piloting, controlling, directing and maintaining processing and quality control in the chemical manufacturing field. Includes instruction in material handling, crushing, grinding, and sizing; extraction, distillation, evaporation, drying, absorption, and heat transfer; and assisting in design installation and operation of pilot plants for chemical manufacturing processes.
- 41.0302 *Geological Technology.* An instructional program that prepares individuals to support and assist geologists. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of geology.
- 41.0303 *Metallurgical Technology.* An instructional program that prepares individuals to support professional personnel in the production of, quality control of, and research on metals. Includes instruction in conducting tests on the properties of metals; designing and developing pilot and production plants; developing, operating, and altering test procedures, processes, and equipment; and the analysis of data and preparation of reports.

41.0304 Meteorological Technology. An instructional program that prepares individuals to assist meteorologists or to work in the interpretation and presentation of weather information, based on reports from the National Weather Service or other agency sources. Includes instruction in the theory and applied science of meteorology and weather forecasting; methods, procedures, techniques, and practices used in identifying weather-making atmospheric phenomena; use of instruments for determining wind velocity, rainfall, temperature, and other meteorological conditions; the system for charting weather and the symbols for describing weather conditions; photography and photogrammetry as related to the identification of weather-making phenomena (as shown on weather satellite photographs); and making weather predictions on weather systems charted and observed at a given time.

41.0305 Oceanographic (Physical) Technology. An instructional program that prepares individuals to understand the specialized equipment, instruments, procedures, and techniques determining the depth, temperature, chemical composition, and rate and direction of flow of underwater currents in oceans, seas, or other major bodies of water; the construction and operation of devices used to make measurements of the characteristics of bodies of water, temperature gradients, chemical composition, and dynamics of water movement; and effective functioning on board ship.

41.0399 Physical Science Technologies, Other. Any instructional program in physical science technologies not described above.

41.99 Science Technologies, Other. A group of instructional programs in science technologies not described above.

41.9999 Science Technologies, Other. Any instructional program in science technologies not described above.

42. Psychology. A summary of groups of instructional programs that describe the behavior and experience of people.

42.0 Psychology, General. A group of instructional programs (see 42.0101).

42.0101 Psychology, General. An instructional program that describes the behavior and experience of people.

42.02 Clinical Psychology. A group of instructional programs (see 42.0201).

42.0201 Clinical Psychology. An instructional program that describes the application of appropriate methods and theories selected from psychology and other fields as they relate to dealing with the troubled person.

42.03 Cognitive Psychology. A group of instructional programs (see 42.0301).

42.0301 Cognitive Psychology. An instructional program that describes the acquisition and recall of new behaviors, and of the processes of learning new activities, and of retaining them through time.

42.04 Community Psychology. A group of instructional programs (see 42.0401).

42.0401 Community Psychology. An instructional program that describes the theory and practice of using psychologists, and psychological facts in psychological work not in the academic, school, and clinical contexts, but rather in the broader social community, working with private and public organizations.

42.05 Comparative Psychology. A group of instructional programs (see 42.0501).

42.0501 Comparative Psychology. An instructional program that describes the behavior of members of particular species, and the relationship of the behaviors of the species to their evolutionary origins.

42.06 Counseling Psychology. A group of instructional programs (see 42.0601).

42.0601 Counseling Psychology. An instructional program that describes the theory and practice of systematically selecting the facts and theories of psychology with the intent of advising people about their problems.

42.07 Developmental Psychology. A group of instructional programs (see 42.0701).

42.0701 Developmental Psychology. An instructional program that describes progressive changes in the behavioral process of individuals as a function of aging through the life span, from conception to death.

- 42.08** *Experimental Psychology.* A group of instructional programs (see 42.0801).
- 42.0801** *Experimental Psychology.* An instructional program that describes the general body of methods, data, and laws that have been derived by scientific research, including theoretical and systematic points of view applicable to the prediction, control, and understanding of the behavior of individual human organisms and other species.
- 42.09** *Industrial and Organizational Psychology.* A group of instructional programs (see 42.0901).
- 42.0901** *Industrial and Organizational Psychology.* An instructional program that describes the application of psychological knowledge and methodology to specific work-related problems in industry and government.
- 42.10** *Personality Psychology.* A group of instructional programs (see 42.1001).
- 42.1001** *Personality Psychology.* An instructional program that describes the unique organization of the fairly permanent characteristics that set the individual apart from other individuals and, at the same time, determine how others respond to that person.
- 42.11** *Physiological Psychology.* A group of instructional programs (see 42.1101).
- 42.1101** *Physiological Psychology.* An instructional program that describes the processes that determine what actions will occur at a particular time, and the strength or precision with which those actions will occur.
- 42.12** *Psycholinguistics.* A group of instructional programs (see 42.1201).
- 42.1201** *Psycholinguistics.* An instructional program that describes the psychology of language, including the behavioral processes that enter into the generation of speech and writing, and the understanding of both spoken and written languages.
- 42.13** *Psychometrics.* A group of instructional programs (see 42.1301).
- 42.1301** *Psychometrics.* An instructional program that describes the mathematical and statistical procedures used in psychological test construction and validation, and of the general problems of the measurement of behavior.
- 42.14** *Psychopharmacology.* A group of instructional programs (see 42.1401).
- 42.1401** *Psychopharmacology.* An instructional program that describes the changes in behavior that occur as a function of drug-ingestion, and the psychological processes associated with such changes, including altered states of consciousness and addiction.
- 42.15** *Quantitative Psychology.* A group of instructional programs (see 42.1501).
- 42.1501** *Quantitative Psychology.* An instructional program that describes the application of mathematical and statistical models and methodology in psychology.
- 42.16** *Social Psychology.* A group of instructional programs (see 42.1601).
- 42.1601** *Social Psychology.* An instructional program that describes the behavior of the individual as a member of a group, and of the processes of associating individuals together.
- 42.99** *Psychology, Other.* A group of instructional programs in psychology not described above.
- 42.9999** *Psychology, Other.* Any instructional program in psychology not described above.

3. Protective Services. A summary of groups of instructional programs that describe the principles and procedures for providing police, fire, and other safety services, and for managing penal institutions.

- 43.01** *Criminal Justice.* A group of instructional programs that describe the principles and procedures of developing, administering, and managing correctional, law enforcement, and forensic services.
- 43.0101** *Correctional Administration.* An instructional program that describes the theories and practices of structuring, managing, directing, and controlling agencies and organizations whose purpose it is to provide safety and correctional services.

- 43.0102 *Corrections.* An instructional program that describes the theories, principles, and techniques of developing, administering, and managing services for the incarceration, behavior modification, rehabilitation, and returning of legal offenders to society.
- 43.0103 *Criminal Justice Administration.* An instructional program that describes the theories and practices of structuring, managing, directing, and controlling criminal justice agencies (e.g., the various judicial and administrative court systems).
- 43.0104 *Criminal Justice Studies.* An instructional program that generally describes the principles and procedures of developing, administering, and managing correctional, law enforcement, and forensic services.
- 43.0105 *Criminal Justice Technology.* An instructional program that prepares individuals to work in a law enforcement agency, crime laboratory, mobile unit dealing with physical evidence, juvenile court, or correctional institution. Includes instruction in patrol and investigative activities; traffic control; using polygraph equipment; procedures for initial contact with the public in such matters as obtaining information, preparing reports, and testifying in court; techniques for collection, preparation, and transportation of physical evidence; methods of crime prevention; and methods for investigation and referral of neglected dependent children, delinquents, and youthful offenders.
- 43.0106 *Forensic Studies.* An instructional program that describes the theories, principles, and techniques of developing, administering, and managing services for relating and applying medical facts to legal problems.
- 43.0107 *Law Enforcement.* An instructional program that describes the theories, principles, and techniques of developing, administering, and managing services for the safety and protection of people and property.
- 43.0108 *Law Enforcement Administration.* An instructional program that describes the theories and practices of structuring, managing, directing, and controlling agencies whose purpose it is to provide law enforcement.
- 43.0109 *Security Services.* An instructional program that prepares individuals to police private property to prevent thievery, malicious damage, and dishonesty among employees or patrons, and to maintain order.
- 43.0199 *Criminal Justice, Other.* Any instructional program in criminal justice not described above.
- 43.02 *Fire Protection.* A group of instructional programs that describe the theories, principles, and techniques of developing, administering, and managing services for fire prevention, fire fighting, and rescue.
- 43.0201 *Fire Control and Safety Technology.* An instructional program that prepares individuals to function as a fire control, prevention, and safety specialist. Includes instruction in structural design and materials; meteorological factors impinging upon fire situations; chemistry of combustion; techniques for coping with fires; procedures for handling hazardous materials (such as petroleum products, and other volatile, explosive, or corrosive materials) either routinely or in an accident situation; methods for inspection of equipment and its proper use; and methods for inspection of public and private property for safety conditions.
- 43.0202 *Fire Protection Administration.* An instructional program that describes the theories, principles, and techniques of developing, administering, and managing services for fire prevention, fire fighting, and rescue.
- 43.0203 *Firefighting.* An instructional program that prepares individuals to fight fires, and control the outbreak of fire. Includes instruction in fire department organization; the use of water and other materials in firefighting and various kinds of equipment such as extinguishers, pumps, hoses, ropes, ladders, gas masks, hydrants, and standpipes and sprinkler systems; methods of entry and rescue and salvage practices and equipment; and fire and arson inspection and investigation techniques.
- 43.0299 *Fire Protection, Other.* Any instructional program in fire protection not described above.
- 43.99 *Protective Services, Other.* A group of instructional programs in protective services not described above.
- 43.9999 *Protective Services, Other.* Any instructional program in protective services not described above.

- 44. Public Affairs.** A summary of groups of instructional programs that describe the formulation, implementation, administration, evaluation, and management of public policies and programs, including those services which are directed toward the betterment of economic and social conditions.
- 44.01 Public Affairs, General.** A group of instructional programs (see 44.0101).
- 44.0101 *Public Affairs, General.* An instructional program that generally describes the formulation, implementation, administration, evaluation, and management of public policies and programs, including those services which are directed toward the betterment of economic and social conditions.
- 44.02 Community Services.** A group of instructional programs (see 44.0201).
- 44.0201 *Community Services.* An instructional program that describes the theories, methods, and techniques of combining school and community resources to provide information, instruction, and recreation to all members of a community.
- 44.03 International Public Service.** A group of instructional programs (see 44.0301).
- 44.0301 *International Public Service.* An instructional program that describes the principles and theories underlying the structure and processes of major international organizations, such as the United Nations and the Organization of American States.
- 44.04 Public Administration.** A group of instructional programs (see 44.0401).
- 44.0401 *Public Administration.* An instructional program that describes the knowledge, skills, values, and behaviors involved in the formulation of public policies and the management of public services.
- 44.05 Public Policy Studies.** A group of instructional programs (see 44.0501).
- 44.0501 *Public Policy Studies.* An instructional program that describes the principles and techniques by which systematic judgments and evaluative assessments are made with respect to particular public policy.
- 44.06 Public Works.** A group of instructional programs that describe the role of the government in constructing, maintaining, and providing structures and utilities for use by the general public.
- 44.0601 *Public Sanitation.* An instructional program that describes the theories, techniques, planning, and development of provisions for the maintenance of the health and welfare of the general public.
- 44.0602 *Public Transportation.* An instructional program that describes the theories, techniques, planning, and development of facilities and systems for transporting people and goods.
- 44.0603 *Public Utilities.* An instructional program that describes the theories, techniques, planning, and development of services such as electricity, waste removal, water, power, and transportation, which are owned and operated, or regulated by governmental agencies, on behalf of the general public.
- 44.0699 *Public Works, Other.* Any instructional program in public works not described above.
- 44.07 Social Work.** A group of instructional programs that describe the social interventions that enhance, conserve, and augment the means by which persons, individually or collectively, can solve disruptions in their social existence.
- 44.0701 *Social Work, General.* An instructional program that generally describes the social interventions that enhance, conserve, and augment the means by which persons, individually or collectively, can solve disruptions in their social existence.
- 44.0702 *Medical Social Work.* An instructional program that describes how to remedy social problems that relate specifically to health conditions, such as mental health and mental retardation, physical health, chemical dependency, and others that generally occur in health care settings.
- 44.0799 *Social Work, Other.* Any instructional program in social work not described above.
- 44.99 Public Affairs, Other.** A group of instructional programs in public affairs not described above.
- 44.9999 *Public Affairs, Other.* Any instructional program in public affairs not described above.

- 45. Social Sciences.** A summary of groups of instructional programs that describe the substantive portions of behavior, past and present activities, interactions, and organizations of people associated together for religious, benevolent, cultural, scientific, political, patriotic, or other purposes.
- 45.01 Social Sciences, General.** A group of instructional programs (see 45.0101).
- 45.0101 *Social Sciences, General.* An instructional program that generally describes the major principles and perspectives of the social sciences.
- 45.02 Anthropology.** A group of instructional programs (see 45.0201).
- 45.0201 *Anthropology.* An instructional program that describes the historic and prehistoric origins of man, his physical and cultural development, racial characteristics, social customs, and beliefs.
- 45.03 Archeology.** A group of instructional programs (see 45.0301).
- 45.0301 *Archeology.* An instructional program that describes the historic and prehistoric peoples and their culture through the scientific analysis of their artifacts, inscriptions, monuments, and other remains.
- 45.04 Criminology.** A group of instructional programs (see 45.0401).
- 45.0401 *Criminology.* An instructional program that describes the causes of crime and the methods of detecting and dealing with crime and the criminal, including crime statistics, theories of punishment, and the role of law enforcement in society as an agent for the prevention and treatment of crime.
- 45.05 Demography.** A group of instructional programs (see 45.0501).
- 45.0501 *Demography.* An instructional program that describes the vital social statistics, including births, deaths, diseases, marriages, and education rates of populations.
- 45.06 Economics.** A group of instructional programs (see 45.0601).
- 45.0601 *Economics.* An instructional program that describes the transformation of limited resources into goods and services which, upon distribution, are again transformed by consumption to yield satisfaction of human wants.
- 45.07 Geography.** A group of instructional programs (see 45.0701).
- 45.0701 *Geography.* An instructional program that describes the earth and its life; the description of land, sea, and air and the distribution of plant and animal life, including human beings and industries.
- 45.08 History.** A group of instructional programs (see 45.0801).
- 45.0801 *History.* An instructional program that describes the past, including the recording, gathering, criticizing, synthesizing, and presenting evidence about past events.
- 45.09 International Relations.** A group of instructional programs (see 45.0901).
- 45.0901 *International Relations.* An instructional program that describes the agencies, operations, and principles involved in communication and interaction among nations, with emphasis upon the relationship between political subdivisions and governments.
- 45.10 Political Science and Government.** A group of instructional programs (see 45.1001).
- 45.1001 *Political Science and Government.* An instructional program that describes the description and analysis of political institutions and processes, including the origin, development, geographical units, forms, sources of authority, powers, purposes, functions, and operations of government.
- 45.11 Sociology.** A group of instructional programs (see 45.1101).
- 45.1101 *Sociology.* An instructional program that describes human society, social institutions, and social relationships, including the development, purposes, structures, and functions of human groups.

- 45.12 *Urban Studies.* A group of instructional programs (see 45.1201).
- 45.1201 *Urban Studies.* An instructional program that describes the history, society, politics, culture, and economics of urban areas.
- 45.99 *Social Sciences, Other.* A group of instructional programs in social sciences not described above.
- 45.9999 *Social Sciences, Other.* Any instructional program in social sciences not described above.

46. **Construction Trades.** A summary of groups of instructional programs that prepare individuals to erect, install, maintain, and repair buildings, highways, airports, missile sites, and other structures using materials such as metal, wood, stone, brick, glass, concrete, and composition substances. Includes instruction in cost estimating; cutting, fastening, and fitting various materials; the use of hand and power tools; and in following technical specifications and blueprints.

- 46.01 *Brickmasonry, Stonemasonry, and Tile Setting.* A group of instructional programs that prepare individuals to lay brick, concrete block, hard tile, marble and related materials, using trowels, levels, hammers, chisels and other handtools.
 - 46.0101 *Brickmasonry, Stonemasonry, and Tile Setting, General.* An instructional program that generally prepares individuals to lay brick, concrete block, hard tile, marble and related materials, using trowels, levels, hammers, chisels and other handtools.
 - 46.0102 *Brick, Block, and Stonemasonry.* An instructional program that prepares individuals to lay bricks and/or blocks. Includes instruction in laying out and/or spacing bonds; determining vertical and horizontal alignment of courses using gauges, plumb-bobs, and levels; and cutting, notching, and shaping blocks, bricks, terra-cotta veneer, glass, and stone to construct or repair walls, partitions, arches, sewers, and fireplaces.
 - 46.0103 *Tile Setting.* An instructional program that prepares individuals to apply tile to walls, floors, ceilings, and roof decks. Includes instruction in fastening lath to walls; spreading plaster and/or concrete; leveling to the desired depth; spreading mastic or adhesive base; and in cutting, shaping, and positioning tile.
 - 46.0199 *Brickmasonry, Stonemasonry, and Tile Setting, Other.* Any instructional program in brickmasonry, stonemasonry, and tile setting not described above.
- 46.02 *Carpentry.* A group of instructional programs (see 46.0201).
 - 46.0201 *Carpentry.* An instructional program that prepares individuals to lay out, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in common systems of framing, construction materials, estimating, and blueprint reading.
- 46.03 *Electrical and Power Transmission Installation.* A group of instructional programs that prepare individuals to install, operate, maintain, and repair residential, commercial, and industrial electrical systems, and the power lines that transmit electricity from its source of generation to its place of consumption.
 - 46.0301 *Electrical and Power Transmission Installation, General.* An instructional program that generally prepares individuals to install, operate, maintain, and repair residential, commercial, and industrial electrical systems, and the power lines that transmit electricity from its source of generation to its place of consumption.
 - 46.0302 *Electrician.* An instructional program that prepares individuals to install, operate, maintain, and repair electrically-energized systems such as residential, commercial, and industrial electric-power wiring, and D.C. and A.C. motors, controls, and electrical-distribution panels. Includes instruction in the use of test equipment.
 - 46.0303 *Lineworker.* An instructional program that prepares individuals to install, operate, and maintain local, long-distance, and rural lines; erect and construct pole and tower lines; and install underground lines.
 - 46.0399 *Electrical and Power Transmission Installation, Other.* Any instructional program in electrical and power transmission installation not described above.

46.04 *Miscellaneous Construction Trades.* A group of instructional programs that prepare individuals for construction trades other than those described under other groupings in the construction trades category.

46.0401 *Building Maintenance.* An instructional program that prepares individuals to keep a building functioning; service a variety of structures including commercial and industrial buildings and mobile homes. Includes instruction in the basic maintenance and repair skills related to the air conditioning, heating, plumbing, electrical, and other mechanical systems.

46.0402 *Concrete Placing and Finishing.* An instructional program that prepares individuals to construct forms; cut, erect, and fasten steel reinforcing bars and wire mesh; compact concrete by hand or with pneumatic vibrators; and finish exposed surfaces during hardening and after forms have been removed. Includes instruction in the use of chemical additives, and in hand and power concrete-handling equipment.

46.0403 *Construction Inspection.* An instructional program that prepares individuals to inspect and oversee construction of bridges, buildings, dams, highways, and other types of construction work to ensure that procedures and materials comply with plans and specifications.

46.0404 *Drywall Installation.* An instructional program that prepares individuals to install wallboard, plasterboard, or other interior surfaces in structures.

46.0405 *Floor Covering Installation.* An instructional program that prepares individuals to test and repair subfloors and to install resilient tile, sheet goods, or carpeting. Includes instruction in installing underlayments; cutting, fitting, and gluing lining; tacking, stapling, or taping padding; planning, laying out, fitting and installing resilient flooring by gluing or loose-lay methods; installing cover bases, self coving and carpet fasteners; trimming and seaming carpet; and installing stair treads, risers, and countertops.

46.0406 *Glazing.* An instructional program that prepares individuals to prepare, fit, and install glass in structural openings such as windows, doors, and partitions or in display cases and table tops.

46.0407 *Insulation Installation.* An instructional program that prepares individuals to install batt, blanket, board, loose fill, and other forms of insulation in residential, commercial, and industrial buildings in order to heat and cool interiors in energy-efficient ways.

46.0408 *Painting and Decorating.* An instructional program that prepares individuals to finish exterior and interior surfaces by applying protective or decorative coating materials, such as paint, lacquer, and wallpaper. Includes instruction in scraping, burning, or sanding surfaces; making, mixing, and matching paint colors, applying coating with brush, roller, or spray gun; and cutting, pasting, and hanging wallpaper.

46.0409 *Plastering.* An instructional program that prepares individuals to apply plaster, stucco, and similar materials to interior and exterior surfaces. Includes instruction in lathing and in surface preparation, smoothing, and finishing.

46.0410 *Roofing.* An instructional program that prepares individuals to cover roofs and exterior walls of structures with waterproofing or insulating materials, such as asphalt, aluminum, slate, wood, and related composition materials.

46.0411 *Terrazzo Installation.* An instructional program that prepares individuals to apply cement, sand, pigment, and marble chips to floors and stairways to attain a durable and decorative surface; cut metal strips to develop designs, patterns, or levels of finish; and grind and polish surfaces to specifications.

46.0499 *Miscellaneous Construction Trades, Other.* Any instructional program in miscellaneous construction trades not described above.

46.05 *Plumbing, Pipefitting, and Steamfitting.* A group of instructional programs that prepare individuals to lay out, assemble, install, and maintain piping, fixtures, and piping systems for steam, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems. Includes instruction in material selection and use of tools to cut, bend, join, and weld pipes.

46.0501 *Plumbing, Pipefitting, and Steamfitting, General.* An instructional program that generally prepares individuals to lay out, assemble, install, and maintain piping, fixtures, and piping systems for steam, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems. Includes instruction in material selection and use of tools to cut, bend, join, and weld pipes.

- 46.0502 *Pipefitting and Steamfitting.* An instructional program that prepares individuals to lay out, fabricate, assemble, install, and maintain piping and piping systems, fixtures, and equipment for steam, hot water, heating, cooling, lubricating, sprinkling, and industrial processing systems, on the basis of knowledge of systems operation and the study of building plans or working drawings.
- 46.0503 *Plumbing.* An instructional program that prepares individuals to assemble, install, and repair pipes, fittings, and fixtures of heating, water, and drainage systems, according to specifications and plumbing codes.
- 46.0599 *Plumbing, Pipefitting, and Steamfitting, Other.* Any instructional program in plumbing, pipefitting, and steamfitting not described above.
- 46.99 *Construction Trades, Other.* A group of instructional programs in construction trades not described above.
- 46.9999 *Construction Trades, Other.* Any instructional program in construction trades not described above.

47. Mechanics and Repairers. A summary of groups of instructional programs that prepare individuals in the adjustment, maintenance, part replacement, and repair of tools, equipment, and machines.

- 47.01 *Electrical and Electronics Equipment Repair.* A group of instructional programs that prepare individuals to operate, maintain, and repair business machines, communications equipment, major and small appliances, commercial vending machines, and related equipment. Includes instruction in electrical circuitry, simple gearing, linkages and lubrication of machines and appliances, and the use of testing equipment.
- 47.0101 *Electrical and Electronics Equipment Repair, General.* An instructional program that generally prepares individuals to operate, maintain, and repair business machines, communications equipment, major and small appliances, commercial vending machines, and related equipment. Includes instruction in electrical circuitry, simple gearing, linkages and lubrication of machines and appliances, and the use of testing equipment.
- 47.0102 *Business Machine Repair.* An instructional program that prepares individuals to maintain and repair a variety of office machines, such as typewriters, 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.
- 47.0103 *Communication Electronics.* An instructional program that prepares individuals to assemble, install, operate, maintain, and repair one- and two-way communications equipment and systems, including AM and FM radio, television, hearing aids, and other electronic communication devices, or systems. Includes instruction in using actual equipment or educational trainers, in various types of equipment, motors, mechanical devices, power supplies, amplifiers, and digital circuitry; the use of testing equipment; and Federal Communications Commission (FCC) licensing requirements.
- 47.0104 *Computer Electronics.* An instructional program that prepares individuals to assemble, install, operate, maintain, and repair computers and digital-control instruments. Includes instruction in power supplies, number systems, gating logic, A-to-D and D-to-A counters, displays, timing circuitry, memory structure, address modes, buffers and registers, microprocessor design, peripheral equipment, programming, and interfacing, including the use of testing equipment and various computer electronic applications.
- 47.0105 *Industrial Electronics.* An instructional program that prepares individuals to assemble, install, operate, maintain, and repair electrical/electronic equipment used in industry and manufacturing. Includes instruction in using actual equipment, in various types of equipment such as power supplies, amplifiers, motors, controls digital and computer circuitry, synchro and servomechanisms, mechanical-power-transfer systems, hydraulic systems, and three-phase A.C., electronic wave-shaping, and control circuitry.
- 47.0106 *Major Appliance Repair.* An instructional program that prepares individuals to repair, install, and service major gas, electric, and microwave consumer appliances such as stoves, refrigerators, dryers, water heaters, washers, and dishwashers.
- 47.0107 *Motor Repair.* An instructional program that prepares individuals to assemble, install, test, maintain, and repair electric motors, generators, transformers, and related equipment.

- 47.0108** *Small Appliance Repair.* An instructional program that prepares individuals to repair, maintain, and service small appliances such as irons, toasters, waste disposal units, vacuum cleaners, coffee makers, and dehumidifiers.
- 47.0109** *Vending and Recreational Machine Repair.* An instructional program that prepares individuals to install, service, adjust, and repair coin vending and recreational machines; verify by observation that machines are functioning properly; perform tests on ice-making, refrigeration, carbonation, and evaporation systems; dispensing, electrical and coin handling systems; and identify and correct malfunctions, including replacing worn or defective electrical and/or mechanical parts using hand and power tools. Includes instruction in refinishing units, transporting units to location, and connecting water or electric lines.
- 47.0199** *Electrical and Electronics Equipment Repair, Other.* Any instructional program in electrical and electronics equipment repair not described above.
- 47.02** *Heating, Air Conditioning, and Refrigeration Mechanics.* A group of instructional programs that prepare individuals to install, repair, and maintain the operating condition of heating, air conditioning, and refrigeration systems.
- 47.0201** *Heating, Air Conditioning, and Refrigeration Mechanics, General.* An instructional program that generally prepares individuals to install, repair, and maintain the operating condition of heating, air conditioning, and refrigerating systems.
- 47.0202** *Cooling and Refrigeration.* An instructional program that prepares individuals to install, operate, test, and service cooling and refrigeration systems. Includes instruction in various types of systems, control devices, thermic units, and refrigerators.
- 47.0203** *Heating and Air Conditioning.* An instructional program that prepares individuals to install, operate, test, repair, and maintain commercial and domestic heating and air conditioning systems.
- 47.0299** *Heating, Air Conditioning, and Refrigeration Mechanics, Other.* Any instructional program in heating, air conditioning, and refrigeration mechanics not described above.
- 47.03** *Industrial Equipment Maintenance and Repair.* A group of instructional programs that prepare individuals to operate, maintain, and repair heavy-duty equipment such as bulldozers, cranes, graders, tractors, trailers, concrete mixers, crawler-mounted shovels, draglines, and compressors.
- 47.0301** *Industrial Equipment Maintenance and Repair, General.* An instructional program that generally prepares individuals to operate, maintain, and repair heavy-duty equipment such as bulldozers, cranes, graders, tractors, trailers, concrete mixers, crawler-mounted shovels, draglines, and compressors.
- 47.0302** *Heavy Equipment Maintenance and Repair.* An instructional program that prepares individuals in the field maintenance of heavy equipment, and in 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** *Industrial Machinery Maintenance and Repair.* An instructional program that prepares individuals to repair and maintain industrial machinery and equipment such as cranes, pumps, engines and motors, pneumatic tools, conveyor systems, production machinery, printing machinery, marine deck machinery, and steam propulsion, refinery, and pipeline-distribution systems.
- 47.0304** *Mine Equipment Maintenance and Repair.* An instructional program that prepares individuals to maintain, repair, and adjust mining equipment and machinery such as continuous mines, shuttle cars, air compressors, and haulage equipment. Includes instruction in testing, adjusting, and repairing pneumatic and hydraulic systems; attaching supplemental equipment such as hoses, valves, gates, vibration equipment, and mechanical, electrical, or electronic control devices; and repairing, maintaining, and installing electric motors, switchboards, controls, fans, and starting devices.
- 47.0305** *Oil and Gas Drilling Equipment Operation and Maintenance.* An instructional program that prepares individuals to engage in oil- and gas-well drilling activities. Includes instruction in drilling, transmission, and pumping of liquids and gases; rigging; and maintenance of drilling equipment.
- 47.0399** *Industrial Equipment Maintenance and Repair, Other.* Any instructional program in industrial equipment maintenance and repair not described above.

- 47.04** *Miscellaneous Mechanics and Repairers.* A group of instructional programs that prepare individuals for mechanic and repairer occupations other than those described under the headings of electrical and electronics equipment repair; heating, air conditioning, and refrigeration mechanics; industrial equipment maintenance and repair; stationary energy sources; and vehicle and mobile equipment mechanics and repair.
- 47.0401** *Electromechanical, Hydraulic, and Pneumatic Instrument Repair.* An instructional program that prepares individuals to maintain and repair various types of meters, measuring devices, and control devices such as heating and air conditioning controls; dial pressure gauges; scales and balances; electrical controlling measuring, and recording devices; and optical, aeronautical, and navigational instruments. Includes instruction in diagnosing malfunctions; disassembling, repairing, and/or replacing faulty parts; and cleaning, assembling, and adjusting instruments using special bench tools, hand tools, and other meters and standards.
- 47.0402** *Gunsmithing.* An instructional program that prepares individuals to repair and modify firearms according to blueprints or customer specifications, using specialized hand tools and machines. Includes instruction in installing such parts as metallic or optical sights, pistol grips, recoil pads, and decorative pieces and in reboring, rebroaching, grinding, polishing, bluing, fabricating, and finishing wooden stocks. Programs may prepare individuals to design new guns and to calculate detailed firearm specifications, such as bullet-flight arc and sight position.
- 47.0403** *Locksmithing and Safe Repair.* An instructional program that prepares individuals to repair and open locks, make keys, change lock and safe combinations, and install and repair safes.
- 47.0404** *Musical Instrument Repair.* An instructional program that prepares individuals to maintain, repair, and tune acoustic and electric musical instruments. Includes instruction in amplification systems of electric instruments, techniques of cleaning, and methods of tuning musical instruments.
- 47.0405** *Operation, Maintenance, and Repair of Audio-Visual Equipment.* An instructional program that prepares individuals to maintain and repair equipment designed to photograph illustrations and other copy that cannot be typeset, to develop negatives, and to prepare photosensitized metal plates for use in printing.
- 47.0406** *Shoe and Boot Repair.* An instructional program that prepares individuals to repair all types of footwear, including replacement and mending of worn or torn parts; repairing orthopedic footwear, refinishing and dyeing leather; and repairing other leather goods such as handbags, belts, and luggage.
- 47.0407** *Sporting Goods Equipment Repair.* An instructional program that prepares individuals to repair or replace faulty parts of sporting and athletic equipment such as fishing tackle, tennis rackets, golf equipment, and archery equipment. Includes instruction in regluing and rewinding shafts of bows and arrows; restringing tennis rackets; working with metal parts and using metal working tools; and researching specialized types of sporting and athletic equipment.
- 47.0408** *Watch Repair.* An instructional program that prepares individuals to make, maintain, and repair clocks, watches, chronometers, and other types of time-measuring devices by diagnosing malfunctions; disassembling, repairing, and/or replacing faulty parts; cleaning, assembling, and adjusting parts; and replacing straps, bands, crystals, crowns, and hands. Includes instruction in the use of various bench and hand tools such as lathes, staking tools, loupes, truing calipers, timing machines, pallet warmers, and other grinding, drilling, and polishing tools. Also instruction in the use of various materials such as metals, plastics, chemicals, oils, waxes, and abrasives.
- 47.0499** *Miscellaneous Mechanics and Repairers, Other.* Any instructional program in miscellaneous mechanics and repairers not described above.
- 47.05** *Stationary Energy Sources.* A group of instructional programs that prepare individuals to install, operate, and maintain large power sources for such purposes as generating electricity, pumping, and heating.
- 47.0501** *Stationary Energy Sources, General.* An instructional program that generally prepares individuals to install, operate, and maintain large power sources used for such purposes as generating electricity, pumping, and heating.
- 47.0502** *Conventional Electric Power Generation.* An instructional program that prepares individuals to install, operate, and maintain electric-power generating stations, and to operate and maintain gas, oil, and coal furnaces, boilers, and electric generators; steam, gas, or hydro-turbines; and diesel engines. Includes instruction in special instrumentation, controls, and emergency and safety procedures.

- 47.0503** *Industrial Nuclear Energy.* An instructional program that prepares individuals to construct, operate, and maintain reactor plants and industrial X-ray equipment; and use radioisotopes in industry for production and control operations.
- 47.0504** *Pumping Plants.* An instructional program that prepares individuals to install, operate, and maintain electric, diesel, or gas turbine-pumping installations that handle liquids, gases, or solids for delivery through pipelines or for local use. Includes instruction in the operation and maintenance of pipeline motors, engines, turbines, instruments, and controls.
- 47.0599** *Stationary Energy Sources, Other.* Any instructional program in stationary energy sources not described above.
- 47.06** *Vehicle and Mobile Equipment Mechanics and Repairers.* A group of instructional programs that prepare individuals to maintain and repair aircraft; automobiles; diesel engines in vehicles such as buses, ships, trucks, railroad locomotives, and construction equipment; stationary diesel engines in electrical generators; and small engines in mobile equipment such as lawnmowers and rotary tillers.
- 47.0601** *Vehicle and Mobile Equipment Mechanics and Repairers, General.* An instructional program that generally prepares individuals to maintain and repair aircraft; automobiles; diesel engines in vehicles such as buses, ships, trucks, railroad locomotives, and construction equipment; stationary diesel engines in electrical generators; and small engines in mobile equipment such as lawnmowers and rotary tillers.
- 47.0602** *Aircraft Mechanics.* An instructional program that prepares individuals to inspect, repair, service, and overhaul all airplane parts, including engines, propellers, instruments, airframes, fuel and oil tanks, control cables, and hydraulic units. This program is designed to meet Federal Aviation Administration requirements for licensing as an airframe/power-plant mechanic.
- 47.0603** *Automotive Body Repair.* An instructional program that prepares individuals to repair body and fenders of automobiles. Includes instruction in body preparation for painting and finishing.
- 47.0604** *Automotive Mechanics.* An instructional program that prepares individuals to engage in the servicing and maintenance of all types of automobiles. Includes instruction in the diagnosis of malfunctions in and repair of engines; fuel, electrical, cooling, and brake systems; and drive train and suspension systems. Also instruction is given in the adjustment and repair of individual components and systems such as radiators, transmissions, and carburetors.
- 47.0605** *Diesel Engine Mechanics.* An instructional program that prepares individuals to repair diesel engines in vehicles such as buses, ships, trucks, railroad locomotives, and construction equipment, and to repair stationary diesel engines in electrical generators and related equipment. Includes instruction in diagnosing malfunctions; disassembling engines and replacing parts; and in repairing and adjusting fuel-injection systems, oil and water pumps, generators, governors, auxiliary and accompanying power units, controls, and transmissions, using a variety of tools and testing and diagnostic equipment.
- 47.0606** *Small Engine Repair.* An instructional program that prepares individuals to maintain and repair small internal-combustion engines used on portable power equipment such as lawnmowers, chain saws, rotary tillers, motorcycles, and snowmobiles.
- 47.0699** *Vehicle and Mobile Equipment Mechanics and Repairers, Other.* Any instructional program in vehicle and mobile equipment mechanics and repairers not described above.
- 47.99** *Mechanics and Repairers, Other.* A group of instructional programs in mechanics and repairers not described above.
- 47.9999** *Mechanics and Repairers, Other.* Any instructional program in mechanics and repairers not described above.

- 48. Precision Production.** A summary of groups of instructional programs that prepare individuals to produce precision goods and materials by hand or machine. In many instances, instructional activities are designed to cultivate an ability to interpret detailed instructions and specifications, and to produce or manufacture goods at low tolerances.
- 48.01 Drafting.** A group of instructional programs that prepare individuals to plan, prepare, and interpret mechanical, architectural, structural, pneumatic, marine, electric/electronic, topographical, and other sketches; to use reproduction materials, equipment, and processes, to develop, plan, and process charts and drawings; to develop models; and to prepare reports and data sheets for writing specifications.
- 48.0101 Drafting, General.** An instructional program that generally prepares individuals to plan, prepare, and interpret mechanical, architectural, structural, pneumatic, marine, electric/electronic, topographical, and other sketches; to use reproduction materials, equipment, and processes, to develop, plan, and process charts and drawings; to develop models; and to prepare reports and data sheets for writing specifications.
- 48.0102 Architectural Drafting.** An instructional program that prepares individuals to support architects and/or architectural engineers in developing plans for buildings or other structures, using a variety of building materials; in creating lay outs and designs in keeping with building codes, zoning laws, ordinances, and other regulations; and in styling and planning in keeping within cost limitations and client preferences.
- 48.0103 Civil/Structural Drafting.** An instructional program that prepares individuals to develop detailed construction drawings, topographical profiles, and related maps and specifications sheets for use in the planning and construction of highways, river and harbor improvements; flood-control structures, drainage structures, sanitation plants, and other structures. Includes instruction in computing the volume of excavation and fill tonnage and in preparing graphs and hauling diagrams for use in earth-moving operations.
- 48.0104 Electrical/Electronics Drafting.** An instructional program that prepares individuals to develop working drawings and wiring diagrams used by construction crews and repairmen to install and prepare electrical equipment, power plants, industrial establishments, and commercial or domestic buildings. Includes instruction in drafting the wiring and schematic diagrams and lay out drawings used to manufacture, assemble, install, and repair electrical/electronic equipment such as television cameras, radio transmitters, receivers, audioamplifiers, computers, and related equipment.
- 48.0105 Mechanical Drafting.** An instructional program that prepares individuals to assist engineers in the development of detailed working drawings and related specifications for mechanical devices and machinery. Includes instruction in sketching rough lay outs; drafting detailed multiview drawings; computing magnitude, direction, and point of application of tension, compression, and bending factors; compiling and analyzing text data to determine design effects on machinery in relation to temperature, pressure, speed, horsepower, and fuel consumption; and producing drawings that indicate dimensions, tolerances, fasteners, joining requirements, and other engineering data.
- 48.0199 Drafting, Other.** Any instructional program in drafting not described above.
- 48.02 Graphic and Printing Communications.** A group of instructional programs that prepare individuals to design and execute lay outs and illustrations for advertising displays and instructional manuals. Includes instruction in all phases of offset printing, lay out, composition, presswork and binding, flexography, lithography, photoengraving, and other graphic arts related to the printing industry.
- 48.0201 Graphic and Printing Communications, General.** An instructional program that generally prepares individuals in the approaches and techniques used in the various graphic and printing communications specialties.
- 48.0202 Bookbinding.** An instructional program that prepares individuals to gather pages, forms, and related materials for assembly into books or pamphlets. Includes instruction in binding and repairing books and documents.
- 48.0203 Commercial Art.** An instructional program that prepares individuals to design and execute lay outs and make illustrations for advertising displays and instructional manuals. Includes instruction in the preparation of copy; lettering, poster, package, and product design; fashion illustration; silk screening; air brushing; and inks and color dynamics.

- 48.0204 *Commercial Photography.* An instructional program that prepares individuals to use cameras and laboratory film-processing techniques. Includes instruction in composition and color dynamics; contact printing; enlarging, developing film; use of air brushes, cameras, meters, and other photographic equipment; portrait, commercial, and industry photography; processing microfilm, and preparing copy for printing or other graphic-arts processing.
- 48.0205 *Composition, Make-up, and Typesetting.* An instructional program that prepares individuals to lay out, compose, and make-up typesetting and typecast, by hand and by machine.
- 48.0206 *Lithography, Photography, and Platemaking.* An instructional program that prepares individuals to engage in activities concerned with lithography, lithographic photography, stripping, and related platemaking processes.
- 48.0207 *Photographic Laboratory and Darkroom.* An instructional program that prepares individuals to develop and print photography still — or motion picture film; control resultant prints; touchup negatives; and finish, color, restore, and copy prints.
- 48.0208 *Printing Press Operations.* An instructional program that prepares individuals to make ready, operate, and maintain printing processes.
- 48.0209 *Silk Screen Making and Printing.* An instructional program that prepares individuals to make silk screens and to perform silk screen printing operations.
- 48.0299 *Graphic and Printing Communications, Other.* Any instructional program in graphic and printing communications not described above.
- 48.03 *Leatherworking and Upholstering.* A group of instructional programs that prepare individuals to fabricate and repair all types of upholstery and leather goods.
- 48.0301 *Leatherworking and Upholstering, General.* An instructional program that generally prepares individuals to fabricate and repair all types of upholstery and leather goods.
- 48.0302 *Saddlemaking and Repair.* An instructional program that prepares individuals to construct and repair saddles. Includes instruction in cutting, assembling, and joining leather parts and other materials according to specification of saddle size, type, color, or grain of leather, using hand and power stitching machines; positioning covering and cushioning materials such as cotton batting, foam rubber, or mohair; attaching accessories and ornamentation, applying paint and liquid dressings for glossy finish; and cutting and stamping leather surfaces with lettering or decoration.
- 48.0303 *Upholstering.* An instructional program that prepares individuals to engage in all aspects of upholstering furniture, automobile seats, caskets, mattresses, and bedsprings. Includes instruction in installing, repairing, arranging, and securing springs, filler, padding, and covering material of mattresses and bedsprings; cutting, sewing, and trimming; cushion filling, tufting, and buttoning; and wood refinishing.
- 48.0399 *Leatherworking and Upholstering, Other.* Any instructional program in leatherworking and upholstering not described above.
- 48.04 *Precision Food Production.* A group of instructional programs that prepare individuals to perform slaughtering and butchering operations in a slaughtering and meat packing establishment, or to cut, trim, and prepare carcasses for wholesale or retail sale.
- 48.0401 *Precision Food Production, General.* An instructional program that prepares individuals to perform slaughtering and butchering operations in a slaughtering and meat packing establishment, or to cut, trim, and prepare carcasses for wholesale or retail sale.
- 48.0402 *Meatcutting.* An instructional program that prepares individuals to cut, trim, and prepare carcasses and consumer-sized portions of meat for sale in wholesale, retail, or food-service establishments. Includes instruction in the use of meat-cutting tools; identification of and cutting techniques for different cuts of meat; dressing poultry; processing fish; counter display; and refrigeration of meats, poultry, and fish.

- 48.0403** *Slaughtering and Butchering.* An instructional program that prepares individuals to perform slaughtering and butchering operations in a slaughtering and meat packing establishment. Includes instruction in stunning and slaughtering; skinning, trimming, and washing; cutting standard cuts of meats such as chucks, hams, loins, plates, rounds, and shanks in preparation for marketing; cleaning and salting hides of cattle, sheep, and hogs; preparing, smoking, and wrapping meats; and making sausage.
- 48.0499** *Precision Food Production, Other.* Any instructional program in precision food production not described above.
- 48.05** *Precision Metal Work.* A group of instructional programs that prepare individuals 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, fished, stamped, or otherwise worked upon.
- 48.0501** *Precision Metal Work, General.* An instructional program that prepares individuals 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, fished, stamped, or otherwise worked upon.
- 48.0502** *Foundry Work.* An instructional program that prepares individuals to engage in activities at ferrous and nonferrous foundries. Includes instruction in foundry equipment, various sands and refractories, sand and machine molding, core-making, chipping, grinding, foundry chemistry, and metallurgy.
- 48.0503** *Machine Tool Operation/Machine Shop.* An instructional program that prepares individuals to shape metal parts on machines such as lathes, grinders, drill presses, milling machines, and shapers. Programs may also train individuals in the use of one machine tool. Includes instruction in making computations related to work dimensions, testing feeds and speeds of machines using precision measuring instruments such as lay out tools, micrometers, and gauges; machining and heat-treating various metals; and in laying out machine parts.
- 48.0504** *Metal Fabrication.* An instructional program that prepares individuals to fabricate and assemble a variety of products. Includes instruction in lay out; sequence of operations; set up and operation of fabricating machines; design and construction of templates and fixtures; and the positioning; aligning, fitting, and welding of parts.
- 48.0505** *Metal Patternmaking.* An instructional program that prepares individuals to fit, assemble, and handfinish castings and parts in the manufacture of metal-foundry patterns, according to specifications and pattern-making methods.
- 48.0506** *Sheet Metal.* An instructional program that prepares individuals to lay out, fabricate, erect or install, and maintain items made of steel, copper, stainless steel, and aluminum using hand tools and machines such as cornice brakes, forming rolls, and squaring shears.
- 48.0507** *Tool and Die Making.* An instructional program that prepares individuals to analyze specifications and to lay out metal stock, set up and operate machine tools to fit and assemble parts for the manufacture and repair of metalworking dies, cutting tools, fixtures, gauges, and machinists' hand tools. Includes instruction in metal properties and in the applications and construction of tool and die designs.
- 48.0508** *Welding, Brazing, and Soldering.* An instructional program that prepares individuals to use gases and/or welding processes and to braze and solder metal parts according to diagrams, blueprints, or written specifications.
- 48.0599** *Precision Metal Work, Other.* Any instructional program in precision metal work not described above.
- 48.06** *Precision Work, Assorted Materials.* An instructional program that prepares individuals to produce precision goods in a variety of materials including ceramics, precious stones, metals, glass, and plastics.
- 48.0601** *Industrial Ceramics Manufacturing.* An instructional program that prepares individuals to engage in manufacturing activities to produce ceramic machine tools; refractories for space vehicles; and brick, glass, crockery, tile, pipe, and other articles made from clays and silicas. Includes instruction in testing physical, chemical, and heat-resisting properties of materials, and in processing, forming, and firing clays to develop ceramic products.

- 48.0602 *Jewelry Design, Fabrication, and Repair.* An instructional program that prepares individuals to design, fabricate, and repair jewelry articles such as rings, broches, pendants, bracelets, and lockets. Includes instruction in modelmaking; casting, engraving, polishing, stonemaking, fitting rings, and soldering broken parts; reshaping and restyling old jewelry; and using special jeweler's hand tools and machines.
- 48.0603 *Optical Goods Work.* An instructional program that prepares individuals to mold and cast optical products, patterns, and prototype parts such as eyeglass lenses and contact lenses.
- 48.0604 *Plastics.* An instructional program that prepares individuals to mold and cast plastic parts, patterns, and prototype parts; fit, fabricate, and repair internal carvings; finish plastic parts; and assemble plastic components into products.
- 48.0699 *Precision Work, Assorted Materials, Other.* Any instructional program in precision work, assorted materials not described above.

48.07 *Woodworking.* A group of instructional programs that prepare individuals 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.

48.0701 *Woodworking, General.* An instructional program that generally prepares individuals 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 *Furniture Making.* An instructional program that prepares individuals to assemble and finish wood furniture. Includes instruction in preparing freehand sketches; fastening wooden parts with glue; reinforcing joints with dowels, screws, staples, or nails using power screwdrivers, staple guns, or hammers; and finishing and/or refinishing new, used, damaged, or worn furniture according to specifications.

48.0703 *Millwork and Cabinet Making.* An instructional program that prepares individuals to engage in the mass production of such articles as window frames, moldings, trim and panels; and such products as store fixtures, kitchen cabinets, and office equipment. Includes instruction in cutting, shaping, assembling, and refinishing articles; installing hinges, catches, drawer pulls, and other hardware; and planning and drafting lay out.

48.0799 *Woodworking, Other.* Any instructional program in woodworking not described above.

48.99 *Precision Production, Other.* A group of instructional programs in precision production not described above.

48.9999 *Precision Production, Other.* Any instructional program in precision production not described above.

49. *Transportation and Material Moving.* A summary of groups of instructional programs that prepare individuals to operate and control equipment used to facilitate the movement of people or materials.

49.01 *Air Transportation.* A group of instructional programs that prepare individuals to engage in activities concerned with the inflight operation of commercial and private airplanes, including piloting, navigating, and providing passenger services and general ground support.

49.0101 *Air Transportation, General.* An instructional program that generally prepares individuals to engage in activities concerned with the inflight operation of commercial and private airplanes, including piloting, navigating, and providing passenger services and general ground support.

49.0102 *Airplane Piloting and Navigation.* An instructional program that prepares individuals to pilot aircraft and assume the eventual command responsibility of carrying passengers and freight. Includes instruction in aircraft structure, behavior, operation, and controls; radio communications, meteorology; navigation; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting aircraft. Completion of this program prepares individuals to take Federal Aviation Administration (FAA) examinations for a commercial pilot's certificate.

49.0103 *Aviation Computer Technology.* An instructional program that prepares individuals to assist computer operators concerned with the tracking and controlling of aircraft.

- 49.0104** *Aviation Management.* An instructional program that prepares individuals in the nature and application of management methods and techniques related to the aviation industry.
- 49.0105** *Air Traffic Control.* An instructional program that prepares individuals in air-traffic 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 control-tower log books and reports.
- 49.0106** *Flight Attendants.* An instructional program that prepares individuals to perform 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, and serving previously prepared meals and beverages.
- 49.0199** *Air Transportation, Other.* Any instructional program in air transportation not described above.
- 49.02** *Vehicle and Equipment Operation.* A group of instructional programs that prepare individuals to drive trucks and buses, and to operate construction, material handling, and mining equipment.
- 49.0201** *Vehicle and Equipment Operation, General.* An instructional program that generally prepares individuals to drive trucks and buses, and to operate construction, material handling, and mining equipment.
- 49.0202** *Construction Equipment Operation.* An instructional program that prepares individuals to operate and maintain a variety of heavy equipment, such as a crawler tractor, motor graders and scrapers, and shovels, including dragline, hoe, and cranes. Includes instruction in digging, ditching, sloping, stripping, grading, backfilling, clearing, and excavating.
- 49.0203** *Material Handling.* An instructional program that prepares individuals to receive, store, ship, transport, control, and distribute products and materials; keep records of transactions; and properly use hand tools and power equipment such as bars, cutters, hand trucks, conveyors, and industrial trucks to move materials.
- 49.0204** *Mining Equipment Operation.* An instructional program that prepares individuals to engage in mining operation activities; operate excavating machinery and shuttle cars; test for and identify gases in the mine; and maintain testing equipment. Includes instruction in first aid; ventilation and dust control in the mine; techniques of roofing, ribbing, and setting crossbars; escape procedures; and maintenance of pneumatic and hydraulic systems.
- 49.0205** *Truck and Bus Driving.* An instructional program that prepares individuals to drive trucks and buses. 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.
- 49.0299** *Vehicle and Equipment Operation, Other.* Any instructional program in vehicle and equipment operation not described above.
- 49.03** *Water Transportation.* A group of instructional programs that prepare individuals to perform tasks on fresh-water and sea-going ships, tugboats, barges, floating structures, and related harbor and dock machinery. Includes instruction in firefighting; lifeboat work; swimming; fiber and wire rope handling and splicing; hull maintenance and painting; cargo-handling gear and ground tackle; maintenance, operation, and repair of main engines and auxiliary steam, refrigeration, water, and electrical systems; and watchkeeping, store-keeping, and food preparation.
- 49.0301** *Water Transportation, General.* An instructional program that generally prepares individuals to perform tasks on fresh-water and sea-going ships, tugboats, barges, floating structures, and related harbor and dock machinery. Includes instruction in firefighting; lifeboat work; swimming; fiber and wire rope handling and splicing; hull maintenance, and painting; cargo-handling, gear and ground tackle; maintenance, operation, and repair of main engines and auxiliary steam, refrigeration, water, and electrical systems; and watchkeeping, store keeping, and food preparation.
- 49.0302** *Barge and Boat Operation.* An instructional program that prepares individuals to direct the operation and navigation of barges, dredges, non-cable ferry boats, and tugboats to transport people and materials; to tow other marine vessels; and to dredge waterways.

- 49.0303 *Commercial Fishing Operation.* An instructional program that prepares individuals to support the captain of a fishing boat or perform as an officer in charge of various types of boats for commercial or recreational purposes. Includes instruction in operation of boats, fishing gear, navigational instruments, electronic fish-finding and depth-measuring devices, and specialized gear required for catching, identifying, sorting, and storing fish or other marine products; safety procedures; marine law and tradition; maintenance of ships logs and report preparation; and effective functioning on board all types of boats. Programs provide preparation for licensure by the Coast Guard.
- 49.0304 *Deep Water Diving and Life Support Systems.* An instructional program that prepares individuals to deep-water dive or serve as attendants on board boats from which diving is done. Includes instruction in the use of diving bells and other specialized gear; problems and hazards of diving; mixing and delivering oxygen and other life-support gases; communication systems; decompression systems; and limits of depth of diving; deep underwater salvage; exploration, rescue, and photography; and installation of underwater mechanical systems and their maintenance, repair, or demolition.
- 49.0305 *Marina Operations.* An instructional program that prepares individuals to manage and operate commercial marinas. Includes instruction in accommodating, docking, servicing, and provisioning recreational or small commercial fishing or other boats; designing, installing, and maintaining docks, wharfs, and related equipment; ensuring sanitation of facilities; fueling and preventing fires; protecting wharf and docking facilities from biological or other destructive agents; maintaining facilities and manning the establishment to serve the public, and basic marine laws and legal responsibilities.
- 49.0306 *Marine Maintenance.* An instructional program that prepares individuals to repair outboard and inboard engines; test, maintain, and repair steering devices and electrical systems, repair metal, wood, and fiberglass; fabricate and maintain sail; and repair and balance propellers.
- 49.0307 *Merchant Marine Officers.* An instructional program that prepares individuals to command or assist in the command of a merchant ship.
- 49.0308 *Sailors and Deckhands.* An instructional program that prepares individuals to use and maintain lines, nets, navigational aids, radios, and electronic equipment; safely handle boats; maintain docks, surfaces, engines, and power plants; and other ocean skills that promote safety and survival at sea.
- 49.0399 *Water Transportation, Other.* Any instructional program in water transportation not described above.
- 49.99 *Transportation and Material Moving, Other.* A group of instructional programs in transportation and material moving not described above.
- 49.9999 *Transportation and Material Moving, Other.* Any instructional program in transportation and material moving not described above.

D. **Visual and Performing Arts.** A summary of groups of instructional programs that describe the creation and perception of auditory, kinesthetic, and visual phenomena which express ideas and emotions in various forms, subject to aesthetic criteria.

- 50.01 *Visual and Performing Arts, General.* A group of instructional programs (see 50.0101).
- 50.0101 *Visual and Performing Arts, General.* An instructional program that generally describes the historic development, aesthetic qualities, and creative processes of two or more of the visual and performing arts.
- 50.02 *Crafts.* A group of instructional programs that describe how to increase one's skills to fashion objects in a specialized area of handwork.
- 50.0201 *Crafts, General.* An instructional program that generally describes how to increase one's skills to fashion objects in a specialized area of handwork.
- 50.0202 *Ceramics.* An instructional program that describes how to increase one's skills to fashion objects of clay and similar materials treated by firing.
- 50.0203 *Enameling.* An instructional program that describes how to increase one's skills to apply glassy substances by fusion to the surface of metal, pottery, etc., for decorative or ornamental purposes.

- 50.0204 *Fiber/Textiles/Weaving.* An instructional program that describes how to increase one's skills to interlace fibrous material (threads, yarns, etc.) into fabrics or materials having decorative or ornamental purposes.
- 50.0205 *Glass.* An instructional program that describes how to increase one's skills to form or shape a mass of molten or heat-softened glass into functional and decorative items.
- 50.0206 *Metal/Jewelry.* An instructional program that describes how to increase one's skills to fashion articles of personal adornment from gems and precious metals.
- 50.0299 *Crafts, Other.* Any instructional program in crafts not described above.
- 50.03 *Dance.* A group of instructional programs (see 50.0301).
- 50.0301 *Dance.* An instructional program that describes the performance and choreography of various kinds of dances, including but not limited to ballet, modern, jazz, ethnic, and folk dance.
- 50.04 *Design.* A group of instructional programs that describe the theories, techniques, and creative processes for more effectively performing the function of communicating feelings, ideas, and information through use of materials and media to create two- or three-dimensional visual affects.
- 50.0401 *Design, General.* An instructional program that generally describes the theories, aesthetic qualities, and processes of two or more design specialties.
- *Environmental Design.* (see 04.0401).
- *Fashion Design.* (see 19.0902).
- 50.0402 *Graphic Design.* An instructional program that describes the theories, aesthetic qualities, and creative processes for more effectively communicating ideas, information, and feelings in printed form with attention being given to both aesthetic and functional criteria.
- 50.0403 *Illustration Design.* An instructional program that describes the techniques for conveying information through visual imagery and pictorial representation.
- 50.0404 *Industrial Design.* An instructional program that describes the techniques of designing consumer or commercial products and packaging to maximize aesthetic appeal while not compromising utilitarian value.
- *Interior Design.* (see 04.0501).
- *Medical Illustrating.* (see 17.0504).
- 50.0405 *Theatre Design.* An instructional program that describes the techniques of communicating information, ideas, moods, and feelings through set design and costuming with attention to both function and aesthetics.
- 50.0499 *Design, Other.* Any instructional program in design not described above.
- 50.05 *Dramatic Arts.* A group of instructional programs (see 50.0501).
- 50.0501 *Dramatic Arts.* An instructional program that describes the development, theory, and processes of creating live performances through human expressive modalities.
- 50.06 *Film Arts.* A group of instructional programs that describe the development, theories, processes, and techniques of photographic images as a means of artistic expression.
- 50.0601 *Film Arts, General.* An instructional program that generally describes the development, theories, processes, and techniques of two or more of the film arts.
- 50.0602 *Cinematography/Film.* An instructional program that describes the historic development, aesthetic qualities, theories, techniques, and creative processes of the moving image as a means of artistic expression using film as the medium.

- 50.0603 *Film Animation.* An instructional program that describes the techniques and creative processes for creating motion pictures consisting of a series of drawings, each slightly different from the preceding one so that, when filmed and projected, the figures appear to move.
- 50.0604 *Holography.* An instructional program that describes the theories, techniques, and creative processes for making holograms (three dimensional pictures made on a photographic film or plate without the use of a camera).
- 50.0605 *Photography.* An instructional program that describes the historic development, aesthetic qualities, theories, techniques, and creative processes of producing images on photographic film or plates.
- 50.0606 *Video.* An instructional program that describes the aesthetic qualities, theories, techniques, and creative processes of the moving image as a means of artistic expression using videotape as the medium.
- 50.0699 *Film Arts, Other.* Any instructional program in film arts not described above.
- 50.07 *Fine Arts.* A group of instructional programs that describe the organization of materials and media for two- or three-dimensional visual affects that communicate ideas and express emotion and are considered primarily in relation to aesthetic criteria of judgments of beauty or meaningfulness.
- 50.0701 *Fine Arts, General.* An instructional program that generally describes the historic development, aesthetic qualities and creative processes of two or more of the fine arts.
- 50.0702 *Art Conservation.* An instructional program that describes the techniques and processes for protecting objects of art (e.g., paintings, sculpture) from deterioration or decay and for restoring such objects that have deteriorated or been damaged.
- *Art Education.* (see 13.1302).
- 50.0703 *Art History and Appreciation.* An instructional program that describes art and its relationship to concurrent events, the evaluation of artistic styles, the lives of artists, and the role of art in human affairs, including contemporary times.
- *Art Therapy.* (see 17.0801).
- 50.0704 *Arts Management.* An instructional program that prepares individuals to apply economic and business principles to the management and operation of profit and nonprofit organizations that specialize in the visual or performing arts.
- 50.0705 *Drawing.* An instructional program that describes the aesthetic qualities, techniques, and creative processes for communicating ideas, feelings, and inner vision through representation by lines; a delineation of form without reference to color.
- 50.0706 *Intermedia.* An instructional program that describes the aesthetic qualities, techniques, and creative processes for expressing emotions, ideas, or inner visions in either two or three dimensions using a variety of materials (medium) simultaneously.
- 50.0707 *Kinetics.* An instructional program that describes the aesthetic qualities, techniques, and creative processes for expressing emotions, ideas, or inner visions using materials (including light) in motion as the medium.
- 50.0708 *Painting.* An instructional program that describes the aesthetic qualities, techniques, and creative processes for expressing emotions or communicating ideas through application of paints to canvases or other materials.
- 50.0709 *Sculpture.* An instructional program that describes the aesthetic qualities, techniques, and creative processes for creating work of art in three dimension through carving, molding, welding or other procedures.
- 50.0799 *Fine Arts, Other.* Any instructional program in fine arts not described above.

- 50.08** *Graphic Arts Technology.* An instructional program (see 50.0801).
- 50.0801** *Graphic Arts Technology.* An instructional program that prepares individuals in all phases of hot-type, cold-type, and computer-type setting, including typographical lay out, composition, press work, binding, lithography, photo-engraving, and other graphic arts related to the printing industry. Includes instruction in drawing and lettering; theory and science relating to camera work and photography, typographical lay outs, and machine-type setting; silk (or other) screen printing, multicolor composition and printing; ink and color preparation paper and other printing materials; printing-press operation, servicing, and elementary maintenance; cost estimation and the production, inspection, quality control, handling, binding, packaging, and storage of printing materials.
- 50.09** *Music.* A group of instructional programs that describe the art and science of combining sounds of various timbre in harmonic, rhythmic, or melodic forms which are artistically expressive.
- 50.0901** *Music, General.* An instructional program that generally describes music history and appreciation, music performance, and music theory and composition.
- 50.0902** *Music History and Appreciation.* An instructional program that describes music and its relationship to concurrent events, the evolution of musical styles, the lives of musicians, and the role of music in human affairs, including contemporary times.
- 50.0903** *Music Performance.* An instructional program that describes the applied study of and performance on musical instruments, or the applied study of voice and vocal performance, either solo or in ensemble.
- 50.0904** *Music Theory and Composition.* An instructional program that describes the principles, forms, and foundations of music as well as the techniques of creating and arranging tonal combinations and sequences.
- 50.0999** *Music, Other.* Any instructional program in music not described above.
- 50.99** *Visual and Performing Arts, Other.* A group of instructional programs in visual and performing arts not described above.
- 50.9999** *Visual and Performing Arts, Other.* Any instructional program in visual and performing arts not described above.

Appendixes

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Appendix A

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NCES Terminology Publications

Chismore, W. Dale, and Hill, Quentin M. *A Classification of Educational Subject Matter*. State Educational Records and Reports Series, Handbook XI, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 78-112. Washington D.C.: U.S. Government Printing Office, 1978.

Collier, Douglas J. *Higher Education Finance Manual*. U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 75-118. Washington D.C.: U.S. Government Printing Office, 1975.

Harris, Yeuell Y. *Community Information in Education*. State Educational Records and Reports Series, Handbook VIII, U.S. Department of Education, National Center for Education Statistics, NCES 79-407. Washington D.C.: U.S. Government Printing Office, 1979.

Harris, Yeuell Y., and Seibert, Ivan N. *The State Education Agency*. State Educational Records and Reports Series, Handbook VII, U.S. Department of Health, Education, and Welfare, Office of Education, OE-23054. Washington D.C.: U.S. Government Printing Office, 1971.

Huff, Robert A., and Chandler, Marjorie O. *A Taxonomy of Instructional Programs in Higher Education*. U.S. Department of Health, Education, and Welfare, Office of Education, OE-50064. Washington D.C.: U.S. Government Printing Office, 1970.

Jones, Dennis P., and Drews, Theodore H. *A Manual for Budgeting and Accounting for Manpower Resources in Postsecondary Education*. U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 77-343. Washington D.C.: U.S. Government Printing Office, 1977.

Putnam, John F. *Student/Pupil Accounting: Standard Terminology and Guide for Managing Student Data in Elementary and Secondary Schools, Community/Junior Colleges, and Adult Education*. State Educational Records and Reports Series, Handbook V, Revised, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 76-329. Washington D.C.: U.S. Government Printing Office, 1974.

Putnam, John F. *Postsecondary Student Terminology*. U.S. Department of Education, National Center for Education Statistics, NCES 79-409. Washington D.C.: U.S. Government Printing Office, forthcoming.

Roberts, Charles T. *Staff Accounting for Local and State School Systems: Standard Terminology, Classifications, Operating Procedures and Reporting*. State Educational Records and Reports Series, Handbook IV, Revised, U.S. Department of Health, Education, and Welfare, Office of Education, OE 74-314. Washington D.C.: U.S. Government Printing Office, 1974.

Roberts, Charles T., and Lichtenberger, Allan R. *Financial Accounting: Classifications and Standard Terminology for Local and State School Systems*. State Educational Records and Reports Series, Handbook II, Revised, U.S. Department of Health, Education, and Welfare, Office of Education, OE 73-11800. Washington D.C.: U.S. Government Printing Office, 1973.

Romney, Leonard C. *Facilities Inventory and Classification Manual*. U.S. Department of Health, Education, and Welfare, Office of Education, OE 74-11424. Washington D.C.: U.S. Government Printing Office, 1974.

Seibert, Ivan N. *Education Property: A Handbook of Standard Terminology and A Guide for Classifying Information About Education Property*. State Educational Records and Reports Series, Handbook III, Revised, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 78-400. Washington D.C.: U.S. Government Printing Office, 1977.

Seibert, Ivan N. *Educational Technology: A Handbook of Standard Terminology and a Guide for Recording and Reporting Information About Educational Technology*. State Educational Records and Reports Series, Handbook X, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 76-321. Washington D.C.: U.S. Government Printing Office, 1975.

Appendix B

Crosswalk Between the HEGIS Taxonomy and the New Classification

HEGIS Taxonomy <i>Conventional Academic Subdivisions of Knowledge and Training</i>		New Classification
0100	Agriculture and Natural Resources	01. Agribusiness and Agricultural Production
		02. Agricultural Sciences
		03. Renewable Natural Resources
0101	Agriculture, general	02.0101 Agricultural Sciences, General
0102	Agronomy (field crops, and crop management)	02.0402 Agronomy
0103	Soils science (management and conservation)	02.0501 Soil Sciences, General
		02.0502 Soil Chemistry
		02.0503 Soil Conservation
		02.0504 Soil Management and Fertility
		02.0505 Soil Microbiology
		02.0506 Soil Physics
		02.0599 Soil Sciences, Other
0104	Animal science (husbandry)	02.0201 Animal Sciences, General
0105	Dairy science (husbandry)	02.0206 Dairy
0106	Poultry science	02.0209 Poultry
0107	Fish, game, and wildlife management	01.0305 Game Farm Management
		03.0301 Fishing and Fisheries, General
		03.0601 Wildlife Management
0108	Horticulture (fruit and vegetable production)	02.0403 Horticulture Science
0109	Ornamental horticulture (floriculture, nursery science)	02.0404 Ornamental Horticulture
0110	Agricultural and farm management	01.0101 Agricultural Business and Management, General
0111	Agricultural economics	01.0103 Agricultural Economics
0112	Agricultural business	01.0102 Agricultural Business
0113	Food science and technology	02.0301 Food Sciences, General
		02.0306 Food Technology
0114	Forestry	03.0501 Forestry and Related Sciences, General
		03.0502 Forestry Science
0115	Natural resources management	03.0101 Renewable Natural Resources, General
0116	Agriculture and forestry technologies (baccalaureate and higher programs)	03.0404 Forest Products Processing Technology
0117	Range management	02.0409 Range Management
0199	Other, specify	01.9999 Agribusiness and Agricultural Production, Other
		02.0202 Animal Breeding and Genetics
		02.0203 Animal Health
		02.0204 Animal Nutrition
		02.0205 Animal Physiology
		02.0207 Fisheries Science
		02.0208 Livestock
		02.0299 Animal Sciences, Other
		02.0302 Dairy Processing
		02.0303 Food Distribution
		02.0304 Food Engineering
		02.0305 Food Packaging

HEGIS Taxonomy
*Conventional Academic Subdivisions of Knowledge
 and Training*

New Classification

0199 Other, specify (Continued)

- 02.0399 Food Sciences, Other
- 02.0401 Plant Sciences, General
- 02.0405 Plant Breeding and Genetics
- 02.0406 Plant Pathology (Applied)
- 02.0407 Plant Physiology
- 02.0408 Plant Protection (Pest Management)
- 02.0410 Turf Management Science
- 02.0499 Plant Sciences, Other
- 02.9999 Agricultural Sciences, Other
- 03.0503 Forest Biology
- 03.0504 Forest Engineering
- 03.0505 Forest Hydrology
- 03.0506 Forest Management
- 03.0507 Forest Mensuration
- 03.0508 Urban Forestry
- 03.0509 Wood Science
- 03.0599 Forestry and Related Sciences, Other
- 03.9999 Renewable Natural Resources, Other

- 0200 Architecture and Environmental Design
- 0201 Environmental design, general
- 0202 Architecture
- 0203 Interior design
- 0204 Landscape architecture
- 0205 Urban architecture
- 0206 City, community, and regional planning
- 0299 Other, specify

- 04. Architecture and Environmental Design
- 04.0401 Environmental Design
- 04.0201 Architecture
- 04.0501 Interior Design
- 04.0601 Landscape Architecture
- 04.0701 Urban Design
- 04.0301 City, Community, and Regional Planning
- 04.0101 Architecture and Environmental Design, General
- 04.9999 Architecture and Environmental Design, Other

- 0300 Area Studies
- 0301 Asian studies, general
- 0302 East Asian studies
- 0303 South Asian (India, etc.) studies
- 0304 Southeast Asian studies
- 0305 African studies
- 0306 Islamic studies
- 0307 Russian and Slavic studies
- 0308 Latin American studies
- 0309 Middle Eastern studies
- 0310 European studies, general
- 0311 Eastern European studies
- 0312 West European studies
- 0313 American studies
- 0314 Pacific area studies
- 0399 Other, specify

- 05. Area and Ethnic Studies
- 05.0103 Asian Studies, General
- 05.0104 East Asian Studies
- 05.0112 South Asian Studies
- 05.0113 Southeast Asian Studies
- 05.0101 African Studies
- 05.0204 Islamic Studies
- 05.0110 Russian and Slavic Studies
- 05.0107 Latin American Studies
- 05.0108 Middle Eastern Studies
- 05.0106 European Studies, General
- 05.0105 Eastern European Studies
- 05.0114 Western European Studies
- 05.0102 American Studies
- 05.0109 Pacific Area Studies
- 05.0111 Scandinavian Studies
- 05.0199 Area Studies, Other
- 05.0205 Jewish Studies
- 05.0299 Ethnic Studies, Other

HEGIS Taxonomy

Conventional Academic Subdivisions of Knowledge
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New Classification

0400 Biological Sciences
 0401 Biology, general
 0402 Botany, general
 0403 Bacteriology
 0404 Plant pathology
 0405 Plant pharmacology
 0406 Plant physiology
 0407 Zoology, general
 0408 Pathology, human and animal
 0409 Pharmacology, human and animal
 0410 Physiology, human and animal
 0411 Microbiology
 0412 Anatomy
 0413 Histology
 0414 Biochemistry
 0415 Biophysics
 0416 Molecular biology
 0417 Cell biology (cytology, cell physiology)
 0418 Marine biology
 0419 Biometrics and biostatistics
 0420 Ecology
 0421 Entomology
 0422 Genetics
 0423 Radiobiology
 0424 Nutrition, scientific (excludes nutrition in home
economics and dietetics)
 0425 Neurosciences
 0426 Toxicology
 0427 Embryology
 0499 Other, specify

26. Life Sciences
 26.0101 Biology, General
 26.0301 Botany, General
 26.0302 Bacteriology
 26.0305 Plant Pathology
 26.0306 Plant Pharmacology
 26.0307 Plant Physiology
 26.0701 Zoology, General
 26.0704 Pathology, Human and Animal
 26.0705 Pharmacology, Human and Animal
 26.0706 Physiology, Human and Animal
 26.0501 Microbiology
 26.0601 Anatomy
 26.0606 Histology
 26.0201 Biochemistry and Biophysics
 26.0201 Biochemistry and Biophysics
 26.0402 Molecular Biology
 26.0401 Cell Biology
 26.0607 Marine Biology
 26.0602 Biometrics and Biostatistics
 26.0603 Ecology
 26.0702 Entomology
 26.0703 Genetics, Human and Animal
 26.0611 Radiobiology
 26.0609 Nutritional Sciences
 26.0608 Neurosciences
 26.0612 Toxicology
 26.0604 Embryology
 26.0303 Mycology
 26.0304 Plant Genetics
 26.0399 Botany, Other
 26.0499 Cell and Molecular Biology, Other
 26.0605 Endocrinology
 26.0607 Marine Biology
 26.0610 Parasitology
 26.0699 Miscellaneous Specialized Areas, Life Sciences, Other
 26.0799 Zoology, Other
 26.9999 Life Sciences, Other

0500 Business and Management
 0501 Business and commerce, general
 0502 Accounting
 0503 Business statistics
 0504 Banking and finance
 0505 Investments and securities
 0506 Business management and administration
 0507 Operations research
 0508 Hotel and restaurant management
 0509 Marketing and purchasing

06. Business and Management
 06.0101 Business and Management, General
 06.0201 Accounting
 06.1301 Business Statistics
 06.0301 Banking and Finance
 06.1001 Investments and Securities
 06.0401 Business Administration and Management, General
 06.1302 Operations Research (Quantitative Methods)
 06.0701 Hotel/Motel Management
 06.0704 Restaurant Management
 06.0402 Contract Management and Procurement/Purchasing
 06.1401 Marketing Management

HEGIS Taxonomy
*Conventional Academic Subdivisions of Knowledge
 and Training*

New Classification

0610	Transportation and public utilities	06.0705	Transportation Management
		44.0602	Public Transportation
		44.0603	Public Utilities
0511	Real Estate	06.1701	Real Estate, General
		06.1702	Commercial Property
		06.1703	Property Management
		06.1704	Real Estate Appraisal
		06.1705	Real Estate Finance
		06.1706	Real Estate Law
		06.1707	Residential Property
		06.1799	Real Estate, Other
0512	Insurance	06.0801	Insurance and Risk Management
0513	International business	06.0901	International Business Management
0514	Secretarial studies (baccalaureate and higher programs)	07.0601	Secretarial and Related Programs, General
0515	Personnel management	06.1601	Personnel Management
0516	Labor and industrial relations	06.1101	Labor/Industrial Relations
0517	Business economics	06.0501	Business Economics
0599	Other, specify	06.0403	Product Management
		06.0404	Systems Efficiency Analysis
		06.0499	Business Administration and Management, Other
		06.0601	Human Resources Development
		06.0702	Recreational Enterprises Management
		06.0703	Resort Management
		06.0799	Institutional Management, Other
		06.1201	Management Information Systems
		06.1399	Management Science, Other
		06.1402	Marketing Research
		06.1499	Marketing Management and Research, Other
		06.1501	Organizational Behavior
		06.1801	Small Business Management
		06.1802	Small Business Ownership
		06.1899	Small Business Management and Ownership, Other
		06.1901	Taxation
		06.2001	Trade and Industrial Supervision and Management
		06.9999	Business and Management, Other
0600	Communications	09.	Communications
0601	Communications, general	09.0101	Communications, General
0602	Journalism (printed media)	09.0401	Journalism (Mass Communications)
0603	Radio/television	09.0601	Radio/Television News Broadcast
		09.0701	Radio/Television, General
0604	Advertising	09.0201	Advertising
0605	Communication media (use of videotape, films, etc., oriented specifically toward radio/television)	10.0104	Radio and Television Production and Broadcasting Technology
0699	Other, specify	09.0301	Communications Research
		09.0501	Public Relations
		09.9999	Communications, Other

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*Conventional Academic Subdivisions of Knowledge
 and Training*

New Classification

0700	Computer and Information Sciences	11.	Computer and Information Sciences
0701	Computer and information sciences, general	11.0101	Computer and Information Sciences, General
0702	Information sciences and systems	11.0401	Information Sciences and Systems
0703	Data processing	11.0301	Data Processing
0704	Computer programming	11.0201	Computer Programming
0705	Systems analysis	11.0501	Systems Analysis
0799	Other, specify	11.9999	Computer and Information Sciences, Other
0800	Education	13.	Education
0801	Education, general	13.0101	Education, General
0802	Elementary education, general	13.1202	Elementary Education
0803	Secondary education, general	13.1205	Secondary Education
0804	Junior high school education	13.1203	Junior High Education
0805	Higher education, general	13.0406	Higher Education Administration
		13.0606	Higher Education Research
0806	Junior and community college education	13.0407	Community College Education Administration
0807	Adult and continuing education	13.0403	Adult and Continuing Education Administration
		13.0602	Adult and Continuing Education Research
		13.1201	Adult and Continuing Education
C808	Special education, general	13.1001	Special Education, General
0809	Administration of special education	13.0402	Administration of Special Education
0810	Education of the mentally retarded	13.1006	Education of the Mentally Handicapped
0811	Education of the gifted	13.1004	Education of the Gifted and Talented
0812	Education of the deaf	13.1003	Education of the Deaf and Hearing Impaired
0813	Education of the culturally disadvantaged	13.1002	Education of the Culturally Disadvantaged
0814	Education of the visually handicapped	13.1009	Education of the Visually Handicapped
0815	Speech correction	13.1012	Speech Correction
0816	Education of the emotionally disturbed	13.1005	Education of the Emotionally Handicapped
0817	Remedial education	13.1010	Remedial Education
0818	Special learning disabilities	13.1011	Specific Learning Disabilities
0819	Education of the physically handicapped	13.1008	Education of the Physically Handicapped
0820	Education of the multiple handicapped	13.1007	Education of the Multiple Handicapped
0821	Social foundations (history and philosophy of education)	13.0901	Social Foundations
0822	Educational psychology (include learning theory)	13.0801	School Psychology
0823	Pre-elementary education (kindergarten)	13.1204	Pre-Elementary Education
0824	Educational statistics and research	13.0603	Educational Statistics and Research
0825	Educational testing, evaluation and measurement	13.0604	Educational Testing, Evaluation, and Measurement
0826	Student personnel (counseling and guidance)	13.1101	Student Counseling and Personnel Services
0827	Educational administration	13.0401	Education Administration, General
0828	Educational supervision	13.0404	Educational Supervision
0829	Curriculum and instruction	13.0301	Curriculum and Instruction
0830	Reading education (methodology and theory)	13.1315	Reading Education
0831	Art education (methodology and theory)	13.1302	Art Education
0832	Music education (methodology and theory)	13.1312	Music Education
0833	Mathematics education (methodology and theory)	13.1311	Mathematics Education
0834	Science education (methodology and theory)	13.1316	Science Education
0835	Physical education	13.1314	Physical Education
0836	Driver and safety education	13.1304	Driver and Safety Education
0837	Health education (include family life education)	13.1307	Health Education
0838	Business, commerce, and distributive education	13.1303	Business Education
		13.1310	Marketing and Distributive Education

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and Training*

New Classification

0839 Industrial arts, vocational, and technical education

0899 Other, specify

13.1309 Industrial Arts Education
 13.1319 Technical Education
 13.1320 Trade and Industrial Education
 13.0201 Bilingual/Bicultural Education
 13.0405 Elementary and Secondary Education Administration
 13.0499 Education Administration, Other
 13.0501 Educational Media
 13.0601 Evaluation and Research, General
 13.0605 Elementary and Secondary Research
 13.0699 Evaluation and Research, Other
 13.0701 International and Comparative Education
 13.1099 Special Education, Other
 13.1299 Teacher, Education, General Programs, Other
 13.1301 Agricultural Education
 13.1305 English Education
 13.1306 Foreign Languages Education
 13.1308 Home Economics Education
 13.1313 Nutritional Education
 13.1317 Social Science Education
 13.1318 Social Studies Education
 13.1399 Teacher Education, Specific Subject Areas, Other
 13.1401 Teaching English as a Second Language/Foreign Language
 13.9999 Education, Other

0900 Engineering
 0901 Engineering, general
 0902 Aerospace, aeronautical and astronautical engineering
 0903 Agricultural engineering
 0904 Architectural engineering
 0905 Bioengineering and biomedical engineering
 0906 Chemical engineering (include petroleum refining)
 0907 Petroleum engineering (exclude petroleum refining)
 0908 Civil, construction, and transportation engineering
 0909 Electrical, electronics, and communications engineering
 0910 Mechanical engineering
 0911 Geological engineering
 0912 Geophysical engineering
 0913 Industrial and management engineering
 0914 Metallurgical engineering
 0915 Materials engineering
 0916 Ceramic engineering
 0917 Textile engineering
 0918 Mining and mineral engineering
 0919 Engineering physics
 0920 Nuclear engineering
 0921 Engineering mechanics
 0922 Environmental and sanitary engineering
 0923 Naval architectural and marine engineering
 0924 Ocean engineering

14. Engineering
 14.0101 Engineering, General
 14.0201 Aerospace, Aeronautical, and Astronautical Engineering
 14.0301 Agricultural Engineering
 14.0401 Architectural Engineering
 14.0501 Bioengineering and Biomedical Engineering
 14.0701 Chemical Engineering
 14.2501 Petroleum Engineering
 14.0801 Civil Engineering
 14.1001 Electrical, Electronics, and Communications Engineering
 14.1901 Mechanical Engineering
 14.1501 Geological Engineering
 14.1601 Geophysical Engineering
 14.1701 Industrial Engineering
 14.2001 Metallurgical Engineering
 14.1801 Materials Engineering
 14.0601 Ceramic Engineering
 14.2801 Textile Engineering
 14.2101 Mining and Mineral Engineering
 14.1201 Engineering Physics
 14.2301 Nuclear Engineering
 14.1101 Engineering Mechanics
 14.1401 Environmental Health Engineering
 14.2201 Naval Architecture and Marine Engineering
 14.2401 Ocean Engineering

HEGIS Taxonomy

Conventional Academic Subdivisions of Knowledge
and Training

New Classification

0925	Engineering technologies (baccalaureate and higher programs)	15.	Engineering and Engineering Related Technologies
0999	Other, specify	14.0901	Computer Engineering
		14.1301	Engineering Science
		14.2601	Surveying and Mapping Sciences
		14.2602	Cartography
		14.2701	Systems Engineering
		14.9999	Engineering, Other
1000	Fine and Applied Arts	50.	Visual and Performing Arts
1001	Fine arts, general	50.0101	Visual and Performing Arts, General
1002	Art (painting, drawing, sculpture)	50.0705	Drawing
		50.0708	Painting
		50.0709	Sculpture
1003	Art history and appreciation	50.0703	Art History and Appreciation
1004	Music (performing, composition, theory)	50.0903	Music Performance
		50.0904	Music Theory and Composition
1005	Music (liberal arts program)	50.0901	Music, General
1006	Music history and appreciation (musicology)	50.0902	Music History and Appreciation
1007	Dramatic arts	50.0501	Dramatic Arts
1008	Dance	50.0301	Dance
1009	Applied design (ceramics, weaving, textile design, fashion design, jewelry, metalsmithing, interior decoration, commercial art)	50.0201	Crafts, General
		50.0202	Ceramics
		50.0203	Enameling
		50.0204	Fiber/Textiles/Weaving
		50.0205	Glass
		50.0206	Metal/Jewelry
		50.0299	Crafts, Other
		50.0401	Design, General
		50.0402	Graphic Design
		50.0403	Illustration Design
		50.0404	Industrial Design
		50.0405	Theatre Design
		50.0499	Design, Other
1010	Cinematography	50.0602	Cinematography/Film
1011	Photography	50.0605	Photography
1099	Other, specify	50.0601	Film Arts, General
		50.0603	Film Animation
		50.0604	Holography
		50.0606	Video
		50.0699	Film Arts, Other
		50.0701	Film Arts, General
		50.0702	Art Conservation
		50.0704	Arts Management
		50.0706	Intermedia
		50.0707	Kinetics
		50.0799	Fine Arts, Other
		50.0901	Music, General
		50.0999	Music, Other
		50.9999	Visual and Performing Arts, Other

HEGIS Taxonomy
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 and Training*

New Classification

1100 Foreign Languages
 1101 Foreign languages, general (includes concentration on more than one foreign language without major emphasis on one language)
 1102 French
 1103 German
 1104 Italian
 1105 Spanish
 1106 Russian
 1107 Chinese
 1108 Japanese
 1109 Latin
 1110 Greek, classical
 1111 Hebrew
 1112 Arabic
 1113 Indian (Asiatic)

 1114 Scandinavian languages
 1115 Slavic languages (other than Russian)
 1116 African languages (non Semitic)
 1199 Other, specify

16. Foreign Languages
 16.0101 Foreign Languages, Multiple Emphasis

 16.0901 French
 16.0501 German
 16.0902 Italian
 16.0905 Spanish
 16.0402 Russian
 16.0301 Chinese
 16.0302 Japanese
 16.0903 Latin
 16.0601 Greek (Classical)
 16.1102 Hebrew
 16.1101 Arabic
 16.0701 Hindi
 16.0702 Sanskrit
 16.0799 Indic Languages, Other
 16.0502 Scandinavian Languages
 16.0403 Slavic Languages (Other than Russian)
 16.0201 African (Non-Semitic) Languages
 16.0302 Japanese
 16.0303 Korean
 16.0399 Asiatic Languages, Other
 16.0401 Baltic Languages
 16.0503 Yiddish
 16.0599 Germanic Languages, Other
 16.0602 Greek (Modern)
 16.0801 Iranian Languages
 16.0904 Portuguese
 16.0999 Italic Languages, Other
 16.1001 Native American Languages
 16.1199 Semitic Languages, Other
 16.9999 Foreign Languages, Other

1200 Health Professions
 1201 Health professions, general
 1202 Hospital and health care administration
 1203 Nursing (baccalaureate and higher programs)

 1204 Dentistry, D.D.S. or D.M.D. degree
 1205 Dental specialties (work beyond first-professional degree, D.D.S. or D.M.D.)

18. Health Sciences
 18.9999 Health Sciences, Other
 18.0701 Health Care Administration
 18.1101 Nursing, General
 18.1102 Anesthetist
 18.1103 Maternal/Child Health
 18.1104 Medical Surgical
 18.1105 Nursing Administration
 18.1106 Psychiatric/Mental Health
 18.1107 Public Health
 18.1199 Nursing, Other
 18.0401 Dentistry, General
 18.0402 Dental Public Health
 18.0403 Endodontics
 18.0404 Oral/Maxial Facial Surgery
 18.0405 Oral Pathology
 18.0406 Orthodontics

HEGIS Taxonomy

*Conventional Academic Subdivisions of Knowledge
and Training*

New Classification

1205	Dental specialities (work beyond first-professional degree, D.D.S. or D.M.D) (Continued)	18.0407	Pedodontics
		18.0408	Periodontics
		18.0409	Prosthodontics
		18.0499	Dentistry, Other
1206	Medicine, M.D. degree	18.1001	Medicine, General
1207	Medical specialties (work beyond first-professional degree, M.D.)	18.1002	Allergies and Endomology
		18.1003	Anesthesiology
		18.1004	Colon and Rectal Surgery
		18.1005	Dermatology
		18.1006	Emergency Medicine
		18.1007	Family Practice
		18.1008	Geriatrics
		18.1009	Immunology
		18.1010	Internal Medicine
		18.1011	Neurological Surgery
		18.1012	Nuclear Medicine
		18.1013	Obstetrics and Gynecology
		18.1014	Ophthalmology
		18.1015	Orthodontic Surgery
		18.1016	Orthopedic
		18.1017	Otorhinolaryngology/Otolaryngology
		18.1018	Pathology
		18.1019	Pediatrics
		18.1020	Physical Medicine and Rehabilitation
		18.1021	Plastic Surgery
		18.1022	Preventive Medicine
		18.1023	Psychiatry
		18.1024	Neurology
		18.1025	Radiology
		18.1026	Surgery
		18.1027	Thoracic Surgery
		18.1028	Urology
		18.1099	Medicine, Other
1208	Occupational therapy	17.0807	Occupational Therapy
1209	Optometry	18.1201	Optometry
1210	Osteopathic medicine, D.O. degree	18.1301	Osteopathic Medicine
1211	Pharmacy	18.1401	Pharmacy
1212	Physical therapy	17.0813	Physical Therapy
1213	Dental hygiene (baccalaureate and higher programs)	17.0102	Dental Hygiene
1214	Public Health	18.2201	Public Health Laboratory Science
1215	Medical record librarianship	18.0703	Medical Records Administration
1216	Podiatry (Pod.D. or D.P.) or podiatric medicine (D.P.M.)	18.1501	Podiatry
1217	Biomedical communication	17.0504	Medical Illustrating
1218	Veterinary medicine (D.V.M. degree)	18.2401	Veterinary Medicine
1219	Veterinary medicine specialties (work beyond first-professional degree, D.V.M.)		
1220	Speech pathology and audiology	18.0103	Speech Pathology/Audiology
1221	Chiropractic	18.0301	Chiropractic
1222	Clinical social work (medical and psychiatric and specialized rehabilitation services)	44.0702	Medical Social Work
1223	Medical laboratory technologies (baccalaureate and higher programs)	18.0901	Medical Laboratory
1224	Dental technologies (baccalaureate and higher programs)	17.0103	Dental Laboratory Technology

HEGIS Taxonomy
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 and Training*

New Classification

1225 Radiologic technologies (baccalaureate and higher programs)

1299 Other, specify

- 17.0207 Medical Radiation Dosimetry
- 17.0208 Nuclear Medical Technology
- 17.0209 Radiograph Medical Technology
- 18.0101 Audiology
- 18.0102 Speech Pathology
- 18.0199 Audiology and Speech Pathology, Other
- 18.0201 Clinical Anatomy
- 18.0202 Clinical Biochemistry
- 18.0203 Clinical Microbiology
- 18.0204 Clinical Pathology
- 18.0205 Physiology
- 18.0299 Basic Clinical Health Sciences, Other
- 18.0501 Emergency/Disaster Science
- 18.0601 Epidemiology
- 18.0702 Health Care Planning
- 18.0799 Health Sciences Administration, Other
- 18.0801 Hematology
- 18.1601 Population and Family Planning
- 18.1701 Pre-Dentistry
- 18.1801 Pre-Medicine
- 18.1901 Pre-Pharmacy
- 18.2001 Pre-Veterinary
- 18.2101 Prosectorial Science
- 18.2301 Toxicology (Clinical)
- 18.9999 Health Sciences, Other

1300 Home Economics

1301 Home economics, general

1302 Home decoration and home equipment

1303 Clothing and textiles

19. Home Economics

19.0101 Home Economics, General

19.0601 Human Environment and Housing, General

19.0901 Textiles and Clothing, General

19.0902 Fashion Design

19.0903 Textiles and Clothing, Retail

19.0904 Textile Science

19.0999 Textiles and Clothing, Other

19.0401 Family/Consumer Resource Management, General

19.0701 Individual and Family Development, General

19.0501 Food Sciences and Human Nutrition, General

20.0601 Institutional, Home Management, and Supporting Programs, General

19.0201 Business Home Economics

19.0301 Family and Community Services, General

19.0302 Nonformal Education (Extension, Adult/Extended)

19.0303 Family Services

19.0399 Family and Community Services, Other

19.0402 Consumer Science

19.0403 Family Economics

19.0499 Family/Consumer Resource Management, Other

19.0502 Food/Food Sciences

19.0503 Dietetics/Human Nutritional Services

19.0504 Human Nutrition

19.0599 Food Sciences and Human Nutrition, Other

1304 Consumer economics and home management

1305 Family relations and child development

1306 Foods and nutrition (include dietetics)

1307 Institutional management and cafeteria management

1399 Other, specify

1399 Other, specify (Continued)

19.0602 Household Equipment
 19.0603 Housing
 19.0699 Human Environment and Housing, Other
 19.0702 Adult Development
 19.0703 Family Counseling
 19.0704 Family Relations
 19.0705 Geriatric Services
 19.0799 Individual and Family Development, Other
 19.0801 International/Comparative Home Economics
 19.9999 Home Economics, Other

1400 Law

22. Law

1401 Law, General

22.0101 Law

1499 Other, specify

22.0102 Pre-Law

22.0103 Legal Assisting

22.0199 Law, Other

1500 Letters

23. Letters

1501 English, general

38. Philosophy and Religion

1502 Literature, English

23.0101 English, General

1503 Comparative literature

23.0801 Literature, English

1504 Classics

23.0301 Comparative Literature

1505 Linguistics (include phonetics, semantics, and
 philology)

23.0201 Classics

23.0601 Linguistics (Includes Phonetics, Semantics, and
 Philology)

1506 Speech, debate, and forensic science
 (rhetoric and public address)

23.1001 Speech, Debate, and Forensics

1507 Creative Writing

23.0501 Creative Writing

1508 Teaching of English as a foreign language

13.1401 Teaching English as a Second Language/Foreign
 Language

1509 Philosophy

38.0101 Philosophy

1510 Religious studies (exclude theological professions)

38.0201 Religion

1599 Other, specify

23.0401 Composition

23.0701 Literature, American

23.0901 Rhetoric

23.1101 Technical and Business Writing

23.9999 Letters, Other

38.9999 Philosophy and Religion, Other

1600 Library Science

25. Library and Archival Sciences

1601 Library science, general

25.0401 Library Science

1699 Other, specify

25.0101 Library and Archival Sciences, General

25.0201 Archival Science

25.0301 Library Assisting

25.0501 Museology

25.9999 Library and Archival Sciences, Other

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*Conventional Academic Subdivisions of Knowledge
 and Training*

New Classification

1700 Mathematics
 1701 Mathematics, general
 1702 Statistics, mathematical and theoretical
 1703 Applied mathematics
 1799 Other, specify

27. Mathematics
 27.0101 Mathematics, General
 27.0501 Statistics
 27.0301 Applied Mathematics
 27.0201 Actuarial Sciences
 27.0401 Pure Mathematics
 27.9999 Mathematics, Other

1800 Military Sciences
 1801 Military science (Army)
 1802 Naval science (Navy, Marines)
 1803 Aerospace science (Air Force)
 1899 Other, specify

28. Military Sciences
 28.0301 Military Science (Army)
 28.0401 Naval Science (Navy, Marines)
 28.0101 Aerospace Science (Air Force)
 28.0201 Coast Guard Science
 28.9999 Military Sciences, Other

1900 Physical Sciences
 1901 Physical sciences, general
 1902 Physics, general (exclude biophysics)
 1903 Molecular physics
 1904 Nuclear physics
 1905 Chemistry, general (exclude biochemistry)
 1906 Inorganic chemistry
 1907 Organic chemistry
 1908 Physical chemistry
 1909 Analytical chemistry
 1910 Pharmaceutical chemistry
 1911 Astronomy
 1912 Astrophysics
 1913 Atmospheric sciences and meteorology
 1914 Geology
 1915 Geochemistry
 1916 Geophysics and seismology
 1917 Earth sciences, general
 1918 Paleontology
 1919 Oceanography
 1920 Metallurgy
 1999 Other, specify

40. Physical Sciences
 40.0101 Physical Sciences, General
 40.0801 Physics, General
 40.0802 Atomic/Molecular Physics
 40.0806 Nuclear Physics
 40.0501 Chemistry, General
 40.0503 Inorganic Chemistry
 40.0504 Organic Chemistry
 40.0506 Physical Chemistry
 40.0502 Analytical Chemistry
 40.0505 Pharmaceutical Chemistry
 40.0201 Astronomy
 40.0301 Astrophysics
 40.0401 Atmospheric Sciences and Meteorology
 40.0601 Geology
 40.0602 Geochemistry
 40.0603 Geophysics and Seismology
 40.0703 Earth Science
 40.0604 Paleontology
 40.0702 Oceanography
 40.0701 Metallurgy
 40.0599 Chemistry, Other
 40.0699 Geological Sciences, Other
 40.0803 Electron Physics
 40.0804 Elementary Particle Physics
 40.0805 Fluids and Plasmas
 40.0807 Optics
 40.0808 Solid State Physics
 40.0899 Physics, Other
 40.0901 Planetary Science
 40.9999 Physical Sciences, Other

HEGIS Taxonomy
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New Classification

2000	Psychology	42.	Psychology
2001	Psychology, general	42.0101	Psychology, General
2002	Experimental psychology (animal and human)	42.0801	Experimental Psychology
2003	Clinical psychology	42.0201	Clinical Psychology
2004	Psychology for counseling	42.0601	Counseling Psychology
2005	Social psychology	42.1601	Social Psychology
2006	Psychometrics	42.1301	Psychometrics
2007	Statistics in psychology	42.1501	Quantitative Psychology
2008	Industrial psychology	42.0901	Industrial and Organizational Psychology
2009	Developmental psychology	42.0701	Developmental Psychology
2010	Physiological psychology	42.1101	Physiological Psychology
2099	Other, specify	42.9999	Psychology, Other
		42.0301	Cognitive Psychology
		42.0401	Community Psychology
		42.0501	Comparative Psychology
		42.1001	Personality Psychology
		42.1201	Psycholinguistics
		42.1401	Psychopharmacology
2100	Public Affairs and Services	43.	Protective Services
		44.	Public Affairs
2101	Community services, general	44.0201	Community Services
2102	Public administration	44.0401	Public Administration
2103	Parks and recreation management	31.0301	Parks and Recreation Management
2104	Social work and helping services (other than clinical social work)	44.0701	Social Work, General
		44.0702	Medical Social Work
		44.0799	Social Work, Other
2105	Law enforcement and corrections (baccalaureate and higher programs)	43.0101	Correctional Administration
		43.0102	Corrections
		43.0103	Criminal Justice Administration
		43.0104	Criminal Justice Studies
		43.0106	Forensic Studies
		43.0107	Law Enforcement
		43.0108	Law Enforcement Administration
		43.0199	Criminal Justice, Other
		44.0301	International Public Service
2106	International public service (other than diplomatic service)	43.0202	Fire Protection Administration
		43.0299	Fire Protection, Other
2199	Other, specify	43.9999	Protective Services, Other
		44.0101	Public Affairs, General
		44.0501	Public Policy Studies
		44.0601	Public Sanitation
		44.0602	Public Transportation
		44.0603	Public Utilities
		44.0699	Public Works, Other
		44.9999	Public Affairs, Other

HEGIS Taxonomy
*Conventional Academic Subdivisions of Knowledge
 and Training*

New Classification

2200 Social Sciences
 2201 Social sciences, general
 2202 Anthropology
 2203 Archaeology
 2204 Economics
 2205 History
 2206 Geography
 2207 Political science and government
 2208 Sociology
 2209 Criminology
 2210 International relations
 2211 Afro-American (black culture) studies
 2212 American Indian cultural studies
 2213 Mexican-American cultural studies
 2214 Urban studies
 2215 Demography
 2299 Other, specify

2300 Theology
 2301 Theological professions, general
 2302 Religious music
 2303 Biblical languages
 2304 Religious education
 2399 Other, specify

4900 Interdisciplinary Studies
 4901 General liberal arts and sciences
 4902 Biological and physical sciences
 4903 Humanities and social sciences
 4904 Engineering and other disciplines
 4999 Other, specify

45. Social Sciences
 45.1010 Social Sciences, General
 45.0201 Anthropology
 45.0301 Archeology
 45.0601 Economics
 45.0801 History
 45.0701 Geography
 45.1001 Political Science and Government
 45.1101 Sociology
 45.0401 Criminology
 45.0901 International Relations
 05.0201 Afro-American (Black) Studies
 05.0202 American Indian Studies
 05.0203 Hispanic-American Studies
 45.1201 Urban Studies
 45.0501 Demography
 45.9999 Social Sciences, Other

39. Theology
 39.0601 Theological Studies
 39.0501 Religious Music
 39.0101 Biblical Languages
 39.0401 Religious Education
 39.0201 Bible Studies
 39.0301 Missionary Studies
 39.9999 Theology, Other

30. Multi/Interdisciplinary Studies
 24.0101 Liberal/General Studies
 30.0101 Biological and Physical Sciences
 30.0401 Humanities and Social Sciences
 30.0301 Engineering and Other Disciplines
 24.0199 Liberal/General Studies, Other
 30.0201 Clinical Pastoral Care
 30.0501 Peace Studies
 30.0601 Systems Science
 30.0701 Women's Studies
 30.9999 Multi/Interdisciplinary Studies, Other

HEGIS Taxonomy
*Technological and Occupational Curriculums Leading
 To Associate Degrees and Other Awards
 Below the Baccalaureate*

New Classification

5000	Business and Commerce Technologies	07.	Business and Office
5001	Business and commerce technologies, general	07.9999	Business and Office, Other
5002	Accounting technologies	07.01	Accounting, Bookkeeping, and Related Programs
5003	Banking and finance technologies	07.02	Banking and Related Financial Programs
5004	Marketing, distribution, purchasing, business, and industrial management technologies	08.	Marketing and Distribution
5005	Secretarial technologies (include office machines training)	07.06	Secretarial and Related Programs
5006	Personal service technologies (stewardess, cosmetologist, etc.)	07.07	Typing, General Office, and Related Programs
5007	Photography technologies	12.04	Personal Services
5008	Communications and broadcasting technologies (radio/television, newspapers)	49.0106	Flight Attendants
5009	Printing and lithography technologies	10.0103	Photographic Technology
5010	Hotel and restaurant management technologies	48.0204	Commercial Photography
5011	Transportation and public utility technologies	10.	Communication Technologies
5012	Applied arts, graphic arts, and fine arts technologies (include advertising design)	48.0206	Lithography, Photography, and Platemaking
5099	Other, specify	48.0208	Printing Press Operations
5100	Data Processing Technologies	08.09	Hospitality and Recreation Marketing
5101	Data processing technologies, general	08.11	Transportation and Travel Marketing
5102	Keypunch operator and other input preparation technologies	44.06	Public Works
5103	Computer programmer technologies	50.0801	Graphic Arts Technology
5104	Computer operator and peripheral equipment operation technologies	50.9999	Visual and Performing Arts, Other
5105	Data processing equipment maintenance technologies	07.9999	Business and Office, Other
5199	Other, specify		
5200	Health Services and Paramedical Technologies	07.03	Business Data Processing and Related Programs
5201	Health services assistant technologies, general	07.0399	Business Data Processing and Related Programs, Other
5202	Dental assistant technologies	07.0303	Business Data Entry Equipment Operation
5203	Dental hygiene technologies	07.0305	Business Data Programming
5204	Dental laboratory technologies	07.0302	Business Computer and Console Operation
5205	Medical or biological laboratory assistant technologies	07.0304	Business Data Peripheral Equipment Operation
5206	Animal laboratory assistant technologies	47.0102	Business Machine Repair
5207	Radiologic technologies (X-ray, etc.)	47.0104	Computer Electronics
5208	Nursing, R.N. (less than 4-year program)	07.0399	Business Data Processing and Related Programs, Other
		47.0199	Electrical and Electronics Equipment Repair, Other
		07.0306	Business Systems Analysis
		17.	Allied Health
		17.9999	Allied Health, Other
		17.0101	Dental Assisting
		17.0102	Dental Hygiene
		17.0103	Dental Laboratory Technology
		17.0309	Medical Laboratory Technology
		17.0399	Medical Laboratory Technologies, Other
		17.0512	Veterinarian Assisting
		17.0209	Radiograph Medical Technology
		18.1101	Nursing, General

HEGIS Taxonomy
*Technological and Occupational Curriculums Leading
 To Associate Degrees and Other Awards
 Below the Baccalaureate*

New Classification

5209	Nursing, practical (L.P.N. or L.V.N. less than 4-year program)	17.0605	Practical Nursing
5210	Occupational therapy technologies	17.0808	Occupational Therapy Assisting
5211	Surgical technologies	17.0809	Occupational Therapy Aide
5212	Optical technologies (include ocular care, ophthalmic, optometric technologies)	17.0211	Surgical Technology
5213	Medical record technologies	17.07	Ophthalmic Services
5214	Medical assistant and medical office assistant technologies	17.0506	Medical Records Technology
5215	Inhalation therapy technologies	17.0503	Medical Assisting
5216	Psychiatric technologies (include mental health aide programs)	17.0210	Respiratory Therapy Technology
5217	Electro diagnostic technologies (include E.K.G., E.E.G., etc.)	17.04	Mental Health/Human Services
5218	Institutional management technologies (rest homes, etc.)	17.0203	Electrocardiograph Technology
5219	Physical therapy technologies	17.0204	Electroencephalograph Technology
5299	Other, specify	17.9999	Allied Health, Other
5300	Mechanical and Engineering Technologies	17.0814	Physical Therapy Aide
5301	Mechanical and engineering technologies, general	17.0815	Physical Therapy Assisting
5302	Aeronautical and aviation technologies	17.9999	Allied Health, Other
5303	Engineering graphics (tool and machine drafting and design)	15.	Engineering and Engineering-Related Technologies
5304	Architectural drafting technologies	15.9999	Engineering and Engineering-Related Technologies, Other
5305	Chemical technologies (include plastics)	15.0801	Aeronautical Technology
5306	Automotive technologies	48.0105	Mechanical Drafting
5307	Diesel technologies	48.0102	Architectural Drafting
5308	Welding technologies	15.0601	Chemical Manufacturing Technology
5309	Civil technologies (surveying, photogrammetry, etc.)	41.0301	Chemical Technology
5310	Electronics and machine technologies (television, appliance, office machine repair, etc.)	15.0803	Automotive Technology
5311	Electromechanical technologies	47.0605	Diesel Engine Mechanics
5312	Industrial technologies	48.0508	Welding, Brazing, and Soldering
5313	Textile technologies	15.0201	Civil Technology
5314	Instrumentation technologies	15.0203	Surveying and Mapping Technology
5315	Mechanical technologies	15.03	Electrical and Electronic Technologies
5316	Nuclear technologies	47.01	Electrical and Electronics Equipment Repair
5317	Construction and building technologies (carpentry, electrical work, plumbing, sheet metal, air conditioning, heating, etc.)	15.0403	Electromechanical Technology
5399	Other, specify	15.0603	Industrial Technology
		15.0609	Textile Technology
		15.0404	Instrumentation Technology
		15.0805	Mechanical Design Technology
		41.02	Nuclear Technologies
		47.0503	Industrial Nuclear Energy
		46.	Construction Trades
		47.	Mechanics and Repairers
		48.	Precision Production
		15.9999	Engineering and Engineering-Related Technologies, Other

HEGIS Taxonomy
*Technological and Occupational Curriculums Leading
 To Associate Degrees and Other Awards
 Below the Baccalaureate*

New Classification

5400	Natural Science Technologies	41.	Science Technologies
5401	Natural science technologies, general	41.9999	Science Technologies, Other
5402	Agricultural technologies (include horticulture)	01.9999	Agribusiness and Agricultural Production, Other
5403	Forestry and wildlife technologies (include fisheries)	15.0802	Agricultural Equipment Technology
5404	Food services technologies	03.0301	Fishing and Fisheries, General
5405	Home economics technologies	03.0401	Forestry Production and Processing, General
5406	Marine and oceanographic technologies	03.0404	Forest Products Processing Technology
5407	Laboratory technologies, general	03.0601	Wildlife Management
5408	Sanitation and public health inspection technologies (environmental health technologies)	20.0499	Food Production, Management, and Services, Other
5499	Other, specify	20.9999	Vocational Home Economics, Other
5500	Public Service Related Technologies	15.0605	Marine Products Technology
5501	Public service technologies, general	41.0102	Oceanographic (Biological) Technology
5502	Bible study or religion-related occupations	41.0305	Oceanographic (Physical) Technology
5503	Education technologies (teach aide and 2-year teacher training programs)	41.9999	Science Technologies, Other
5504	Library assistant technologies	15.0599	Environmental Control Technologies, Other
5505	Police, law enforcement, corrections technologies	41.9999	Science Technologies, Other
5506	Recreation and social work related technologies	43.	Protective Services
5507	Fire control technology	44.	Public Affairs
5508	Public administration and management technologies	43.9999	Protective Services, Other
5599	Other, specify	39.9999	Theology, Other
		10.0101	Educational Media Technology
		20.0205	Teacher Aide
		25.0301	Library Assisting
		43.0102	Corrections
		43.0105	Criminal Justice Technology
		43.0107	Law Enforcement
		31.0201	Outdoor Recreation
		44.0201	Community Services
		43.0201	Fire Control and Safety Technology
		43.0203	Firefighting
		44.9999	Public Affairs, Other
		43.9999	Protective Services, Other
		44.9999	Public Affairs, Other

Appendix C

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Crosswalk Between The Handbook VI Vocational Program Listing and The New Classification

This appendix is designed to enable users to locate programs by crosswalking from previously used Handbook VI code listings into the new classification code listings. This appendix will be most helpful to those who are required to supply data for various data collections activities.

Vocational Programs

Handbook VI Vocational Programs

New Classification

Handbook VI Vocational Programs	New Classification
01 0000 Agriculture	01. Agribusiness and Agricultural Production
	03. Renewable Natural Resources
01.0100 Agricultural Production	01.0301 Agricultural Production, General
01.0101 Animal Science	01.0302 Animal Production
01.0102 Plant Science	01.0304 Crop Production
01.0103 Farm Mechanics	01.0201 Agricultural Mechanics, General
01.0104 Farm Business Management	01.0104 Farm and Ranch Management
01.0199 Other Agricultural Production	01.0303 Aquaculture
	01.0399 Agricultural Production, Other
01.0200 Agricultural Supplies Services	01.0501 Agricultural Services and Supplies, General
	01.0502 Agricultural Services
	01.0503 Agricultural Supplies Marketing
	01.0504 Animal Grooming
	01.0505 Animal Training
	01.0506 Horseshoeing
	01.0599 Agricultural Services and Supplies, Other
01.0300 Agricultural Mechanics	01.0201 Agricultural Mechanics, General
01.0301 Agricultural Power and Machinery	01.0204 Agricultural Power Machinery
01.0302 Agricultural Structures and Conveniences	01.0205 Agricultural Structures, Equipment, and Facilities
01.0303 Soil Management	01.0206 Soil and Water Mechanical Practices
01.0304 Water Management	01.0206 Soil and Water Mechanical Practices
01.0305 Agricultural Mechanics Skills	01.0203 Agricultural Mechanics, Construction, and Maintenance Skills
	01.0203 Agricultural Mechanics, Construction, and Maintenance Skills
01.0306 Agricultural Construction and Maintenance	01.0202 Agricultural Electrification, Power, and Controls
	01.0299 Agricultural Mechanics, Other
01.0307 Agricultural Electrification	01.0401 Agricultural Products and Processing, General
01.0399 Other Agricultural Mechanics	01.0402 Food Products
01.0400 Agricultural Products	01.0403 Nonfood Products
01.0401 Food Products	01.0499 Agricultural Products and Processing, Other
01.0402 Nonfood Products	01.0601 Horticulture, General
01.0499 Other Agricultural Products	
01.0500 Ornamental Horticulture (Production, Processing, Marketing, and Services)	01.0602 Arboriculture
01.0501 Arboriculture	01.0603 Floriculture
01.0502 Floriculture	01.0604 Greenhouse Operation and Management
01.0503 Greenhouse Operation and Management	01.0605 Landscaping
01.0504 Landscaping	01.0606 Nursery Operation and Management
01.0505 Nursery Operation and Management	01.0607 Turf Management
01.0506 Turf Management	01.0699 Horticulture, Other
01.0599 Other Ornamental Horticulture	

Handbook VI Vocational Programs

New Classification

01.0600 Agricultural Resources (Conservation, Utilization, and Services)
 01.0601 Forests
 01.0602 Recreation
 01.0603 Soil
 01.0604 Wildlife — including game farms and hunting areas

 01.0605 Water
 01.0606 Air
 01.0607 Fish — including farms and hatcheries

 01.0608 Range
 01.0699 Other Agricultural Resources
 01.0700 Forestry (Production, Processing, Management, Marketing, and Services)
 01.0701 Forests
 01.0702 Forest Protection

 01.0703 Logging (harvesting and transporting)
 01.0704 Wood Utilization
 01.0705 Recreation
 01.0706 Special Products

 01.0799 Other Forestry
 01.9900 Other Agriculture

03.0101 Renewable Natural Resources, General
 03.9999 Renewable Natural Resources, Other
 31.0201 Outdoor Recreation
 03.9999 Renewable Natural Resources, Other
 01.0305 Game Farm Management
 03.0601 Wildlife Management
 03.9999 Renewable Natural Resources, Other
 03.9999 Renewable Natural Resources, Other
 03.0301 Fishing and Fisheries, General
 03.0302 Fisheries
 03.0399 Fishing and Fisheries, Other
 03.9999 Renewable Natural Resources, Other
 03.9999 Renewable Natural Resources, Other
 03.0401 Forestry Production and Processing, General

 03.0402 Forest Production
 03.0201 Conservation and Regulation, General
 03.0202 Conservation
 03.0203 Resources Protection and Regulation
 03.0299 Conservation and Regulation, Other
 03.0405 Logging
 03.0403 Forest Products Utilization
 31.0201 Outdoor Recreation
 03.0406 Pulp and Paper Production
 03.0499 Forestry Production and Processing, Other
 03.0499 Forestry Production and Processing, Other
 01.0101 Agricultural Business and Management, General
 01.0199 Agricultural Business and Management, Other
 01.9999 Agribusiness and Agricultural Production, Other
 03.9999 Renewable Natural Resources, Other

04.0000 Distributive Education
 04.0100 Advertising Services
 04.0200 Apparel and Accessories

08. Marketing and Distribution
 09.0201 Advertising
 08.0101 Apparel and Accessories Marketing, General
 08.0102 Fashion Merchandising
 08.0104 Footwear Marketing
 08.0105 Jewelry Marketing
 08.0199 Apparel and Accessories Marketing, Other
 08.1203 Automotive Vehicles and Accessories Marketing
 08.0401 Financial Services Marketing, General
 08.0402 Banking Marketing
 08.0403 Credit Marketing
 08.0404 Credit Union Marketing
 08.0405 Savings and Loan Marketing
 08.0406 Securities and Commodities Marketing
 08.0499 Financial Services Marketing, Other
 08.0503 Floristry
 08.0601 Food Marketing, General
 08.0602 Convenience Store Marketing
 08.0603 Specialty Foods Marketing
 08.0604 Supermarket Marketing
 08.0605 Wholesale Food Marketing
 08.0699 Food Marketing, Other
 08.0905 Waiter/Waitress and Related Services

04.0300 Automotive
 04.0400 Finance and Credit

04.0500 Floristry
 04.0600 Food Distribution

04.0700 Food Services

04.0800	General Merchandise	08.0701	Auctioneering
		08.0704	Purchasing
		08.0705	Retailing
		08.0706	Sales
		08.0707	Wholesaling
		08.0799	General Marketing, Other
04.0900	Hardware, Building Materials, Farm and Garden Supplies and Equipment	08.0502	Farm and Garden Supplies Marketing
		08.0803	Building Materials Marketing
		08.0806	Hardware Marketing
04.1000	Home Furnishings	08.0801	Home and Office Products Marketing, General
		08.0802	Appliance Marketing
		08.0804	Floor Coverings, Draperies, and Upholstery Marketing
		08.0805	Furniture Marketing
		08.0807	Office Products and Equipment Marketing
		08.0808	Specialty Home Furnishings Marketing
		08.0899	Home and Office Products Marketing, Other
04.1100	Hotel and Lodging	06.0701	Hotel/Motel Management
		08.0901	Hospitality and Recreation Marketing, General
		08.0902	Marketing of Hotel/Motel Services
04.1200	Industrial Marketing	08.0702	Industrial Sales
04.1300	Insurance	08.1001	Insurance Marketing, General
		08.1002	Accident and Health Insurance Marketing
		08.1003	Life Insurance Marketing
		08.1004	Property and Casualty Insurance Marketing
		08.1099	Insurance Marketing, Other
04.1400	International Trade	08.0703	International Marketing
04.1500	Personal Services	08.0201	Business and Personal Services Marketing, General
		08.0202	Display
		08.0203	Marketing of Business or Personal Services
		08.0299	Business and Personal Services Marketing, Other
04.1600	Petroleum	08.1204	Petroleum Wholesaling
04.1700	Real Estate	06.1701	Real Estate, General
		06.1702	Commercial Property
		06.1703	Property Management
		06.1707	Residential Property
		06.1799	Real Estate, Other
04.1800	Recreation and Tourism	06.0702	Recreational Enterprises Management
		06.0703	Resort Management
		06.0704	Restaurant Management
		08.0901	Hospitality and Recreation Marketing, General
		08.0903	Marketing of Recreational Services
		08.0904	Recreational Products Marketing
		08.0999	Hospitality and Recreation Marketing, Other
		08.1104	Tourism
04.1900	Transportation	06.0705	Transportation Management
		08.1101	Transportation and Travel Marketing, General
		08.1102	Freight Transportation Marketing
		08.1103	Passenger Transportation Marketing
		08.1105	Travel Services Marketing
		08.1106	Warehouse Services Marketing
		08.1199	Transportation and Travel Marketing, Other
04.2000	Other Retail Trade	06.1801	Small Business Management
		06.1802	Small Business Ownership
		06.1899	Small Business Management and Ownership, Other
04.3100	Other Wholesale Trade	08.0301	Entrepreneurship, General
04.9900	Other Instructional Programs	08.9999	Marketing and Distribution, Other
		06.0799	Institutional Management, Other
		06.1401	Marketing Management

04.9900 Other Instructional Programs (Continued)

07.0000 Health Occupations Education
 07.0101 Dental Assisting
 07.0102 Dental Hygiene (Associate Degree)
 07.0103 Dental Laboratory Technology
 07.0199 Other Dental
 07.0200 Medical Laboratory Technology
 07.0201 Cytology (Cytotechnology)
 07.0202 Histology
 07.0203 Medical Laboratory Assisting
 07.0204 Hematology
 07.0299 Other Medical Laboratory Technology

07.0301 Nursing (Associate Degree)
 07.0302 Practical (Vocational) Nursing
 07.0303 Nursing Assistance (Aide)
 07.0304 Psychiatric Aide
 07.0305 Surgical Technician (Operating Room Technician)
 07.0306 Obstetrical Technician
 07.0307 Home Health Aide
 07.0308 School Health Aide
 07.0399 Other Nursing

07.0400 Rehabilitation
 07.0401 Occupational Therapy

07.0402 Physical Therapy

07.0403 Prosthetics

07.0404 Orthotics

07.0499 Other Rehabilitation

06.1402 Marketing Research
 06.1499 Marketing Management and Research, Other
 08.0501 Floristry, Farm and Garden Supplies Marketing, General
 08.0599 Floristry, Farm and Garden Supplies Marketing, Other
 08.1201 Vehicles and Petroleum Marketing, General
 08.1202 Agricultural Implements and Machinery Marketing
 08.1205 Recreational Vehicles and Accessories Marketing
 08.1206 Service Station Retailing
 08.1207 Vehicle Rental and Leasing
 08.1299 Vehicles and Petroleum Marketing, Other
 08.9999 Marketing and Distribution, Other

17. Allied Health
 17.0101 Dental Assisting
 17.0102 Dental Hygiene
 17.0103 Dental Laboratory Technology
 17.0199 Dental Services, Other
 17.0309 Medical Laboratory Technology
 17.0306 Cytotechnology
 17.0308 Histologic Technology
 17.0305 Clinical Laboratory Assisting
 17.0307 Hematology Technology
 17.0301 Blood Bank Technology
 17.0302 Chemistry Technology
 17.0303 Clinical Animal Technology
 17.0304 Clinical Laboratory Aide
 17.0310 Medical Technology
 17.0311 Microbiology Technology
 17.0399 Medical Laboratory Technologies, Other
 18.1101 Nursing, General
 17.0605 Practical Nursing
 17.0602 Nursing Assisting
 17.0405 Mental Health/Human Services Assisting
 17.0211 Surgical Technology
 17.0603 Obstetrical Technology
 17.0404 Home Health Aide
 17.9999 Allied Health, Other
 17.0601 Geriatric Aide
 17.0604 Pediatric Aide
 17.0606 Ward Service Management
 17.0699 Nursing-Related Services, Other
 17.0899 Rehabilitation Services, Other
 17.0807 Occupational Therapy
 17.0808 Occupational Therapy Assisting
 17.0809 Occupational Therapy Aide
 17.0813 Physical Therapy
 17.0814 Physical Therapy Aide
 17.0815 Physical Therapy Assisting
 17.0810 Orthotic/Prosthetic Assisting
 17.0811 Orthotics/Prosthetics
 17.0810 Orthotic/Prosthetic Assisting
 17.0811 Orthotics/Prosthetics
 17.0801 Art Therapy
 17.0802 Corrective Therapy
 17.0803 Dance Therapy

07.0499 Other Rehabilitation (Continued)

07.0500 Radiologic

07.0600 Ophthalmic

07.0601 Ophthalmic Dispensing

07.0602 Orthoptics

07.0603 Optometrist Assistant

07.0699 Other Ophthalmic

07.0700 Environmental Health

07.0800 Mental Health Technology

07.0801 Mental Health Technician

07.0802 Mental Retardation Aide

07.0899 Other Mental Health Technology

07.0900 Miscellaneous Health Occupations Education

07.0901 Electroencephalograph Technician

07.0902 Electrocardiograph Technician

07.0903 Inhalation Therapy

07.0904 Medical Assistant (Assistant in physician's office)

07.0905 Central Supply Technician

07.0906 Community Health Aide

07.0907 Medical Emergency Technician

07.0908 Food Service Supervisor

07.0909 Mortuary Science

07.0910 Orthopedic Assisting

07.9900 Other Health Occupations Education

17.0804 Exercise Physiology

17.0805 Manual Arts Therapy

17.0806 Music Therapy

17.0816 Recreational Therapy

17.0817 Recreational Therapy Technology

17.0820 Speech/Hearing Therapy Aide

17.0821 Speech-Language Pathology/Audiology

17.0899 Rehabilitation Services, Other

17.0208 Nuclear Medical Technology

17.0209 Radiograph Medical Technology

17.0799 Ophthalmic Services, Other

17.0701 Ophthalmic Dispensing

17.0706 Orthoptics

17.0704 Optometric Assisting

17.0702 Ophthalmic Laboratory Technology

17.0703 Ophthalmic Medical Assisting

17.0705 Optometric Technology

17.0799 Ophthalmic Services, Other

17.9999 Allied Health, Other

17.0406 Mental Health/Human Services Technology

17.0406 Mental Health/Human Services Technology

17.0499 Mental Health/Human Services, Other

17.0401 Alcohol/Drug Abuse Specialty

17.0403 Genetic Counseling

17.0407 Rehabilitation Counseling

17.0408 Therapeutic Child Care Work

17.0499 Mental Health/Human Services, Other

17.0501 Animal Technology

17.0503 Medical Assisting

17.0504 Medical Illustrating

17.0505 Medical Office Management

17.0506 Medical Records Technology

17.0507 Pharmacy Assisting

17.0510 Podiatric Assisting

17.0511 Veterinarian Aide

17.0512 Veterinarian Assisting

17.0513 Ward Clerk

17.0599 Miscellaneous Allied Health Services, Other

17.0204 Electroencephalograph Technology

17.0203 Electrocardiograph Technology

17.0210 Respiratory Therapy Technology

17.0818 Respiratory Therapy

17.0819 Respiratory Therapy Assisting

17.0508 Physician Assisting-Primary Care

17.0509 Physician Assisting-Specialty

17.0502 Central Supply Technology

17.0402 Community Health Work

17.0205 Emergency Medical Technology-Ambulance

17.0206 Emergency Medical Technology-Paramedic

17.9999 Allied Health, Other

12.0301 Funeral Services

17.0812 Orthopedic Assisting

17.0201 Cardiopulmonary Technology

17.0202 Dialysis Technology

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07.9900	Other Health Occupations Education (Continued)	17.0207	Medical Radiation Dosimetry
		17.0212	Ultrasound Technology
		17.0299	Diagnostic and Treatment Services, Other
		17.9999	Allied Health, Other
09.0000	Home Economics	20.	Vocational Home Economics
09.0101	Comprehensive Homemaking or Home Economics	20.0101	Comprehensive Consumer and Homemaking Home Economics
09.0102	Child Development	20.0102	Child Development, Care, and Guidance
09.0103	Clothing and Textiles	20.0103	Clothing and Textiles
09.0104	Consumer Education	20.0104	Consumer Education
09.0105	Family Health	20.0106	Family/Individual Health
09.0106	Family Relations	20.0107	Family Living and Parenthood
09.0107	Foods and Nutrition	20.0108	Food and Nutrition
09.0108	Home Management	20.0109	Home Management
09.0109	Housing and Home Furnishings	20.0110	Housing, Home Furnishing and Equipment
09.0199	Other Homemaking	20.0199	Consumer and Homemaking Home Economics, Other
09.0201	Care and Guidance of Children	20.0201	Child Care and Guidance Management and Services, General
		20.0202	Child Care Aide/Assisting
		20.0203	Child Care Management
		20.0204	Foster Care/Family Care
		20.0205	Teacher Aide
		20.0299	Child Care and Guidance Management and Services, Other
09.0202	Clothing Management, Production, and Services	20.0301	Clothing, Apparel, and Textiles Management, Production, and Services, General
		20.0302	Clothing Maintenance Aide
		20.0303	Commercial Garment and Apparel Construction
		20.0304	Custom Apparel/Garment Seamstress
		20.0305	Custom Tailoring and Alteration
		20.0306	Fashion/Fabric Coordination
		20.0307	Textiles Testing
		20.0308	Wedding/Specialty Consulting
		20.0399	Clothing, Apparel, and Textiles Management, Production, and Services, Other
09.0203	Food Management, Production, and Services	20.0401	Food Production, Management and Services, General
		20.0402	Baking
		20.0403	Chef/Cook
		20.0404	Dietetic Aide/Assisting
		20.0405	Food Catering
		20.0406	Food Service
		20.0407	Food Testing
		20.0408	School Food Service
		20.0499	Food Production, Management and Services, Other
09.0204	Home Furnishings, Equipment, and Services	20.0501	Home Furnishings and Equipment Management, Production, and Services, General
		20.0502	Custom Drapery and Window Treatment Design/Making
		20.0503	Custom Slipcovering and Upholstering
		20.0504	Floral Design
		20.0505	Home Decorating
		20.0506	Home Furnishings Aide
		20.0507	Home-Service Assisting

09.0204 Home Furnishings, Equipment, and Services
(Continued)
09.0205 Institutional and Home Management and Supporting
Services

09.0299 Other Occupational Preparation

10.0000 Industrial Arts
10.0100 Construction
10.0200 Crafts (Industrial)
10.0300 Drafting
10.0400 Electricity/Electronics
10.0500 Elementary School Industrial Arts
10.0600 General Industrial Arts (Formerly General Shop)
10.0700 Graphic Arts
10.0800 Home Mechanics
10.0900 Industrial Arts Mathematics
10.1000 Industrial Arts Science (Applied Chemistry)
10.1100 Industrial Arts Science (Applied Physics)
10.1200 Industrial Materials and Processes
10.1300 Manufacturing
10.1400 Metals
10.1500 Plastics
10.1600 Power/Automotive Mechanics
10.1700 Research and Development
10.1800 Service Industries
10.1900 Woods
10.9900 Other Industrial Arts

14.0000 Office Occupations
14.0100 Accounting and Computing Occupations
14.0101 Accountants
14.0102 Bookkeepers
14.0103 Cashiers
14.0104 Machine Operators: Billing, Bookkeeping,
and Computing
14.0105 Tellers
14.0199 Other Accounting and Computing Occupations
14.0200 Business Data Processing Systems Occupations
14.0201 Computer and Console Operators
14.0202 Peripheral Equipment Operators

20.0599 Home Furnishings and Equipment Management, Pro-
duction, and Services, Other
20.0601 Institutional, Home Management, and Supporting
Services, General
20.0602 Companion to the Aged
20.0603 Consumer Aide/Assisting
20.0604 Custodial Services
20.0605 Executive Housekeeping
20.0606 Homemaker's Aide
20.0607 Therapeutic Recreation Aide
20.0699 Institutional, Home Management, and Supporting
Services, Other
04.0501 Interior Design
20.0105 Exploratory Homemaking
20.9999 Vocational Home Economics, Other

21. Industrial Arts
21.0102 Construction
21.0199 Industrial Arts, Other
21.0103 Drafting and Design
21.0104 Electricity/Electronics
21.0199 Industrial Arts, Other
21.0101 Industrial Arts, General
21.0106 Graphic Arts
21.0199 Industrial Arts, Other
21.0199 Industrial Arts, Other
21.0199 Industrial Arts, Other
21.0199 Industrial Arts, Other
21.0107 Manufacturing/Materials Processing
21.0107 Manufacturing/Materials Processing
21.0199 Industrial Arts, Other
21.0199 Industrial Arts, Other
21.0105 Energy, Power, and Transportation
21.0199 Industrial Arts, Other
21.0199 Industrial Arts, Other
21.0199 Industrial Arts, Other
21.0199 Industrial Arts, Other

07. Business and Office
07.0101 Accounting, Bookkeeping, and Related Programs,
General
07.0102 Accounting and Computing
07.0103 Bookkeeping
07.0199 Accounting, Bookkeeping, and Related Programs, Other
07.0104 Machine Billing, Bookkeeping, and Computing
07.0205 Teller
07.0199 Accounting, Bookkeeping, and Related Programs, Other
07.0301 Business Data Processing and Related Programs, General
07.0302 Business Computer and Console Operation
07.0304 Business Data Peripheral Equipment Operation

14.0203	Programmers	07.0305	Business Data Programming
14.0204	Systems Analysts	07.0306	Business Systems Analysis
14.0299	Other Business Data Processing Systems Occupations	07.0303	Business Data Entry Equipment Operation
14.0300	Filing, Office Machines, and General Office Clerical Occupations	07.0399	Business Data Processing and Related Programs, Other
14.0301	Duplicating Machine Operators	07.0701	Typing, General Office, and Related Programs, General
14.0302	File Clerks	07.0704	Duplicating Machine Operation
14.0303	General Office Clerks	07.0799	Typing, General Office, and Related Programs, Other
14.0399	Other Filing, Office Machines, and General Office Clerical Occupations	07.0705	General Office Clerk
14.0400	Information Communication Occupations	07.0799	Typing, General Office, and Related Programs, Other
14.0401	Communication Systems Clerks and Operations	07.0701	Typing, General Office, and Related Programs, General
14.0402	Correspondence Clerks	07.0707	Receptionist and Communication Systems Operation
14.0403	Mail and Postal Clerks	07.0703	Correspondence Clerk
14.0404	Mail-preparing and Mail-handling Machine Operators	07.0706	Mail and Order Clerk
14.0405	Messengers and Office Boys and Girls	07.0799	Typing, General Office, and Related Programs, Other
14.0406	Receptionists and Information Clerks	07.0799	Typing, General Office, and Related Programs, Other
14.0499	Other Information Communication Occupations	07.0707	Receptionist and Communication Systems Operation
14.0500	Materials Support Occupations: Transporting, Storing, and Recording	07.0799	Typing, General Office, and Related Programs, Other
14.0501	Planning and Production Clerks	07.0799	Typing, General Office, and Related Programs, Other
14.0502	Quality Control Clerks	07.0708	Shipping, Receiving, and Stock Clerk
14.0503	Shipping and Receiving Clerks	07.0708	Shipping, Receiving, and Stock Clerk
14.0504	Stock and Inventory Clerks	07.0709	Traffic, Rate, and Transportation Clerk
14.0505	Traffic, Rate, and Transportation Clerks	07.0799	Typing, General Office, and Related Programs, Other
14.0599	Other Materials Support Occupations: Transporting, Storing, and Recording Occupations	07.0501	Personnel and Training Programs, General
14.0600	Personnel, Training, and Related Occupations	07.0502	Educational Assisting and Training
14.0601	Educational Assistants and Training Specialists	07.0599	Personnel and Training Programs, Other
14.0602	Interviewers and Tests Technicians	07.0503	Personnel Assisting
14.0603	Personnel Assistants	07.0599	Personnel and Training Programs, Other
14.0699	Other Personnel, Training, and Related Occupations	07.0601	Secretarial and Related Programs, General
14.0700	Stenographic, Secretarial, and Related Occupations	07.0603	Executive Secretarial
14.0701	Executive Secretary	07.0606	Secretarial
14.0702	Secretaries	07.0607	Stenographic
14.0703	Stenographers	07.0602	Court Reporting
14.0799	Other Stenographic, Secretarial, and Related Occupations	07.0604	Legal Secretarial
14.0800	Supervisory and Administrative Management Occupations	07.0605	Medical Secretarial
14.0900	Typing and Related Occupations	07.0608	Word Processing
14.0901	Clerk Typists	07.0699	Secretarial and Related Programs, Other
14.0902	Typists	07.0401	Office Supervision and Management
14.0999	Other Typing and Related Occupations	07.0701	Typing, General Office, and Related Programs, General
14.9900	Other Office Occupations	07.0702	Clerk-Typist
		07.0710	Typing
		07.0799	Typing, General Office, and Related Programs, Other
		06.0401	Business Administration and Management, General
		06.0404	Systems Efficiency Analysis
		07.0201	Banking and Related Financial Programs, General
		07.0202	Credit Collection Clerk
		07.0203	Insurance Clerk
		07.0204	Loan Clerk
		07.0206	Transport Clerk
		07.0299	Banking and Related Financial Programs, Other
		07.9999	Business and Office, Other

16.0000	Technical Education	10.	Communication Technologies
		15.	Engineering and Engineering-Related Technologies
		41.	Science Technologies
16.0100	Engineering-related Technology	15.	Engineering and Engineering-Related Technologies
16.0101	Aeronautical Technology	15.0801	Aeronautical Technology
16.0102	Agricultural Technology	15.0802	Agricultural Equipment Technology
16.0103	Architectural Technology (Building Construction)	15.0101	Architectural Design and Construction Technology
		15.0102	Architectural Interior Design Technology
		15.0199	Architectural Technologies, Other
16.0104	Automotive Technology	15.0803	Automotive Technology
16.0105	Chemical Technology	15.0601	Chemical Manufacturing Technology
16.0106	Civil Technology	15.0201	Civil Technology
		15.0202	Drafting and Design Technology
		15.0203	Surveying and Mapping Technology
		15.0204	Urban Planning Technology
		15.0299	Civil Technologies, Other
16.0107	Electrical Technology	15.0302	Electrical Technology
16.0108	Electronic Technology	15.0303	Electronic Technology
16.0109	Electromechanical Technology	15.0401	Biomedical Equipment Technology
		15.0402	Computer Servicing Technology
		15.0403	Electromechanical Technology
		15.0499	Electromechanical Instrumentation and Maintenance Technologies, Other
16.0110	Environmental-control Technology	15.0501	Air Conditioning, Heating, and Refrigeration Technology
		15.0502	Air Pollution Control Technology
		15.0503	Energy Conservation and Use Technology
		15.0504	Sanitation Technology
		15.0505	Solar Heating and Cooling Technology
		15.0506	Water and Wastewater Technology
		15.0599	Environmental-Control Technologies, Other
16.0111	Industrial Technology	15.0603	Industrial Technology
		15.0604	Manufacturing Technology
		15.0605	Marine Products Technology
		15.0606	Optical Technology
		15.0607	Plastic Technology
		15.0608	Safety Technology
		15.0609	Textile Technology
		15.0610	Welding Technology
		15.0699	Industrial Production Technologies, Other
16.0112	Instrumentation Technology	15.0404	Instrumentation Technology
16.0113	Mechanical Technology	15.0805	Mechanical Design Technology
16.0114	Metallurgical Technology	41.0303	Metallurgical Technology
16.0115	Nuclear Technology	41.0201	Nuclear Materials Handling Technology
		41.0202	Nuclear Power Plant Operation Technology
		41.0203	Nuclear Power Plant Radiation Control Technology
		41.0204	Radiologic (Physical) Technology
		41.0299	Nuclear Technologies, Other
16.0116	Petroleum Technology	15.0900	Petroleum Technology
16.0117	Scientific Data Processing	11.0301	Data Processing
16.0199	Other Engineering-related Technology	15.0301	Computer Technology
		15.0304	Laser Electro-Optic Technology
		15.0399	Electrical and Electronic Technologies, Other
		15.0701	Occupational Safety and Health Technology
		15.0702	Quality Control Technology
		15.0799	Quality Control and Safety Technologies, Other
		15.0804	Marine Propulsion Technology
		15.0901	Coal Mining Technology

16.0199	Other Engineering-related Technology (Continued)	15.0902	Mining (Excluding Coal) Technology
		15.0999	Mining and Petroleum Technologies, Other
		15.9999	Engineering and Engineering-Related Technologies, Other
16.0200	Agricultural-related Technology	01.0201	Agricultural Mechanics, General
16.0201	Animal Science	01.0302	Animal Production
16.0202	Dairy Technology	01.0399	Agricultural Production, Other
16.0203	Food Processing Technology	02.0306	Food Technology
		15.0602	Food Processing Technology
16.0204	Plant Science	01.0304	Crop Production
16.0299	Other Agricultural-related Technology	02.9999	Agricultural Sciences, Other
16.0301	Dental Hygiene (Associate Degree)	17.0102	Dental Hygiene
16.0302	Electroencephalograph Technician	17.0204	Electroencephalograph Technology
16.0303	Medical Laboratory Assisting	17.0309	Medical Laboratory Technology
16.0304	Radiologic Technology (X-ray)	17.0209	Radiograph Medical Technology
16.0305	Nursing (Associate Degree)	18.1101	Nursing, General
16.0399	Other Health-related Technology	17.9999	Allied Health, Other
16.0401	Computer Programmer	11.0201	Computer Programming
16.0402	Systems Analyst Technology	11.0501	Systems Analysis
16.0501	Child Care Center Assistant	20.0202	Child Care Aide/Assisting
16.0502	Hospital Children's Division Assistant	20.0299	Child Care and Guidance Management and Services, Other
		20.0205	Teacher Aide
16.0503	Teacher's Assistant at the Preprimary Level	20.0406	Food Service
16.0504	Food Service Supervisor	20.0506	Home Furnishings Aide
16.0505	Interior Decorator Assistant	20.0506	Home Furnishings Aide
16.0506	Home Equipment Demonstrator	15.9999	Engineering and Engineering-Related Technologies, Other
16.0600	Miscellaneous Technical Education	22.0103	Legal Assisting
		25.0301	Library Assisting
16.0601	Commercial Pilot Training	41.9999	Science Technologies, Other
16.0602	Fire and Fire Safety Technology	49.0102	Airplane Piloting and Navigation
16.0603	Forestry Technology	43.0201	Fire Control and Safety Technology
16.0604	Oceanographic Technology (Physical, Biological, and Fisheries)	03.0404	Forest Products Processing Technology
		41.0102	Oceanographic (Biological) Technology
		41.0305	Oceanographic (Physical) Technology
16.0605	Police (Law Enforcement and Corrections) Science Technology	49.0303	Commercial Fishing Operation
16.0699	Other Miscellaneous Technical Education	43.0105	Criminal Justice Technology
		10.0101	Educational Media Technology
		10.0102	Motion Picture Technology
		10.0103	Photographic Technology
		10.0104	Radio and Television Production and Broadcasting Technology
		10.0199	Communication Technologies, Other
		15.9999	Engineering and Engineering-Related Technologies, Other
		29.0101	Military Technologies
		29.0199	Military Technologies, Other
		41.0101	Biological Laboratory Technology
		41.0199	Biological Technologies, Other
		41.0301	Chemical Technology
		41.0302	Geological Technology
		41.0304	Meteorological Technology
		41.0399	Physical Science Technologies, Other
		41.9999	Science Technologies, Other
		49.0101	Air Transportation, General

16.0699 Other Miscellaneous Technical Education
(Continued)

49.0101 Air Transportation, General
49.0103 Aviation Computer Technology
49.0105 Air Traffic Control
49.0304 Deep Water Diving and Life Support Systems
49.0305 Marina Operations
50.0801 Graphic Arts Technology

17.0000 Trade and Industrial Occupations

17.0100 Air Conditioning

17.0101 Cooling
17.0102 Heating
17.0103 Ventilating (Filtering and Humidification)

17.0199 Other Air Conditioning

17.0200 Appliance Repair

17.0300 Automotive Services

17.0301 Body and Fender
17.0302 Mechanics
17.0303 Specialization

17.0399 Other Automotive Services

17.0400 Aviation Occupations

17.0401 Aircraft Maintenance
17.0402 Aircraft Operations
17.0403 Ground Operations

17.0500 Blueprint Reading

17.0600 Business Machine Maintenance

17.0700 Commercial Art Occupations

17.0800 Commercial Fishing Occupations

17.0801 Seamanship

17.0802 Ship and Boat Operation and Maintenance

17.0899 Other Commercial Fishery Occupations

17.0900 Commercial Photography Occupations

17.0901 Photographic Laboratory and Darkroom Occupations

17.0999 Other Commercial Photography Occupations

17.1000 Construction and Maintenance Trades

17.1001 Carpentry

17.1002 Electricity

17.1003 Heavy Equipment (Construction)

17.1004 Masonry

17.1005 Painting and Decorating

17.1006 Plastering

17.1007 Plumbing and Pipefitting

17.1008 Drywall Installation

17.1009 Glazing

46. Construction Trades

47. Mechanics and Repairers

48. Precision Production

49. Transportation and Material Moving

47.0201 Heating, Air Conditioning, and Refrigeration
Mechanics, General

47.0202 Cooling and Refrigeration

47.0203 Heating and Air Conditioning

47.0299 Heating, Air Conditioning, and Refrigeration
Mechanics, Other

47.0299 Heating, Air Conditioning, and Refrigeration
Mechanics, Other

47.0106 Major Appliance Repair

47.0108 Small Appliance Repair

47.0601 Vehicle and Mobile Equipment Mechanics and
Repairers, General

47.0603 Automotive Body Repair

47.0604 Automotive Mechanics

47.0699 Vehicle and Mobile Equipment Mechanics and
Repairers, Other

47.0699 Vehicle and Mobile Equipment Mechanics and
Repairers, Other

49.0101 Air Transportation, General

47.0602 Aircraft Mechanics

49.0102 Airplane Piloting and Navigation

49.0105 Air Traffic Control

48.0299 Graphic and Printing Communications, Other

47.0102 Business Machine Repair

48.0203 Commercial Art

49.0303 Commercial Fishing Operation

49.0308 Sailors and Deckhands

49.0302 Barge and Boat Operation

49.0399 Water Transportation, Other

48.0204 Commercial Photography

48.0207 Photographic Laboratory and Darkroom

48.0299 Graphic and Printing Communication, Other

46.9999 Construction Trades, Other

46.0201 Carpentry

46.0302 Electrician

47.0302 Heavy Equipment Maintenance and Repair

46.0102 Brick, Block, and Stonemasonry

46.0408 Painting and Decorating

46.0405 Plastering

46.0501 Plumbing, Pipefitting, and Steamfitting, General

46.0502 Pipefitting and Steamfitting

46.0503 Plumbing

46.0599 Plumbing, Pipefitting, and Steamfitting, Other

46.0404 Drywall Installation

46.0406 Glazing

17.1010	Roofing	46.0410	Roofing
17.1099	Other Construction and Maintenance Trades	46.0402	Concrete Placing and Finishing
		46.0403	Construction Inspection
		46.0405	Floor Covering Installation
		46.0407	Insulation Installation
		46.0411	Terrazzo Installation
		46.0499	Miscellaneous Construction Trades, Other
		46.9999	Construction Trades, Other
17.1100	Custodial Services	46.0401	Building Maintenance
17.1200	Diesel Mechanic	47.0605	Diesel Engine Mechanics
17.1300	Drafting Occupations	48.0101	Drafting, General
		48.0102	Architectural Drafting
		48.0103	Civil/Structural Drafting
		48.0104	Electrical/Electronics Drafting
		48.0105	Mechanical Drafting
		48.0199	Drafting, Other
17.1400	Electrical Occupations	46.0301	Electrical and Power Transmission Installation, General
17.1401	Industrial Electrician	46.0302	Electrician
17.1402	Lineman	46.0303	Lineworker
17.1403	Motor Repairman	47.0107	Motor Repair
17.1499	Other Electrical Occupations	46.0399	Electrical and Power Transmission Installation, Other
17.1500	Electronics Occupations	47.0101	Electrical and Electronics Equipment Repair, General
17.1501	Communications	47.0103	Communications Electronics
17.1502	Industrial Electronics	47.0105	Industrial Electronics
17.1503	Radio/Television	47.0199	Electrical and Electronics Equipment Repair, Other
17.1599	Other Electronics Occupations	47.0199	Electrical and Electronics Equipment Repair, Other
17.1600	Fabric Maintenance Services	12.0101	Drycleaning and Laundering Services, General
17.1601	Drycleaning	12.0102	Drycleaning
17.1602	Laundering	12.0103	Laundering
17.1699	Other Fabric-maintenance Services	12.0199	Drycleaning and Laundering Services, Other
17.1700	Foremanship, Supervision, and Management Development	46.9999	Construction Trades, Other
17.1900	Graphic Arts Occupations	48.0201	Graphic and Printing Communications, General
17.1901	Composition, Makeup, and Typesetting	48.0205	Composition, Make-up, and Typesetting
17.1902	Printing Press Occupations	48.0208	Printing Press Operations
17.1903	Lithography, Photography, and Platemaking	48.0206	Lithography, Photography, and Platemaking
17.1904	Photoengraving		
17.1905	Silk Screen Making and Printing	48.0209	Silk Screen Making and Printing
17.1906	Bookbinding	48.0202	Bookbinding
17.1999	Other Graphic Arts	48.0299	Graphic and Printing Communications, Other
17.2000	Industrial Atomic Energy Occupations	41.0299	Nuclear Technologies
		47.0503	Industrial Nuclear Energy
17.2001	Installation, Operation, and Maintenance of Reactors	41.0202	Nuclear Power Plant Operation Technology
		47.0503	Industrial Nuclear Energy
17.2002	Radiography	41.0204	Radiologic (Physical) Technology
17.2003	Industrial Uses of Radioisotopes	47.0503	Industrial Nuclear Energy
17.2099	Other Industrial Atomic Energy Occupations	41.0299	Nuclear Technologies, Other
17.2100	Instrument Maintenance and Repair Occupations	15.0499	Electromechanical Instrumentation and Maintenance Technologies, Other
		47.0408	Watch Repair
17.2101	Instruments (other than watches and clocks)	15.0499	Electromechanical Instrumentation and Maintenance Technologies, Other
		47.0408	Watch Repair
17.2102	Watchmaking and Repair	49.0301	Water Transportation, General
17.2200	Maritime Occupations	49.0306	Marine Maintenance
		49.0307	Merchant Marine Officers
17.2300	Metalworking Occupations	48.0501	Precision Metal Work, General
17.2301	Foundry	48.0502	Foundry Work

- 17.2302 Machine Shop
- 17.2303 Machine Tool Operation
- 17.2304 Metal Trades (combined)
- 17.2305 Sheet Metal
- 17.2306 Welding and Cutting
- 17.2307 Tool and Die Making
- 17.2308 Die Sinking
- 17.2309 Metal Patternmaking
- 17.2399 Other Metalworking Occupations

- 17.2400 Metallurgy Occupations
- 17.2600 Personal Services
- 17.2601 Barbering
- 17.2602 Cosmetology
- 17.2699 Other Personal Services

- 17.2700 Plastics Occupations
- 17.2801 Fireman Training
- 17.2802 Law Enforcement Training
- 17.2899 Other Public Service Occupations
- 17.2900 Quantity Food Occupations

- 17.2901 Baker
- 17.2902 Cook/Chef
- 17.2903 Meat Cutter

- 17.2904 Waiter/Waitress
- 17.2999 Other Quantity Food Occupations
- 17.3000 Refrigeration

- 17.3100 Small Engine Repair (Internal Combustion)
- 17.3200 Stationary Energy Sources Occupations
- 17.3201 Electric Power Generating Plants
- 17.3202 Pumping Plants
- 17.3299 Other Stationary Energy Sources Occupations
- 17.3300 Textile Production and Fabrication

- 17.3301 Dressmaking
- 17.3302 Tailoring

- 17.3399 Other Textile Production and Fabrication

- 17.3400 Leatherworking

- 17.3500 Upholstering
- 17.3600 Woodworking Occupations
- 17.3601 Millwork and Cabinet Making
- 17.3699 Other Woodworking Occupations

- 17.9900 Other Trade and Industrial Occupations

- 48.0503 Machine Tool Operation/Machine Shop
- 48.0503 Machine Tool Operation/Machine Shop
- 48.0599 Precision Metal Work, Other
- 48.0506 Sheet Metal
- 48.0508 Welding, Brazing, and Soldering
- 48.0507 Tool and Die Making
- 48.0599 Precision Metal Work, Other
- 48.0505 Metal Patternmaking
- 48.0504 Metal Fabrication
- 48.0599 Precision Metal Work, Other
- 48.0599 Precision Metal Work, Other
- 12.0401 Personal Services, General
- 12.0402 Barbering
- 12.0403 Cosmetology
- 12.0404 Electrolysis
- 12.0405 Massage
- 12.0499 Personal Services, Other
- 48.0604 Plastics
- 43.0203 Firefighting
- 43.0107 Law Enforcement
- 43.9999 Protective Services, Other
- 20.0401 Food Production, Management and Services, General
- 48.0401 Precision Food Production, General
- 20.0402 Baking
- 20.0403 Chef/Cook
- 48.0402 Meatcutting
- 48.0403 Slaughtering and Butchering
- 08.0905 Waiter/Waitress and Related Services
- 20.0499 Food Production, Management, and Services, Other
- 47.0202 Cooling and Refrigeration
- 47.0606 Small Engine Repair
- 47.0501 Stationary Energy Sources, General
- 47.0502 Conventional Electric Power Generation
- 47.0504 Pumping Plants
- 47.0599 Stationary Energy Sources, Other
- 20.0301 Clothing, Apparel, and Textiles Management, Production, and Services, General
- 20.0303 Commercial Garment and Apparel Construction
- 20.0304 Custom Apparel/Garment Seamstress
- 20.0305 Custom Tailoring and Alteration
- 20.0399 Clothing, Apparel, and Textiles Management, Production, and Services, Other
- 47.0406 Shoe and Boot Repair
- 48.0301 Leathermaking and Upholstering, General
- 48.0302 Saddlemaking and Repair
- 48.0399 Leatherworking and Upholstering, Other
- 48.0303 Upholstering
- 48.0701 Woodworking, General
- 48.0703 Millwork and Cabinet Making
- 48.0702 Furniture Making
- 48.0799 Woodworking, Other
- 46.0101 Brickmasonry, Stonemasonry, and Tile Setting, General
- 46.0103 Tile Setting
- 46.0199 Brickmasonry, Stonemasonry, and Tile Setting, Other
- 46.9999 Construction Trades, Other
- 47.0104 Computer Electronics
- 47.0109 Vending and Recreational Machine Repair

17.9900 Other Trade and Industrial Occupations
(Continued)

- 47.0301 Industrial Equipment Maintenance and Repair, General
- 47.0303 Industrial Machinery Maintenance and Repair
- 47.0304 Mine Equipment Maintenance and Repair
- 47.0305 Oil and Gas Drilling Equipment Operation and Maintenance
- 47.0399 Industrial Equipment Maintenance and Repair, Other
- 47.0401 Electromechanical, Hydraulic, and Pneumatic Instrument Repair
- 47.0402 Gunsmithing
- 47.0403 Locksmithing and Safe Repair
- 47.0404 Musical Instrument Repair
- 47.0405 Operation, Maintenance, and Repair of Audio-Visual Equipment
- 47.0407 Sporting Goods Equipment Repair
- 47.0499 Miscellaneous Mechanics and Repairers, Other
- 47.9999 Mechanics and Repairers, Other
- 48.0401 Precision Food Production, General
- 48.0499 Precision Food Production, Other
- 48.0601 Industrial Ceramics Manufacturing
- 48.0602 Jewelry Design, Fabrication, and Repair
- 48.0603 Optical Goods Work
- 48.0699 Precision Work, Assorted Materials, Other
- 48.9999 Precision Production, Other
- 49.0106 Flight Attendants
- 49.0201 Vehicle and Equipment Operation, General
- 49.0202 Construction Equipment Operation
- 49.0203 Material Handling
- 49.0204 Mining Equipment Operation
- 49.0205 Truck and Bus Driving
- 49.0299 Vehicle and Equipment Operation, Other
- 49.9999 Transportation and Material Moving, Other

Appendix D

List of Vocational Education Programs

This appendix is to be used to assist individuals who are interested in placing the vocational programs contained in this classification in their traditional areas. This is not meant to be a separate classification, but it is a subset of the entire classification and is only included to provide additional assistance.

It should be noted that in addition to vocational programs there are vocational student organizations that serve as an integral part of the total instructional program. These organizations significantly help secondary, postsecondary, and college students develop vocational/career competencies and leadership skills. Vocational student organizations recognized by the U.S. Department of Education are:

Future Farmers of America (FFA)
 National Postsecondary Agriculture Student Organization (NPASO)
 Future Business Leaders of America (FBLA)
 Other Education Association (OEA)
 Distinctive Education Clubs of America (DECA)
 Health Occupation Students of America (HOSA)
 Future Homemakers of America (FHA & HERO) Chapters
 American Industrial Arts Student Associations (AIASA)
 Vocational Industrial Clubs of America (VICA)

Agriculture/Agribusiness

(From Agribusiness and Agricultural Production, Category 01 of the Classification)

- | | | | | | |
|--|--|--|---|--|--|
| <p>01.01 <i>Agricultural Business and Management</i>
 01.0101 <i>Agricultural Business and Management, General</i>
 01.0104 <i>Farm and Ranch Management</i></p> | <p>01.02 <i>Agricultural Mechanics</i>
 01.0201 <i>Agricultural Mechanics, General</i>
 01.0202 <i>Agricultural Electrification, Power, and Controls</i>
 01.0203 <i>Agricultural Mechanics, Construction, and Maintenance Skills</i>
 01.0204 <i>Agricultural Power Machinery</i>
 01.0205 <i>Agricultural Structures, Equipment, and Facilities</i>
 01.0206 <i>Soil and Water Mechanical Practices</i>
 01.0299 <i>Agricultural Mechanics, Other</i></p> | <p>01.03 <i>Agricultural Production</i>
 01.0301 <i>Agricultural Production, General</i>
 01.0302 <i>Animal Production</i>
 01.0303 <i>Aquaculture</i>
 01.0304 <i>Crop Production</i>
 01.0305 <i>Game Farm Management</i>
 01.0399 <i>Agricultural Production, Other</i></p> | <p>01.04 <i>Agricultural Products and Processing</i>
 01.0401 <i>Agricultural Products and Processing, General</i>
 01.0402 <i>Food Products</i>
 01.0403 <i>Nonfood Products</i>
 01.0499 <i>Agricultural Products and Processing, Other</i></p> | <p>01.05 <i>Agricultural Services and Supplies</i>
 01.0501 <i>Agricultural Services and Supplies, General</i>
 01.0502 <i>Agricultural Services</i>
 01.0503 <i>Agricultural Supplies Marketing</i>
 01.0504 <i>Animal Grooming</i>
 01.0505 <i>Animal Training</i>
 01.0506 <i>Horseshoeing</i>
 01.0599 <i>Agricultural Services and Supplies, Other</i></p> | <p>01.06 <i>Horticulture</i>
 01.0601 <i>Horticulture, General</i>
 01.0602 <i>Arboriculture</i>
 01.0603 <i>Floriculture</i>
 01.0604 <i>Greenhouse Operation and Management</i>
 01.0605 <i>Landscaping</i>
 01.0606 <i>Nursery Operation and Management</i>
 01.0607 <i>Turf Management</i>
 01.0699 <i>Horticulture, Other</i></p> |
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01.99 **Agribusiness and Agricultural Production, Other**
 01.9999 *Agribusiness and Agricultural Production, Other*

(From Renewable Natural Resources, Category 03 of the Classification)

<p>03.01 Renewable Natural Resources, General 03.0101 <i>Renewable Natural Resources, General</i></p> <p>03.02 Conservation and Regulation 03.0201 <i>Conservation and Regulation, General</i> 03.0202 <i>Conservation</i> 03.0203 <i>Resources Protection and Regulation</i> 03.0299 <i>Conservation and Regulation, Other</i></p> <p>03.03 Fishing and Fisheries 03.0301 <i>Fishing and Fisheries, General</i> 03.0302 <i>Fisheries</i> 03.0399 <i>Fishing and Fisheries, Other</i></p>	<p>03.04 Forestry Production and Processing 03.0401 <i>Forestry Production and Processing, General</i> 03.0402 <i>Forest Production</i> 03.0403 <i>Forest Products Utilization</i> 03.0405 <i>Logging</i> 03.0406 <i>Pulp and Paper Production</i> 03.0499 <i>Forestry Production and Processing, Other</i></p> <p>03.06 Wildlife Management 03.0601 <i>Wildlife Management</i></p> <p>03.99 Renewable Natural Resources, Other 03.9999 <i>Renewable Natural Resources, Other</i></p>
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(From Parks and Recreation, Category 31 of the Classification)

31.02 **Outdoor Recreation**
 31.0201 *Outdoor Recreation*

Business and Office

(From Business and Management, Category 06 of the Classification)

06.04 **Business Administration and Management**
 06.0401 *Business Administration and Management, General*
 06.0404 *Systems Efficiency Analysis*

(From Business and Office, Category 07 of the Classification)

<p>07.01 Accounting, Bookkeeping, and Related Programs 07.0101 <i>Accounting, Bookkeeping, and Related Programs, General</i> 07.0102 <i>Accounting and Computing</i> 07.0103 <i>Bookkeeping</i> 07.0104 <i>Machine Billing, Bookkeeping, and Computing</i> 07.0199 <i>Accounting, Bookkeeping, and Related Programs, Other</i></p> <p>07.02 Banking and Related Financial Programs 07.0201 <i>Banking and Related Financial Programs, General</i> 07.0202 <i>Credit Collection Clerk</i> 07.0203 <i>Insurance Clerk</i> 07.0204 <i>Loan Clerk</i> 07.0205 <i>Teller</i> 07.0206 <i>Transit Clerk</i> 07.0299 <i>Banking and Related Financial Programs, Other</i></p>	<p>07.03 Business Data Processing and Related Programs 07.0301 <i>Business Data Processing and Related Programs, General</i> 07.0302 <i>Business Computer and Console Operation</i> 07.0303 <i>Business Data Entry Equipment Operation</i> 07.0304 <i>Business Data Peripheral Equipment Operation</i> 07.0305 <i>Business Data Programming</i> 07.0306 <i>Business Systems Analysis</i> 07.0399 <i>Business Data Processing and Related Programs, Other</i></p> <p>07.04 Office Supervision and Management 07.0401 <i>Office Supervision and Management</i></p> <p>07.05 Personnel and Training Programs 07.0501 <i>Personnel and Training Programs, General</i> 07.0502 <i>Educational Assisting and Training</i> 07.0503 <i>Personnel Assisting</i> 07.0599 <i>Personnel and Training Programs, Other</i></p>
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07.06	Secretarial and Related Programs				
07.0601	Secretarial and Related Programs, General		07.0703	Correspondence Clerk	
07.0602	Court Reporting		07.0704	Duplicating Machine Operation	
07.0603	Executive Secretarial		07.0705	General Office Clerk	
07.0604	Legal Secretarial		07.0706	Mail and Order Clerk	
07.0605	Medical Secretarial		07.0707	Receptionist and Communication Systems Operation	
07.0606	Secretarial		07.0708	Shipping, Receiving, and Stock Clerk	
07.0607	Stenographic		07.0709	Traffic, Rate, and Transportation Clerk	
07.0608	Word Processing		07.0710	Typing	
07.0699	Secretarial and Related Programs, Other		07.0799	Typing, General Office, and Related Programs, Other	
07.07	Typing, General Office, and Related Programs				
07.0701	Typing, General Office, and Related Programs, General		07.99	Business and Office, Other	
07.0702	Clerk-Typist		07.9999	Business and Office, Other	

Marketing and Distribution

(From Business and Management, Category 05 of the Classification)

06.17	Real Estate
06.1701	Real Estate, General
06.1702	Commercial Property
06.1703	Property Management
06.1707	Residential Property
06.1799	Real Estate, Other

(From Marketing and Distribution, Category 08 of the Classification)

08.01	Apparel and Accessories Marketing	08.02	Business and Personal Services Marketing
08.0101	Apparel and Accessories Marketing, General	08.0201	Business and Personal Services Marketing, General
08.0102	Fashion Merchandising	08.0202	Display
08.0104	Footwear Marketing	08.0203	Marketing of Business or Personal Services
08.0105	Jewelry Marketing	08.0299	Business and Personal Services Marketing, Other
08.0199	Apparel and Accessories Marketing, Other	08.03	Entrepreneurship
		08.0301	Entrepreneurship, General

(From Business and Management, Category 06 of the Classification)

06.18	Small Business Management and Ownership	08.05	Floristry, Farm and Garden Supplies Marketing
06.1801	Small Business Management	08.0501	Floristry, Farm and Garden Supplies Marketing, General
06.1802	Small Business Ownership	08.0502	Farm and Garden Supplies Marketing
06.1899	Small Business Management and Ownership, Other	08.0503	Floristry
		08.0599	Floristry, Farm and Garden Supplies Marketing, Other
08.04	Financial Services Marketing	08.06	Food Marketing
08.0401	Financial Services Marketing, General	08.0601	Food Marketing, General
08.0402	Banking Marketing	08.0602	Convenience Store Marketing
08.0403	Credit Marketing	08.0603	Specialty Foods Marketing
08.0404	Credit Union Marketing	08.0604	Supermarket Marketing
08.0405	Savings and Loan Marketing	08.0605	Wholesale Food Marketing
08.0406	Securities and Commodities Marketing	08.0699	Food Marketing, Other
08.0499	Financial Services Marketing, Other		

- 08.07 General Marketing**
 08.0701 Auctioneering
 08.0702 Industrial Sales
 08.0703 International Marketing
 08.0704 Purchasing
 08.0705 Retailing
 08.0706 Sales
 08.0707 Wholesaling
 08.0799 General Marketing, Other

(From Business and Management, Category 06 of the Classification)

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| <p>06.14 Marketing Management and Research
 06.1401 Marketing Management
 06.1402 Marketing Research
 06.1499 Marketing Management and Research, Other</p> | <p>08.087 Office Products and Equipment Marketing
 08.0808 Specialty Home Furnishings Marketing
 08.0899 Home and Office Products Marketing, Other</p> |
| <p>08.08 Home and Office Products Marketing
 08.0801 Home and Office Products Marketing, General
 08.0802 Appliance Marketing
 08.0803 Building Materials Marketing
 08.0804 Floor Coverings, Draperies, and Upholstery Marketing
 08.0805 Furniture Marketing
 08.0806 Hardware Marketing</p> | <p>08.09 Hospitality and Recreation Marketing
 08.0901 Hospitality and Recreation Marketing, General
 08.0902 Marketing of Hotel/Motel Services
 08.0903 Marketing of Recreational Services
 08.0904 Recreational Products Marketing
 08.0905 Waiter/Waitress and Related Services
 08.0909 Hospitality and Recreation Marketing, Other</p> |

(From Business and Management Category 06 of the Classification)

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| <p>06.07 Institutional Management
 06.0701 Hotel/Motel Management
 06.0702 Recreational Enterprises Management
 06.0703 Resort Management
 06.0704 Restaurant Management
 06.0705 Transportation Management
 06.0799 Institutional Management, Other</p> | <p>08.1105 Travel Services Marketing
 08.1106 Warehouse Services Marketing
 08.1199 Transportation and Travel Marketing, Other</p> |
| <p>02.10 Insurance Marketing
 08.1001 Insurance Marketing, General
 08.1002 Accident and Health Insurance Marketing
 08.1003 Life Insurance Marketing
 08.1004 Property and Casualty Insurance Marketing
 08.1099 Insurance Marketing, Other</p> | <p>08.12 Vehicles and Petroleum Marketing
 08.1201 Vehicle and Petroleum Marketing, General
 08.1202 Agricultural Implements and Machinery Marketing
 08.1203 Automotive Vehicles and Accessories Marketing
 08.1204 Petroleum Wholesaling
 08.1205 Recreational Vehicles and Accessories Marketing
 08.1206 Service Station Retailing
 08.1207 Vehicle Rental and Leasing
 08.1299 Vehicles and Petroleum Marketing, Other</p> |
| <p>08.11 Transportation and Travel Marketing
 08.1101 Transportation and Travel Marketing, General
 08.1102 Freight Transportation Marketing
 08.1103 Passenger Transportation Marketing
 08.1104 Tourism</p> | <p>08.99 Marketing and Distribution, Other
 08.9999 Marketing and Distribution, Other</p> |

(From Communications, Category 09 of the Classification)

- 09.02 Advertising**
 09.0201 Advertising

Health Occupations

(From Allied Health, Category 17 of the Classification)

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| 17.01 | Dental Services | | |
| | 17.0101 Dental Assisting | 17.0505 | Medical Office Management |
| | 17.0102 Dental Hygiene | 17.0506 | Medical Records Technology |
| | 17.0103 Dental Laboratory Technology | 17.0507 | Pharmacy Assisting |
| | 17.0199 Dental Services, Other | 17.0508 | Physician Assisting-Primary Care |
| 17.02 | Diagnostic and Treatment Services | 17.0509 | Physician Assisting-Specialty |
| | 17.0201 Cardiopulmonary Technology | 17.0510 | Podiatric Assisting |
| | 17.0202 Dialysis Technology | 17.0511 | Veterinarian Aide |
| | 17.0203 Electrocardiograph Technology | 17.0512 | Veterinarian Assisting |
| | 17.0204 Electroencephalograph Technology | 17.0513 | Ward Clerk |
| | 17.0205 Emergency Medical Technology-
Ambulance | 17.0599 | Miscellaneous Allied Health Services,
Other |
| | 17.0206 Emergency Medical Technology-
Paramedic | 17.06 | Nursing-Related Services |
| | 17.0207 Medical Radiation Dosimetry | 17.0601 | Geriatric Aide |
| | 17.0208 Nuclear Medical Technology | 17.0602 | Nursing Assisting |
| | 17.0209 Radiograph Medical Technology | 17.0603 | Obstetrical Technology |
| | 17.0210 Respiratory Therapy Technology | 17.0604 | Pediatric Aide |
| | 17.0211 Surgical Technology | 17.0605 | Practical Nursing |
| | 17.0212 Ultrasound Technology | 17.0606 | Ward Service Management |
| | 17.0299 Diagnostic and Treatment Services,
Other | 17.0699 | Nursing-Related Services, Other |
| 17.03 | Medical Laboratory Technologies | 17.07 | Ophthalmic Services |
| | 17.0301 Blood Bank Technology | 17.0701 | Ophthalmic Dispensing |
| | 17.0302 Chemistry Technology | 17.0702 | Ophthalmic Laboratory Technology |
| | 17.0303 Clinical Animal Technology | 17.0703 | Ophthalmic Medical Assisting |
| | 17.0304 Clinical Laboratory Aide | 17.0704 | Optometric Assisting |
| | 17.0305 Clinical Laboratory Assisting | 17.0705 | Optometric Technology |
| | 17.0306 Cytotechnology | 17.0706 | Orthoptics |
| | 17.0307 Hematology Technology | 17.0799 | Ophthalmic Services, Other |
| | 17.0308 Histologic Technology | 17.08 | Rehabilitation Services |
| | 17.0309 Medical Laboratory Technology | 17.0801 | Art Therapy |
| | 17.0310 Medical Technology | 17.0802 | Corrective Therapy |
| | 17.0311 Microbiology Technology | 17.0803 | Dance Therapy |
| | 17.0399 Medical Laboratory Technologies, Other | 17.0804 | Exercise Physiology |
| 17.04 | Mental Health/Human Services | 17.0805 | Manual Arts Therapy |
| | 17.0401 Alcohol/Drug Abuse Specialty | 17.0806 | Music Therapy |
| | 17.0402 Community Health Work | 17.0807 | Occupational Therapy |
| | 17.0403 Genetic Counseling | 17.0808 | Occupational Therapy Assisting |
| | 17.0404 Home Health Aide | 17.0809 | Occupational Therapy Aide |
| | 17.0405 Mental Health/Human Services Assisting | 17.0810 | Orthotic/Prosthetic Assisting |
| | 17.0406 Mental Health/Human Services
Technology | 17.0811 | Orthotics/Prosthetics |
| | 17.0407 Rehabilitation Counseling | 17.0812 | Orthopedic Assisting |
| | 17.0408 Therapeutic Child Care Work | 17.0813 | Physical Therapy |
| | 17.0499 Mental Health/Human Services, Other | 17.0814 | Physical Therapy Aide |
| 17.05 | Miscellaneous Allied Health Services | 17.0815 | Physical Therapy Assisting |
| | 17.0501 Animal Technology | 17.0816 | Recreational Therapy |
| | 17.0502 Central Supply Technology | 17.0817 | Recreational Therapy Technology |
| | 17.0503 Medical Assisting | 17.0818 | Respiratory Therapy |
| | 17.0504 Medical Illustrating | 17.0819 | Respiratory Therapy Assisting |
| | | 17.0820 | Speech/Hearing Therapy Aide |
| | | 17.0821 | Speech-Language Pathology/Audiology |
| | | 17.0899 | Rehabilitation Services, Other |
| | | 17.99 | Allied Health, Other |
| | | 17.9999 | Allied Health, Other |

- 18.11 Nursing
- 18.1101 Nursing, General

Home Economics

(From Architecture and Environmental Design, Category 04 of the Classification)

- 04.05 Interior Design
- 04.0501 Interior Design

(From Vocational Home Economics, Category 20 of the Classification)

- 20.01 *Consumer and Homemaking Home Economics*
 - 20.0101 *Comprehensive Consumer and Homemaking Home Economics*
 - 20.0102 *Child Development, Care, and Guidance*
 - 20.0103 *Clothing and Textiles*
 - 20.0104 *Consumer Education*
 - 20.0105 *Exploratory Homemaking*
 - 20.0106 *Family/Individual Health*
 - 20.0107 *Family Living and Parenthood*
 - 20.0108 *Food and Nutrition*
 - 20.0109 *Home Management*
 - 20.0110 *Housing, Home Furnishing and Equipment*
 - 20.0199 *Consumer and Homemaking Home Economics, Other*
- 20.02 *Child Care and Guidance Management and Services*
 - 20.0201 *Child Care and Guidance Management and Services, General*
 - 20.0202 *Child Care Aide/Assisting*
 - 20.0203 *Child Care Management*
 - 20.0204 *Foster Care/Family Care*
 - 20.0205 *Teacher Aide*
 - 20.0299 *Child Care and Guidance Management and Services, Other*
- 20.03 *Clothing, Apparel, and Textiles Management, Production, and Services*
 - 20.0301 *Clothing, Apparel, and Textiles Management, Production, and Services, General*
 - 20.0302 *Clothing Maintenance Aide*
 - 20.0303 *Commercial Garment and Apparel Construction*
 - 20.0304 *Custom Apparel/Garment Seamstress*
 - 20.0305 *Custom Tailoring and Alteration*
 - 20.0306 *Fashion/Fabric Coordination*
 - 20.0307 *Textiles Testing*
 - 20.0308 *Wedding/Specialty Consulting*
 - 20.0399 *Clothing, Apparel, and Textiles Management, Production, and Services, Other*
- 20.04 *Food Production, Management, and Services*
 - 20.0401 *Food Production, Management, and Services, General*
 - 20.0402 *Baking*
 - 20.0403 *Chef/Cook*
 - 20.0404 *Dietetic Aide/Assisting*
 - 20.0405 *Food Catering*
 - 20.0406 *Food Service*
 - 20.0407 *Food Testing*
 - 20.0408 *School Food Service*
 - 20.0499 *Food Production, Management and Services, Other*
- 20.05 *Home Furnishings and Equipment Management, Production, and Services*
 - 20.0501 *Home Furnishings and Equipment Management, Production, and Services, General*
 - 20.0502 *Custom Drapery and Window Treatment Design/Making*
 - 20.0503 *Custom Slipcovering and Upholstering*
 - 20.0504 *Floral Design*
 - 20.0505 *Home Decorating*
 - 20.0506 *Home Furnishings Aide*
 - 20.0507 *Home-Service Assisting*
 - 20.0599 *Home Furnishings and Equipment Management, Production, and Services, Other*
- 20.06 *Institutional, Home Management, and Supporting Services*
 - 20.0601 *Institutional, Home Management, and Supporting Services, General*
 - 20.0602 *Companion to the Aged*
 - 20.0603 *Consumer Aide/Assisting*
 - 20.0604 *Custodial Services*
 - 20.0605 *Executive Housekeeping*
 - 20.0606 *Homemaker's Aide*
 - 20.0607 *Therapeutic Recreation Aide*
 - 20.0699 *Institutional, Home Management, and Supporting Services, Other*
- 20.99 *Vocational Home Economics, Other*
 - 20.9999 *Vocational Home Economics, Other*

Industrial Arts

(From Industrial Arts, Category 21 of the Classification)

- 21.01 Industrial Arts**
- 21.0101 *Industrial Arts, General*
 - 21.0102 *Construction*
 - 21.0103 *Drafting and Design*
 - 21.0104 *Electricity/Electronics*
 - 21.0105 *Energy, Power, and Transportation*
 - 21.0106 *Graphic Arts*
 - 21.0107 *Manufacturing/Materials Processing*
 - 21.0199 *Industrial Arts, Other*

Technical Education

(From Agricultural Sciences, Category 02 of the Classification)

- 02.03 Food Sciences**
- 02.0306 *Food Technology*

(From Renewable Natural Resources, Category 03 of the Classification)

- 03.04 Forestry Production and Processing**
- 03.0404 *Forest Products Processing Technology*

(From Consumer, Personal, and Miscellaneous Services, Category 12 of the Classification)

- 12.03 Funeral Services**
- 12.0301 *Funeral Services*

(From Communication Technologies, Category 10 of the Classification)

- 10.01 Communication Technologies**
- 10.0101 *Educational Media Technology*
 - 10.0102 *Motion Picture Technology*
 - 10.0103 *Photographic Technology*
 - 10.0104 *Radio and Television Production and Broadcasting Technology*
 - 10.0199 *Communication Technologies, Other*

(From Computer and Information Sciences, Category 11 of the Classification)

- 11.02 Computer Programming**
- 11.0201 *Computer Programming*

- 11.04 Systems Analysis**
- 11.0401 *Systems Analysis*

- 11.03 Data Processing**
- 11.0301 *Data Processing*

(From Engineering and Engineering-Related Technologies, Category 15 of the Classification)

- 15.01 Architectural Technologies**
- 15.0101 *Architectural Design and Construction Technology*
 - 15.0102 *Architectural Interior Design Technology*
 - 15.0199 *Architectural Technologies, Other*

- 15.02 Civil Technologies**
- 15.0201 *Civil Technology*
 - 15.0202 *Drafting and Design Technology*
 - 15.0203 *Surveying and Mapping Technology*
 - 15.0204 *Urban Planning Technology*
 - 15.0299 *Civil Technologies, Other*

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| <p>15.03 <i>Electrical and Electronic Technologies</i></p> <p>15.0301 <i>Computer Technology</i></p> <p>15.0302 <i>Electrical Technology</i></p> <p>15.0303 <i>Electronic Technology</i></p> <p>15.0304 <i>Laser Electro-Optic Technology</i></p> <p>15.0399 <i>Electrical and Electronic Technologies, Other</i></p> | <p>15.06 <i>Industrial Production Technologies</i></p> <p>15.0601 <i>Chemical Manufacturing Technology</i></p> <p>15.0602 <i>Food Processing Technology</i></p> <p>15.0603 <i>Industrial Technology</i></p> <p>15.0604 <i>Manufacturing Technology</i></p> <p>15.0605 <i>Marine Products Technology</i></p> <p>15.0606 <i>Optical Technology</i></p> | <p>15.04 <i>Electromechanical Instrumentation and Maintenance Technologies</i></p> <p>15.0401 <i>Biomedical Equipment Technology</i></p> <p>15.0402 <i>Computer Servicing Technology</i></p> <p>15.0403 <i>Electromechanical Technology</i></p> <p>15.0404 <i>Instrumentation Technology</i></p> <p>15.0499 <i>Electromechanical Instrumentation and Maintenance Technologies, Other</i></p> | <p>15.07 <i>Quality Control and Safety Technologies</i></p> <p>15.0701 <i>Occupational Safety and Health Technology</i></p> <p>15.0702 <i>Quality Control Technology</i></p> <p>15.0799 <i>Quality Control and Safety Technologies, Other</i></p> | <p>15.05 <i>Environmental Control Technologies</i></p> <p>15.0501 <i>Air Conditioning, Heating, and Refrigeration Technology</i></p> <p>15.0502 <i>Air Pollution Control Technology</i></p> <p>15.0503 <i>Energy Conservation and Use Technology</i></p> <p>15.0504 <i>Sanitation Technology</i></p> <p>15.0505 <i>Solar Heating and Cooling Technology</i></p> <p>15.0506 <i>Water and Wastewater Technology</i></p> <p>15.0599 <i>Environmental Control Technologies, Other</i></p> | <p>15.08 <i>Mechanical and Related Technologies</i></p> <p>15.0801 <i>Aeronautical Technology</i></p> <p>15.0802 <i>Agricultural Equipment Technology</i></p> <p>15.0803 <i>Automotive Technology</i></p> <p>15.0804 <i>Marine Propulsion Technology</i></p> <p>15.0805 <i>Mechanical Design Technology</i></p> <p>15.0899 <i>Mechanical and Related Technologies, Other</i></p> | <p>15.0607 <i>Plastic Technology</i></p> <p>15.0608 <i>Safety Technology</i></p> <p>15.0609 <i>Textile Technology</i></p> <p>15.0610 <i>Welding Technology</i></p> <p>15.0699 <i>Industrial Production Technologies, Other</i></p> | <p>15.09 <i>Mining and Petroleum Technologies</i></p> <p>15.0901 <i>Coal Mining Technology</i></p> <p>15.0902 <i>Mining (Excluding Coal) Technology</i></p> <p>15.0903 <i>Petroleum Technology</i></p> <p>15.0999 <i>Mining and Petroleum Technologies, Other</i></p> | <p>15.99 <i>Engineering and Engineering-Related Technologies, Other</i></p> <p>15.9999 <i>Engineering and Engineering-Related Technologies, Other</i></p> |
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(From Law, Category 22 of the Classification)

- 22.01** *Law*
- 22.0103 *Legal Assisting*

(From Library and Archival Sciences, Category 25 of the Classification)

- 25.03** *Library Assisting*
- 25.0301 *Library Assisting*

(From Military Technologies, Category 29 of the Classification)

- 29.01** *Military Technologies*
- 29.0101 *Military Technologies*
- 29.0199 *Military Technologies, Other*

(From Science Technologies, Category 41 of the Classification)

41.01	Biological Technologies	41.03	Physical Science Technologies
41.0101	Biological Laboratory Technology	41.0301	Chemical Technology
41.0102	Oceanographic (Biological) Technology	41.0302	Geological Technology
41.0199	Biological Technologies, Other	41.0303	Metallurgical Technology
41.02	Nuclear Technologies	41.0304	Meteorological Technology
41.0201	Nuclear Materials Handling Technology	41.0305	Oceanographic (Physical) Technology
41.0202	Nuclear Power Plant Operation Technology	41.0399	Physical Science Technologies, Other
41.0203	Nuclear Power Plant Radiation Control Technology		
41.0204	Radiologic (Physical) Technology	41.99	Science Technologies, Other
41.0299	Nuclear Technologies, Other	41.9999	Science Technologies, Other

(From Protective Services, Category 43 of the Classification)

43.01	Criminal Justice	43.02	Fire Protection
43.0105	Criminal Justice Technology	43.0201	Fire Control and Safety Technology

(From Transportation and Material Moving, Category 49 of the Classification)

49.01	Air Transportation	49.03	Water Transportation
49.0101	Air Transportation, General	49.0303	Commercial Fishing Operation
49.0102	Airplane Piloting and Navigation	49.0304	Deep Water Diving and Life Support Systems
49.0103	Aviation Computer Technology	49.0305	Marina Operations
49.0105	Air Traffic Control		

(From Visual and Performing Arts, Category 50 of the Classification)

50.08	Graphic Arts Technology
50.0801	Graphic Arts Technology

Trade and Industrial

(From Consumer, Personal, and Miscellaneous Services, Category 12 of the Classification)

12.01	Drycleaning and Laundering Services	12.04	Personal Services
12.0101	Drycleaning and Laundering Services, General	12.0401	Personal Services, General
12.0102	Drycleaning	12.0402	Barbering
12.0103	Laundering	12.0403	Coiffure
12.0199	Drycleaning and Laundering Services, Other	12.0404	Electrolysis
		12.0405	Massage
		12.0499	Personal Services, Other

(From Protective Services, Category 43 of the Classification)

43.01	Criminal Justice	43.02	Fire Protection
43.0107	Law Enforcement	43.0203	Firefighting
43.0109	Security Services		

(From Construction Trades, Category 46 of the Classification)

46.01	Brickmasonry, Stonemasonry, and Tile Setting	46.0403	Construction Inspection
46.0101	Brickmasonry, Stonemasonry, and Tile Setting, General	46.0404	Drywall Installation
46.0102	Brick, Block, and Stonemasonry	46.0405	Floor Covering Installation
46.0103	Tile Setting	46.0406	Glazing
46.0199	Brickmasonry, Stonemasonry, and Tile Setting, Other	46.0407	Insulation Installation
		46.0408	Painting and Decorating
		46.0409	Plastering
46.02	Carpentry	46.0410	Roofing
46.0201	Carpentry	46.0411	Terrazzo Installation
		46.0499	Miscellaneous Construction Trades, Other
46.03	Electrical and Power Transmission Installation	46.05	Plumbing, Pipefitting, and Steamfitting
46.0301	Electrical and Power Transmission Installation, General	46.0501	Plumbing, Pipefitting, and Steamfitting, General
46.0302	Electrician	46.0502	Pipefitting and Steamfitting
46.0303	Lineworker	46.0503	Plumbing
46.0399	Electrical and Power Transmission Installation, Other	46.0599	Plumbing, Pipefitting, and Steamfitting, Other
46.04	Miscellaneous Construction Trades	46.99	Construction Trades, Other
46.0401	Building Maintenance	46.9999	Construction Trades, Other
46.0402	Concrete Placing and Finishing		

(From Mechanics and Repairers, Category 47 of the Classification)

47.01	Electrical and Electronics Equipment Repair	47.04	Miscellaneous Mechanics and Repairers
47.0101	Electrical and Electronics Equipment Repair, General	47.0401	Electromechanical, Hydraulic, and Pneumatic Instrument Repair
47.0102	Business Machine Repair	47.0402	Gunsmithing
47.0103	Communications Electronics	47.0403	Locksmithing and Safe Repair
47.0104	Computer Electronics	47.0404	Musical Instrument Repair
47.0105	Industrial Electronics	47.0405	Operation, Maintenance, and Repair of Audio-Visual Equipment
47.0106	Major Appliance Repair	47.0406	Shoe and Boot Repair
47.0107	Motor Repair	47.0407	Sporting Goods Equipment Repair
47.0108	Small Appliance Repair	47.0408	Watch Repair
47.0109	Vending and Recreational Machine Repair	47.0499	Miscellaneous Mechanics and Repairers, Other
47.0199	Electrical and Electronics Equipment Repair, Other		
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47.0201	Heating, Air Conditioning, and Refrigeration Mechanics, General	47.0501	Stationary Energy Sources, General
47.0202	Cooling and Refrigeration	47.0502	Conventional Electric Power Generation
47.0203	Heating and Air Conditioning	47.0503	Industrial Nuclear Energy
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		47.0599	Stationary Energy Sources, Other
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47.0304	Mine Equipment Maintenance and Repair	47.0604	Automotive Mechanics
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		47.0699	Vehicle and Mobile Equipment Mechanics and Repairers, Other
		47.99	Mechanics and Repairers, Other
		47.9999	Mechanics and Repairers, Other

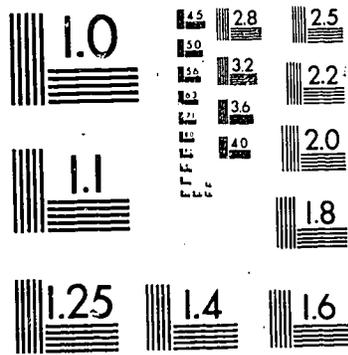
(From Precision Production, Category 48 of the Classification)

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48.0101	Drafting, General	48.0401	Precision Food Production, General
48.0102	Architectural Drafting	48.0402	Meatcutting
48.0103	Civil/Structural Drafting	48.0403	Slaughtering and Butchering
48.0104	Electrical/Electronics Drafting	48.0499	Precision Food Production, Other
48.0105	Mechanical Drafting	48.05	Precision Metal Work
48.0199	Drafting, Other	48.0501	Precision Metal Work, General
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48.0203	Commercial Art	48.0505	Metal Patternmaking
48.0204	Commercial Photography	48.0506	Sheet Metal
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48.0206	Lithography, Photography, and Platemaking	48.0508	Welding, Brazing, and Soldering
48.0207	Photographic Laboratory and Darkroom	48.0599	Precision Metal Work, Other
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(From Transportation and Material Moving, Category 49 of the Classification)

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49.0106	Flight Attendants	49.0301	Water Transportation, General
49.02	Vehicle and Equipment Operation	49.0302	Barge and Boat Operation
49.0201	Vehicle and Equipment Operation, General	49.0306	Marine Maintenance
49.0202	Construction Equipment Operation	49.0307	Merchant Marine Officers
49.0203	Material Handling	49.0308	Sailors and Deckhands
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49.0299	Vehicle and Equipment Operation, Other	49.9999	Transportation and Material Moving, Other

Appendix E



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS
STANDARD REFERENCE MATERIAL 1010a
(ANSI and ISO TEST CHART No. 2)

Contributors to the Development of the Classification

National Planning Committee

The primary review group for the project was a Task Force, the National Planning Committee, comprised of individuals particularly knowledgeable about: (a) data needs of both State and Federal agencies regarding instructional programs in higher, vocational/technical, secondary, and adult/continuing education and (b) organization and administration at each level. This committee ensured that the viewpoints of a wide range of people in the education community to be served by the new instructional program classification were incorporated. Members of the National Planning Committee were:

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A selected group of professional organizations reviewed the appropriate field/special category of the instructional program classification. The responses provided additional input to the final revision. These organizations were:

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American Chemical Society, Committee on Chemical
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American Council on Education for Journalism
American Historical Association
American Library Association
American Political Science Association
American Psychological Association
American Society of Journalism School Administrators
American Sociological Association
Association for Computing Machinery, Curriculum
Committee on Computer Science
Association of American Law Schools
Association of Collegiate Schools of Architecture

Association of Theological Schools
Council on Social Work Education
Engineers' Council for Professional Development
Geological Society of America
Mathematical Association of America
Modern Language Association of America
National Architectural Accrediting Board
National Art Education Association - Teachers
National Association of Colleges and Teachers of Agriculture
National Association of Schools of Music
National Council for Accreditation of Teacher Education
Organization of American Historians
Society for the Advancement of Scandinavian Study
Society for Photographic Education
Society of American Foresters
Social Science Research Council

Appendix F

Glossary

Terms included in the glossary are meant to provide the user with definitions not appearing elsewhere in *A Classification of Instructional Programs*.

Adult Basic Education (A.B.E.) — Education for adults whose inability to speak, read, or write the English language constitutes a substantial impairment of their ability to get or retain employment commensurate with their real ability, which is designed to help eliminate such inability and raise the level of education of such individuals with a view to making them less likely to become dependent on others, to improving their ability to benefit from occupational training and otherwise increasing their opportunities for more productive and profitable employment, and to making them better able to meet their adult responsibilities.

Adult Education — Instruction designed to meet the unique needs of persons — beyond the age of compulsory school attendance — who have either completed or interrupted their formal education and whose primary occupation is other than full-time students. This may be provided by a school system, college, or other agency or institution (including a technical institute or area vocational school) through activities and media such as formal classes, correspondence study, radio, television, lectures, concerts, demonstrations, and counseling.

Apprentice — A worker who is learning a recognized occupation in accordance with a written apprentice-training contract between him and his employer or employers which provides for a given period of planned work experience through employment on the job, supplemented by appropriate related instruction, and with other specified provisions of the arrangement.

Award — Formal recognition, such as a certificate, diploma, or degree conferred upon a person by an educational institution upon successful completion of an instructional program.

Certificate — A document certifying the satisfactory completion of a program of studies, course, class, or cocurricular activity, or for graduation from a school, e.g., a diploma or other certificate, promotion to the next school, and awarding of units of value.

Continuing Education — The philosophy and the process under which an institution, organization, agency, or individual provides organized learning activities for the professional or personal development of adults whose primary role is something other than a student.

Course — An organization of subject matter and related learning experiences provided for the instruction of students on a regular or systematic basis, usually for a predetermined period of time as in a semester, a quarter, or a regular school term.

Credit — The unit of value, awarded for the successful completion of certain courses, intended to indicate the quantity of course instruction in relation to the total requirements for a diploma, certificate, or degree. Credits usually are expressed in terms such as "Carnegie units," "credits," "semester credit hours," and "quarter credit hours."

Degree — An award conferred by a college, university or other postsecondary education institution as official recognition for the successful completion of a program of studies or in some instances as recognition for outstanding achievement or merit.

Diploma — A formal document certifying the successful completion of a prescribed program of studies.

Discipline — A broad, logically organized body of subject matter which is distinguished by its scholarly prestige.

Extension Education — Education offered outside its normal physical confines or formal framework by an educational institution. This may include such activities as short courses, conferences, institutes, independent study, and credit or noncredit courses offered in off-campus settings via television, correspondence, instruction or other media.

General Educational Development (GED) Program — Academic instruction to prepare persons to take the high school equivalency examination.

Higher Education — Education above the level of the secondary school, which is provided by colleges, universities, graduate schools, professional schools, and other degree-granting institutions.

Level of Instruction — An indication of the general nature and difficulty of instruction, usually identified by the designation of a grade or year in an organized educational system.

Noncredit Course — A course for which students do not receive credit applicable towards graduation or completion of a program of studies.

Occupational Field — A group of recognized occupations having many similarities, including the following characteristics in common: the type of work performed; the basic aptitudes, and the required knowledge and training required; the tools, machines, instruments, and other equipment used; and the basic materials used.

On-the-job-training — A program of instruction provided to an employed worker by the employer during the normal working hours of the occupation.

Postsecondary Instructional Level — A general level of instruction provided for students in college programs, or any instruction of a comparable nature and difficulty provided for adults and youth beyond the age of compulsory school attendance.

Prerequisite — A course (completed successfully) or other requirement which is necessary as a preliminary to participation in a given activity or succeeding course.

School District — An administrative unit at the local level which exists primarily to operate public schools or to contract for public school services. Normally, taxes can be levied by such units for school purposes. These units may or may not be coterminous with county, city or town boundaries. This term is used synonymously with the term "local basic administrative unit."

Skills — Abilities acquired by observation, study, and experience in mental, physical and interpersonal performance basic to the mastery of school work and other activities.

Subject — An organized body of knowledge which may be more comprehensive than a course but is less comprehensive than a subject-matter area. For example, the subject of American history may be one course or it may be comprised of two courses, such as (a) American history up to the Civil War, and (b) American history from the Civil War to the present.

Subject-Matter Areas — The most aggregate entries of subject matter which form the basic structure of an array of mutually restrictive categories of knowledge.

Subject-Matter Descriptor — The word or words that are used to identify individual subject-matter elements at any level within a hierarchical array of knowledge.

Subject-Matter Element — A single, discrete unit of subject-matter representing a designated component of the substance of knowledge.

Technology — The study of the practical applications of knowledge which emanate from the theoretical construction of subject matter.

Work-Study Program — A school program designed to provide employment for students who could not continue in school without the financial support provided through a job. The work may or may not be curriculum related.

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Cooling and Refrigeration (47.0202)
Coping Skills (37.0102)
Correctional Administration (43.0101)
Corrections (43.0102)
Corrective Therapy (17.0802)
Correspondence Clerk (07.0703)
Cosmetology (12.0403)
Counseling Psychology (42.06, 42.0601)
Court Reporting (07.0602)
Crafts (50.02)
Crafts (Leisure and Recreational) (36.0102)
Crafts, General (50.0201)
Crafts, Other (50.0299)
Creative Writing (23.05, 23.0501)
Credit Collection Clerk (07.0202)
Credit Marketing (08.0403)
Credit Union Marketing (08.0404)
Criminal Justice (43.01)
Criminal Justice Administration (43.0103)

Criminal Justice, Other (43.0199)
Criminal Justice Studies (43.0104)
Criminal Justice Technology (43.0105)
Criminology (45.04, 45.0401)
Crop Production (01.0304)
Curriculum and Instruction (13.03, 13.0301)
Custodial Services (20.0604)
Custom Apparel/Garment Seamstress (20.0304)
Custom Drapery and Window Treatment Design/Making
(20.0502)
Custom Slipcovering and Upholstering (20.0503)
Custom Tailoring and Alteration (20.0305)
Cytotechnology (17.0306)

D

Dairy (02.0206)
Dairy Processing (02.0302)
Dance (50.03, 50.0301)
Dance Therapy (17.0803)
Data Processing (11.03, 11.0301)
Deep Water Diving and Life Support Systems (49.0304)
Demography (45.05, 45.0501)
Dental Assisting (17.0101)
Dental Hygiene (17.0102)
Dental Laboratory Technology (17.0103)
Dental Public Health (18.0402)
Dental Services (17.01)
Dental Services, Other (17.0199)
Dentistry (18.04)
Dentistry, General (18.0401)
Dentistry, Other (18.0499)
Dermatology (18.1005)
Design (50.04)
Design, General (50.0401)
Design, Other (50.0499)
Developmental Psychology (42.07, 42.0701)
Diagnostic and Treatment Services (17.02)
Diagnostic and Treatment Services, Other (17.0299)
Dialysis Technology (17.0202)
Diesel Engine Mechanics (47.0605)
Dietetic Aide/Assisting (20.0404)
Dietetics/Human Nutritional Services (19.0503)
Display (08.0202)
Drafting (48.01)
Drafting, General (48.0101)
Drafting, Other (48.0199)
Drafting and Design (21.0103)
Drafting and Design Technology (15.0202)
Dramatic Arts (50.05, 50.0501)
Drawing (50.0705)
Driver and Safety Education (13.1304)
Drycleaning (12.0102)
Drycleaning and Laundering Services (12.01)
Drycleaning and Laundering Services, General (12.0101)
Drycleaning and Laundering Services, Other (12.0199)
Drywall Installation (46.0404)
Duplicating Machine Operation (07.0704)

E

Earth Science (40.0703)
 East Asian Studies (05.0104)
 Eastern European Studies (05.0105)
 Ecology (26.0603)
 Economics (45.06, 45.0601)
 Education (13.)
 Education Administration (13.04)
 Education Administration, General (13.0401)
 Education Administration, Other (13.0499)
 Education, General (13.01, 13.0101)
 Education, Other (13.99, 13.9999)
 Education of the Culturally Disadvantaged (13.1002)
 Education of the Deaf and Hearing Impaired (13.1003)
 Education of the Emotionally Handicapped (13.1005)
 Education of the Gifted and Talented (13.1004)
 Education of the Mentally Handicapped (13.1006)
 Education of the Multiple Handicapped (13.1007)
 Education of the Physically Handicapped (13.1008)
 Education of the Visually Handicapped (13.1009)
 Educational Assisting and Training (07.0502)
 Educational Media (13.05, 13.0501)
 Educational Media Technology (10.0101)
 Educational Statistics and Research (13.0603)
 Educational Supervision (13.0404)
 Educational Testing, Evaluation, and Measurement (13.0604)
 Electrical and Electronic Technologies (15.03)
 Electrical and Electronic Technologies, Other (15.0399)
 Electrical and Electronics Equipment Repair (47.01)
 Electrical and Electronics Equipment Repair, General (47.0101)
 Electrical and Electronics Equipment Repair, Other (47.0199)
 Electrical and Power Transmission Installation (46.03)
 Electrical and Power Transmission Installation, General (46.0301)
 Electrical and Power Transmission Installation, Other (46.0399)
 Electrical/Electronics Drafting (48.0104)
 Electrical, Electronics, and Communications Engineering (14.10, 14.1001)
 Electrical Technology (15.0302)
 Electrician (46.0302)
 Electricity/Electronics (21.0104)
 Electrocardiograph Technology (17.0203)
 Electroencephalograph Technology (17.0204)
 Electrolysis (12.0404)
 Electromechanical, Hydraulic, and Pneumatic Instrument Repair (47.0401)
 Electromechanical Instrumentation and Maintenance Technologies (15.04)
 Electromechanical Instrumentation and Maintenance Technologies, Other (15.0499)
 Electromechanical Technology (15.0403)
 Electron Physics (40.0803)
 Electronic Technology (15.0303)
 Elementary and Secondary Education Administration (13.0405)
 Elementary and Secondary Research (13.0605)
 Elementary Education (13.1202)
 Elementary Particle Physics (40.0804)
 Embryology (26.0604)
 Emergency/Disaster Science (18.05, 18.0501)
 Emergency Medical Technology-Ambulance (17.0205)

Emergency Medical Technology-Paramedic (17.0206)
 Emergency Medicine (18.1006)
 Endocrinology (26.0605)
 Enameling (50.0203)
 Endodontics (18.0403)
 Energy Conservation and Use Technology (15.0503)
 Energy, Power, and Transportation (21.0105)
 Engineering (14.)
 Engineering and Engineering-Related Technologies (15.)
 Engineering and Engineering-Related Technologies, Other (15.99, 15.9999)
 Engineering and Other Disciplines (30.03, 30.0301)
 Engineering, General (14.01, 14.0101)
 Engineering Mechanics (14.11, 14.1101)
 Engineering, Other (14.99, 14.9999)
 Engineering Physics (14.12, 14.1201)
 Engineering Science (14.13, 14.1301)
 English Education (13.1305)
 English, General (23.01, 23.0101)
 Entertainment Services (12.02)
 Entertainment Services, General (12.0201)
 Entertainment Services, Other (12.0299)
 Entomology (26.0702)
 Entrepreneurship (08.03)
 Entrepreneurship, General (08.0301)
 Environmental Control Technologies (15.05)
 Environmental Control Technologies, Other (15.0599)
 Environmental Design (04.04, 04.0401)
 Environmental Health Engineering (14.14, 14.1401)
 Epidemiology (18.06, 18.0601)
 Ethnic Studies (05.02)
 Ethnic Studies, Other (05.0299)
 European Studies, General (05.0106)
 Evaluation and Research (13.06)
 Evaluation and Research, General (13.0601)
 Evaluation and Research, Other (13.0699)
 Executive Housekeeping (20.0605)
 Executive Secretarial (07.0603)
 Exercise Physiology (17.0804)
 Experimental Psychology (42.08, 42.0801)
 Exploratory Homemaking (20.0105)

F

Family and Community Services (19.03)
 Family and Community Services, General (19.0301)
 Family and Community Services, Other (19.0399)
 Family/Consumer Resource Management (19.04)
 Family/Consumer Resource Management, General (19.0401)
 Family/Consumer Resource Management, Other (19.0499)
 Family Counseling (19.0703)
 Family Economics (19.0403)
 Family/Individual Health (20.0108)
 Family Living and Parenthood (20.0107)
 Family Practice (18.1007)
 Family Relations (19.0704)
 Family Services (19.0303)
 Farm and Garden Supplies Marketing (08.0502)
 Farm and Ranch Management (01.0104)
 Fashion Design (19.0902)
 Fashion/Fabric Coordination (20.0306)

Fashion Merchandising (08.0102)
Fashion Models (08.0103)
Fiber/Textiles/Weaving (50.0204)
Film Animation (50.0603)
Film Arts (50.06)
Film Arts, General (50.0601)
Film Arts, Other (50.0699)
Financial Services Marketing (08.04)
Financial Services Marketing, General (08.0401)
Financial Services Marketing, Other (08.0499)
Fine Arts (50.07)
Fine Arts, General (50.0701)
Fine Arts, Other (50.0799)
Fire Control and Safety Technology (43.0201)
Fire Protection (43.02)
Fire Protection Administration (43.0202)
Fire Protection, Other (43.0299)
Firefighting (43.0203)
Fisheries (03.0302)
Fisheries Science (02.0207)
Fishing and Fisheries (03.03)
Fishing and Fisheries, General (03.0301)
Fishing and Fisheries, Other (03.0399)
Flight Attendants (49.0106)
Floor Covering Installation (46.0405)
Floor Coverings, Draperies, and Upholstery Marketing (08.0804)
Floral Design (20.0504)
Floriculture (01.0603)
Floristry (08.0503)
Floristry, Farm and Garden Supplies Marketing (08.05)
Floristry, Farm and Garden Supplies Marketing, General (08.0501)
Floristry, Farm and Garden Supplies Marketing, Other (08.0599)
Fluids and Plasmas (46.0405)
Food and Nutrition (20.0405)
Food Catering (20.0405)
Food Distribution (02.0303)
Food Engineering (02.0304)
Food/Food Sciences (19.0502)
Food Marketing (08.06)
Food Marketing, General (08.0601)
Food Marketing, Other (08.0699)
Food Packaging (02.0305)
Food Processing Technology (15.0602)
Food Production, Management, and Services (20.04)
Food Production, Management, and Services, General (20.0401)
Food Production, Management, and Services, Other (20.0499)
Food Products (01.0402)
Food Sciences (02.03)
Food Sciences and Human Nutrition (19.05)
Food Sciences and Human Nutrition, General (19.0501)
Food Sciences and Human Nutrition, Other (19.0599)
Food Sciences, General (02.0301)
Food Sciences, Other (02.0399)
Food Service (20.0406)
Food Technology (02.0306)
Food Testing (20.0407)
Footwear Marketing (08.0104)
Foreign Languages Education (13.1306)
Foreign Languages (16.)

Foreign Languages, Multiple Emphasis (16.01, 16.0101)
Foreign Languages, Other (16.99, 16.9999)
Forensic Studies (43.0106)
Forest Biology (03.0503)
Forest Engineering (03.0504)
Forest Hydrology (03.0505)
Forest Management (03.0506)
Forest Mensuration (03.0507)
Forest Production (03.0402)
Forest Products Processing Technology (03.0404)
Forest Products Utilization (03.0403)
Forestry and Related Sciences (03.05)
Forestry and Related Sciences, General (03.0501)
Forestry and Related Sciences, Other (03.0599)
Forestry Production and Processing (03.04)
Forestry Production and Processing, General (03.0401)
Forestry Production and Processing, Other (03.0499)
Forestry Science (03.0502)
Foster Care/Family Care (20.0204)
Foundry Work (48.0502)
Freight Transportation Marketing (08.1102)
French (16.0901)
Funeral Services (12.03, 12.0301)
Furniture Making (48.0702)
Furniture Marketing (08.0805)

G

Game Farm Management (01.0305)
Games (36.0103)
General Marketing (08.07)
General Marketing, Other (08.0799)
General Office Clerk (07.0705)
Genetic Counseling (17.0403)
Genetics, Human and Animal (26.0703)
Geochemistry (40.0602)
Geography (45.07, 45.0701)
Geological Engineering (14.15, 14.1501)
Geological Sciences (40.06)
Geological Sciences, Other (40.0699)
Geological Technology (41.0302)
Geology (40.0601)
Geophysical Engineering (14.16, 14.1601)
Geophysics and Seismology (40.0603)
Geriatric Aide (17.0601)
Geriatric Services (19.0705)
Geriatrics (18.1008)
German (16.0501)
Germanic Languages (16.05)
Germanic Languages, Other (16.0599)
Glass (50.0205)
Glazing (46.0406)
Graphic and Printing Communications (48.02)
Graphic and Printing Communications, General (48.0201)
Graphic and Printing Communications, Other (48.0299)
Graphic Arts (21.0106)
Graphic Arts Technology (50.08, 50.0801)
Graphic Design (50.0402)
Greek (16.06)

Greek (Classical) (16.0601)
Greek (Modern) (16.0602)
Greenhouse Operation and Management (01.0604)
Gunsmithing (47.0402)

H

Hardware Marketing (08.0806)
Health Care Administration (18.0701)
Health Care Planning (18.0702)
Health Education (13.1307)
Health Enhancement Practices (34.0103)
Health-Related Activities (34., 34.01)
Health-Related Activities, General (34.0101)
Health-Related Activities, Other (34.0199)
Health Sciences (18.)
Health Sciences Administration (18.07)
Health Sciences Administration, Other (18.0799)
Health Sciences, Other (18.99, 18.9999)
Health Treatment/Prevention Practices (34.0104)
Heating, Air-Conditioning, and Refrigeration
Mechanics (47.02)
Heating, Air-Conditioning, and Refrigeration
Mechanics, General (47.0201)
Heating, Air-Conditioning, and Refrigeration
Mechanics, Other (47.0299)
Heating and Air Conditioning (47.0203)
Heavy Equipment Maintenance and Repair (47.0302)
Hebrew (16.1102)
Hematology (18.08, 18.0801)
Hematology Technology (17.0307)
Higher Education Administration (13.0406)
Higher Education Research (13.0606)
Hindi (16.0701)
Hispanic-American Studies (05.0203)
Histologic Technology (17.0308)
Histology (26.0606)
History (45.08, 45.0801)
Hobbies (36.0104)
Holography (50.0604)
Home and Office Products Marketing (08.08)
Home and Office Products Marketing, General (08.0801)
Home and Office Products Marketing, Other (08.0899)
Home Decorating (20.0505)
Home Economics (19.)
Home Economics Education (13.1308)
Home Economics General (19.01, 19.0101)
Home Economics, Other (19.99, 19.9999)
Home Furnishings Aide (20.0506)
Home Furnishings and Equipment Management, Production,
and Services (20.05)
Home Furnishings and Equipment Management, Production,
and Services, General (20.0501)
Home Furnishings and Equipment Management, Production,
and Services, Other (20.0599)
Home Health Aide (17.0404)
Home Management (20.0109)
Homemaker's Aide (20.0606)
Home Service Assisting (20.0507)
Horseshoeing (01.0506)

Horticulture (01.06)
Horticulture, General (01.0601)
Horticulture, Other (01.0699)
Horticulture Science (02.0403)
Hospitality and Recreation Marketing (08.09)
Hospitality and Recreation Marketing, General (08.0901)
Hospitality and Recreation Marketing, Other (08.0999)
Hotel/Motel Management (06.0701)
Household Equipment (19.0602)
Housing (19.0603)
Housing, Home Furnishing and Equipment (20.0110)
Housing/Home Maintenance (36.0105)
Human Environment and Housing (19.06)
Human Environment and Housing, General (19.0601)
Human Environment and Housing, Other (19.0699)
Human Nutrition (19.0504)
Human Resources Development (06.06, 06.0601)
Humanities and Social Sciences (30.04, 30.0401)

I

Illustration Design (50.0403)
Immunology (18.1009)
Indic Languages (16.07)
Indic Languages, Other (16.0799)
Individual and Family Development (19.07)
Individual and Family Development, General (19.0701)
Individual and Family Development, Other (19.0799)
Industrial and Organizational Psychology (42.09, 42.0901)
Industrial Arts (21., 21.01)
Industrial Arts Education (13.1309)
Industrial Arts, General (21.0101)
Industrial Arts, Other (21.0199)
Industrial Ceramics Manufacturing (48.0601)
Industrial Design (50.0404)
Industrial Electronics (47.0105)
Industrial Engineering (14.17, 14.1701)
Industrial Equipment Maintenance and Repair (47.03)
Industrial Equipment Maintenance and Repair, General (47.0301)
Industrial Equipment Maintenance and Repair, Other (47.0399)
Industrial Machinery Maintenance and Repair (47.0303)
Industrial Nuclear Energy (47.0503)
Industrial Production Technologies (15.06)
Industrial Production Technologies, Other (15.0699)
Industrial Sales (08.0702)
Industrial Technology (15.0603)
Information Sciences and Systems (11.04, 11.0401)
Inorganic Chemistry (40.0503)
Institutional, Home Management, and Supporting Services
(20.06)
Institutional, Home Management, and Supporting Services,
General (20.0601)
Institutional, Home Management, and Supporting Services,
Other (20.0699)
Institutional Management (06.07)
Institutional Management, Other (06.0799)
Instrumentation Technology (15.0404)
Insulation Installation (46.0407)
Insurance and Risk Management (06.08, 06.0801)
Insurance Clerk (07.0203)

Insurance Marketing (08.10)
Insurance Marketing, General (08.1001)
Insurance Marketing, Other (08.1099)
Intermedia (50.0706)
Interior Design (04.05, 04.0501)
Internal Medicine (18.1010)
International Agriculture (01.07, 01.0701)
International and Comparative Education (13.07, 13.0701)
International Business Management (06.09, 06.0901)
International/Comparative Home Economics (19.08, 19.0801)
International Marketing (08.0703)
International Public Service (44.03, 44.0301)
International Relations (45.09, 45.0901)
Interpersonal Skills (35., 35.01)
Interpersonal Skills, General (35.0101)
Interpersonal Skills, Other (35.0199)
Investments and Securities (06.10, 06.1001)
Iranian Languages (16.08, 16.0801)
Islamic Studies (05.0204)
Italian (16.0302)
Italic Languages (16.09)
Italic Languages, Other (16.0999)

Japanese (16.0302)
Jewelry Design, Fabrication, and Repair (48.0602)
Jewelry Marketing (08.0105)
Jewish Studies (05.0205)
Job-Seeking/Changing Skills (32.0105)
Journalism (Mass Communications) (09.04, 09.0401)
Junior High Education (13.1203)

Kinetics (50.0707)
Korean (16.0303)

Labor/Industrial Relations (06.11, 06.1101)
Landscape Architecture (04.06, 04.0601)
Landscaping (01.0605)
Laser Electro-Optic Technology (15.0304)
Latin (16.0903)
Latin American Studies (05.0107)
Laundering (12.0103)
Law (22., 22.01, 22.0101)
Law Enforcement (43.0107)
Law Enforcement Administration (43.0108)
Law, Other (22.0199)
Leatherworking and Upholstering (48.03)
Leatherworking and Upholstering, General (48.0301)
Leatherworking and Upholstering, Other (48.0399)
Legal Assisting (22.0103)
Legal Secretarial (07.0604)
Leisure and Recreational Activities (36., 36.01)
Leisure and Recreational Activities, General (36.0101)
Leisure and Recreational Activities, Other (36.0199)

Letters, Other (23.99, 23.9999)
Liberal/General Studies (24., 24.01, 24.0101)
Liberal/General Studies, Other (24.0199)
Library and Archival Sciences (25.)
Library and Archival Sciences, General (25.01, 25.0101)
Library and Archival Sciences, Other (25.99, 25.9999)
Library Assisting (25.03, 25.0301)
Library Science (25.04, 25.0401)
Life Insurance Marketing (08.1003)
Life Sciences (26.)
Life Sciences, Other (26.99, 26.9999)
Lineworker (46.0303)
Linguistics (Includes Phonetics, Semantics, and Philology) (23.06, 23.0601)
Literature, American (23.07, 23.0701)
Literature, English (23.08, 23.0801)
Lithography, Photography, and Platemaking (48.0206)
Livestock (02.0208)
Loan Clerk (07.0204)
Locksmithing and Safe Repair (47.0403)
Logging (03.0405)

M

Machine Billing, Bookkeeping, and Computing (07.0104)
Machine Tool Operation/Machine Shop (48.0503)
Mail and Order Clerk (07.0706)
Major Appliance Repair (47.0106)
Management Information Systems (06.12, 06.1201)
Management Science (06.13)
Management Science, Other (06.1399)
Manual Arts Therapy (17.0805)
Manufacturing/Materials Processing (21.0107)
Manufacturing Technology (15.0604)
Marina Operations (49.0305)
Marine Biology (26.0607)
Marine Maintenance (49.0306)
Marine Products Technology (15.0605)
Marine Propulsion Technology (15.0804)
Marketing and Distribution (08.)
Marketing and Distribution, Other (08.99, 08.9999)
Marketing and Distributive Education (13.1310)
Marketing Management (06.1401)
Marketing Management and Research (06.14)
Marketing Management and Research, Other (06.1499)
Marketing of Business or Personal Services (08.0203)
Marketing of Hotel/Motel Services (08.0902)
Marketing of Recreational Services (08.0903)
Marketing Research (06.1402)
Massage (12.0405)
Material Handling (49.0203)
Materials Engineering (14.18, 14.1801)
Maternal/Child Health (18.1103)
Mathematics (27.)
Mathematics Education (13.1311)
Mathematics, General (27.01, 27.0101)
Mathematics, Other (27.99, 27.9999)
Meatcutting (48.0402)
Mechanical and Related Technologies (15.08)
Mechanical and Related Technologies, Other (15.0899)

Mechanical Design Technology (15.0805)
Mechanical Drafting (48.0105)
Mechanical Engineering (14.19, 14.1901)
Mechanics and Repairers (47.)
Mechanics and Repairers, Other (47.99, 47.9999)
Medical Assisting (17.0503)
Medical Illustrating (17.0504)
Medical Laboratory (18.09, 18.0901)
Medical Laboratory Technologies (17.03)
Medical Laboratory Technologies, Other (17.0399)
Medical Laboratory Technology (17.0309)
Medical Office Management (17.0505)
Medical Radiation Dosimetry (17.0207)
Medical Records Administration (18.0703)
Medical Records Technology (17.0506)
Medical Secretarial (07.0605)
Medical Social Work (44.0702)
Medical Surgical (18.1104)
Medical Technology (17.0310)
Medicine (18.10)
Medicine, General (18.1001)
Medicine, Other (18.1099)
Mental Health/Human Services (17.04)
Mental Health/Human Services Assisting (17.0405)
Mental Health/Human Services Technology (17.0406)
Mental Health /Human Services, Other (17.0499)
Merchant Marine Officers (49.0307)
Metal Fabrication (48.0504)
Metal/Jewelry (50.0206)
Metal Patternmaking (48.0505)
Metallurgical Engineering (14.20, 14.2001)
Metallurgical Technology (41.0303)
Metallurgy (40.0701)
Meteorological Technology (41.0304)
Microbiology (26.05, 26.0501)
Microbiology Technology (17.0311)
Middle Eastern Studies (05.0108)
Military Science (Army) (28.03, 28.0391)
Military Sciences (28.)
Military Sciences, Other (28.99, 28.9999)
Military Technologies (29., 29.01, 29.0101)
Military Technologies, Other (29.0199)
Millwork and Cabinet Making (48.0703)
Mine Equipment Maintenance and Repair (47.0304)
Mining and Mineral Engineering (14.21, 14.2101)
Mining and Petroleum Technologies (15.09)
Mining and Petroleum Technologies, Other (15.0999)
Mining Equipment Operation (49.0204)
Mining (Excluding Coal) Technology (15.0902)
Miscellaneous Allied Health Services (17.05)
Miscellaneous Allied Health Services, Other (17.0599)
Miscellaneous Construction Trades (46.04)
Miscellaneous Construction Trades, Other (46.0499)
Miscellaneous Mechanics and Repairers (47.04)
Miscellaneous Mechanics and Repairers, Other (47.0499)
Miscellaneous Physical Sciences (40.07)
Miscellaneous Physical Sciences, Other (40.0799)
Miscellaneous Specialized Areas: Life Sciences (26.06)
Miscellaneous Specialized Areas: Life Sciences, Other (26.0699)
Missionary Studies (39.03, 39.0301)

Molecular Biology (26.0402)
Motion Picture Technology (10.0102)
Motor Repair (47.0107)
Motor Skills (32.0106)
Multi/Interdisciplinary Studies (30.)
Multi/Interdisciplinary Studies, Other (30.99, 30.9999)
Museology (25.05, 25.0501)
Music (50.09)
Music Education (13.1312)
Music, General (50.0901)
Music History and Appreciation (50.0902)
Music Performance (50.0903)
Music Theory and Composition (50.0904)
Music Therapy (17.0806)
Music, Other (50.0999)
Musical Instrument Repair (47.0404)
Mycology (26.0303)

N

Native American Languages (16.10, 16.1001)
Nature Appreciation (36.0106)
Naval Architecture and Marine Engineering (14.22, 14.2201)
Naval Science (Navy, Marines) (28.04, 28.0401)
Neurological Surgery (18.1011)
Neurology (18.1024)
Neurosciences (26.0608)
Nonfood Products (01.0403)
Nonformal Education (Extension, Adult/Extended) (19.0302)
Nuclear Engineering (14.23, 14.2301)
Nuclear Materials Handling Technology (41.0201)
Nuclear Medical Technology (17.0208)
Nuclear Medicine (18.1012)
Nuclear Physics (40.0806)
Nuclear Power Plant Operation Technology (41.0202)
Nuclear Power Plant Radiation Control Technology (41.0203)
Nuclear Technologies (41.02)
Nuclear Technologies, Other (41.0299)
Nursery Operation and Management (01.0606)
Nursing (18.11)
Nursing Administration (18.1105)
Nursing Assisting (17.0602)
Nursing, General (18.1101)
Nursing, Other (18.1199)
Nursing-Related Services (17.06)
Nursing-Related Services, Other (17.0699)
Nutritional Education (13.1313)
Nutritional Sciences (26.0609)

O

Obstetrical Technology (17.0603)
Obstetrics and Gynecology (18.1013)
Occupational Safety and Health Technology (15.0701)
Occupational Therapy (17.0807)
Occupational Therapy Aide (17.0809)
Occupational Therapy Assisting (17.0808)
Ocean Engineering (14.24, 14.2401)
Oceanographic (Biological) Technology (41.0102)
Oceanographic (Physical) Technology (41.0305)

Oceanography (40.0702)
Office Products and Equipment Marketing (08.0807)
Office Supervision and Management (07.04, 07.3401)
Oil and Gas Drilling Equipment Operation and Maintenance (47.0305)
Operation, Maintenance, and Repair of Audio Visual Equipment (47.0405)
Operations Research (Quantitative Methods) (06.1302)
Ophthalmic Dispensing (17.0701)
Ophthalmic Laboratory Technology (17.0702)
Ophthalmic Medical Assisting (17.0703)
Ophthalmic Services (17.07)
Ophthalmic Services, Other (17.0799)
Ophthalmology (18.1014)
Optical Goods Work (48.0603)
Optical Technology (15.0606)
Optics (40.0507)
Optometric Assisting (17.0704)
Optometric Technology (17.0705)
Optometry (18.12, 18.1201)
Oral/Maxial Facial Surgery (18.0404)
Oral Pathology (18.0405)
Organic Chemistry (40.0504)
Organizational Behavior (06.15, 06.1501)
Ornamental Horticulture (02.0404)
Orthodontics (18.0406)
Orthodontic Surgery (18.1015)
Orthopedic (18.1016)
Orthopedic Assisting (17.0812)
Orthoptics (17.0706)
Orthotic/Prosthetic Assisting (17.0810)
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Paleontology (40.0604)
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Petroleum Engineering (14.25, 14.2501)
Petroleum Technology (15.0903)
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Pharmaceutical Chemistry (40.0505)
Pharmacology, Human and Animal (26.0705)
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Pharmacy Assisting (17.0507)
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Philosophy and Religion (38.)
Philosophy and Religion, Other (38.99, 38.9999)
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Photography (50.0605)
Physical Chemistry (40.0506)
Physical Education (13.1314)
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Physical Science Technologies, Other (41.0399)
Physical Sciences (40.)
Physical Sciences, General (40.01, 40.0101)
Physical Sciences, Other (40.99, 40.9999)
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Physical Therapy Assisting (17.0815)
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Physiological Psychology (42.11, 42.1101)
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Pipefitting and Steamfitting (46.0502)
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Plant Genetics (26.0304)
Plant Pathology (02.0406)
Plant Pathology (26.0305)
Plant Pharmacology (26.0306)
Plant Physiology (Applied) (02.0407)
Plant Physiology (26.0307)
Plant Protection (Pest Management) (02.0408)
Plant Sciences (02.04)
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Plumbing, Pipefitting, and Steamfitting, General (46.0501)
Plumbing, Pipefitting, and Steamfitting, Other (46.0599)
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Radiology (18.15, 18.1501)
Political Science and Government (45.10, 45.1001)
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Poultry (02.0209)
Practical Nursing (17.0605)
Pre-Dentistry (18.17, 18.1701)
Pre-Elementary Education (13.1204)
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Precision Work, Assorted Materials, Other (48.0699)
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Public Health Laboratory Science (18.22, 18.2201)
Public Policy Studies (44.05, 44.0501)
Public Relations (09.05, 09.0501)
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Public Transportation (44.0602)
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Purchasing (08.0704)
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Quality Control and Safety Technologies (15.07)
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Quality Control Technology (15.0702)
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Radio and Television Production and Broadcasting Technology, (10.0104)
Radio/Television, General (09.07, 09.0701)
Radio/Television News Broadcast (09.06, 09.0601)
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Radiograph Medical Technology (17.0209)
Radiologic (Physical) Technology (41.0204)
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Range Management (02.0409)
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Real Estate Appraisal (06.1704)
Real Estate Finance (06.1705)
Real Estate, General (06.1701)
Real Estate Law (06.1706)
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Receptionist and Communication Systems Operation (07.0707)
Recreational Enterprises Management (06.0702)
Recreational Products Marketing (08.0904)
Recreational Therapy (17.0816)
Recreational Therapy Technology (17.0817)
Recreational Vehicles and Accessories Marketing (08.1205)
Rehabilitation Counseling (17.0407)
Rehabilitation Services (17.08)
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Renewable Natural Resources, General (03.01, 03.0101)
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Safety Technology (15.0608)
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Sanitation Technology (15.0504)
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Secretarial and Related Programs, Other (07.0699)
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Soil Chemistry (02.0502)
Soil Conservation (02.0503)
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Soil Microbiology (02.0505)
Soil Physics (02.0506)
Soil Sciences (02.05)
Soil Sciences, General (02.0501)
Soil Sciences, Other (02.0599)
Solar Heating and Cooling Technology (15.0505)
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Specialty Foods Marketing (08.0603)
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Speech Correction (13.1012)
Speech, Debate, and Forensics (23.10) (23.1001)
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Teaching English as a Second Language/Foreign Language (13.14, 13.1401)
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Textile Engineering (14.28, 14.2801)
Textile Science (19.0904)
Textile Technology (15.0609)
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Therapeutic Recreation Aide (20.0607)
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Vehicles and Petroleum Marketing, General (08.1201)
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